

A strategic and interactive approach

Drs Kimberly Wolbers and **Hannah Dostal** are working to boost the language and literacy development of deaf and hard of hearing students



Could you begin by giving an overview of your respective backgrounds?

KW: I am Associate Professor of Education of the Deaf and Hard of Hearing in the Department of Theory and Practice in Teacher Education at the University of Tennessee in Knoxville, USA. Much of my research focuses on designing instructional interventions that promote language growth and literacy achievement among deaf and hard of hearing (DHH) children and adolescents. Strategic and Interactive Writing Instruction (SIWI) was originally conceptualised during my dissertation work in 2007 and has since evolved.

HD: I am Assistant Professor of Literacy Education in the Department of Curriculum and Instruction and a research scientist for the Collaborative on Strategic Education Reform (CSER) at the University of Connecticut. I am a certified reading specialist and hold a PhD in Education with a concentration in literacy studies and deafness. Prior to working at a university, I served as a middle school teacher of the DHH and a PreK-12 writing intervention coordinator. My primary research agenda focuses on writing instruction for linguistically diverse students and its impact on the language and literacy development of DHH students.

What are the key aims and objectives of the 'Development of Strategic and Interactive Writing Instruction for Deaf and Hard of Hearing Students' project and how did it come into fruition?

KW&HD: The main objective is to arm teachers with the necessary educational tools and

instructional approaches that can spur both the language and literacy development of their DHH students. This is an area that has traditionally proven difficult for the DHH.

Embedded in SIWI are instructional approaches, such as the use of strategy instruction or collaborative interactive writing, which are effective in helping most children develop their writing skills. Additionally embedded in SIWI are approaches that specifically respond to the diverse language needs of the DHH. We have seen statistically significant writing and language gains with middle school DHH students, so we are now extending SIWI to the later elementary age group.

Have you encountered any challenges? How have they been overcome?

KW&HD: One of the challenges of investigating an approach designed for DHH learners is the small and diffused population of possible participants. Since deafness is a low-incidence disability, this study necessarily spans several states and school districts in order to represent a variety of educational contexts and the full diversity of DHH students. Because we are geographically stretched, we have to rely on video technologies that enable long-distance observations of classroom instruction and support communications with teachers. In classrooms where communication tends to happen visually, we use a two-camera video system that captures footage from the perspectives of both the teacher and students and subsequently combines it into one split-screen video.

Can you give an insight into the wider implications of your project?

KW&HD: There has been very little progress in literacy outcomes for the DHH over the past century. We are serious about addressing the heart of this matter, which we believe is language deprivation and difference. With SIWI,

students grow their expressive language skills and engage in critical thinking and reasoning, which we believe to be the ultimate building blocks of literacy attainment.

What are your future research plans?

KW&HD: Our goal for the next five to 10 years is to replicate our experimental studies in the later elementary and middle grades to test the efficacy of the fully developed SIWI intervention. We also aim to further develop the SIWI approach for other grades and content areas.

If a school programme is interested in training their teachers in SIWI, how could they obtain further information?

KW&HD: Interested teachers and school administrators can learn about SIWI by visiting our project website or by contacting us directly at writing.siw@gmail.com. We typically offer summer professional development courses in a central region of the US for teachers. We are also able to tailor professional development programmes to meet the specified needs and timelines of individual schools or programmes.





Literacy development

A three-year project underway at the [University of Tennessee](#) aims to improve the language and literacy outcomes of students who are deaf or hard of hearing

LEARNING TO READ and write is more difficult for deaf and hard of hearing (DHH) children, and this subpopulation has historically shown slow or stagnant literacy progress throughout their school years. Research data have flagged up some alarming statistics; for example, upon graduation from high school the median reading comprehension score of DHH students corresponds to a fourth grade level and 30 per cent of these students are functionally illiterate when they leave school. Indeed, reading outcomes of DHH children have not made considerable gains in more than a century. There is therefore a need for specialised language instruction that caters to the unique needs of DHH students, facilitating their linguistic and cognitive growth.

Strategic and Interactive Writing Instruction (SIWI) is one innovative initiative that aims to advance the language and literacy outcomes of DHH students. As a flexible approach, SIWI responds to the varying language histories and profiles of individual students and is sensitive to those with additional disabilities. To date, SIWI studies have been predominantly conducted with children in grades six to eight. However, Associate Professor of Education of the Deaf and Hard of Hearing at the University of Tennessee, USA, Dr Kimberly Wolbers is leading a project seeking to extend SIWI for use with deaf students in grades three to five. Funded by the Institute of Education Sciences (IES), the project is currently in its third and final year. Wolbers is working in close collaboration with Dr Hannah Dostal from the University of Connecticut, Dr Steve Graham from Arizona State University and Jen Kilpatrick, Rachel Saulsburry and Chen Wen from the University of Tennessee.

AN IMPORTANT INTERVENTION

The SIWI intervention draws on cognitive theories of composing, sociocultural theories

of learning and first and second language acquisition theory. It is also heavily informed by theories of dialogue within the classroom, with dialogic teaching modes linked to greater literacy achievement and cognitive development among students. The combination of these different perspectives creates a theoretical structure that guides strategic writing instruction within collaborative and interactive environments.

There are three main driving principles behind SIWI. The first is strategic instruction. This refers to explicitly teaching novice writers the processes and strategies used by expert writers and may include the use of word or symbol procedural facilitators. The second is interactive instruction, meaning that students and teachers share ideas, build on one another's contributions and jointly decide writing actions when carrying out guided or shared writing exercises. Finally, the third principle is metalinguistic knowledge and linguistic competence, which refers to developing the American Sign Language (ASL) and/or English language ability of students through both explicit learning and implicit acquisition. Importantly, every SIWI lesson provides opportunities for both learning routes.

