Enhancing Collaboration Through Evidence-Based Practice

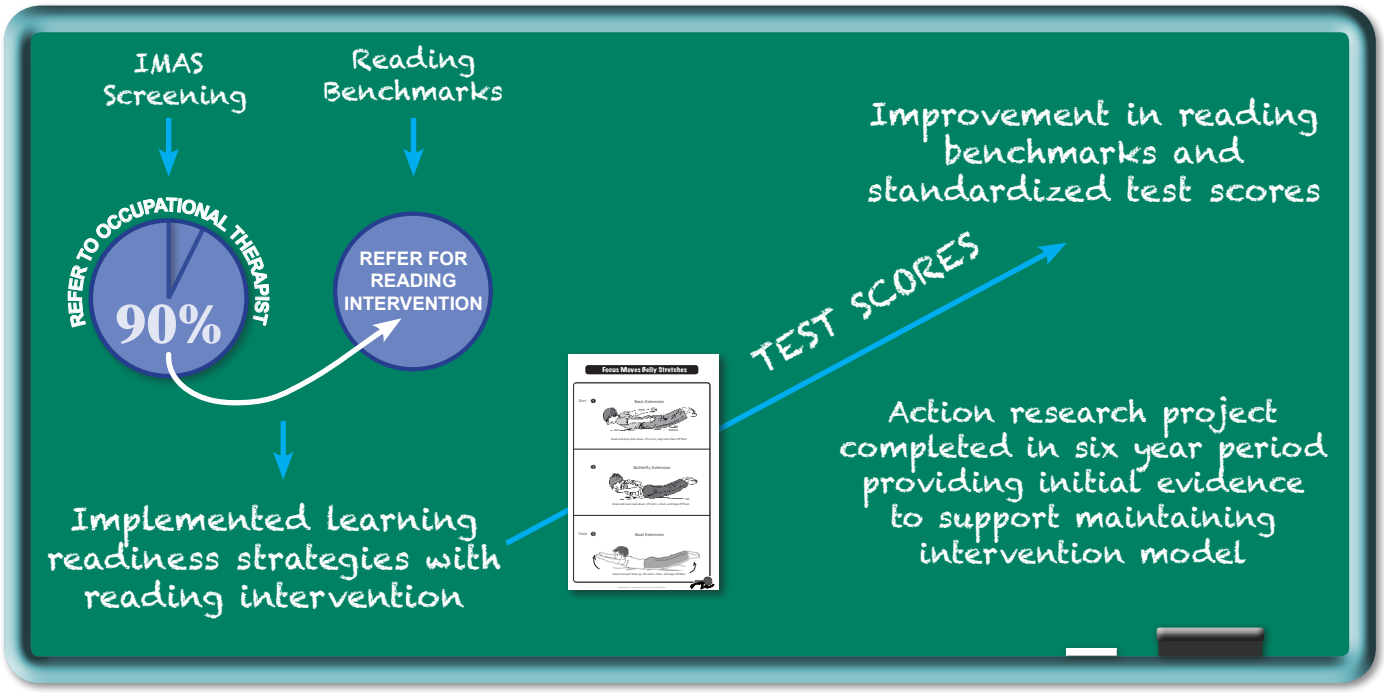
by Dr. Debra Em Wilson

S'cool Moves: Early Beginnings

S'cool Moves began with quantitative data using a screening tool called the Integrated Motor Activities Screening (IMAS) along with reading benchmarks and standardized test scores. All first grade students were screened by assistants unfamiliar with the students' abilities. The first grade reading specialist compared the IMAS results with the first grade reading results. A positive correlation was made between the students selected for reading intervention and the students who scored in the "refer to an occupational therapist" range on the IMAS.

From this point, research questions needed to be asked, "If we provide activities designed to improve the students' performance on the IMAS, will we see an improvement in reading scores and will this improvement be maintained year to year?"

A collaboration began with the author of the IMAS to develop a program for the students who scored low on the IMAS. For six years, students participated in a reading intervention program that today is known as S'cool Moves. Improvement on the IMAS screening tool translated into improvement in reading and provided initial evidence to continue with the reading intervention model.



Fast Forward Fifteen Years

Based on the continual evolution of the initial reading intervention model and the publication of the book *S'cool Moves for Learning*, S'cool Moves grew into the company it is today. As the S'cool Moves program aimed to improve collaboration and professional practice, gaps in academic research and the professional knowledge base became evident.

