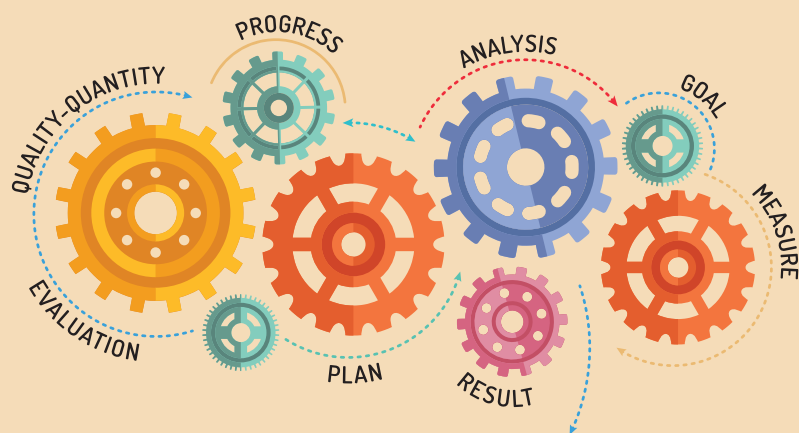


# RESEARCH INNOVATION

Research in Georgia State University's College of Education & Human Development • Fall 2016



The College of Education & Human Development created the **Dean's Doctoral Research Fellowship** to recognize newly-admitted doctoral students for their outstanding scholarly accomplishments and academic potential. As fellows, they receive funding that supports their research projects and helps them become scholars who make significant contributions to their field of study.

## My Good Fellow(s)

This issue of *Research & Innovation* highlights a selection of their research.

## Hop, Skip and Jump to Better Movement

### Beerse, Wu help children with Down syndrome improve leg stiffness



**Matthew Beerse**

**Field of Study:**  
Biomechanics

**Major Advisor:**  
Jerry Wu

Children can often switch from running to walking to jumping as quickly as you can shout, "Ready, set, go!"

Doctoral fellow Matthew Beerse and Jerry Wu, director of the College of Education & Human Development's Center for Pediatric Locomotion Sciences, asked children with and without Down syndrome to hop in place and walk on a treadmill as part of a study aimed at analyzing children's control over a biomechanical concept called *leg stiffness*.

"For running and hopping, usually the stiffer the leg the faster the movement, but there is a greater risk for injuries to bones. The less stiff the leg, the slower the movement and the greater the risk for injuries to muscles, ligaments and tendons," Beerse explained. "So the control of leg stiffness is important for children because they are constantly changing the speed of their movement as they run, jump and play."

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## { HOP, SKIP AND JUMP *continued* }

Beerse and Wu found that children without Down syndrome demonstrated an adult-like hopping strategy and pattern while those with Down syndrome had difficulty coordinating multiple hops in a row and weren't as able to change their hopping speed and leg stiffness accurately.

With this information, Beerse and Wu hope to create an intervention for children with Down syndrome using a mini trampoline to help them successfully hop in place multiple times.



“Children with Down syndrome have already demonstrated the ability to improve their motor skills with visual instruction and successful practice,” he said. “We propose that the skills and control practiced on the trampoline will carry over to hopping, jumping and running in their everyday lives.”

## Parents and Teachers Weigh In On “School Readiness”



*Ellen Litkowski*

**Field of Study:**  
Educational  
Psychology

**Major Advisor:**  
Maggie Renken

*School readiness.* These two words can have very different meanings to teachers and parents, as doctoral fellow Ellen Litkowski discovered in her most recent research project.

Her project facilitated three focus groups – one for teachers of preschool and Pre-K students, one for parents of preschoolers, and one for parents of Pre-K students – to determine what skills each group believed were most important for children to succeed in school.

“While parents of Pre-K students emphasized the importance of appropriate behavior, structure and formal learning activities, teachers believed that parents had a different view of when learning takes place and emphasized the value of conversations and play,” Litkowski said. “Preschool parents did not discuss academic skills but rather focused on the importance of abstract qualities for their children's success, such as independence and creativity.”

These differences in opinion may cause tension between home and school environments, so it's important for educators and parents to consider each other's perspectives and look for common ground.

“Future interventions might promote stronger communication between these two groups, allowing for a shift in perspective about developmentally-beneficial tasks as well as the value of learning through play,” she said.





## Current Events + Math

Students probably expect to discuss current events from the European refugee crisis to gender bias in video gaming in their social studies classes. But what if math teachers brought these issues into their curriculum?

During the 2015-2016 school year, doctoral fellow Susan Cannon, with support from her major advisor and Assistant Professor Stephanie Behm Cross, observed and interviewed a middle school current events math class as students deconstructed statistics from news reports and developed statistics to better understand major events.

In doing so, Cannon and Cross found that considering current events in math curriculum allowed students to use statistics in real-world contexts and opened their eyes to the nuances present in any major news story.

“This course asked students to question the taken for granted ‘truth’ of numbers and to consider how those numbers are constructed,” Cannon explained. “The students rose to this challenge and were able to critically read the news and then go out and find data so that they could better evaluate what was going on in the situation being reported. They also became aware of their own biases and bias in the media as they worked with various topics across the school year.”



