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RESEARCH FOCUS

Western Kentucky University • Communication Sciences and Disorders



- Welcome from Dr. Jean Neils-Strunjas
- Graduate Student Spotlight
- Awards & Recognitions



*Preparing students to be knowledgeable, productive
and engaged leaders in professional practice*

Welcome from Dr. Jean Neils-Strunjas



Dear Students, Faculty, and Alumni,

I invite you to read about advances in research and creative works taking place within our department. In this edition, I am especially pleased to see the growth of our current students and alumni who have been mentored by the department's faculty.

There is a national shortage of doctorally- prepared speech-language pathologists and audiologists. It is exciting to see our students and alumni—like Cara Richman and Lauren Ervin -- preparing to fill this need with WKU as their launching pad. There are several first time honors. Tanner Smith under the mentorship of Dr. Janice Smith was the first student to receive an ASHA SPARC award. Alexa Colvin, under the mentorship of Dr. Leigh Anne Roden-Carrier, was the first undergraduate student to be elected as a NSSLHA Student State Officer. Dr. Kimberly Green was the first faculty member to be selected for the Kentucky Council for Postsecondary Education's Academic Leadership Development Institute. Dr. Lauren Bland was the first CSD faculty member to provide national training for accreditation site visitors. Clinical Supervisor Ms. Rebecca Broyles was the first CSD Clinical Supervisor to receive grant funding from United Way to offer the *Hanen More Than Words Program* for fall 2017 and spring 2018 semesters. Dr. Brian Weiler is the first CSD professor to present at the prestigious Symposium on Research in Child Language Disorders in Madison, WI and publish in the journal *Language, Speech, and Hearing Services in Schools*.

Last year, Dean Neale Chumbler hosted a visit from a nursing home executive to the College of Health and Human Services (CHHS) at WKU. Several of our UG students eloquently described their research interest in the program Bingocize®. Based on their clear and convincing argument in favor of the program, the visiting executive suggested that we apply for State funding. Through collaboration with the Department of Kinesiology, Recreation and Sport and Dr. Jason Crandall and the support of Dean Chumbler, Associate Dean Vijay Golla, and Ron Wilson, who was serving as the Director of Development for the CHHS, the college was able to win one of the largest external grants awarded to WKU.

Research starts with imagining the future and dreaming about what might be possible. Certainly our department has enjoyed tremendous support and opportunity that has resulted in incredible outcomes in 2017.

Dr. Jean Neils-Strunjas
CSD Professor and Department Head

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SLP graduate students and Dr. Neils-Strunjas at ASHA in Los Angeles

Graduate Student Spotlight

Cara Richmond

(Web 14 distance Learning Cohort, 2018)

Cara Richman, from Chattanooga, TN, earned her B.A. in English at the University of Tennessee (UT) at Chattanooga in 2011, and her M.A. in Rhetoric, Writing, and Linguistics at the UT-Knoxville in 2013. Cara shares information about the research she has been involved in as a distance learning student and how other distance learning students may approach the idea of being part of a research team in the WKU Department of Communication Sciences and Disorders.



The Use of High-Definition Body Cameras in a Shopping Test of Executive Function (STEF) research project is a pilot study that seeks to design standardized procedures, valid measures, and scoring protocols for an assessment of executive function (EF) in a naturalistic setting through the use of wearable cameras.

Individuals recovering from traumatic brain injury typically have impairment of executive function and are unable to efficiently carry out goal directed tasks like shopping for items on a list. Dr. Richard Dressler is the lead investigator on the study, and it has been an amazing experience to work with him in bringing the STEF project from a mere concept to the point we are at today. We are actually running and scoring a nascent version of the test in order to rate how subjects collect a list of ten items at a Target® retail chain store. Our subjects are given two minutes to study a list of 10 everyday items. The list is discarded, and a personal GoPro® body camera is activated to track the performance of the individual completing the shopping

task. The performance of the subject is rated according to duration, efficiency, and accuracy. When the items have been collected, the subject simply leaves them in the cart, deactivates the camera, and meets the clinician back outside. Finally, the STEF protocol is scored when the clinician reviews and analyzes the GoPro® footage.

