Convention 2018

Image of the CEC DVIDB 2018 Award winners. From left to right: Dr. Sandra Lewis, Barb Johnson, Dr. Karen Kohler, and Carlie Rhoades. Not pictured is Dr. Olaya Landa-Vialard.

Visual Impairment and Deafblind Education Quarterly

Volume 63 Issue 2

The Voice and Vision of Special Education

Council for Exceptional Children
The voice and vision of special education

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This is a publication of the Council for Exceptional Children's Division on Visual Impairments and DeafBlindness (CEC-DVIDB). Advertisements included in this issue are not endorsements of products or services, and individual views of authors are not necessarily the official position of CEC and/or DVIDB.

Message from the Editor

Kathleen Farrand, Ph.D.

Assistant Professor

Arizona State University

Kathleen.Farrand@asu.edu

I am thrilled to share the Spring Convention Issue of the *Visual Impairments and Deafblind Education Quarterly* journal with you. This issue is a wonderful collection of highlights from this year's annual convention in Tampa, FL! This issue is a great way to explore some of the amazing things in the field of visual impairments and deafblindness that were featured at the CEC Annual Convention and Expo.

This issue begins with articles featuring the DVIDB Award Winners for 2018. The following articles are summaries of presentations from this year's convention with applications for the field. I will let the articles speak for themselves, but please make sure to read them all, because you will find excellent ideas and suggestions for practitioners and researchers included throughout this issue. Happy reading, and a special thank you to our authors and advertisers that contributed to this special issue.


THANK YOU SPONSORS
DVIDB Thanks Our Sponsors
Because of the generous donations of our sponsors, DVIDB was able to have a successful pre convention and social to connect with those in the visual impairment and deafblind community at the CEC Convention in Tampa, FL.
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American Foundation for the Blind
Illinois State University
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Florida State University
Kutztown University

President's Message

Amy Parker, Ed.D. & COMS

Assistant Professor

Portland State University

atp5@pdx.edu

Dear DVIDB members and friends,

In February, we were delighted to welcome so many colleagues at our pre-convention and convention presentations and posters in Tampa, Florida. Because of the sponsorship of the American Printing House for the Blind, we were able to host Millie Smith for a full day gathering on "Growing Good Communicators". If you weren't able to join us or would like to share Millie's handouts or Millie's Symbols and Meaning videos, you can find these on the DVIDB and APH websites.

If you are following us on our DVIDB Facebook page, our team, which includes active undergraduate and graduate students, shared several highlights of the Tampa convention, including snippets of presentations from mobile applications, research findings, and insights on good teaching for the fields of VI and DB. A special thanks to the leaders and contributors who are sharing summaries of presentations in our

quarterly. Our fields and the children we serve are diverse and it is true pleasure to hear from colleagues' sharing their knowledge and passion to improve practice.

Thanks to the generosity of several university and agency sponsors, we were also able to host a business meeting and social at Jackson's Bistro that was organized by Dr. Nicole Johnson, our President-Elect. At this meeting we celebrated the work of 5 outstanding colleagues: Dr. Sandra Lewis, Dr. Olaya Landa-Vialard, Barb Johnson, Carlie Rhodes, and Dr. Karen Koehler. The DVIDB awards are a way to acknowledge our colleagues for their distinguished service, advocacy, teaching, scholarship and dissertation research. It is a joy and a pleasure to commend our colleagues for their contributions.

In addition to our own Division's rich program, several members of our Board were involved in the larger governance conversations within the Council for Exceptional Children. Because of the leadership of Dr. Deborah Hatton, Dr. Tiffany Wild, Dr. Sandy Lewis and other workgroup members on the CEC Knowledge and Standards Committee, an updated set of knowledge and skills competencies for Teachers of the Visually Impaired are ready to review for validation. If you have not already done so, please take the opportunity to complete the validation survey that was shared with DVIDB members from CEC.

As you may have read, the CEC proposed amendments to governance bylaws.and asked for Division's and membership comments. DVIDB responded to the proposal with my board-approved letter that has been included in this issue of the quarterly. Many sister CEC divisions responded with their own letters. In response to DVIDB's and other letters, CEC President Laurie VanderPloeg acknowledged that the

governance workgroup had received over 100 pages of comments and would consider all of our suggestions. Please stay tuned for more information and feel free to contact CEC at president@cec.sped.org with your own thinking about the proposed changes.

In the coming months our DVIDB Board will be working together to communicate with you and to plan for another fantastic program in Indianapolis. The CEC 2019 Call for Proposals is open now and closes on March 31st. All of our proposals are peer-reviewed and if you are a member in good standing and are interested in being a proposal reviewer, we welcome your support. Please don't hesitate to let me or any DVIDB Board member know how you would like to be involved! We welcome all of you to this organization and look forward to staying in touch!

February 14, 2018

Dear Madame President and CEC Board of Directors,

On behalf of the Division on Visual Impairments and Deafblindness (DVIDB), thank you for the tremendous investment in the creation of your proposed comprehensive leadership development model as presented by members of the Governance Assessment Workgroup (GAW). Three members of DVIDB's Executive Board attended the IDC gathering on February 6th, 2018 and appreciated the GAW's presentation of the model and the subsequent discussion. Our RA member, Dr. Katie Farrand, also shared her observations of the plan after attending the RA meeting in Tampa. On February 7th, our Executive Board met and briefly discussed the excellent graphic of the model, as well as the more hands-on approach CEC is taking in selecting and preparing the board to govern. Since its inception, DVIDB has appreciated the opportunity to attend the leadership meetings hosted by CEC in the summer and our leaders have gleaned useful knowledge from these gatherings to benefit our members. In reflecting on the leadership development model that GAW presented, DVIDB leaders who attended gatherings recognized the ways in which you are sharing your learning about the recruitment and preparation of a board members with everyone, which reflects CEC's strength as an educational and innovative organization. While there are so many promising elements of the proposed leadership development model, one point of consternation is the loss of the membership vote for CEC Board members. On one hand, one may rightfully ask why a low-incidence division with 365 members would pause about this proposed change because we don't bring droves of people to the voting process anyway.

Our main concern is that DVIDB have a voice in the selection of the CEC Board and that we, as a low-incidence division, have opportunities to serve on the CEC Board. As you know we are a small but active group of educators. We represent the disability groups that were among the first internationally recognized in terms of special education. We ask that as you consider the need for diversity in special education, that you all consider that the educators that we serve often play itinerant roles in wide geographic areas and have different types of needs than educators who are based in one setting or school. We are deeply vested in the opportunity to work with our community to create, update, align, and validate our knowledge and skill sets as a part of CEC. While teachers of the visually impaired, teachers of the deafblind, and interveners do draw from the larger knowledge base, there are very specific competencies that our educators need to adequately meet the needs of diverse students with visual impairments and deafblindness.

At times, DVIDB leaders and members may feel overwhelmed in the larger CEC program and committees. While we appreciate the efforts made by CEC staff to include us, sometimes if our DVIDB leadership isn't vigilant, we can be overlooked when it comes to policy and governance issues. The real concern when this happens is that CEC itself becomes less representative of the needs of students who are visually impaired and deafblind. We know that the innovations in technology, access to instruction, and communication that have emerged from teaching students with visual impairments and deafblindness have a positive impact on all students in special education.

One practical way to ensure that the diversity across our divisions is represented is that leaders be prepared and selected from all divisions. Another approach may be to ensure that a representative from a low-incidence division is prepared to serve on the CEC Board on a rotating basis. This individual would have the responsibility of reaching out to other low incidence divisions and representing these collective concerns on CEC Board.

