

Washington State University, College of Education

A Note From The Program Coordinator Dr. Brian French

Happy Fall Semester! As I write this note, the campus is busy with Halloween activities, blowing and swirling leaves, and a bit of anticipation for our first snow this weekend. As our days become shorter and darker, I hope the fun and exciting news presented below brings light to your day or night as you read.

In this edition, we highlight faculty and current and past student achievements. You will see plenty of evidence that our program is finding success by contributing high quality research to our fields and beyond. It is a pleasure for me to be part of such a lively, fun, and productive group.

2017 Program Highlights:

- 1) We welcomed 3 new Faculty in Fall 2017: **Dr. Zoe Higheagle Strong, Dr. Shenghai Dai, and Dr. Robert Danielson**. Our program doubled in size in terms of our tenure-line faculty. We look forward to their continued success, and growing our student population.
- 2) Faculty and students presented their work and built collaborations at several national and international conferences. There was also a bundle of quality publications released from our group! I encourage you to chat with your colleagues about the exciting work they are doing. Simply ask: "What are you working on?" to start a conversation.
- 3) Our 5th LPRC methodology workshop focused on Bayesian Statistical Analysis. What a success! Thank you Dr. Roy Levy from Arizona State University! The group represented no less than 5 colleges. Look for our next workshop in May 2018.

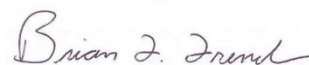
Inside This Issue

A Note from the Program Coordinator	1
3 Minute Thesis	2
Recent Graduate Updates	2, 3, 4
New Tenure Line Faculty	3,6
Student Internship Experience	5
Project Updates	5, 7, 8

- 4) The MERIT laboratory under the direction of Dr. Kira Carbonneau and Dr. Sola Adesope has moved to a larger and more inviting space. Ask to have a look inside or ask what type of research they are engaged in with the lab.
- 5) Dr. Sola Adesope was named the *Boeing Distinguished Professor of STEM Education*. Congratulations Sola!
- 6) I say thank you to a colleague, a scholar, and a friend. Dr. Sola Adesope has led our program as coordinator for the past two years. The thank you is not just from me, but from the entire student and faculty body. We appreciate your leadership and countless hours you have spent ensuring our program is strong. Thank you Sola! We will miss you during your sabbatical.

I hope you all have had a wonderful start to the 2017-2018 academic year. I wish you all success in your work.

With appreciation,



Program Statement

We apply advanced methodologies to answer applied and basic research questions in the context of complex educational environments. We develop leaders who possess the knowledge, skills, and abilities to transform educational environments.

3 Minute Thesis Julie Noyes, DVM



Congratulations to Dr. Julie Noyes, doctoral student in Educational Psychology, for earning second place in the 2017 3 Minute Thesis competition on March 28. When asked about the experience, Julie had this to say:

The 3 Minute Thesis competition helped me develop the ability to convey my work using concise and accessible language. In less than 400 words, I discussed the core of my research program that involves designing simulated operating room environments and implementing teaching strategies to help veterinary students train for high risk procedures in a low-risk but very realistic setting. I described how the students use real anesthesia and surgical equipment with simulated patients that have physiologic parameters that respond to the learner's decision-making. I also mentioned the series of empirical studies I conducted which demonstrate an increase in knowledge, self-efficacy, and clinical skills for students trained in the simulated environment.

The greatest benefit to participating in the competition was developing the skills to effectively communicate the complexities of my research to an audience without a background in medicine, technology, or research. In fact, in response to inquiries about my work, I have "presented" my 3 Minute Thesis to friends, family, and even some friendly passengers seated next to me on a plane.



2017 3 Minute Thesis Winners

Left to right: Zachary Cartwright (Third Place, CAHNRS), Dan Bernardo (Provost & Executive Vice President), Panshak Dakup (First Place, College of Pharmacy), Julie Noyes (Second Place, College of Education).

Recent Graduate Highlight Yahu Ye

I am currently working at Jincheng College of Sichuan University which is a four-year public university located in Chengdu, China as an Assistant Professor who teaches three courses this semester including English, Education, and Psychology. The college, mainly teaching-oriented, aims to provide comprehensive courses and practical experience for students. Unlike many other research universities in China, our university has been focusing on practical experience instead of theoretical knowledge, expecting students could be well prepared for their career. For instance, students who major in literature and other social sciences are required to learn how to develop a website, write code, and obtain computer science skills to meet the need of the market.