More research was needed to understand the components of successful collaboration within general education classrooms and provide evidence to include or exclude strategies in the S'cool Moves training framework. Designing and completing a rigorous research project was essential for closing the gap between theory and practice. The completed research project and dissertation underwent external review and was accepted with high distinction by leaders in the fields of research and professional practice. A research abstract follows to highlight the study and outcomes.[1]

Research Abstract

Collaboration research focusing on occupational therapists and general education teachers working in the classroom environment is a timely issue. Indeed collaboration as a concept is a pressing issue in contemporary literature and in practice. Within the context of USA practice and Federal regulations, collaboration is deemed best practice for providing services for students with special needs in the least restrictive environment. In addition, new guidelines encourage collaboration in general education classrooms to support all children in the classroom, not only children with special needs.

Though legal mandates relating to teaching children in the least restrictive environment underpin the need for collaboration, the literature review provides evidence that research highlighting what collaboration looks like in the classroom setting is under reported. Gaps in the literature indicate that while collaboration is deemed best practice, the extent to which occupational therapists and general education teachers are collaborating is limited. The literature review findings included disparate definitions of collaboration, a wide-range of inconsistent terminology, a general lack of research crossing disciplinary boundaries, and limited practical application for guidelines for collaboration in general education classrooms. There was a need for research to inform professional practice and highlight promising new knowledge underpinning successful collaboration in education.

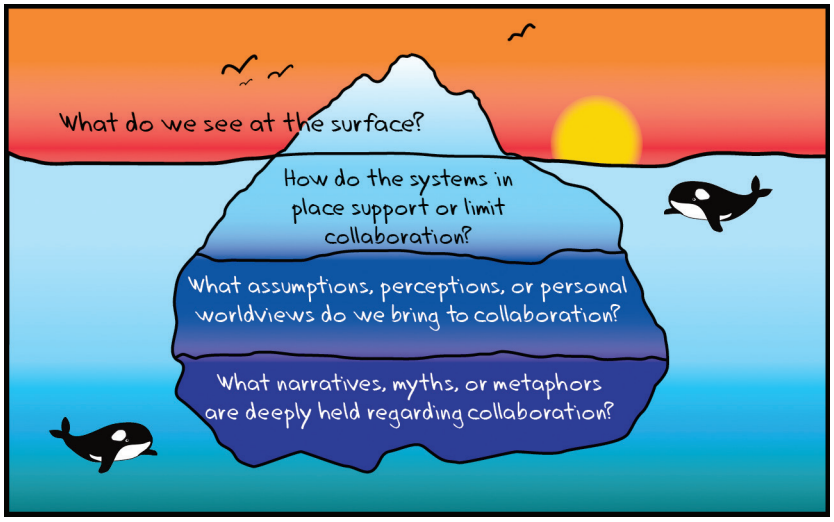
The purpose of this study was to combine a workplace-based project with rigorous research to provide a deep understanding of the phenomenon of collaboration between occupational therapists and general education teachers working together in inclusive classrooms. The study's objectives were to a) close the gap in research regarding occupational therapist and general education teachers collaborating in the classroom environment, b) contribute to the current body of knowledge and professional practice through completing a rigorous research study focusing on collaboration between occupational therapists and general education teachers, c) revise the current S'cool Moves training framework to reflect the research findings, and d) evaluate the extent to which the revised training framework met the needs of the stakeholders who participated in S'cool Moves training sessions.

The study sought to answer two research questions, 'How and to what extent do general education teacher and occupational therapist pairs in the USA collaborate successfully and to what extent do the systems, assumptions, and worldviews enable or disrupt such collaboration in primary school classrooms?' and 'How and to what extent does the S'cool Moves collaboration training framework integrate relevant theory and meet the needs of stakeholders in the teacher-occupational therapist collaborative relationship.'

The methodology adopted by the study assumed a pragmatist paradigm and mixed methods research design. Phase one of the study was qualitative and through the use of semi-structured interviews, uncovered key elements of successful practice and deep insights in order to understand how the occupational therapists and general education teachers developed collaborative relationships that enabled positive outcomes for students in the classroom environment. Based on these findings, the S'cool Moves training program was refined and implemented.

Using Causal Layered Analysis (CLA), this study uncovered deeper layers of meaning in order to understand how the pairs in the study moved beyond reported barriers and successfully collaborated.[2]

Causal Layered Analysis: Layers of Understanding



The research results provided evidence to support refining the definition of collaboration, creating an A-E Collaboration Cycle framework, and implementing the 'One for All' collaboration strategy. The research was generalized beyond occupational therapists and teachers to include collaboration among multidisciplinary support staff as based on the quantitative phase of the project.