One example of how our Division is working to meet the needs of itinerant educators happened because of CEC's support of DVIDB's pre-convention workshop with Millie Smith at the Florida Diagnostic Learning Resource Center on February 6, 2018. Because of your support, DVIDB was able to provide outreach to 83 attendees, most of whom were Tampa-based teachers who attended at no cost. Because we obtained the support of a national sponsor, the American Printing House for the Blind, we were able to take a risk when we knew that drawing local teachers would be challenging. One of the administrators at the Manhattan Center mentioned that her teachers in low-incidence areas were thrilled to have a day that focused on children with the most complex disabilities. Both CEC and DVIDB achieved our purposes on that day, in providing meaningful outreach to educators who work everyday to serve diverse students.

We appreciate the opportunity to share feedback and are proud to be a part of CEC.

Sincerely,

Amy T. Parker

Amy T. Parker, DVIDB President 2018-2019

DVIDB Executive Board

Council for Exceptional Children | DVIDB

The voice and vision of special education

Job Description

Faculty Position in the Area of Visual Impairments
Department of Special Education
Vanderbilt University's Peabody College

The Department of Special Education at Peabody College of Vanderbilt University invites applications for an open rank (assistant, associate, or full professor) faculty position in visual impairments. Our vision program has had a significant impact on the field for more than 60 years. We are seeking a strong scholar who can provide new leadership to the program as we re-envision its future and expand its reach in the areas of research and training. The successful candidate will have an important program of research related to education or rehabilitation in visual impairments, as well as a clear vision for how our program can continue its deep influence locally and nationally. Responsibilities include carrying out an influential program of research, providing leadership to the graduate program in visual impairments, collaborating with a full-time professor of the practice in visual impairments, teaching courses, advising master's and doctoral students, securing external funding, collaborating with schools and agencies that serve diverse students; and providing service to the university and profession. We envision this position being located within the low-incidence program area within the Department. A doctorate in special education, education, rehabilitation, or related field is required.

For more than a decade, the Department of Special Education at Vanderbilt University has been the top-ranked graduate program in the nation. Our large faculty conducts research spanning early childhood through adulthood and addressing a broad range of issues of importance in the lives of people with disabilities and their families. Affiliation is also possible with the Vanderbilt Kennedy Center for Research on Human Development (http://kc.vanderbilt.edu), which is highly regarded for its interdisciplinary research, training, and community partnerships.

Candidates should submit an application letter, curriculum vitae, three samples of scholarly writing, and contact information for three people from whom letters of reference may be requested. Screening of applications will begin March 30th and continue until the position is filled. Questions regarding this position should be directed to Erik Carter, Search Chair at erik.carter@vanderbilt.edu. Employment will also require a background clearance check.

Applications materials should be submitted to: Visual Impairments Faculty Search, Department of Special Education, PMB 228 Peabody College, Vanderbilt University, Nashville, TN 37203 or can be emailed to visionsearch@vanderbilt.edu.

Vanderbilt University has a student body of 12,000 undergraduate, graduate, and professional students. One quarter of our students are from racially/ethnically diverse backgrounds, including more than 1,000 international students from 84 countries. Vanderbilt values individuals who can share different points of view; strives to create an atmosphere where faculty of diverse races and ethnicities receive support from other faculty; and aspires to become a leader among its peer institutions in making meaningful and lasting progress in responding to the needs and concerns of all underrepresented groups. Vanderbilt University is an Affirmative Action/Equal Opportunity Employer. People of color, women, and individuals with disabilities are encouraged to apply.

Virginia M. Sowell Student of the Year Award: **Carlie Rhoads**

Vanderbilt University

Council for Exceptional Children

Division on Visual Impairments and Deafblindness

Presents 2018 Awards

At International Conference in Tampa, FL

The council for Exceptional Children Division on Visual Impairments and Deafblindness is proud to present the *Virginia M. Sowell Student of the Year Award* to Carlie Rhoads at the Council for Exceptional Children Convention and Expo in Tampa, Florida, on February 8, 2018.

The *Virginia M. Sowell Student of the Year Award* recognizes a student who demonstrates a commitment to the education and/or rehabilitation of individuals with visual impairments and deafblindness. The award was named after Dr. Virginia Sowell whose lifetime contributions to the profession impacted the lives of numerous educators and countless children and adults with visual impairments and deafblindness.

Carlie is currently a doctoral candidate at Vanderbilt University. She is an exceptional student who is already demonstrating leadership in our division by serving on the licensure standards update committee for the new TVI standards; taking an active role in editing and updating two CEC DVIDB position paper; and has recently been appointed to represent our division in an ad hoc research committee of the larger CEC Community. Carlie has presented at numerous conferences and has worked as a teacher assistant or co-instructor in numerous courses at Vanderbilt University.

Dissertation of the Year: **Dr. Karen Koehler**

The Ohio State University

Council for Exceptional Children
Division on Visual Impairments and Deafblindness
Presents 2018 Awards
At International Conference in Tampa, FL

The Council for Exceptional Children, Division on Visual Impairments and Deafblindness (DVIDB) is proud to present the *Dissertation of the Year Award* to Dr. Karen Koehler at the Council for Exceptional Children Convention and Expo in Tampa, Florida, on February 8, 2018. The *Dissertation of the Year Award* is presented to a DVIDB member who makes a significant contribution to the field through extensive study and research.

Dr. Koehler has researched the unique subject matter of 3-D printing and its use by students in a science classroom. As many have heard, 3-D printing has been speculated to be able to revolutionize the learning that will take place in science classrooms all over the country and dramatically increase student learning; especially the learning of students with visual impairments. Many have speculated that this technology will have dramatic abilities to increase access to the general education classrooms by students with visual impairments. However, those claims had little to no research to back them up.

Karen's dissertation work and pilot study, reported in the dissertation, finally provided some insight into the use of 3-D printed models and student learning. Her dissertation was timely and of great importance to our field.

Teacher of the Year Award: **Barb Johnson**

Lincoln Public School System

Council for Exceptional Children

Division on Visual Impairments and Deafblindness

Presents 2018 Awards

At International Conference in Tampa, FL

The Council for Exceptional Children, Division on Visual Impairments and Deafblindness (DVIDB) is proud to present the *Teacher of the Year Award* to Ms. Barb Johnson at the Council for Exceptional Children Convention and Expo in Tampa, Florida, on February 8, 2018.

The *Teacher of the Year Award* recognizes a person who is exceptionally dedicated, knowledgeable and a skilled certified Teacher of Students with Visual Impairments, deafblind or COMS, in any state approved or accredited day or specialized school, who serves students who are VI and/or DB ages birth through 21, with or without additional disabilities. It is the highest award presented to education professionals within the Council for Exceptional Children, Division on Visual Impairments and Deafblinenss.

Barb is an advocate for kids, strives to improve instructionally, and has taken on several leadership opportunities in her district. She has adopted a hands-on approach to student achievement and learning, and is an effective team member with students, families, and staff in and out of the classroom.

As the team leader for the Lincoln Public Schools teachers of the visually impaired, Barb supports her colleagues in scheduling and developing structures for the team to

collaborate around best practices. She has helped develop systems for professional growth in assessment and instruction, as well as assisted in a five-year plan of growth in the Expanded Core Curriculum. In addition, Ms. Johnson serves as a mentor for graduate students learning to conduct functional vision assessments, learning media assessments, and Expanded Core Curriculum screenings and assessment.