Besides teaching three courses, I work with two commercial companies to provide consultant services for students, parents, and education administrations. Specifically, I work with a private Chinese elite educational institution as an educational consultant and psychological counselor to develop educational products, and answer questions for parents and students who plan to study abroad. I also work at a cultural company which aims to develop study-tour programs for K-12 students.

I am initiating one research program that explores the relationship between the frequency students use their smartphone and their social circles/family relationship to examine if the lacking of emotional care is responsible for the smartphone addiction among college students through quantitative and qualitative methodology. I am a member of a cross-universities Confucius research center in which we members will discuss, research, and publish topics and papers concerning the contributions and theories of Confucius and the application of his theories in the modern age.

One thing I wish I had learned more before graduation about how to negotiate my work treatment, benefits, and salaries with employers.



New Tenure-Line Faculty

Robert Danielson



Where did you get your degrees?

I received my BA and MA from California State University, at Chico, and my Ph.D. was from the University of Southern California.

How did you wind up in Ed Psych?

I was getting my master's degree at CSU Chico and I was bitten by the "research bug". I was always fascinated by how people learned, and what was even more interesting to me was when this learning failed. Why did some students learn more from lectures than others? How could two people read the same book and walk away with different understandings? How do people find the answers to their questions online? It was at Chico that I started to learn how to form these questions and the tools to investigate them. I then went to USC to find some more answers.

Where were you before you started your current position?

I was a graduate student at USC.

What are your research interests?

How graphics and epistemic cognition influence learning and conceptual change about STEM and socio-scientific concepts.

Who are your main collaborators?

Recently I have been working with Gale Sinatra at USC, Doug Lombardi at Temple University, and Ben Heddy at the University of Oklahoma, but I am looking forward to collaborating with many great scholars here at WSU as well!

What is your favorite conference to attend?

Probably the European Association for Research on Learning and Instruction (EARLI). It is a great conference, more relaxed than AERA, and always held in excellent locations. There are also ample coffee breaks, something that AERA is seriously lacking.

What is your favorite class to teach?

Well, I am teaching Ed Psych 502 right now and I am really enjoying it!

2018 Annual Meetings

New York, NY

AERA

April 13-17, 2018

www.aera.net

NCME

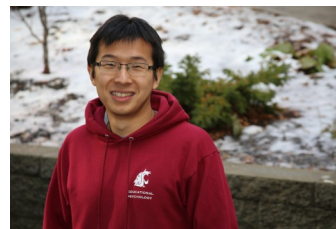
April 12-16, 2018

www.ncme.org



Recent Graduate Highlight

Zhe 'Joey' Wang



I am currently working as a postdoc researcher in the College of Education at WSU. I will join the Faculty of Education as an assistant professor at East China Normal University next year.

I am currently working with the Department of Chemistry on a project on how to use concept maps to improve the learning of chemistry. I am also teaching a graduate-level foundational course in education at WSU.

I had an incredible experience studying in the educational psychology program. All of the faculty and classmates were tremendously helpful when I was working on my dissertation. I would have not been able to accomplish what I have accomplished without the generous support from them. The rigorous training in both research and teaching I have received from the program have equipped me with knowledge, skills, and professional attitudes, which paved the way for my career and finally led me to successfully securing a tenure position in academia.

Visitor Avi Kaplan



Avi Kaplan, an Associate Professor of Educational Psychology from Temple University, spent two days with faculty and graduate students in the Fall semester on the Pullman campus. Avi is an expert in student motivation, self-regulation, learning environments, and self and identity development. Avi provided scoring training for a new assessment involving written response to item prompts that assess a student's motivation and development related to college success. We are implementing this measure with the TCI project this year. In addition to training, Avi gave a graduate seminar talk to faculty and students from Educational Psychology and Prevention Science.