The study contributed to professional practice by applying research findings to underpin a training framework designed to provide evidence-based guidelines and strategies to enhance collaboration between occupational therapists and general education teachers working in classroom settings.

The study contributed to methodology in that CLA is applied outside its originating 'futures studies' context and evidences its appropriate application in contemporary social science and educational research contexts.

The results for Phase Two (the quantitative phase) of the study validated the findings of phase one in terms of an evaluation of the S'cool Moves revised training program and the extent to which it met the needs of the stakeholders. Please refer to Table 1 for survey results.

Table 1: Survey Results

QUESTION	Strongly Disagree		Disagree		Undecided		Agree		Strongly agree	
	n=	%	*n=*	%	*n=*	%	*n=*	%	*n=*	%
Causal Layered Analysis (CLA), the opening group activity, helped me understand different participants' perspectives on collaboration.	2	0.52%	2	0.53%	14	3.68%	146	38.42%	216	56.84%
I would use CLA in other situations where understanding of various points of view is important.	2	0.53%	6	1.59%	31	8.20%	151	39.95%	188	49.74%
The theory provided a foundation for why collaboration is important for student success.	1	0.26	1	0.26	4	1.04%	112	29.09%	267	69.35%
The training provided useful techniques for enhancing collaboration with other professionals on staff.	1	0.26%	4	1.04%	10	2.60%	104	27.08%	265	69.01%
The week-by-week implementation plan increased my confidence with getting started.	0	0.00%	5	1.31%	12	3.15%	92	24.15%	272	71.39%
The small group activity focusing on CCSS increased my skill level for integrating academics with foundation skills.	0	0.00%	2	0.52%	18	4.72%	133	34.91%	228	59.84%
I have increased my knowledge and grasp of S'cool Moves learning objectives.	0	0.00%	1	0.26%	0	0.00%	60	15.54%	325	84.20%
After attending this training, I want to share what I've learned with others.	1	0.26%	0	0.00%	4	1.03%	53	13.70%	329	85.01%
I would encourage my colleagues to attend a collaboration training like this one.	1	0.26%	4	1.04%	5	1.30%	56	14.58%	318	82.81%
Overall, the training met my expectations.	2	0.52%	3	0.78%	8	2.08%	70	18.18%	302	78.44%

The evaluation survey results from one additional training session is reported here due to the organization using a proprietary evaluation form that differed from the S'cool Moves evaluation survey form. The rationale for including the additional survey results is threefold: the supervisor was able to provide details regarding the number of support staff for each specific discipline; the results of the survey showed a generalizability of the revised training framework to a larger audience consisting of multidisciplinary support staff; and open-ended survey comments from the attendees provided evidence of the framework's efficacy in enhancing multidisciplinary staff members' confidence and willingness to participate in collaboration.

Table 2: Multidisciplinary team affiliation for tenth workshop training session

Multidisciplinary Team Affiliation	Number of Professionals in Attendance
Resource Room Teachers	5
Life Skills Classroom Teachers	7
Social Communication Classroom Teachers	5
Social Learning Classroom Teachers	4
Speech Language Pathologists	2
School Counselors	5
Clinical Psychologist	1
General Ed Teacher (2nd grade)	1
Autism Consultants	5
Support Specialists	4
Classified Behavior Cadre	8
Licensed Behavior Cadre	1
Total in Attendance	**48**

Table 3: Hillsboro, Oregon participant evaluation average rating

POOR ⇦ 1 2 3 4 5 ⇨ EXCELLENT	AVERAGE
Please rate usefulness of this training	4.88
Please rate the information provided in this training	4.95
Please rate the level of expertise of the presenter of this training	4.95
Please rate the level of ability in providing this training	4.90
Would you recommend this training to a colleague?	4.95

Evaluations completed totaled 43, an 89.58% completion rate. Due to this training session being provided for special education staff only, general education teachers were absent in this particular case (with the exception of one general education teacher invited by the supervisor). Staff members were given the task of sharing the training information with the schools they serviced—hence the evaluation prompt, "Please rate the level of ability in providing this training." Many staff members commented on the survey "…it would be great to have this available for more general education teachers."

Support staff acknowledging the importance of participating in training with general education teachers is an important step to improving collaboration and validates the teachers' comments during the interviews expressing the need to be included in training provided by special education departments.

Through rigorous research, this project supported teachers' and therapists' collaborative efforts by providing evidence-based research that informs practice, makes original contributions to knowledge, elevates the knowledge base within professional learning communities, enriches the working environments for professionals working in United States school systems, and ultimately enhances the quality of support for all students in inclusive classroom environments.