Barb has built many relationships within Lincoln Public Schools, as well as within the state of Nebraska. She serves on a number of state committees and is regarded as an expert in her field. Most importantly, Barb is an amazing teacher. She loves working with her students, and their families. She has a passion for teaching, confidence in her abilities and knowledge, and strives to learn how to be a better educator and instructional leader. Barb is a quiet, competent, caring, compassionate, and devoted educator who touches all who she works with. She is a community builder who is exceptionally aware of the needs of others. Barb is a learner who is engaging, innovative, and passionate.

Exemplary Advocate Award: **Dr. Olaya Landa-Vialard**

Illinois State University

Council for Exceptional Children

Division on Visual Impairments and Deafblindness

Presents 2018 Awards

At International Conference in Tampa, FL

The Council for Exceptional Children, Division on Visual Impairments and Deafblindness (DVIDB) is proud to present the *Exemplary Advocate Award* to Dr. Landa Vialard at the Council for Exceptional Children Convention and Expo in Tampa, Florida, on February 8, 2018. The *Exemplary Advocate Award* honors an individual whose personal and professional activities have significantly promoted and improved quality of life for people with visual impairments and deafblindness.

Dr. Landa Vialard is a full-time professor at Illinois State University (ISU), whose mascot is the Redbird. She is the advisor of the student group the Braille Birds. She has assisted this group in a variety of community engagement activities, so that members of the university and local community can learn about and support concerns related to blindness. One example was the Sports in the Dark event featuring Army Veteran Steve Baskis. In addition, ISU community members are invited on field trips to the state school for the blind and visually impaired. In addition to raising awareness, this trip often recruits students from the field of general education to the Blindness and Low Vision field, helping to address the shortage of service providers in Illinois and nationally. Bringing additional teachers into our field will help ensure fewer students with visual

impairments and deafblindness go without needed services.

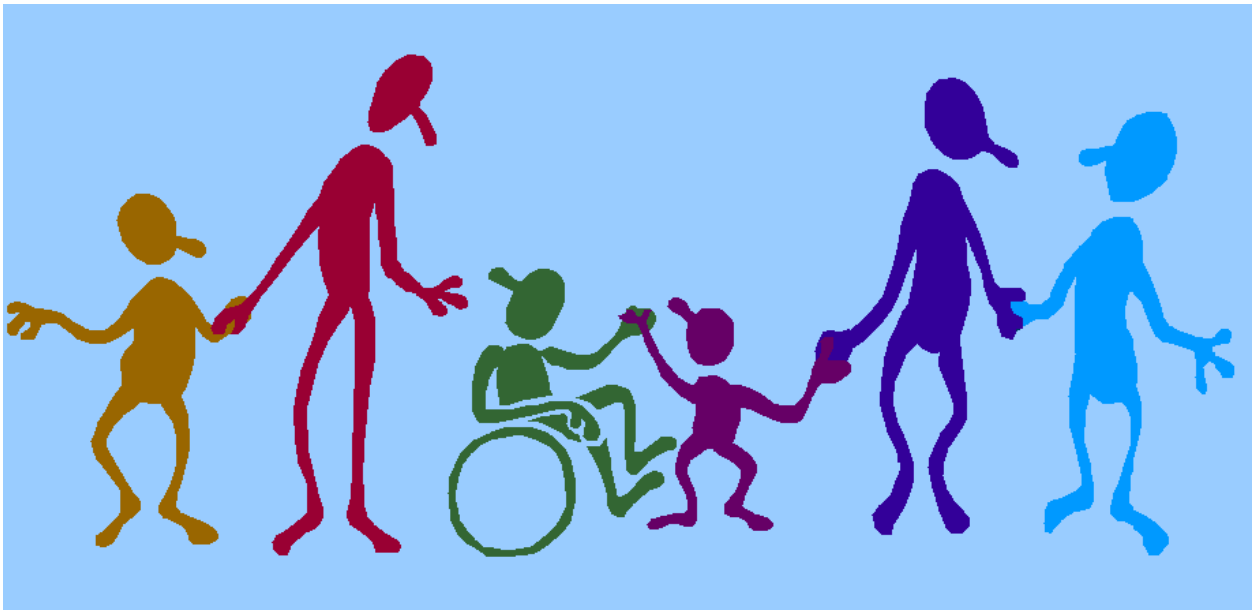
Dr. Landa Vialard has been a frequent visitor to legislators to provide information about and seek support for the Cogswell-Macy Act. Whether it is in Washington D. C. or a local office in Illinois, Dr. Landa Vialard can provide factual information that supports the stories and heartfelt pleas of the parents and students who are the constituents of federals members of the House and Senate. When she travels at her own cost to a legislator's office to meet, she often will Skype and Facetime in families who cannot attend in person so that they are equally represented. I have seen her quickly give her facts and then support those who may be nervous about talking to legislators, but have important stories to share. At conferences, Dr. Landa Vialard also does informative sessions on Cogswell Macy and hosts booths where participants can write letters to their legislators. Her efforts are starting to pay off in Illinois. Recently, language was approved making DeafBlind Interveners a related service in Illinois, and this action was related to Section 3 of Cogswell Macy! This is now making DeafBlind Intervention an option for students with deafblindness in Illinois.

When Gary Mudd, the Vice President for Public Affairs at the American Printing House (APH) learned of Dr. Landa Vialard's efforts, he asked for her assistance in locating stories, quotes and pictures from people who use APH products in order to advocate for an increase of quota funds. Dr. Landa Vialard has been spreading the message to all of her many contacts, since she believes in the mission of APH and knows their work supports the education of children and youth, and the families and teachers in their lives.

Dr. Landa Vialard also supports individual families and students through pro-bono work as an advocate. She has attended IEP meetings and done assessment review in Illinois, Indiana, Florida, and New York. She does this pro-bono work because she is passionate about students with visual impairments and deafblindness deserving equal access to education.

Finally, Dr. Landa Vialard is leading the effort to advocate for appropriate learning media assessment processes. She is working to education state legislators (recently in Missouri and Arizona) on the issues regarding legislating the use of only one tool for a learning media assessment, including students with visual impairments and additional disabilities. Dr. Landa Vialard volunteers her knowledge at a national level to support the needs of all children with visual impairments.

Dr. Landa Vialard is an exemplary advocate who is having an ongoing positive impact in our field because of her willingness to teach and inform others on the needs on individual with visual impairments and deafblindness.



Distinguished Service Award: **Dr. Sandra Lewis**

Florida State University

Council for Exceptional Children

Division on Visual Impairments and Deafblindness

Presents 2018 Awards

At International Conference in Tampa, FL

The Council for Exceptional Children, Division on Visual Impairments and Deafblindness (DVIDB) is proud to present the *Distinguished Service Award* to Dr. Sandra Lewis at the Council for Exceptional Children Convention and Expo in Tampa, Fl. on February 8, 2018. Dr. Lewis is Professor and Coordinator of the Program in Visual Disabilities at Florida State University.

The *Distinguished Service Award* is presented to a DVIDB member who provides exemplary leadership and commitment to the field through service, education, and research. Dr. Lewis received this prestigious award because she has been an outstanding leader in this field for over 37 years.

Dr. Lewis is active in leadership at the university, state, and national level. She maintains close contact with leaders and direct service providers across the state, many of whom she personally trained as pre-service teachers. Through her service to the National Leadership Consortium in Sensory Disabilities, she supports the development of the next generation of leaders in the education of children with sensory disabilities.

Perhaps her greatest contribution to the field is her tireless work and dedication to pre-service teachers, doctoral students, and young special education faculty members at Florida State University. Dr. Lewis' commitment to her students and the program in which she coordinates is unparalleled. She has inspired and crafted generations of TVIs to provide quality programming for students with visual impairment. Dr. Lewis is generous with her time to ensure that her students acquire the skills needed to be "job ready" upon completion of their program. In addition, Dr. Sandra Lewis often supports her students after program completion by fielding job-related questions and serving as a guest speaker for teacher in-services.