I am passionate about this research project because I truly believe that the technology we are utilizing will make a positive difference in assessing clients with deficits in EF by giving more precise information that can be used in programming effective treatment.

Although assessments of EF have typically been done with paper and pencil tests that are completed in a clinical setting, subtle deficits in EF are often missed by such tests that lack ecological validity. Attempts to replicate real-life situations to evaluate EF have been done using a virtual reality model. However, this requires specialized equipment and computer programming resources that are not readily available

to evaluators. The advent of wearable high-definition cameras ushers in an era of new and exciting possibilities for assessing individuals with mild cognitive impairment in a way that is more naturalistic, cost-effective, and convenient.

The ultimate goal of this pilot study is to collect normative data for the STEF from 10 participants between the ages of 18 and 59 who do not have a history of brain injury or other neurological disorders.

Before completing this project, I had not seriously considered whether I would like to pursue a doctoral degree after I completed my CFY and earned my CCC's. However, getting the chance to engage with this research project has made me more certain that I would like to pursue the doctoral-level studies that will allow me to conduct research in our field (and possibly teach at the post-secondary level).

I would say that—as a distance student—I had initially ruled out being able to collaborate with a professor on campus for a research project, since I thought the logistics and limited in-person availability would make such collaboration all but impossible. However, for this particular study (where we were really testing the viability of running the STEF in multiple locations throughout the region), being a distance student actually turned out to be an asset! I would tell other distance students not to immediately rule out any research opportunities with WKU's CSD program, as what they perceive as a limitation might actually turn out to be a



Cara Richman, Abbey Tolbert (both in graduate cohorts), & Dr. Richard Dressler presented their study and findings at ASHA convention in Los Angeles.

boon for the project.

Future plans for their research

We are currently looking to expand the general footprint of this project by developing a framework for other tasks such as ordering in restaurants and completing domestic activities of daily living. Dr. Dressler is also planning to pursue contacts with Houchens Industries Inc. to allow adaptation of the STEF to be run in their participating location. Now that our initial study has provided proof-of-concept, developing new protocols and measures and piloting these with recruited subjects will also continue into the upcoming spring semester. Additionally, we are looking into potential ways that this technology might be used for other populations, such as people with aphasia. I am planning to submit this expanded research in order to participate in the Clinical Aphasiology Conference, which will be hosted in Austin, TX in May of 2018.

Author: Dr. Janice Carter Smith

Congratulations to Tanner Smith on receiving an American Speech-Language Hearing Association Students Preparing for Academic and Research Career (SPARC) Award!

The SPARC Award Program is part of ASHA's strategic objective to enhance the generation and eventual implementation of clinical research. The goal of SPARC is to foster students' interest in the pursuit of PhD education and careers in academia in order to fill faculty/researcher vacancies in communication sciences and disorders (CSD).

As a SPARC Award recipient, Tanner will receive a \$1,000 stipend to support activities proposed in her research mentoring and teaching plan. Dr. Janice Carter-Smith will serve as Tanner's primary mentor to assist her in completing both her research project and a teaching experience. Their research is looking at a novel, consistent way to elicit individualized language samples and analyze their lexical diversity using a multi-factor perspective. Tanner was one of only 14 awardees in the US this year.

Author: Dr. Leigh Anne Roden-Carrier

CSD senior Alexa Colvin has been selected as Kentucky's National Student Speech-Language-Hearing Association (NSSLHA) Student State Officer. Alexa will serve a one-year term in which she will coordinate with other NSSLHA chapters, state associations, and the American Speech-Language-Hearing Association's Advisory Council.

She is also President of WKU's NSSLHA chapter and is actively involved in research within the department.



