

New Education Game Group in Town

Gear Learning builds games for UW–Madison and external partners

Impact. It's a word Mike Beall uses often when defining the mission of the eight game developers he leads at the Wisconsin Center for Education Research, the new home for this dynamic band of learning designers, software programmers and artists.

Recently branded as Gear Learning, the team's new game plan is to bring learning to digital life by working with researchers across the University of Wisconsin–Madison campus, as well as with external educational partners.

“We want to reach students who struggle to grasp complex scientific content, or an adult who thinks it's impossible to establish a new career at 40. We want to help influence many education outcomes in many venues through video games,” says Beall, Gear Learning director and lifelong gamer who built his first game—a Dungeons & Dragons-like board game—out of butcher paper when he was only 8 years old.

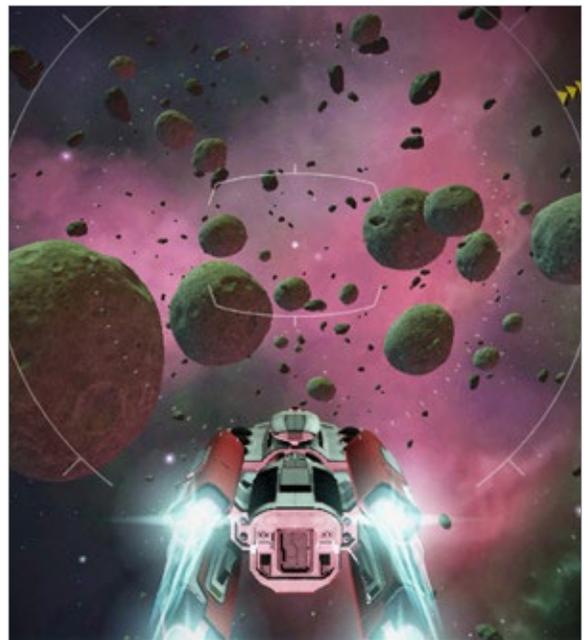
Gear Learning picks up where its predecessor Games+Learning+Society left off, when prominent education gaming pioneers Kurt Squire and Constance Steinkuehler moved west to join the faculty at the University of California–Irvine last summer. Though the two thought leaders are gone, GLS's core staff of highly talented and hands-on game designers and developers remain.

Beall worked closely with WCER Director Bob Mathieu to bring this new game development resource to UW–Madison's School of Education, where the Gear Learning team members first worked in 2010. “Gear Learning is a natural fit within WCER. They will put into practice UW–Madison's deep foundation of research on digital media learning for the benefit of colleagues on campus, and external partners locally and around the world,” says Mathieu.

Inside

Gear Learning	1-2
Inclusive Teaching Workshops	3
Publications/Findings From WCER Researchers	4
News	4

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Gear Learning recently launched “At Play in the Cosmos,” a digital introduction to astronomy for college students.

(Continued from page 1)

For a decade, WCER has been home to the Epistemic Games Group, well-known for building virtual internships, assessment tools and other innovative learning technologies. A team of designers, education and distribution experts called Field Day Lab also recently joined WCER to further strengthen digital development and grant support.

Beall says Gear Learning's focus is on creating games that engage students with complex concepts in fun ways that lead to learning. While the team always has built games important to research, none have ever attracted a wide audience.

For instance, "Progenitor X" in play tests was a wildly popular zombie-themed game designed to teach middle schoolers about regenerative medicine and the relationships between cells, tissues and organs. However, it never went public or became part of a classroom curriculum.

"Now we are working with partners who can implement our games widely," explains Beall.

The Gear Learning director is excited about forging partnerships with UW–Madison researchers. They are working with Christine Pribbenow, director of the LEAD Center at WCER, on a potential new direction for "Fair Play," a game she helped evaluate and disseminate to teach university faculty about bias in academic settings.

Gear Learning officially became part of WCER at the beginning of 2017 and already has attracted interest from several collaborative partners outside the university. The team is working with DeVry Medical International to design and develop games and simulations that support and enhance curriculum for medical and veterinary students.

Gear Learning also is collaborating with publisher W.W. Norton & Company, Inc. on a much-anticipated new game two years in the making, "At Play in the Cosmos," a first-of-its-kind resource in astronomy education. Although created for college students, the game's design makes the complex content of astronomy digestible for younger learners, as well.

Again, the name of the game is impact. "We're going to give tens of thousands of people exposure to complex astronomical concepts that they normally wouldn't have," says Beall, who is working with W.W. Norton to donate the game to community centers and other organizations that serve low-income neighborhoods. "We want to get these games to all kids, especially those who may not have access to them."