Promoting Problem-Solving in Students with Visual Impairments

Rachel C. Weber

Instructor, Director of Training

UBC School and Child Psychology

Internship Program,

rachel.weber@ubc.ca

Kim T. Zebehazy

Associate Professor

University of British Columbia

kim.zebehazy@ubc.edu

Background

Problem-solving, and related skills such as creativity, executive functioning, critical thinking, and self-regulation, is an important ability that can impact lifelong outcomes in children across academic, social, behavioral, and emotional domains (Jonassen, 2000; Plucker, 1999). One area of cognition that is particularly crucial for the problem-solving process is called *divergent thinking* (DT), which is involved in the first step of this process often referred to as brainstorming. DT involves flexible thinking that attempts to rapidly produce as many possible solutions to a problem (Guildford, 1950). This is commonly measured using tasks that require individuals to generate as many uses for everyday objects as they can, such as the Alternate Uses Task (Wallach & Kogan, 1965).

There is an emphasis on observational learning in the development of DT, such that children acquire much of this skill through watching others solve problems (Kaufman & Kaufman, 2004). This could be problematic for students with visual impairments (VI), however, as they are known to have fewer opportunities for

observation learning, particularly if these opportunities are not intentionally provided by caregivers or teachers (Barraga & Erin, 2001). Only one study has directly examined the development of DT in children with VI, meaning there is very limited knowledge about this skill in this population. The study, conducted by Wyver and Markham (1999), found that 19 students with severe VI performed similarly to their sighted peers on the Alternate Uses Task, but there was greater variability amongst their scores than in the sighted sample. There are many possible reasons why the authors may have found this variability and the present study aimed to expand on their work by investigating which student and curriculum characteristics might influence DT development in students with VI. We also examined how students' DT relates to their 'real-life' problem-solving ability through the use of a scenario-based problem-solving task, in order to determine how important DT may be for students with VI.

Methodology

During our CEC 2018 presentation, we shared results from our study in which 52 students with VI (ages 7-18 years) participated. Each student completed two DT tasks. One was the Alternate Uses Task, in which the examiner handed the student an object and asked them to generate as many ideas as possible for how to use or play with that object. The second task was researcher created to simulate more 'real-life' problem-solving. The instructions were similar to the Alternate Uses Task, but the students were given a scenario and asked 'what could you do?' For example, one scenario provided the following situation: "You get home from school and realize that you are locked out of the house. What could you do?" We conducted three trials for each of the two tasks (i.e., three objects and three scenarios). Scores were created for each students' total

number of responses and unique responses, which were ideas that no one else in the sample generated.

In order to collect information about student and curriculum characteristics, we distributed a questionnaire to each student's teacher of students with visual impairments (TSVIs). TSVIs rated students on their thinking skills, social skills, and academic performance. They also provided information about level of vision, receipt of expanded core curriculum (ECC) instruction and direct problem-solving instruction among other demographic variables (e.g., age, grade, ethnicity). Statistical analyses were conducted to explore the relationship between the two tasks and the questionnaire variables. We are in the process of preparing a research manuscript for publication that will share the specific outcomes of these analyses. This article focuses on some of the general findings and discussion about the implications for working with students on problem-solving skills.

Results

Analyses of the relationship between student and curriculum characteristics and task performance yielded an interesting pattern of results. First, and surprisingly, age, grade level, student level of vision, receipt of problem-solving instruction, and total number of areas of ECC instruction included in the students' current curriculum were not significantly correlated with DT or scenario-based task performance. In contrast, student school placement (school for the blind or public school), receipt of assistive technology (AT) instruction, teacher-rated academic independence, and whether they were working on grade level were all correlated with performance on at least one task trial.

Within this sample, students' DT, as measured by the Alternate Uses Task, was significantly correlated with their real-life problem-solving abilities, as measured by the scenario-based problem-solving task. This suggests that DT is important for the problem-solving process and strongly contributes to students' ability to generate solutions to everyday problems they may face. The lack of relationship observed between task performance and problem-solving instruction (mentioned earlier), as well as between task performance and teacher ratings of student problem-solving abilities or creativity, suggests that neither DT nor the real-life problem-solving assessed by the scenario-based task encompass what the TSVIs in our sample considered when completing their ratings. It is also suggests that, for those students currently or previously receiving problem-solving instruction, this curriculum does not likely include a focus on DT.

Considerations for Practitioners and Researchers

Based on the complex pattern of findings, more universal understanding about how practitioners can promote problem-solving would help ensure that students with VI receive adequate opportunities to develop these skills. This could be accomplished by increasing teacher knowledge about how to incorporate different dimensions of thinking into their lesson designs. Thinking related to problem-solving involves a combination of being able to generate many ideas (fluency), being flexible in idea generation (e.g., taking different viewpoints or thinking differently about situations), being able to elaborate on those ideas, and being able to create original ideas, among other skills. While this study only addressed the quantity and novelty of responses, teachers may want to consider the additional aspects of thinking that promote successful problem-

solving such as the feasibility of potential solutions. In addition, the following are considerations for practitioners and researchers:

- Emphasize the problem-solving steps with students just beginning to learn this skill: define the problem, brainstorm solutions, evaluate the solution, choose the best option, implement the solution, and evaluate the outcome (Zebehazy & Weber, 2017).
- Encourage students to identify actual problems they are facing as a real-life opportunity to work on developing DT and problem-solving skills.
- Promote independent rehearsal of skills through initial structured scaffolding that tailors off so that students eventually learn to use these skills on their own.
- Define the terms problem-solving and creativity carefully and consistently when conducting research, particularly when asking teachers to report on these skills in their students.
- Utilize observational and naturalistic methods of measuring problem-solving skills in students in addition to performance-based tasks in research, in order to control for issues related to assessment in students with visual impairments.

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Teaching Self-Determination Skills to Elementary Students with Sensory Loss

Lanya L. McKittrick

Student

University of Northern Colorado

mcki9421@bears.unco.edu

Silvia M. Correa-Torres

Professor

University of Northern Colorado

silvia.correa-Torres@unco.edu

Self-determination skills need to be learned early in life if students with disabilities are to become self-determined young adults (Wehmeyer & Palmer, 2000; Wehmeyer, Sands, Doll, & Palmer, 1997). However, there is limited research about teaching self-determination skills in elementary school (Cho, Wehmeyer, & Kingston, 2011; Palmer & Wehmeyer, 2003). Until this decade, self-determination research has primarily been focused on exploring the *importance* of self-determination for students with disabilities. The focus of research has now shifted to strategies and barriers to teaching self-determination and the benefits of teaching it earlier.

Teachers' perceptions of self-determination have been shown to vary based upon disability category (Cho et al., 2012). However, there is very little self-determination research focused on any one disability group. Only a few researchers have studied the importance of self-determination for students with sensory disabilities, and most are focused on students who are deaf or hard of hearing (Luckner & Muir, 2002; Luckner & Sebald, 2013; Sebald, 2013). No studies could be located that focus on teaching self-determination to students with sensory loss in elementary school. The purpose of this qualitative study was to gain an understanding of how self-determination

skills that are being taught to elementary students with visual impairment, hearing loss and deafblindness and the barriers they face when teaching those skills.