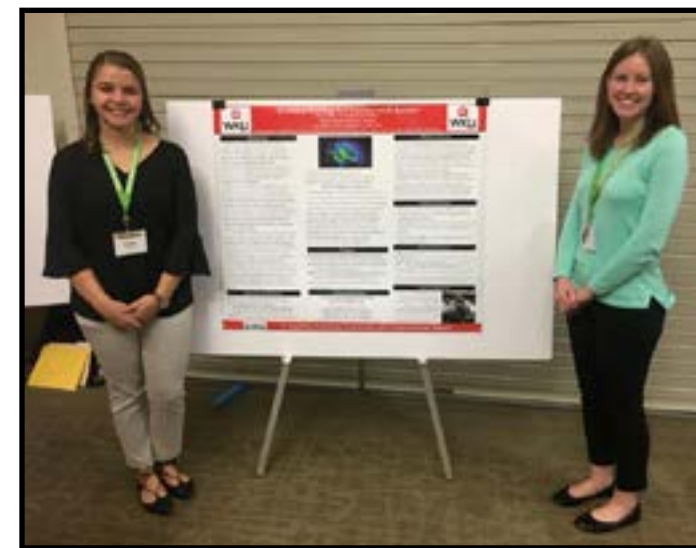
In November, Dr. Kimberly Green completed her first year in the Kentucky Council for Postsecondary Education's Academic Leadership Development Institute. A ceremony was held at the November Council meeting to recognize 19 participants from each of the Kentucky state institutions of higher education.



WKU CSD Students and Faculty Present at the Kentucky Rural Health Association Conference

The department of Communication Sciences and Disorders was well represented at the annual Kentucky Rural Health Association Conference, held in Bowling Green on November 16, 2017. Undergraduate student Haley Jones and Graduate student Megan Martin presented a poster on their RAPS (Rapid Assessment of Problem Solving) research and finding.

Dr. Jean Neils-Strunjas and first-year graduate student Lauren Stevens teamed up with Exercise Science students to present information on Bingocize®, a health promotion program to maintain and improve quality of life in a variety of populations. The project addresses the problem of disengagement and inactivity, common among persons living in nursing homes. Dr. Neils-Strunjas, Co-Investigator and PI, Dr. Jason Crandall were awarded the Civil Money Penalty Grant, United States Center for Medicare Services funded on 2-27-17 for 3 years. Students from Exercise Science and Communication Sciences and Disorders receive a Graduate Assistantship and stipend to assist with implementing Bingocize® in nursing homes throughout the State of Kentucky. CSD Associate Professor, Dr. Jo Shackelford also contributes to the project by preparing students for service learning opportunities in the Bowling Green area.



Haley Jones (left) and Megan Martin (right)



Dr. Jean Neils-Strunjas (middle left), Speech-Language Pathology graduate student Lauren Stevens (middle right), and WKU Exercise Students (Brian Clark and Kathryn Dispennette).

Dr. Brian Weiler, Assistant Professor

CSD Professor Dr. Brian Weiler was involved in a study focused on the rate of failure in kindergarten language screenings when the Rice Wexler Test of Early Grammatical Impairment was used. Dr. Weiler provides a summary of this study and its results:

Researchers Involved:

Brian Weiler- Western Kentucky University

C. Melanie Schuele- Vanderbilt University Medical Center

Jacob I. Feldman, Hannah Krimm- Vanderbilt University

This study was undertaken to address the challenge of under-identification of oral language impairment (e.g., specific language impairment or SLI, developmental language disorder or DLD) in the kindergarten population. Epidemiologic studies reveal that at least 7% of kindergarteners have a language impairment. Of critical concern, only 29% of kindergarten children meeting research criteria for language impairment had received intervention services, for example from a speech-language pathologist (SLP; Tomblin et al., 1997). Mass language screenings at the point of elementary school entry offer the potential to improve the identification of children at-risk for language impairment and subsequent academic difficulties.