Alumni Update Antonio Valdivia



Juan Antonio Valdivia Vázquez earned his Ph.D. in Educational Psychology in 2014. He is currently the Director of Research at Universidad Tecmilenio in Monterrey, Mexico. His responsibilities include developing a research line to understand how positive psychology elements affect students' development. He is working on the validity aspects of the instruments used to evaluate these elements; afterwards, he plans to conduct longitudinal research to see if positive psychology characteristics provide personality development with life healthy aspects. Prior to his current position, Antonio spent 10 months at Tecnológico de Monterrey as a postdoctoral researcher. As a postdoc he participated in a project related to understanding characteristics MOOC participants have to attend and finish a course. He helped with developing initial and ending measurements to evaluate MOOC participant's profile. Before his postdoc position he was in College Station, Texas, where he worked as an external research consultant for Universidad Autonoma de Nuevo Leon where he designed projects to adapt psychological tests to Spanish language (basically, emotional intelligence tests).

Recent Graduate Highlight Nathaniel Hunsu



What is your current job?

I am currently an Assistant Professor of Engineering Education at the University of Georgia in Athens. I have both research and teaching duties

in the School of Electrical and Computer Engineering in the College of Engineering at UGA.

What research and scholarship are you engaged in within your current position?

Problem solving skills are crucial in the professional formation of engineers. However, many undergraduate engineering students have difficulty learning in foundational engineering courses because they lack skills crucial to problem solving. Currently, my research focuses on identifying the roles of conceptual understanding and students' learning and study strategies on their ability to solve engineering problems.

What do you wish you had known before finishing your degree?

I wish I had had experience with forming collaborations outside of academia, both with establishing K-12 collaborations and with entities that provide educational solutions outside of academia. I also did not afford myself of any opportunity to engage in event planning; either webinars or conference panels, which are part of the expectations in my current role.

Any other comments about your graduate school experience related to your current position?

I appreciate the faculty support I received in doing basic and applied research during graduate school. I also appreciate the opportunities I had to co-write grant proposals while in the college. These earlier exposures are proving to be invaluable in my current role.



Student-Centered Assessment



Over the last few years, Dr. Chad Gotch has built a strong relationship with the Oregon Department of Education (ODE), working on initiatives to build teachers' and administrators' understanding and skills related to student assessment. For the 2016-17 school year, Dr. Gotch along with Dr. Marcus Poppen, a Faculty Affiliate in the Learning and Performance Research Center, and Ph.D. student, José Razo, led an evaluation of three statewide programs. These programs aimed to improve educators' capacities related to formative and performance assessment. Collectively they were known as the Student-Centered Assessment Initiative.

Throughout the year, the evaluation team attended training sessions, observed community of practice meetings at the participating schools, surveyed and interviewed teachers and principals, and examined videos of teachers implementing their newly learned skills in the classroom. Over 500 teachers and administrators from across the state participated in the programming. The evaluation showed these participants made gains in involving students in definitions of successful learning, aligning assessment activities to state learning standards, and working together to build their understanding and teaching practice.

While providing valuable feedback to ODE on their programming, the evaluation team also brought back lessons learned from the experience. Dr. Gotch and José Razo have applied resources provided in the programs to the classroom assessment courses that soon-to-be teachers take in their preparation program at WSU. Dr. Gotch has also connected observations from the project to his work in teacher assessment literacy, presenting a model for sequencing professional learning topics with teacher educators from the Educational Testing Service at the conference on Classroom Assessment and Large-Scale Psychometrics convened by the National Council on Measurement in Education in Lawrence, Kansas, in September 2017. Dr. Gotch, Dr. Poppen, and Razo will also present some of their work at the annual meeting of the American Educational Research Association next April in New York City.

Student Internship Experience

Ed Psych doctoral graduate student Andrew Iverson took part in a 10-week internship with American Institutes for Research (AIR) in Washington, D.C. during the summer of 2017.

About the Internship

During the internship, Andrew received training in survey analysis, on specific nationally representative data sets, etc. He also was part of three project teams:

1. Investigating early childhood reading development (K-3rd grade) using growth trajectories and growth mixture modeling.
2. Linking student high school transcripts to student success on the NAEP.
3. Connecting student self efficacy in and exposure to technology and engineering to their success on the NAEP's subtest focusing on technology and engineering literacy (TEL).