Methodology

Participants

We recruited and interviewed seven educators of students with visual impairment (teachers of the visually impaired and/or orientation and mobility specialists) and four teachers of the deaf. These professionals met the following inclusionary criteria: (a) currently teaching or have taught at least one elementary student who has sensory loss in the last five years (b) have at least two years' experience working with elementary age students. Ten of the participants were from westerns states and one was from Canada. Two were male, and nine were female. All participants had experience working with students of a varied age range, mostly 3-21.

Data Collection

The primary source of data was phone interviews. All phone interviews were recorded and followed a semi-structured interview protocol. We interviewed participants one time, and the interviews averaged between twenty to forty-five minutes. Follow-up was necessary to clarify some of the data, but second interviews were not required or scheduled. We provided participants details concerning the nature and purpose of the study and interview protocol in advance. Participants were given the opportunity to review their transcripts and will be offered a copy of the completed research report once it's complete.

Data Analysis

We derived themes from the interview data. We transcribed each recorded interview verbatim, and analyzed the data using a sequential three-step qualitative

analysis process referred to as open, axial, and selective coding procedures. First, each interview was independently open coded using the NVivo qualitative software program. These categories were collapsed into larger themes.

Findings

The results from this study are currently in-progress for publication. In order to preserve the integrity of the final publication, we only provide a brief summary here. The professionals interviewed identified four primary roles that they have when teaching self-determination to students with sensory loss. Participants also offered strategies that they have used when taking on each of these roles. All participants agreed that it was best to start exposing children to self-determination at an early age. Participants also agreed upon the importance of teaching self-determination to children with sensory loss. However, like previous studies, participants stated there were barriers to teaching self-determination. Results from this study contribute to a broader body of research on the importance of and the barriers to teaching self-determination to students with sensory loss at a young age.

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Cortical Visual Impairment

An Approach to Assessment and Intervention

Second Edition

Christine Roman-Lantzy

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Effective Communication with Nonverbal Students

Caroline Cacchio

Student

Kutztown University Vision Program

ccacc223@live.kutztown.edu

Jacqueline Morell

Student

Kutztown University Vision Program

jmore660@live.kutztown.edu

When working with nonverbal students, it is important to allow them to communicate their wants and needs in an appropriate, effective manner. If a nonverbal student is unable to communicate his or her wants and needs, it can distract them from their learning. More often than not, the nonverbal student will become frustrated and unproductive all together. If nonverbal students are unable to use certain augmentative communication, there is an alternative. We researched other methods that utilize body systems or senses that the nonverbal student has best use of to communicate.

Some augmentative communication devices are successful for students and aid in creating effective communication for the nonverbal population. They give individuals an outlet for which they can share thoughts and feelings (Beukalman, Mirenda, & Beukalman, 2013). However, these devices can be very limiting; students must try to find a picture or word that describes all that is going on in their heads while the general population has thousands that they can use to accurately express themselves. Also, not all students have the ability to use the augmentative communication devices. For example, children with physical disabilities or fine motor deficits may be unable to press

a small button on a device. Therefore, the alternative being researched is the concept of using body systems to assist in communication for nonverbal students.

Similar to how an individual with a physical disability may be unable to accurately select an icon on a device, a student with visual impairments may have a hard time seeing the images in PECS. Instead, a device or system using the somatic system may suit him or her best. This could include devices such as the use of object cards or Braille display. Augmentative communication devices such as the Picture Exchange System, object cards, Braille to speech devices, body language, sign language, or switches can all be beneficial for nonverbal students, but is not limited to. Students who have the capability of communicating may feel more comfortable using a device and these options can be explored for all exceptional children.

When speaking of using body systems to aid in communication, the reference is to 8 systems in particular. The eight systems include the somatic system, the olfactory system, the auditory system, the visual system, the gustatory system, the proprioceptive system, the vestibular system, and the interoception system (Holbrook, Kamei-Hannan, & McCarthy, 2017). These are all systems of the body that contribute towards a student's ability to feel and communicate. The teacher must take the time to get to know the student and his or her strengths and weaknesses to determine the best body system to explore. With that being said, this process can be time consuming and is usually based around trial and error.

The Somatic system is a piece of the central nervous system responsible for the sense of touch. It is responsible for the protective, commonly known as the flight or fight response, versus discriminatory, the manipulating and identifying of objects, touch

sensitivity. Discrimination in the somatic system can be utilized for communication by the nonverbal community. This is known as *Haptic Perception,* or a person's ability to identify an object's properties using the sense of touch (Bushnell & Boudreau, 1998). Through our work with students with visual impairments, we utilize the somatic system for a variety of things such as reading Braille, communicating with object cards, creating tactile pictures, etc. For students with visual impairments, this is often the most available body system for them to use which usually makes it the most successful.

The Olfactory system uses chemical receptors in the nose that responds to airborne chemicals making the human sense of smell (Faure & Richardson, 2002). At first, this sense does not appear to aid in the student's ability to express wants or needs. However, it does have major implications for scheduling and cue systems. This aids in the prevention of anticipation reactions. At Overbrook School for the Blind in Philadelphia, a teacher was observed using jars with specific scents to identify the days of the week with students who had multiple disabilities and were nonverbal. During circle time, when children were asked to identify the day of the week, those nonverbal students with severe disabilities would be presented with a jar with a distinct scent. It was used to communicate to students what to expect. This was a big step in our research of communicating with body systems. These students had limited use of their somatic system, vision, and overall cognitive functioning. At Overbrook, they utilized the body system that was of best use to them to communicate.

The Auditory system is the way sound is transmitted through the ear and to the brain for interpretation. Hearing functions are primitive, such as awareness of biological sounds like breathing, signal warning, such as the ability to monitor your environment,

and spoken communication (Moore, 2002). This is a system that Teachers of the Visually Impaired often use with their students. For example, giving a student an audiobook or orally giving them instruction. This body system is crucial when understanding nonverbal students and giving prompting for communication. The Visual system refers to sight, which is when light entering the eye is converted into electrical impulses by the retina and is then transmitted to the brain for interpretation. Teachers of the Visually Impaired understand the wide spectrum of visual impairments and use what functional vision that student has to better serve the student. In short, they understand the student's stronger body systems and utilizes those to compensate for what they may lack in vision.

Additionally, the Gustatory system is the system responsible for taste. Teachers and parents can use this system in order to elicit a response out of nonverbal students or to give a response. This aids in the motivation for students to communicate. Often, children want to satisfy this system so teachers can elicit communication, using things like food as prompting.

To continue, the Proprioceptive system involves the sensory receptors in skin, muscles, tendons, ligaments, and joints that give information on body position. Nonverbal students use this while pointing to communicate, using fine motor skills to move pictures, hit switches, etc. The Vestibular system is the internal body sense that determines speed, force, direction of movement, effect of gravity, etc. This can also be beneficial to elicit a response from students as well. The ability to use an action to create a response is ideal for communication training. The Interoception system is the body system involving information from one's internal organs that convey basic needs

such as hunger, regulation of body temperature, fatigue, elimination of body waste, etc. Nonverbal students have the same internal feelings that verbal students have, however, they are unable to communicate them. This body system is what communicates to our nonverbal students their needs (Faure & Richardson, 2002). Teachers must help children understand these feelings, educate them on what their body is telling them, and use it as motivation to communicate.

The student's success is dependent on the family's ability to foster communication techniques that are used in the school environment in the home. Although students spend 6+ hours at school, the majority of their time is spent in the home. Therefore, there needs to be open communication with the IEP team and the parents. Techniques used in the classroom should be reinforced at home. For example, if a child does not receive what they want in school without presenting an object card to the teacher, the same should be done at home. Parents should ask that their child communicate their wants and needs in order to get it. It is also important to remember that even though the nonverbal population may be unable to express themselves the same as the verbal community, that it does not mean that they do not understand. As educators, it is up to us to find outlets for these children to communicate successfully and exploring body systems could be the best way to do so.