Meet the Gear Learning team: (Sitting, left to right): Sarah Aken, Mike Beall, Keith Decker (Standing, left to right): Jake Ruesch, Leonid Umanskiy, Josephine Allen, Greg Vaughan, Jason Palmer; (Not pictured: John Karczewski) Photo credit: Andy Manis

The education gaming industry is projected to top \$2.3 billion this year, according to market research firm Metaari. The challenge for educational game developers, like Gear Learning, is to make learning fun without compromising teaching. In fact, Beall is adamant that Gear Learning does not design games to replace teachers in the classroom.

"Our video games provide supplemental support to teachers," says Beall. "The strongest use of games is for kids who otherwise would have no interest in the content. It's really not a case of chocolate-covered broccoli." In other words, the goal of educational gaming is not to trick students into learning, but rather to engage them and create a desire to learn.

A few years ago, Beall witnessed firsthand the power of gaming on education. After a "Progenitor X" play test at a middle school, he overheard a group of 8th-grade students arguing in front of a SMART Board. As he listened, Beall realized they were passionately discussing the endocrine system using precise scientific terminology they had learned only hours ago while playing the game. It was a meaningful moment for Beall, who helped design and develop it.

A former Marine platoon sergeant, Beall is quick to acknowledge his dedicated team. "Nothing happens without these eight people," a tight-knit staff that works and plays together. Oftentimes at lunch, they play Team Fortress 2, a cartoon-based, multi-player game that Beall says is good for team-building. "The worst thing that could happen is that we stop having fun."

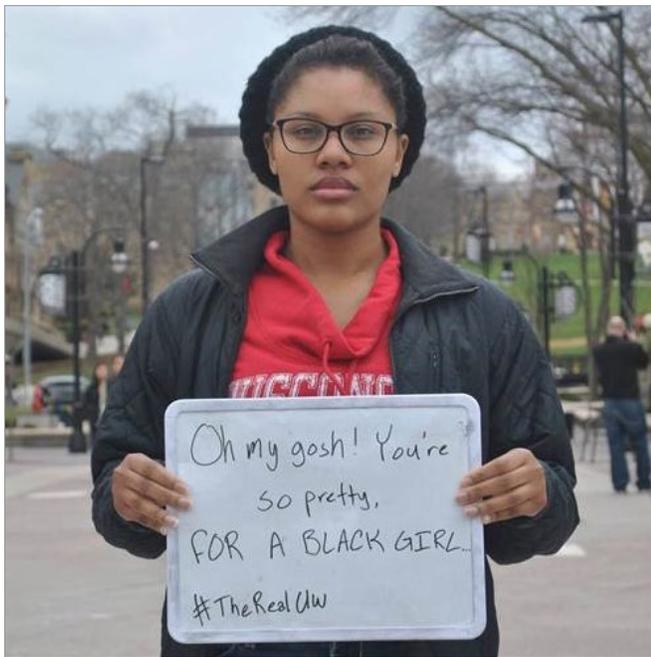


Photo by Regina Stieber from “The Real UW—A Visual Campaign”

Teaching by Example

New workshop trains UW–Madison faculty on inclusive teaching

A student holds up a sign with the comment, “You’re so pretty, for a Black girl.” In another photo, a student of Latino heritage grips this disturbing message: “The only reason you got into this school is because of the color of your skin.”

As uncomfortable as these comments are to read, they were real words spoken to University of Madison–Wisconsin students as depicted in “The Real UW—A Visual Campaign” that garnered attention last year. The campaign fostered much-needed conversations about racism and discrimination at the university. Now these photos provide the backdrop to an inclusive teaching workshop to help faculty and staff resolve education disparities among minorities.

“When you see these real-life experiences, it brings to light what is happening here on campus and can’t be ignored,” says Don Gillian-Daniel, associate director of the Delta Program in Research, Teaching and Learning, and co-founder of this four-session workshop created by the Collaborative for Advancing Learning and Teaching.

Based on training developed at the Wisconsin Center for Education Research, the workshop teaches educators how to normalize conversations in the classroom around race, racism, power and inclusion. “We focus on how instructors can make

learning environments places where all students excel,” explains Gillian-Daniel.