The purpose of this study was to evaluate, over two separate school years, the school district-wide failure rate of kindergarteners on a screener of grammatical tense marking – the Rice Wexler Test of Early Grammatical Impairment (TEGI) Screening Test – comprised of Past Tense (PT) and Third Person Singular (3S) Probes. In the fall of two consecutive school



Dr. Weiler pictured with his family

(story continued on page 12)

CSD Department Head and Professor Published Research on Quality of Life

CSD Department Head Dr. Jean Neils-Strunjas was involved in the development of a study and recent publication in the Clinical Archives of Communication Disorders focused on determining how speech-language pathologists in the United States are implementing recommendations regarding assessment of quality of life in persons with aphasia. An anonymous survey was made available on a web-based survey platform, and findings from the study will be used to facilitate clinical intervention and care for persons with aphasia and positively influence their quality of life. Dr. Neils-Strunjas's collaborator Dr. Morrow-Odom is affiliated with Western Carolina University and Dr. Moser is from University of Arkansas.

Citation:

Morrow-Odom, K. L., Moser, D. C., & Neils-Strunjas, J. (2017). Current practices in the assessment of quality of life in individuals with aphasia. *Clinical Archives of Communication Disorders*, 2(2), 185-195. doi:10.21849/cacd.2017.00143

More than Words Hanen Program at WKU

Author: Rebecca Broyles

We are excited to share that, after being awarded with grant funding from United Way, the Suzanne Vitale Clinical Education Complex has been able to offer the *Hanen More Than Words* program for Fall 2017 and Spring 2018 semesters.

More Than Words is a parent training program that was designed specifically for parents of children ages five and under who on the autism spectrum with other social communication difficulties.

Led by Rebecca Broyles, Hanen MTW certified speech language pathologist, and supported by CSD graduate assistant Katy Ward, the program is providing parents with the tools, strategies and support they need to help their children reach their full communication potential in their daily lives.



(story continued on page 10)

RAPS, DiXit, and ADR Projects- Undergraduate and Graduate Research Students

Exciting things are happening in Dr. Janice Smith's Communication Sciences and Disorders Student Research Lab! Undergraduate and graduate students are continuing to make progress towards the development of their respective studies. Listed below is information about the studies that are underway:

- Problem Solving in Children with Autism (using the Rapid Assessment of Problem Solving- RAPS)

Primary Investigators: Haley Jones & Megan Martin
Research Mentors: Dr. Janice Carter Smith and Dr. Leigh Anne Roden-Carrier

- DiXit Method of Language Sampling in Early Adolescence

Primary Investigator: Tanner Smith
Research Assistant: Allison Glascock
Research Mentor: Dr. Janice Carter Smith

- Parent-Implemented Dialogic Reading with Children with Autism (using Adapted Dialogic Reading- ADR)

Primary Investigator: McKenzie Ward
Research Assistant: Hannah Perdew
Research Mentor: Dr. Janice Carter Smith

During the summer and fall of 2017, CSD student teams have been moving along in their next stages of research development. After receiving funding from various grants, they are continuing the production phase of their research. This phase includes developing curriculum for ADR studies, producing assessment kits for RAPS and DiXit, recruiting subjects and research assistants, and completing training materials for parent ADR workshops, teacher DiXit workshops, and RAPS administrator training. The next phase for all of the above projects will be data collection. Research teams are synthesizing and analyzing literature they have reviewed.

For more information on these students' projects and their developments, view their research blog at: the-csd-researchsquad.blog.wku.edu

Ms. Allison Hatcher - Dissertation

Allison Hatcher, a WKU Communication Disorders Clinic (CDC) clinical supervisor and instructor, successfully defended her dissertation at The University of Kentucky on November 13th.

Mrs. Hatcher investigated a parent-implemented language intervention training program for parents from low-income environments who have children with language impairment (LI).

Mrs. Hatcher examined the effects of training parents from low-income environments to use Enhanced Milieu Teaching (EMT) with their young children with LI. She used a Teach-Model-Coach-Review method to train parents to use four specific EMT strategies during individualized, home-based sessions. A single-case, multiple-baseline design across-behaviors, replicated across four parent/child dyads was used to evaluate the parents' use of the EMT strategies. Child language outcomes were also assessed using pre- and post-intervention language samples. All parents learned and demonstrated use of each language support strategy at or above set criterion levels.