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Teaching Students the Nemeth Braille Code: Making it Fun, Easy, and Meaningful

Tina Herzberg, Ph.D.
Consultant, Accessibility Group for School Assessment, Pearson
University of South Carolina Upstate
therzberg@uscupstate.edu

Sara Larkin, M.A.
Iowa Educational Services for the Blind and Visually Impaired, Vinton, Iowa
Consultant, Accessibility Group for School Assessment, Pearson

Susan Osterhaus, M.Ed.
Texas School for the Blind and Visually Impaired, Austin, Texas
Consultant, Accessibility Group for School Assessment, Pearson

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Proficiency in Nemeth Code is essential for accessing grade-level mathematics and science materials for K-12 students who are visually impaired and read braille (Rosenblum & Smith, 2012; Hong, Rosenblum, & Campbell, 2017). The Nemeth Code provides students of all ages an effective way to demonstrate understanding of mathematical concepts (Rosenblum & Smith, 2012). By using the Nemeth Code, students are able to show their work step-by-step, as they solve simple and complex mathematical equations similar to their sighted peers. Furthermore, an increased knowledge of the Nemeth Code can significantly impact the earning potential of persons who are blind (Kapperman & Sticken, 2002).

The goal of the presentation was to share strategies and resources that can be used to teach Nemeth code to students who read braille as well as how to make meaningful connections between learning the Nemeth code and learning math. Developing resources is especially important since many states in the U.S. recently transitioned to Nemeth within Unified English Braille (UEB) Contexts (Braille Authority of North America, 2012, 2014, 2016), and there are limited resources available in the updated code (Hong, Rosenblum, & Campbell, 2017). In addition, the highest level of math achieved in high school has been shown to be linked with successful completion of college in any field of study (Adelman, 1999; Hill, 2006). Thus, it is essential to increase mathematical competencies for K-12 students who are blind and/or visually impaired and support the efforts of removing access barriers for all learners.

We began with an overview of a comprehensive Nemeth Curriculum we are designing for elementary students. It is grade-level specific and aligned with the Common Core State Standards (CCSS; CCSS Initiative, 2010). The curriculum incorporates best practices for teaching students with visual impairments and includes hands on activities and games for younger students that reinforce grade-level math concepts. The curriculum also includes teacher scripts, braille ready files (commonly called brf files) for student worksheets, answer keys, recording sheets, review activities, and assessments.

The curriculum makes connections to the math standards and concepts. For example, the Kindergarten curriculum includes activities that promote the following CCSS (2010) counting and cardinality standards: a) Count to 100 by ones and by tens; b) Count forward beginning from a given number within the known sequence; c) Write

numbers from 0 to 20; d) Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects); and e) Count to answer "how many?". Students also learn to use a place value chart, hundreds chart, Five Frame, and Ten Frame while completing the Kindergarten curriculum.

We use activities and games throughout the curriculum in order to make the learning fun and meaningful. After becoming familiar with the Hundreds chart, students use the chart to play “Guess My Special Number”. Here is how the game is played within the curriculum:

> Listen carefully to my clues so that you can guess my special number. Do you remember what a clue is? It is information that gives you a hint about my special number.
> Here we go. My special number is on the bottom row, and it is one more than 98. What is my number?
> That’s right! My special number is 99.
> Let’s try another. My special number is ten more than 60.
> You got it! My special number is 70.
> Let’s try another. My special number is ten less than 83.
> My special number is 73.
> Listen carefully because this time I will be sharing two clues about my next special number. My number is a two-digit number. It is one more than 87. Do you know what my special number is?
> Excellent work, math detective! My number is 88.
> Let’s try two more. My special number is a two-digit number, and it is ten more than 55. What is my special number?
> Way to go! My number is 65.
> My special number is in the last column on the right and is one more than 59. What is my special number?
> Yes, my special number is 60. Now it is your turn to give me clues so that I can figure out your special number.

We are currently beta-testing the Pre-Kindergarten and the Kindergarten curriculum. Based on information we receive; additional edits will continue to be made. The first grade curriculum is currently under development. Teachers and parents are welcome to share activities and games they have used when teaching the Nemeth code

with their students/children. If you would like additional information or would like to share your ideas, please visit http://accessibility.pearson.com/nemeth/.

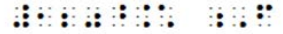
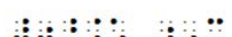
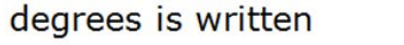
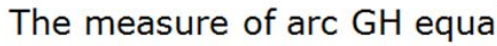
During the second half of the session, we proceeded to share an overview of a comprehensive Nemeth searchable database available at http://accessibility.pearson.com/nemethdatabase/. The database is a free resource and includes a list of symbols commonly used in mathematics and science classes at the middle school through college level. Each term is linked to a description of how to write this symbol in Nemeth code. The description also includes a link to a Word document with examples in SimBraille, ranging from simple math expressions to more complex. In addition, the examples are available as brf files in both Nemeth within UEB Contexts and Nemeth within English Braille American Edition (EBAE). Both contextual codes are provided as some students are still in the transition process and may be using textbooks transcribed in the older code, Nemeth within EBAE. We will continue to add symbols and examples to the database. Individuals are also welcome to offer suggestions of additional symbols and examples that might be helpful.

For example, if students are unsure about how to write degrees Fahrenheit, they could select the link for degrees which would take them to the following definition:

> Degrees can be used to specify an angle or arc measure, to write degrees Fahrenheit, and to write degrees Celsius or Centigrade. The degree symbol is actually three cells long. It begins with the superscript indicator (dots 4-5), since it is raised, followed by the two-cell hollow dot symbol (dots 4-6 and then dots 1-6). Nemeth within EBAE, Nemeth within UEB contexts, or Nemeth in print and SimBraille.

If they select one of the links at the end of the description, they will be taken to a file with examples such as the following:

Degrees Samples with SimBraille

1. One hundred twenty degrees Fahrenheit is written
   $120°F$
   
2. Zero degrees Celsius or Centigrade is written
   $0°C$
   
3. The measure of angle A equals forty-five degrees is written
   $m\angle A = 45°$
   
4. The measure of arc GH equals thirty degrees is written
   $m\overset{\frown}{GH} = 30°$
   

Since the students were interested in how to write degrees Fahrenheit, the first example might suffice. However, if they desired, they could review the other examples and learn about how this symbol is used in different mathematical contexts.

Several terms will land students on the same description so if their terminology is slightly different, they still get the same description and examples. The description for the superscript indicator can be found by searching exponent, exponent of an exponent, superscript, superscript indicator, powers, and baseline indicator (for superscript).

We sincerely hope that these newly developed resources will assist students in obtaining grade-level mathematical competence while learning to read and write the Nemeth Code. We also hope that these resources will support parents and teachers of students with visual impairments as they teach the Nemeth Code to their children/students. Learning the Nemeth Code should be fun, easy, and meaningful!