Andrew's takeaways from the internship

- Experience in fields that I would not otherwise have:
 - Survey Analysis
 - Working with the nationally representative data sets
- Experience sitting in on panels and boards:
 - NAEP Validity Studies Panel
 - NAEP Governing Board
 - Presented my poster at this Board
- AERA/NCME submissions
 - Combined, I am on 4 submissions
- Potential to publish 1 to 2 papers
- Connections made with other graduate students and AIR professionals

Andrew's advice for other students



My main piece of advice to other students is that this is a very rewarding experience as it broadens your education and provides access to new experiences that you will not have access to at your home university. I do also advise students to apply early and often, as these are very competitive positions.

New Tenure-Line Faculty

Shenghai Dai



Where did you get your degrees?

I obtained my Ph.D. degree in the Inquiry Methodology program at Indiana University Bloomington (IUB). I

also got my M.S. degree in Applied Statistics at IUB, my M.A. and B.A. degrees in Language Testing and Teaching Chinese as a Second Language at Beijing Language and Culture University.

How did you wind up in Ed Psych?

It is a wonderful and well-known program that perfectly fits my research interest and area of expertise, allows me to teach the methods courses I like, has a group of wonderful people (now my dear colleagues). And I do like the peace in Pullman and sunsets on the Palouse.

Where were you before you started your current position?

Before I came to WSU, I was a Ph.D. candidate at Indiana University and also a research assistant in the Indiana Institute on Disability and Community.

What are your research interests?

My research interests mainly lie in the investigations of the performance and utility of current and emerging measurement frameworks that can provide formative and diagnostic information about student learning and achievement in various assessment settings. Particularly, I am interested in both methodological and applied aspects of (multidimensional) item response theory models, cognitive diagnostic models (CDMs), subscore reporting, differential item functioning (DIF), and large-scale assessment. I am also interested in applying quantitative methods, such as missing data analysis, structural equation modeling, and multilevel modeling in broad educational contexts.

Who are your main collaborators?

My main collaborators include both methodologists in psychometrics and educational research, and applied researchers from diverse substantive fields such as STEM education, second language studies, public health, and early childhood education.

What is your favorite conference to attend?

My favorite conferences are annual meetings of The American Educational Research Association (AERA) and The National Council on Measurement in Education (NCME).

What is your favorite class to teach?

I like teaching quantitative research methodology and educational measurement courses at both introductory and advanced levels. Currently my favorite class to teach is ED_RES 565 (Quantitative Research) that I am teaching this semester.

What are your hopes and aspirations for the Ed Psych program?

It is a great program. Let's keep up with the great work!

What is something surprising that people might not know about you?

I am also good at cooking.



Giving Back

Alumni and Friends: Consider giving back to support the Educational Psychology program. Donations can support a variety of program pillars from research hardware and software to student travel and research positions. For information on how you can help us grow please contact Brian French (frenchb@wsu.edu).

ISTEM Project Update

Culturally Responsive Indigenous Science (CRIS): Connecting Land, Language, and Culture for Indigenous STEM (ISTEM) Education – \$2,481,274 NSF Grant Award

Dr. Zoe Higheagle Strong (Co-Principal Investigator) and Dr. Sola Adesope (Evaluator) are part of an interdisciplinary grant team in the College of Education that was recently awarded a four-year, \$2.5 million grant from the National Science Foundation to increase Native American students' STEM learning, engagement and achievement. Other key researchers on this team are Dr. Paula Groves Price (PI, College of Education) and Dr. Kim Christen (Co-PI, Center for Digital Scholarship & Curation, College of Arts and Sciences).

The project catalyzes new approaches to Indigenous Science learning in grades 4-9. The "I" in ISTEM holds multiple meaning—Indigenous, integrated, iPads/technology, Internet, imagination, and innovation. ISTEM also approaches teaching, learning and assessment from Indigenous knowledge systems. A key element of this project is the use of innovative resources, models and tools that embody the ISTEM philosophy and practice

In collaboration with three different Northwest tribes located in three different states (Oregon, Washington, and Idaho). The research team seeks to develop and examines the effects of ISTEM curriculum and instructional strategies that integrate tribal knowledge and western science by utilizing Indigenous knowledge systems, land education and digital tools to connect culture, language and land with science. Our educational psychology faculty (Drs. Strong and Adesope) will contribute their expertise in indigenous education, curriculum design, instructional design, multimedia learning, research design and evaluation to make the ISTEM project a success. We are excited about this project and the many opportunities our faculty will have to work with other researchers as well as our students in tackling a grand challenge problem of diversifying post-secondary STEM fields to include more Indigenous and Native American students.

