

# VAL SHUTE

## Endowed Professor Helps Define the Future of Learning

BY LAUREN VONDERHARR



WITH FUNDING FROM THE BILL AND Melinda Gates Foundation, the MacArthur Foundation, the Florida Department of Education, and the U.S. Department of Education, Valerie J. Shute has positioned herself at the forefront of educational psychology research.

Shute's prolific research agenda led to her selection as the Mack and Effie Campbell Tyner Endowed Professor of Educational Psychology and Learning Systems in the Florida State University College of Education last fall.

"Dr. Shute's impressive record and reputation for truly innovative research makes her an outstanding choice for this year's Mack and Effie Campbell Tyner Distinguished Professorship," said Marcy Driscoll, dean of the College of Education.

Shute is developing new methods for educational assessment and learning engagement. She has five major research projects underway and a sixth scheduled to begin this spring.

"The common denominator among the projects is my general passion and research related to making education more effective for the masses, especially disadvantaged youth," Shute said.

Shute's research involves employing games as a "vehicle for assessment and learning." As the world has changed, Shute says schools have remained stagnant. As a result, students have disconnected from the learning experience. She cites as evidence a recent report of the Bill and Melinda Gates Foundation.

"According to this report, nearly one-third of all public high-school students drop out,

and the rate is higher for minority students," Shute said. "In the report, when 467 high-school dropouts were asked why they left school, 47 percent of them simply responded, 'The classes were not interesting.' We need to find ways, such as well-designed digital games and other immersive environments, to get our kids engaged, support their learning, and allow them to contribute fruitfully to society."

Other reasons Shute favors games as assessments are the limitations of traditional multiple-choice examinations and the need for new, complex and enduring methodologies for gauging learning processes and outcomes efficiently and effectively. Shute structures her assessment games to meet three basic criteria: validity, reliability and automation (in scoring).

Finally, she points out that games and digital technology have become an integral part of our culture – something that children and their families incorporate into their daily lives already – and they require an array of cognitive skills that are sought-after by employers.

"Many games typically require a player to apply various competencies; for example, creativity, problem-solving, persistence and collaboration. The competencies required to succeed in many games also happen to be the same ones that companies are looking for in today's highly competitive economy," Shute said.

Most of Shute's work involves the use of games in a process known as "stealth assessment." The development of a game as a stealth assessment tool starts with drafting a competency model based on a literature

review; that is, defining the competencies to be measured. The next step is to get the model approved by experts. Then, the researcher has to define the specific behaviors a person would have to enact in the game to demonstrate that he or she had attained the determined competencies.

Shute describes each project as a team effort involving co-principal investigators Matthew Ventura, Russell Almond and Fengfeng Ke. She also credits the contributions of graduate students Yoon Jeon Kim, Weinan Zhao, Lubin Wang, Tim Wright and Matt Small.

"I learn new things every single day from my colleagues and students," Shute said.

Among others to whom Shute attributes her academic success are her doctoral advisor at the University of California, Santa Barbara, Jim Pellegrino, who imparted key knowledge regarding individual differences research; her post-doctorate advisor at the University of Pittsburgh, Bob Glaser, who proved how to successfully integrate her interests in cognitive psychology, artificial intelligence and statistics into the creation of intelligent tutoring systems; and Jim Gee, a games/learning/assessment colleague at Arizona State University, who she says is responsible for facilitating her shift to a more progressive mentality toward educational reform.

"Dr. Shute's teaching and research have greatly enhanced the success of our program," said Driscoll. "She has become one of the foremost authorities in the field of educational assessment and learning, as well as in related areas in educational psychology."

Shute continually looks to the future for bigger, better and broader goals. Among them is establishing an interdisciplinary

center at FSU for designing quality games that utilize stealth assessments to test a variety of competencies. She foresees linking results to important benchmarks (such as core state standards) and evaluating the programs as a whole for effectiveness.

"I love my job and can't imagine doing anything else, anywhere else," Shute said.

Her words of wisdom for aspiring researchers and academics are simple.

"My advice would be three things that work in concert: (a) measure twice and cut once, (b) treat failure as an opportunity to begin anew, more intelligently, and (c) enjoy the ride."



## EDUCATIONAL PSYCHOLOGY & LEARNING SYSTEMS



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**ASSOCIATE PROFESSOR**

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- Honoree, FSU Transformation Through Teaching Project



**JAMES KLEIN**

**PROFESSOR**

- Annual Achievement Award, Association for Educational Communications and Technology
- Outstanding Service Award, Research and Theory Division, Association for Educational Communications and Technology



**JANET LENZ**

**ASSISTANT-IN**

- Presidential Recognition Award, National Career Development Association



**SUSAN LOSH**

**ASSOCIATE PROFESSOR**

- Elected Program Chair of the American Educational Research Association