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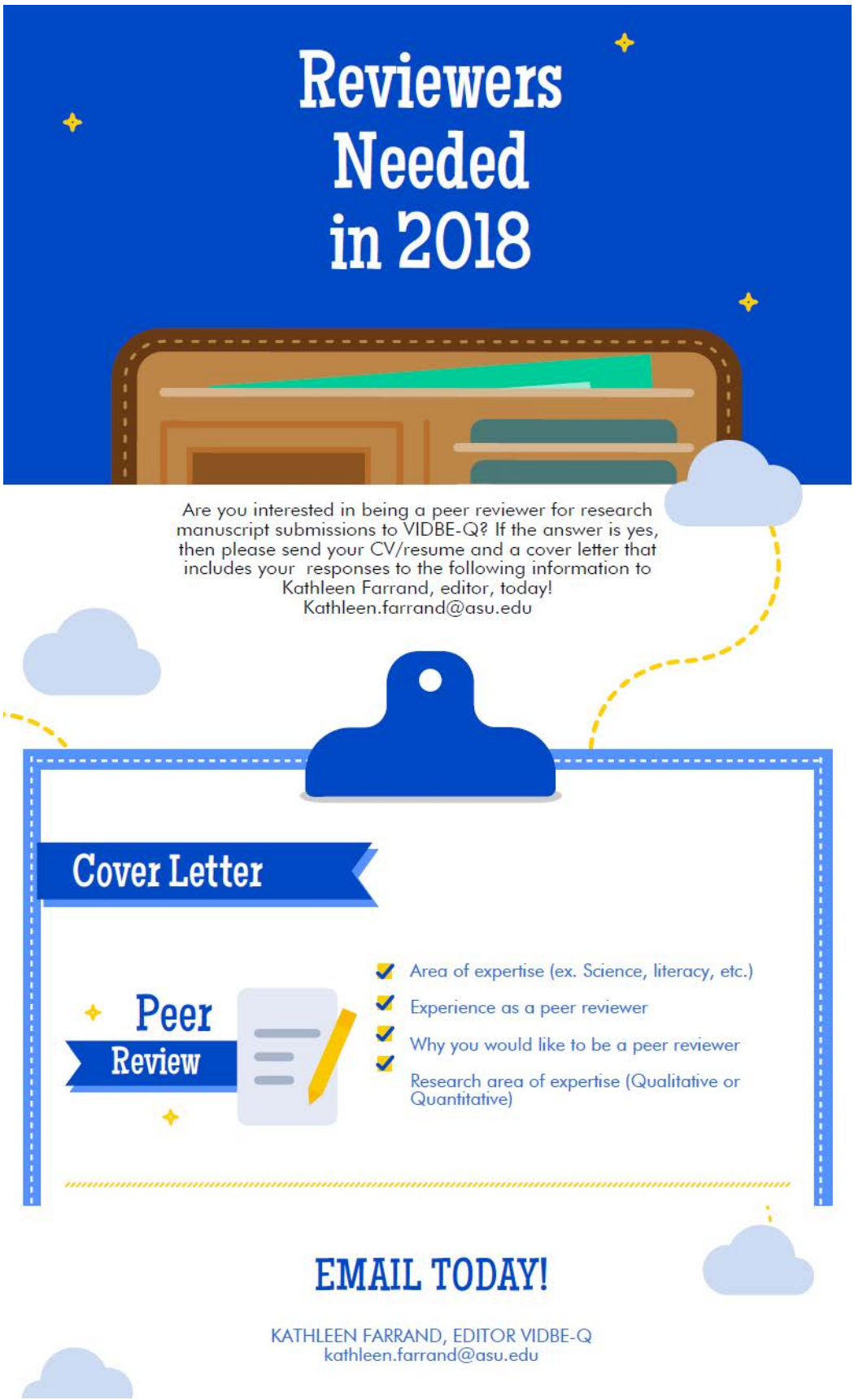
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Field-Identified Needs When Working with Students Who Are Deafblind

Silvia M. Correa-Torres

Professor

University of Northern Colorado

silvia.correa-Torres@unco.edu

Sandy K. Bowen

Professor

University of Northern Colorado

sandy.bowen@unco.edu

Deafblindness is a condition in which there is a combination of visual and hearing loss that could cause severe communication challenges and developmental and/or learning needs. Over the last several years, the educational settings where students with deafblindness are being educated have changed from more segregated settings such as institution-based services and self-contained classrooms to the most recent models of mainstreaming and inclusion in general education schools and settings (Correa-Torres, 2008). However, a review of the literature indicates the shortage of information on the pre-service training teachers of students who are blind or visually impaired and teachers of the deaf receive on working with students who are deafblind (Bruce, 2007; DeMario & Heinze 2001; Zambone & Alsop, 2009). This results in challenging situations for which professionals working with students who are deafblind are not prepared. Limited data exist on a national scale to determine the educational practices, needs, and services provided to students with deafblindness. Given the

unique needs of this population, the purpose of this study was to determine the training needs of teachers when working with students who are deafblind.

Methodology

Participants

Participants in this study were teachers of the blind/visually impaired, teachers of the deaf/hard of hearing, and special education teachers who work with students who are deafblind. Participants were recruited through the major professional organizations in the fields of visual impairments and deafness. There were a total of 254 respondents. Of these, 205 completed the entire survey. Respondents represented 28 states.

Data collection

The researchers developed an electronic survey that contained three sections. Section one consisted of an explanation of the purpose of the survey and demographic information. The second section contained 14 questions that identified educational practices and educational needs when teaching students who are deafblind. Part three of the survey included two open-ended questions, designed to encourage participants to report in their own words needed and available information and services to serve students with deafblindness.

Data Analysis

Data were analyzed both quantitatively and qualitatively. Participant demographic information and participants' perceptions and knowledge regarding the education of students who are deafblind were analyzed using descriptive statistics, means, standard deviations, and percentages using the SPSS software program. Open-ended questions were analyzed to determine systematic categories through coding. Categories drawn

from meaning units across all participants and/or in more than one interview question were retained. Categories that did not appear as meaning units of all participants or across several questions were discarded for lack of support. Finally, categories were clustered together into themes based on similarity of content.

Results

The results from this study are currently in-progress for publication. In order to preserve the integrity of the final publication, we only provide a brief summary here. Demographic information mirrored other reported data regarding what we know about teachers in general in special education (e.g. Caucasian, female). Teachers represented a continuum of years of experience and across educational settings and geographic locations. Participants overwhelmingly indicated a need for both pre-service training and professional development regarding working with students who are deafblind. Teachers indicated that the unique needs of students who are deaf-blind around communication, technology, collaboration, assessment, and teaching strategies required more in-depth knowledge than teacher preparations programs currently offer. Finally, this presentation opened the door for dialogue among professionals regarding solutions to preparing teachers at the pre-service level as well as professional development in individual school districts.

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The Expanded Core Curriculum and Schools for the Blind: Application for Practitioners

Susan Yarbrough

Doctoral candidate

Florida State University

sey09c@my.fsu.edu

Rationale and Methods

Professionals have long acknowledged children with visual impairments need unique educational opportunities outside of those provided to their peers with typical vision. Hatlen (1996, 2004) formally conceptualized the expanded core curriculum (ECC), when he delineated nine areas of instruction critical to the education of children with visual impairments: compensatory access, social skills, recreation and leisure, assistive technology, orientation and mobility, independent living skills, career education, visual (later sensory) efficiency, and self-determination.

Support for ECC instruction is widespread among both parents and teachers of students with visual impairments (Lohmeier, Blankenship, & Hatlen, 2009), but despite its acknowledged importance, researcher consensus reveals children with visual impairments are not receiving sufficient instruction in the ECC (e.g., Lohmeier et al., 2009; Wolffe et al., 2002). Some authors have suggested schools for the blind as a source of expertise in providing instruction in the ECC (e.g., Wolffe et al., 2002), yet existing knowledge about schools for the blind is limited (McMahon, 2014).