Research focusing on collaboration strategies in the classroom setting (beyond co-teaching research) is in the early phases as evidenced by the literature review completed as part of this study. S'cool Moves strives to encourage and support on-going research. Participants in S'cool Moves workshops interact cooperatively with others to design action research projects to add to the limited base of knowledge currently available.

According to the U.S. Department of Education:

"Evidence-based is the integration of professional wisdom with the best available empirical evidence in making decisions about how to deliver instruction."[3]

S'cool Moves as a program to enhance collaboration between support staff and general education teachers is based on the best available empirical evidence to date. This study lays the groundwork for additional research. The strategies used in the program qualify as evidence-based practices.

Independent Research

Independent research is encouraged and supported with information provided to researchers who choose the S'cool Moves program for their investigative research projects. Many students have completed Masters projects with positive outcomes, focusing on S'cool Moves implementation. Projects can be viewed through databases providing access to completed projects.

A recent doctoral capstone was completed by Amy Spence, OTR, titled, "Use of Sensory Based Program To Improve On-Task Classroom Behaviors of At-Risk Urban Elementary Students: An Evidence-Based Occupational Therapy Capstone Project in Occupational Therapy."[4]

Study Abstract

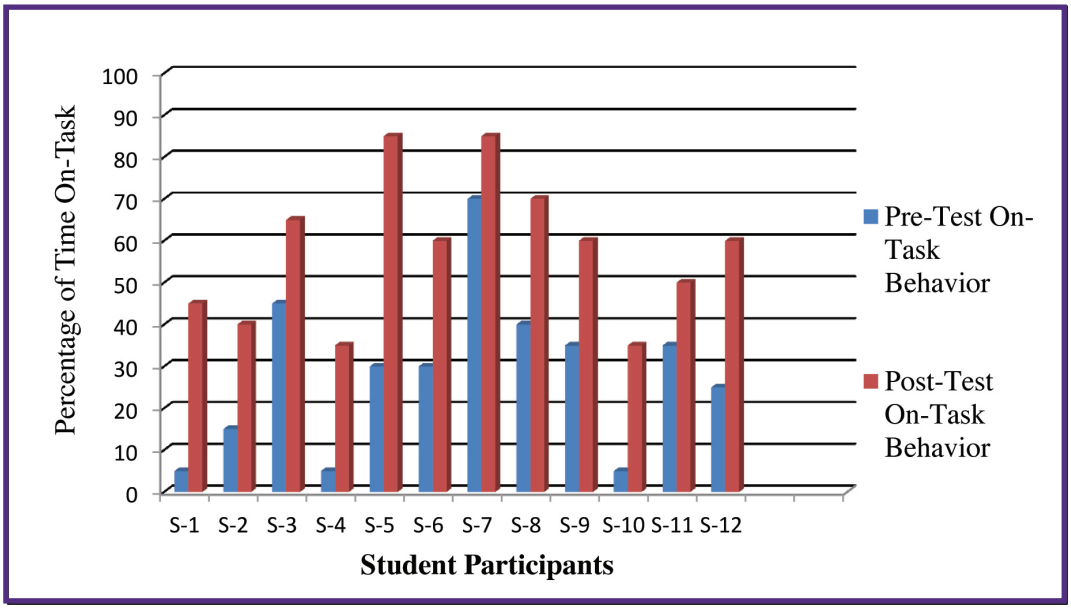
On-task behavior is a required component for student participation and completion of grade level expectations in school. Attention deficits in general education students are escalating and can impede acquisition of foundational knowledge necessary to build future academic learning. Off-task behaviors in classrooms appear as inattention and hyperactivity, which may emerge from sensory processing deficits, specifically sensory modulation dysfunction.

This capstone project applied a sensory-based intervention program with at-risk students to improve their on-task behavior and academic performance. In collaboration with two general education teachers, twelve students engaged in a six-week intervention called S'cool Moves.

Small group sessions were conducted for 15 minutes, one time per week and students performed the sensory-based strategies three times per week in class. Collaborative sessions were held with teachers one time per week. Pre and post-testing with two quantitative measures, Momentary

Time Sampling and an informal recorder tool, determined on-task behavior and assignment completion. Participant perspectives were unveiled through two qualitative measures, a teacher survey and student focus group.