A PIONEERING PROJECT

During SIWI's guided writing lessons, students work with the teacher to co-construct text for authentic audiences, and collaborative writing occurs within the specific genre that students are learning. When engaged in collaborative writing, teachers, and sometimes students, serve as models by thinking-aloud, guiding and scaffolding others with the writing process and the use of more advanced writing skills. Over time, the teacher steps back and transfers more responsibility to students when engaged in shared or independent writing activity. SIWI is specifically tailored to meet the language needs of DHH.

While writing, teachers utilise a 'language zone' where there is focus on language development and/or building metalinguistic awareness. Instructional strategies applied in the language zone vary depending on students' specific language needs, but might involve English enrichment, guided translation between languages, or the use of gesture, drawing or pictures/videos to get to a point of shared understanding and build on expressive language. This is sometimes known as a two-surface approach, whereby students' ideas are captured on one surface through gloss, pictures, video, etc. for the purpose of clarifying and complicating, and then translated or moved to a surface with written English.

At present, Wolbers and her team are conducting a randomised controlled trial to assess the efficacy of SIWI. Specifically, 20 different classrooms from 11 educational programmes in eight different states have been randomly assigned experimental and control conditions. The study is taking place in a range of different educational contexts, such as schools for the deaf, public schools and itinerant services. The student participants are a diverse group, differing in terms of hearing loss, language competency, communication method and the presence of additional disabilities. The data from the study will establish whether or not SIWI leads to significant improvements in language and writing outcomes among 3rd-5th grade DHH children.

A UNIQUE APPROACH

During the first two years of the study, the researchers focused on developing the SIWI curriculum for DHH students in grades three to five. They designed innovative writing and language evaluation tools to enable teachers to set goals in line with current curriculum standards and provide feedback on writing.



Strategic and Interactive Writing Instruction differs from other writing programmes in that it functions as a framework for instruction as opposed to a fixed curriculum

They also created a range of instructional materials including visual scaffolds, genre-specific resources and student cue cards. In addition, they have built an online platform for teacher resources and video clips that highlight SIWI principles applied in bilingual, total communication or spoken language settings. Wolbers and her team also collected an extensive range of data to analyse the feasibility of implementing these various tools. Encouragingly, the findings so far strongly imply that teachers who use SIWI positively impact the language and literacy outcomes of their students.

SIWI differs from other writing programmes in that it functions as a framework for instruction as opposed to a fixed curriculum, enabling teachers of different grades and subject areas to include it as a means of working towards various language objectives. Specifically designed to support the language needs of DHH signers, SIWI incorporates methods for advancing their metalinguistic awareness of both the English language and ASL, and provides strategies for guiding translation between the languages. "For students who use spoken language, there are methods for clarifying and enriching their English language use," Wolbers states. "When students encounter difficulty expressing themselves or understanding others in ASL or English, a visual 'language zone' is utilised where conceptual understandings can be shared and attached to comprehensible expressive language – and subsequently represented in written language."

DRIVING DEVELOPMENT

Because the project is funded by a development grant, Wolbers' research has evolved since the time of its conception and important revisions have been made. For example, the study has shown that teachers in the 3rd-5th grade classrooms spend a large proportion of their time trying to reach a point of shared understanding with the students and developing their expressive language abilities



SHARED WRITING



GUIDED WRITING

before beginning the writing task. Additionally, work in the language zone varies depending on the students' language profiles and needs. As a result of these challenges, Wolbers and her team have designed a range of language zone resources, such as decision-making flow charts that instruct teachers' use of responsive instructional strategies. They have also developed video models of teachers using the language zone in a variety of educational contexts and for different purposes. Importantly, these resources equip the teachers to support their students with the development of expressive language in both English and ASL.

Looking ahead, the researchers are confident that SIWI will help lay a solid foundation for the literacy and academic attainment of DHH children. Over the course of the coming decade, they are planning to further develop SIWI for other levels and conduct experimental studies across grades to continue evaluating the effectiveness of the fully developed SIWI intervention.

INTELLIGENCE

DEVELOPMENT OF STRATEGIC AND INTERACTIVE WRITING INSTRUCTION (SIWI) FOR DEAF AND HARD OF HEARING STUDENTS

OBJECTIVES

To extend SIWI, a writing approach proven to be effective with middle school deaf and hard of hearing (DHH) students from 3rd-5th grade learners.

KEY COLLABORATORS

Dr Hannah Dostal, University of Connecticut, USA

Dr Steve Graham, Arizona State University, USA

Jen Kilpatrick; Rachel Saulsbury; Chen Wen, University of Tennessee, USA

FUNDING

Institute of Education Sciences (IES)

CONTACT

Dr Kimberly Wolbers
Principal Investigator and Associate Professor of the Education of the Deaf and Hard of Hearing Program in the Department of Theory and Practice in Teacher Education

University of Tennessee, Knoxville
A214 Jane and David Bailey Education Complex
1122 Volunteer Boulevard
Knoxville, Tennessee
37996-3442
USA

T +1 865 974 2375
E kwolbers@utk.edu
E writing.siwi@gmail.com

<http://ies.ed.gov/funding/grantsearch/details.asp?ID=1249>

centerondeafness.utk.edu

DR KIMBERLY WOLBERS earned her PhD from Michigan State University in 2007 in special education with a concentration in literacy. She is also a nationally certified interpreter through the Registry of Interpreters for the Deaf (RID). She received her interpreter training from Lansing Community College in 1999. Wolbers' primary research agenda has involved the design and implementation of language and writing instruction with DHH students. She conceptualised the SIWI approach which aims to be responsive to the unique language needs of the DHH.