As a result, data were gathered in a qualitative study to explore how the ECC is addressed at schools for the blind. Two schools for the blind were each visited for 5 days with a 1-day follow-up visit 1 year later. Observations were made in instructional and residential settings, interviews or focus groups were conducted with a wide range of students and staff, and documents (e.g., curricula, IEPs) were collected and reviewed. The data shared here are part of a larger research project with Dr. Sandra Lewis regarding the implementation of the ECC at schools for the blind, including barriers and facilitators to instruction, but the challenges and strategies outlined below may prove particularly useful for practitioners.

Implications for Practitioners

Barriers

Tension between academics and ECC. Multiple sources of information in both schools revealed a tension between providing instruction in the ECC and the core academic curriculum. Students were reported to often enter school with academic skills below expectations and, as a result, required instructional time be spent on remedial academic skills instead of the ECC to meet state and national testing requirements. This pressure to teach academics may have resulted in a dichotomy of ECC and academics and made it difficult to integrate the two areas.

Training challenges. Both instructional and residential staff members reported learning about the ECC once on the job, through graduate education or in-service programs. Additionally, high staff turnover led to difficulty building an experienced staff. As a result, teachers, educational assistants, and residential advisors all reported a

desire for more training in basic ECC concepts, specific assessments, and instructional strategies.

Missed opportunities. In both schools, there were many opportunities for incidental and systematic instruction in the ECC, especially during less structured times (e.g., class changes). Procedures for meals were adjusted to better support systematic instruction in independent living and social skills. One school transitioned from prepared, cafeteria-style meals to self-serve, family-style meals to better approximate real world experiences. Administrators in both schools also invested resources to support instructional and residential staff supervising students during meals.

Communication inconsistencies. In both schools, instructional and residential staff overlap at the beginning and end of the school day were used to ease transitions for students. In one school, educational assistants began their work days in the dorm as students prepared for school and then moved with students through the instructional day. Residential staff began their work days at the end of the school day, allowing conversations with the instructional staff before transitioning to the dorm. This led to an increased willingness to initiate communication to solve problems and plan activities.

The physical distance of school personnel from many families led personnel to report the existing interactions (e.g., emails, IEP meetings) were insufficient to transfer skills from school to home. Personnel reported a desire to interact more with family members and coach them to reinforce ECC skills at home. One school recently hired a home-school coordinator, and the residential director in one school implemented quarterly progress reports from the dorm staff to report on skill development.

Incomprehensive focus. Instruction in all nine of the areas of the ECC was observed during the instructional day at both schools, though personnel in each school prioritized different ECC areas. In the dorm, social and independent living skills were emphasized, though little crossover was apparent between the instructional and residential units. Both groups appeared to be teaching the same skills but with different methods. Staff cited past occurrences of teacher push-in instruction after school in the dorm as instructive for the residential staff and useful for student learning.

Solutions

Expertise of schools for the blind. Staff of both schools were proud of their resources, facilities, and unique skills to provide education for children with complex learning needs and perceived their schools as excellent places to educate children with visual impairments. Because the schools were small and personnel were aware of their students' unique learning needs, personnel and instructional programming could remain flexible to the changing needs of students, providing instruction before, during, and after the school day.

Importance of school-wide "buy in." Perhaps the most critical and variable element in each school was ECC buy in. All personnel acknowledged support and commitment for the ECC, though perceived responsibility for instruction varied by individual. Administrative buy in proved essential because it allowed for the allocation of personnel and instructional time in the ECC, though the practical challenges of implementing ECC instruction remained. In one school, the administration actively advocated for dedicated ECC instructional time and shared plans to more fully integrate ECC and academic instruction in the future.

Assessment and curricula. Staff in both schools used modified versions of *EVALS* from the Texas School for the Blind and Visually Impaired. At one school, the same tool was used by all staff, and in the other school, different teacher-made adaptations were circulated by staff. Use of assessment data also varied widely for class placement and directing instructional priorities within classes. In one school, a scope and sequence for ECC instruction was in development by teachers and administrators, though all parties reported the tremendous challenge of developing the comprehensive tool.

Creativity. In both schools, staff were actively developing innovative programs to meet their students' ECC needs. In one school, a campus-wide initiative of weekly, dedicated ECC classes for all students allowed students to learn specific ECC skills (e.g., lawn care, abacus use) to mastery. The residential staff in one school developed lesson plans to guide purposeful inclusion of each student in after-school activities. One after-school program allowed students to access homework help, socialize, and practice career and independent living skills while they operated a coffee cart business. A student-directed IEP initiative provided students with opportunities to engage in their own educational processes and practice self-determination skills.

Both schools provided featured opportunities for paid, on-campus work. A cafeteria work program provided opportunities for the students to develop specific job and social skills. In one school, a full-service coffee shop provided employment for students of all ability levels and allowed opportunities to practice independent living, career, social, and academic skills. Administrators in both schools reported developing

plans for partnerships with local businesses to provide supported, paid employment in the community.

Conclusion

The staff and students of both schools revealed common challenges in providing ECC instruction, but they also shared strategies that proved useful in their schools. Further research is necessary to document the presence of these barriers and facilitators in other educational settings, but while that research is in progress, practitioners may find some of the shared strategies useful for increasing the quality of ECC instruction they provide to children with visual impairments.

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DVIBD Executive Board

President
Amy T. Parker
Orientation and Mobility Program
Graduate School of Education, Portland State University
Portland, OR
503-725-4695
atpx5@pdx.ed

Past-President
Tiffany Wild
The Ohio State University
Ramseyer Hall
29 W. Woodruff Ave.
Columbus, Ohio 43210
614-292-4783
614-292-4260 (fax)
wild.13@osu.edu

President-Elect/CAN Coordinator
Nicole Johnson
Special Education Department
Kuztown University
116 Beekey Education Center
Kutztown, PA 19530
(610) 683-4297
njohnson@kutztown.edu

Secretary
Tessa McCarthy (18-19)
Assistant Professor
Coordinator of the Vision Studies Program
University of Pittsburgh
5332 Wesley W. Posvar Hall
230 S Bouquet St
Pittsburgh, PA 15206
412-648-7308
tessam@pitt.edu

Treasurer
Lanya McKittrick
17837 1st Ave. So., PMB 2
Normandy Park, WA, 98148
lanyamck@gmail.com

Representative/Quarterly Editor
Kathleen Farrand
Arizona State University
Mary Lou Fulton Teachers College
1050 Forest Mall
Tempe, AZ 85287
Kathleen.Farrand@asu.edu

Directors
Karen Koehler (17-18)
Assistant Professor
Teacher Education
Shawnee State University
kkoehler@shawnee.edu

Adam Graves (17-18)
Deafblind Education Consultant,
Texas School of the Blind and Visually Impaired
gravesa@tsbvi.edu

Kathleen Stanfa, (17-18)
Department of Special Education
111 Beekey Education Center
Kutztown University
Kutztown, PA 19530
484-646-5869 (work)
stanfa@kutztown.edu

Karen Vay Walker (18-19)
VP of Educational Services
Allied Instructional Services,
PO Box 2214 Ashland, VA, 23005
804-368-8475
kvay@alliedinstructional.com

Carol Rimka (18-19)
Plano Independent School District
Plano, Texas
Certified Teacher of the Visually Impaired
(469) 752-8775
carol.rimka@pisd.edu

Angel Perez (18-19)
Project Director
Center for Sensory and Complex
Disabilities
The College of New Jersey
School of Education
PO Box 7718
Ewing, NJ 08628
pereza@tcnj.edu
(O)609-771-2744

Student Ambassadors
Lauren Maloney
Kutztown University
Lmalo076@live.kutztown.edu

Jacqueline Morell
Kutztown University
Jmore660@live.kutztown.edu

May Moscato
Kutztown University
Pmosc870@live.kutztown.edu