Carla Cornette, a doctoral student in Italian literature and workshop attendee, knows firsthand real change begins in the classroom. “I was teaching an Italian language course to a predominantly white class. The only African American student never spoke in conversation groups.” She told Cornette that no one spoke to her because of her race, and suggested students be placed in pairs rather than groups. It worked wonders. “She was very talented in writing and speaking Italian, and became a classroom leader. Now this arrangement is part of my everyday teaching practice,” Cornette says.

Inclusion training is nothing new to UW–Madison. However, this professional development workshop of four 90-minute sessions is possibly one of a kind, says Megan Schmid, workshop co-founder and associate director of Madison Teaching and Learning Excellence. She said learning over time is what really influences teaching practice. “We encourage departments, schools and colleges to continue the dialogue and apply what they learn to teaching.”

Schmid and Gillian-Daniel completed the pilot workshop for faculty at UW–Madison’s College of Letters & Science. It was an eye-opening experience, says Eric Wilcots, associate dean for Natural and Mathematical Sciences. “Our faculty now realizes we aren’t aware of the social environment of our classrooms, particularly with underrepresented students and the weight they bring into class.”

Sometimes students show bias toward teachers, as Jeanne Duncan, director of clinical education in UW–Madison’s physical therapy department, discovered. “I had a student who thought females were inferior to males and didn’t take my direction.” She had many conversations with him to find common ground, but to no avail. “He had his own biases and I couldn’t change that.”

With the first round of workshops behind them, Schmid and Gillian-Daniel look ahead. “We’d like to consult with other universities. But our main goal is to push UW–Madison as a campus addressing these issues,” says Gillian-Daniel.

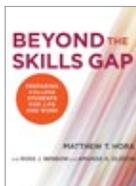


Don Gillian-Daniel and Megan Schmid are co-facilitators of the new inclusive teaching workshop on campus.

Publications/Findings From WCER Researchers

“Beyond the Skills Gap: Preparing College Students for Life and Work”

To thrive in today’s work environment, young people need more than competent technical skills. They also need to be adept at problem-solving, teamwork and communication. In their recently launched book, Matt Hora, Ross Benbow and Amanda Oleson make the case for why these 21st-century competencies are critical to success in our changing workforce.



Should colleges or universities share the financial risk of students not earning a degree or credential?

In a report released by the Wisconsin Center for the Advancement of Postsecondary Education, Nicholas Hillman examines whether policymakers should introduce risk-sharing into federal student financial aid policy, which he suggests would be beneficial to both students and higher education institutions in the long run.



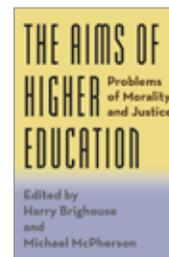
“Reading Students’ Lives: Literacy Learning Across Time”

Catherine Compton-Lilly tracked a group of low-income African American students and their parents across a decade. In this final book of her four-book series, she details the family literacy practices of these students in high school and suggests factors that may contribute to why many children from underserved communities eventually drop out of school.



“The Aims of Higher Education: Problems of Morality and Justice”

Harry Brighouse and Michael McPherson of the Spencer Foundation address complex questions about how to improve liberal arts education in the U.S. This book recently won a prestigious award from the Association of American Colleges and Universities for contributing to the important dialogue on this subject.



“Rethinking Case Study Research: A Comparative Approach”

Lesley Bartlett guides readers on how to develop comparative case study research designs in this informative book she co-authored with Frances Vavrus of the University of Minnesota. The material is tailored for researchers and graduate students in particular in the education and interpretive social sciences fields.



Why women from two-year colleges transfer into four-year STEM programs

A new study by Xueli Wang delves into the reasons why undergraduate women enrolled in STEM courses at two-year colleges intend to transfer to four-year institutions. The study is featured in a recent edition of the journal “Frontiers in Psychology.”

News

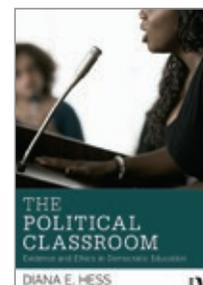
WCER researchers contribute to National Academies of Science Report

Janet Branchaw, Eric Grodsky and Christine Pfund all have contributed to the final report of a National Academies of Science committee examining undergraduate research experiences.

School of Education’s Dean Hess and Paula McAvoy win distinguished education award

The prestigious 2017 University of Louisville Grawemeyer

Award in Education has been awarded to UW–Madison’s Education Dean Diana Hess and Paula McAvoy, program director for WCER’s Center for Ethics and Education, for their book, “The Political Classroom: Evidence and Ethics in Democratic Education.” The book examines the role teachers play in encouraging political thought and discussion in the classroom.



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