Outcomes revealed 100% of the students increased their averaged on-task behavior, 58% of the students increased weekly assignments completed and off-task behaviors related to sensory modulation dysfunction decreased. Findings suggest short-term, sensory-based interventions implemented in natural classroom environments among at-risk students can enhance their engagement in school occupational performance. A coadjutant partnership with educators expanded the utilization of sensory-based interventions as an integral part of classroom techniques and circumvented the adverse impacts of inattention and hyperactivity behaviors creating optimal academic performance.



Evidence Provided By Peer-Reviewed Journals

A review of literature provides current evidence for the use of strategies and techniques included in the S'cool Moves program. Refer to "Behavioral Influences on Reading Achievement" a professionally written paper providing evidence regarding the relationship between behavior issues and reading achievement.[5] This paper explores why behavior (including sensory-based) must be addressed as well as reading skills for students to reach their maximum potentials and underscores the rationale behind including sensory-based techniques in the S'cool Moves training program.

The published article, "Ten Reasons Why Classroom Collaboration is Worth the Time: A Teacher's Perspective" is an example of collaboration in that it was published in an occupational therapy special interest journal.[6]

Experts in the Fields of Neuroscience

In addition to all that is discussed prior, experts in the fields of neuroscience provide evidence of the importance of movement to the learning process and sensory-based movement, in particular, for healing brain trauma.

These experts include:

John J. Ratey, MD, *Spark: The Revolutionary New Science of Exercise and the Brain*

John Medina, *Brain Rules* and *Brain Rules for Baby*

Bruce Perry, MD, multiple articles and books

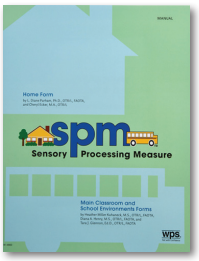
The Dana Foundation, *Brain in the News*

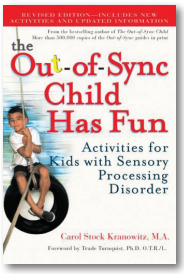
Professional Wisdom

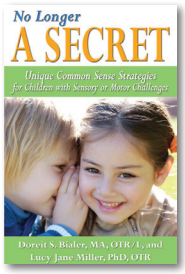
As discussed earlier, evidence-based empirical studies must be interpreted and applied to professional practice through the use of professional wisdom. This wisdom includes individual and collective wisdom of others to bridge the gap between theory and practice.

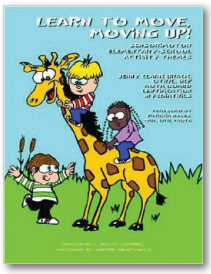
Collective wisdom is gained through S'cool Moves providing on-going staff development for school districts and SELPAs (several of which are among the largest in the U.S.) including New York City, NY; Las Vegas, NV; Apple Valley, CA; Los Angeles, CA; Orange County, CA; Clinton Township, Michigan; St. Louis, MO; Dayton, Ohio; as well as many others.

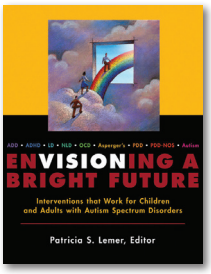
A community of learners provides the base for our S'cool Moves blog and newsletter, with over 5,000 recipients. Collaboration with professionals in various fields increases the opportunity to apply professional wisdom to evidence-based practice. S'cool Moves has collaborated with the following leaders in their field:

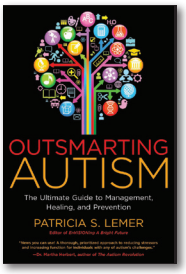












SPM and *SPM-P Quick Tips* ~ Diana Henry, MS, OTR/L, FAOTA
Out-of-Sync Child Has Fun ~ Carol Stock Kranowitz, M.A.
No Longer a SECRET ~ Doreit Sarah Bialer and Lucy J. Miller
Learn to Move, Moving Up! ~ Jenny Brack, OTR
Outsmarting Autism and *Envisioning a Bright Future* ~ Patricia S. Lemur

Conclusion

It is agreed that the field of education benefits from supporting practice through evidence-based research; however for busy teachers and support staff to contribute to research, expensive and time-consuming research found in medicine (independent, randomized controlled studies) is neither practical nor realistic. For theory to support practice, the research needs to be done within the context of real classrooms. The greatest opportunity for us as practitioners to improve our practice is through action research, a well-developed methodology that leads to change and improvement in program delivery though the collaboration of multidisciplinary staff members and the development of collective knowledge underpinning professional wisdom.[7]

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To learn more about S'cool Moves, please view our engaging and informative videos at: www.schoolmoves.com/videos

Please direct comments or questions to wilson@schoolmoves.com.

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