Results from this study indicated a functional relation between the brief parent-implemented language intervention training and parents' use of language support strategies. Additionally, all four children demonstrated variable gains in expressive language. Additional research is needed to assess dosage of parents' use of strategies on specific child language outcomes and to determine how to facilitate maintenance of parents' use of strategies over time. Mrs. Hatcher will receive her Ph.D. in Rehabilitation Sciences in December.



(More Than Words Hanen Program at WKU story continued from page 8)

The program has three major components: 1) Pre-Program Consultation including assessment and baseline video-recording of parent/child interaction; 2) a minimum of 17.5 hours (seven sessions) of group training for parents; and 3) three individual video feedback sessions with the parent and child for each parent attending the program. Families are recruited through referrals based on a first come, first serve basis with an interagency collaboration between the Renshaw Early Childhood Center, the WKU Communication Disorders Clinic, and the Bowling Green Independent School District.

Research Abroad: Teaching and Coaching Caregivers in a Guatemalan Orphanage to Promote Language in Young Children

Author: Allison Hatcher, M.S., CCC-SLP



Dr. Hatcher in Guatemala

Allison Hatcher, a speech-language pathologist and Clinical Supervisor for the Department of Communication Sciences and Disorders at WKU, partnered with Dr. Jennifer Grisham-Brown, a professor from the Department of Early Childhood at the University of Kentucky, while completing a collaborative research project during a UK education abroad in June of 2016. Researchers traveled to Guatemala to investigate a brief

caregiver-implemented language intervention with caregivers in a family-style orphanage in Guatemala City. Research shows a critical need for improved caregiver responsiveness and language learning opportunities in institutionalized settings in Latin American countries. Additionally, research on caregiver-implemented interventions for caregivers from culturally and linguistically diverse backgrounds is much needed.

Mrs. Hatcher served as the PI and used a single-case, multiple-baseline, across behaviors design that was replicated across two caregivers to examine the effects of the intervention on caregivers' use of three specific naturalistic language support strategies across multiple contexts (snack time, joint storybook reading and play). Components of the intervention included teaching and coaching caregivers using an interpreter to use evidence-based, naturalistic language support strategies with young children with or at risk for language impairment (LI) who lived in the orphanage. Results of the study indicate this brief caregiver-implemented intervention program was effective for teaching caregivers to implement language support strategies with fidelity. Recommendations were made for future research as

(story continued on page 12)

(Research Abroad story continued from page 11)

well as implications for policy and practice. This research has recently been accepted for publication in Journal of International Special Needs Education. This will be the first published study on a caregiver-implemented language intervention with Spanish-speaking caregivers in an institutionalized setting in a Latin American Country.

(Dr. Weiler Study story continued from page 7)

years, consenting and eligible kindergarteners (n = 148 in Year 1; n = 126 in Year 2) in a rural southern school district were administered the TEGI Screening Test. Children who failed the Screening Test or either of the individual probes (PT or 3S) were administered the Primary Test of Nonverbal Intelligence. All children also completed the Test of Articulation Performance – Screen and, in Year 2, the Get Ready to Read! emergent literacy screener.

The screening tool outcome most closely and consistently aligned with the recommended failure rate of ~30% (Oetting et al., 2016; based on Tomblin et al., 1997) was the TEGI PT Probe. TEGI Screening Test and 3S Probe failure rates fell below the recommended level. The majority of children who failed the PT Probe demonstrated nonverbal intelligence skills within the average range. Additionally, the majority of children who failed the PT Probe would not have been readily identified based only on the results of their articulation or emergent literacy screenings. To identify children at risk for language impairment, it is therefore necessary to directly screen oral language.

***Note – the results of this study were presented at the 2017 Symposium on Research in Child Language Disorders in Madison, WI. A manuscript for this study has been accepted for publication and is in press at the journal Language, Speech, and Hearing Services in Schools.