*Susan Cannon*

**Field of Study:**  
Middle Level Education

**Major Advisor:**  
Stephanie Behm Cross



## Can You Remember This?

Short-term memory allows someone to recall information from the immediate past for a relatively short time.

Working memory, on the other hand, refers to the active processes involved in manipulating this information.

Doctoral fellow Amani Talwar and Professor Daphne Greenberg examined the relationship between reading comprehension and these two types of memory among adults who struggle with reading.

Talwar and Greenberg’s study found that short-term memory is a stronger predictor of reading comprehension for struggling adult readers than working memory, even after taking other variables, such as age, word reading, fluency and oral vocabulary, into account.

“Due to the high correlation between working memory and achievement in literature, memory researchers often measure working memory instead of short-term memory when studying complex constructs, such as reading comprehension,” Talwar explained. “But this may not be the best practice for struggling adult readers. Our study provides evidence for a relationship between short-term memory and reading comprehension. Researchers studying struggling adult readers may find it more meaningful to measure both types of memory.”



*Amani Talwar*

**Field of Study:**  
Educational Psychology

**Major Advisor:**  
Daphne Greenberg

# African-American girls address identity, sexual harassment in schools



Researchers in the college's Center for the Study of School Safety, School Climate and Classroom Management developed a research-based, interactive curriculum promoting critical thinking and decision-making skills to help keep adolescent girls safe and enhance their well-being.

Doctoral fellow Johari Harris-Ward and her colleagues used this curriculum, called Project P.R.E.V.E.N.T (Promoting Respect, Enhancing Value, Establishing New Trust), in a recent study exploring how African American girls' experiences with popular media affects their sense of identity and issues concerning sexual harassment emerged from the data.

Participants shared experiences of verbal and/or physical sexual harassment by male students at their school and



**Johari Harris-Ward**

**Field of Study:**  
Educational Psychology

**Major Advisor:**  
Ann C. Kruger


said this behavior often happened during the school day when teachers were less likely to be present, like class transitions or recess. The participations also felt teachers and administrators weren't providing the support they sought when relaying incidents. Similar to past findings of sexual harassment in schools, teachers and administrators expected African-American girls to police their sexuality rather than communicating appropriate behaviors to male students.

Given these findings, subsequent interventions shifted focus on helping both male and female adolescents create and maintain healthy relationships while including teachers and administrators in the conversation. "It's important that interventions focus on and provide support for both Black males and females, considering they are both vulnerable to messaging that implies sexual harassment is OK," she said.

Moving forward, she's working with her colleagues to develop a curriculum that is reflective and responsive to students' needs and inclusive of school and community stakeholders.

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## How do teachers find professional autonomy? Start with popular culture



**Kayla Myers**

**Field of Study:**  
Early Childhood and Elementary Education

**Major Advisors:**  
Stephanie Smith and Susan Swars Auslander

How do teachers make sense of their own professional identities?

Doctoral fellow Kayla Myers teamed up with Susan Cannon, another doctoral fellow, and Assistant Professor Sarah Bridges-Rhoads to find out how preservice teachers talk about and practice professional autonomy and freedom.

Myers and her colleagues have collected data from students' course assignments, in-class activities and students' conversations with faculty about the way teachers are portrayed in various contexts, including popular culture, educational policy, news media and conversations among teachers.

"A preliminary analysis of our data suggests that examining teaching archetypes with preservice teachers helps them develop and use strategies for exercising professional autonomy," she said. "Cultivating such strategies is particularly important given the multiple and conflicting expectations of what it means to be a teacher in the 21st century."

# Students, faculty explore experiences with ethics, edTPA assessments

The new edTPA (Teacher Performance Assessment) is a portfolio students submit to showcase their ability to teach in a subject-specific classroom.

Student teachers enrolled in university education preparation programs must record and submit video clips of their own teaching as part of the portfolio, which is used in the teacher certification process.

Doctoral fellows Martha Donovan and Susan Cannon set out to study teacher candidates' and university supervisors' experiences with ethics in their decision making and how the edTPA plays a role.

“We wondered how we as supervisors would negotiate the tension between helping preservice teachers to reflect on their practice as they prepare to enter the field and preparing them to pass a high stakes assessment,” Donovan explained. “We also wondered how the high stakes nature of the assessment might impact the teacher candidates' attention to dilemmas of the field versus dilemmas of the assessment.”

Donovan and her colleagues all supervise students during their student teaching experiences and have found they discuss the edTPA more often than they'd previously anticipated. In addition, students seem very focused on the assessment's requirements and the steps they must take to create a strong portfolio, often bringing up questions and concerns during class time.

“We are concerned that this focus, especially the technical aspects of it, are a challenge to students' perception of teaching as critical professional work,” Cannon said. “We have noticed that they are focused on meeting the technical requirements of edTPA instead of on the larger questions of what it means to be a teacher and to engage with students in learning. We think that in the future, such research may help teacher educators understand the potential ethical implications of high stakes assessments on teacher candidates and supervisors and help keep open lines of inquiry about priorities and pedagogical values in teacher education.”



**Martha Donovan**

**Field of Study:**  
Educational Policy Studies

**Major Advisor:**  
Richard D. Lakes



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Georgia State University  
P.O. Box 3980  
Atlanta, GA 30302-3980