ELL-IMPACT Update

An update from Dr. Kira Carboneau (Co-Principal Investigator) on the first year of progress of a five-year, \$2.2 million grant from the U.S. Department of Education. Other researchers for this project include Gisela Ernst-Slavit (PI, WSU Vancouver), Yuliya Ardasheva (Co-PI, WSU Tri-Cities), Sarah Newcomer (Co-PI, WSU Tri-Cities), and Judy Morrison (Co-PI, WSU Tri-Cities):

The ELL-IMPACT grant is off to a great start! The grant is focused on increasing the number of teachers who hold an endorsement in teaching English Language Learners (ELs). Overall, we have 16 of our 52 paraprofessionals on the Tri-Cities and Vancouver campus who started coursework during the summer and now are actively teaching while they continue coursework at night.

In addition to increasing the number of certified teachers, we hope to improve parental, family and community engagement classroom practices as well as small group instructional strategies. To accomplish these goals, we have spent last year observing teachers to take an inventory of current strategies already being used in the classroom. In the future, we hope to test the efficacy of these practices through a series of quasi-experiments.

As we look to the future, we will focus on 1) the recruitment of our second cohort of teachers; 2) work on the retention of participants through the program; and starting next year 3) collect classroom level data on instructional strategies.

MERIT Lab

Located near the LPRC
Cleveland Hall Room 51

For more information
<https://labs.wsu.edu/merit/>

WARNS Project

The Washington Assessment of the Risks and Needs of Students (WARNS) is a brief (53 to 74-item) self-report measure for 13 to 18-year-old youth designed to allow schools, courts, and youth service providers to assess individual risks and needs that may lead to truancy and/or school failure, and to target interventions accordingly. The WARNS takes approximately 10 to 30 minutes to administer and measures both the past and current experiences in several domains that are critical to healthy social, emotional, and educational development.

The WARNS can be administered online via remote access to a secure server located at Washington State University (WSU). The Learning and Performance Research Center at WSU is responsible for overseeing all aspects of the administration and use of the WARNS. We have also made a middle school version of the WARNS available for use with children 11 to 13 years of age.

WARNS is intended for counselors, case managers, and other individuals working with at-risk youth. The WARNS Report, generated online at the end of an assessment, provides a way to quickly gather and synthesize important information about a youth's developmental experiences and current functioning. It is best used during the initial stages of engagement with the youth to better understand his or her specific risks and needs. The report is a way to facilitate and guide conversations, and develop a successful intervention plan. Counselors have reported that youth appreciate knowing how they score in each domain and often volunteer information that they would not have provided under a normal conversation with a school official.

WARNS is administered using our Portal for Supporting Successful Outcomes (PSSO; pronounced pea-so). PSSO is a dynamic reporting and user management system that improves the delivery of the WARNS assessment to stakeholders. PSSO allows school and agency personnel to make data-driven decisions about students most in need of resources in Washington State and throughout the nation.



PSSO provides stakeholders with the following features:

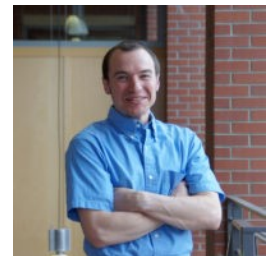
- 1) A nested data collection and management system (e.g., schools within districts within regions).
- 2) Multiple user access levels and permissions for data entry, reporting, and management.
- 3) Automated reporting on respondent data.
- 4) The ability to recreate any youth WARNS report.
- 5) Longitudinal tracking of youth progress with multiple assessments.
- 6) A data download feature to allow you to analyze real-time data with your own software.

More information is available on the WARNS website: warns.wsu.edu.

WARNS Project Team



Paul Strand



Brian French



Nicholas Lovrich



Bruce Austin

Psychometric Lab

*Located within the LPRC
Cleveland Hall Room 80*

For more information

<https://labs.wsu.edu/psychometric/>