CSD Alumni Spotlights



Megan French

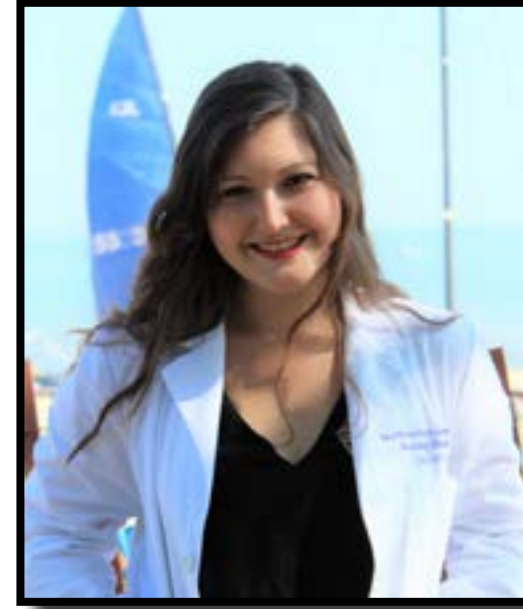
B.S. in Communication Disorders, May 2016

I am currently in my second year of graduate school at the University of Cincinnati and was privileged to interview and receive a stipend externship at the Cincinnati VA Medical Center. I am from a military family, so this externship has been a unique opportunity and a special honor.

I have spent the semester primarily in the acute care setting and have cultivated a genuine interest in dysphagia and modified barium swallow studies. I have also had the opportunity to assist in quality improvement research at the University

of Cincinnati's /r/ Clinic. This clinic uses ultrasound to provide visual biofeedback for individuals with persistent /r/ articulation difficulties. We will be presenting our findings at the University of Cincinnati PRAISE research conference next spring.

In addition, I am excited to be a part of a pilot course called Interprofessional Teamwork and Learning Communication along with students from Rehabilitation Sciences, Social Work and Nutritional Sciences. The goal of the pilot course is to encourage inter-professional communication for disciplines in the College of Allied Health Sciences and to provide feedback so the course can be available to all students within the college in the future. As I complete my final requirements, I remain grateful for the exceptional foundation provided to me through the WKU CSD program. While I am a Bearcat now, I will always be a Topper at heart!



Lauren Ervin

B.S. in Communication Disorders, May 2016

I am currently in my second year of the Doctorate of Audiology program at Northwestern University in Evanston, IL. . This is an accelerated program, so this will be my final year on campus and taking classes before I move onto my year-long externship (location unknown at this point as I am still applying to the majority of them), and then - graduation!

Right now I am completing my first clinical rotation at GN ReSound as a research audiology student. ReSound is one of the big hearing aid manufacturers, so it's been really interesting to learn all the nuances and test parameters that go into ReSound's processing and software. Also at the moment I am working with Dr. Killion, Ph.D on my research capstone, which is looking at how individuals with cochlear dead regions utilize their access to high frequency sound cues.

ASHA 2017 Presentations

Several CSD students and faculty attended this year's American Speech-Language Hearing Association's national convention in Los Angeles. The convention took place November 9th-11th with "Focus on the Big Picture" as its theme. Listed below are the presentations made by CSD's faculty members at ASHA 2017:

- "Using a Body Camera to Assess Executive Function"
– Cara Richman, Abbey Tolbert, & Dr. Richard Dressler (Poster)
- "Enhancing Skills as a Site Visitor" & "CAA Site Visits: What to Expect, How to Prepare"
– Dr. Lauren Bland

- "Engaging Undergraduate Students in Interactive Learning Experiences"
– Dr. Leigh Anne Roden-Carrier
- "Sign & Say: Signing to Maintain Joint Attention in Children with Down Syndrome"
– Dr. Janice Carter Smith
- "Interdisciplinary Course Development & Implementation in an International Setting"
– Dr. Kimberly Green