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NEWS & EVENTS SPOTLIGHT ON STUDENTS

The Systematic Development of Expertise: A Multifaceted Review of Literature on the Development of Expertise

Daniel Novak, a Ph.D. student in the area of Educational Psychology at the College of Education, has published a book titled *The Systematic Development of Expertise: A Multifaceted Review of Literature on the Development of Expertise*. Novak specializes in learning sciences and works closely with faculty members Stephen Kerr, who serves as Novak's advisor, as well as John Bransford.



Before beginning his Ph.D. work in learning sciences at the University of Washington, Novak received a masters degree from San Diego State University's department of Educational Technology and an honors bachelors degree from UC Santa Barbara in Art History and Visual Culture.

While studying at San Diego State University, Novak received a travel grant that allowed him to conduct research on mobile cellular technologies in China, specifically in Beijing and Shanghai, which was published in peer-reviewed journals, including IEEE Transactions on Education and the British Journal of Educational Technology. He has previously worked at Qualcomm Inc. and the Navy Space and Air Warfare Division (SPAWAR).

Novak's book contains three sections, which are built upon work that he completed since beginning his Ph.D. at the University of Washington. The first section is a literature review that Novak wrote for a course taught by Bransford.

"I found that [Bransford's] way of approaching expertise as a fundamental lens for understanding human learning really jibed with my background in instructional design," Novak states. "Even more, it filled in gaps in my thinking about what really constitute 'learning' and 'education.' Instructional design is a very prescriptive field by nature, and it is very problem-centered. I was really interested in the applications of models of expertise because it treats learning as a lived experience, instead of a behavioral experiment. I think that the synthesis of these perspectives (the systematic approaches of instructional design and the human-centered approaches to the cultivation of expertise) was really my core challenge for my first year of doctoral study, and this book represents the first phase in that synthesis."

After completing the foundation for his second section as part of a graduate seminar, The Boeing Company contracted Novak to write a literature review, which would ultimately become the third section of his book. This review, "summarizes the current thinking on adult learning and expertise, and comes up with a systematic way of thinking about bringing learners from a novice level of skill to an expert level."

In addition to his academic studies, Novak is preparing presentations for the American Educational Research Associations 2012 Annual Conference on improving the quality of English Language Learner (ELL) education for migrant farm workers in California and Washington using mobile cellular devices and using design-based research projects that will attempt to meaningfully integrate social networking technologies and mobile cellular technologies into learning experiences.

Novak is grateful to Kerr and Bransford for their mentorship and instruction, stating, "Dr. Kerr has been extremely supportive of my work this year, and I owe him a huge debt of gratitude for all of the recent opportunities that he has pushed my way. Also, Dr. John Bransford taught the majority of my classes in learning theory and expertise this year, so I would like to thank him for his patience and input throughout the year."

[Click here to view Daniel Novak's online portfolio»](#)

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