Taking a closer look at Dewey’s influence, here and abroad

When College of Education Professor Deron Boyles makes reference to “Dewey” in his classes, he’s talking about John Dewey, the philosopher of education who was a proponent of experiential learning and active engagement in society.

“John Dewey was the preeminent philosopher of education and arguably the most influential philosopher of the 20th century,” Boyles said. “I’ve always had an interest in him. He’s central to the canon of philosophy of education, and he’s featured in that canon along with Plato, Rousseau and Pestalozzi.”

Boyles, who is completing his two-year tenure as president of the John Dewey Society this year, has concentrated his most recent research on Dewey’s influence on education in Mexico and how the philosopher’s ideas about education can be applied to classrooms today.

In an article published in the December 2012 issue of Inter-American Journal of Philosophy, Boyles explores Dewey’s visits to Mexico in the 1920s and 1930s to determine how much of an effect he had on the country’s efforts to transform their educational practices in rural school settings.

It’s been argued that Dewey’s influence can be seen through two of his graduate students, Moisés Sáenz and Rafael Ramirez, who worked for Mexico’s Ministry of Education at the time. But Boyles argues these students’ missions in transforming schools — and the stark differences in ideology between Dewey and José Vasconcelos, the minister of education in the 1920s — call Dewey’s influence into question.

“It’s been said that Dewey had a large influence on rural schooling in Mexico — making it experiential and progressive. My research raises questions about the degree of certainty we can attach to that claim,” Boyles said. “I’m not saying it’s not true. I’m saying that if you look into it carefully, the evidence isn’t as clear as it might otherwise be.”

He also wrote an article published last year in Philosophy of Education suggesting educators take a closer look at how arts education is being used in education policy debates.

“IF WE TEACH TODAY’S STUDENTS AS WE TAUGHT YESTERDAY’S, WE ROB THEM OF TOMORROW.”

– JOHN DEWEY
Some argue the arts can help prepare students to be competitive, productive workers in today's economy, using Dewey's pragmatic approach to education as a foundation. Boyles, however, points out that, as Dewey famously noted, there is no preparation for future living, but living itself.

"This is important if we are to understand the potential of students' experiences that are not subjected to externally imposed expectations for a distant 'future,'" Boyles said.

"Any attempt to force the arts into a framework of '21st century skills,'" he said, reduces the potential of the arts "by subsuming them under reductionistic 'skill maps' that are designed (and used as justification) for 'economic productivity.' Such a narrow focus replaces Dewey's emphasis on students' educative experiences with abstract economic expectations that, as a result, unduly restrict what it means to teach and to learn. Understanding Dewey means challenging this sort of policy rationale."

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Dewey

Recording accurate data is possible using differential item functioning instrument

Over the course of their academic lives, students in Georgia are asked periodically to take standardized tests — the Criterion-Referenced Competency Test (CRCT) for first through eighth grade students, the SAT for high school upperclassmen applying to college and the Graduate Record Examinations (GRE) for those planning on attending graduate school.

How do you ensure these and other tests will record accurate information, given that they're administered to students with different backgrounds?

That's where a concept known as differential item functioning comes into play.

"When you're looking at test data, like achievement data, you want to have a fair test regardless of ethnic background, gender and other factors. Given the same ability, do they have the same probability of getting the item correct? If that's not the case, you have differential item functioning," said Chris Oshima, professor of research, measurement and statistics in the College of Education.

Oshima has spent the better part of her academic career developing differential item functioning software that can be used to ensure bias doesn't exist on a particular question on a test. She began working on this software with renowned statistician Nambury Raju in the early 1990s and continued after his death in 1995. The software was published in 2009, and all of the profits go to Raju's estate.

Ensuring that tests don't contain bias is important for those taking standardized tests but also for faculty in the College of Education and at other universities conducting educational research, as Oshima can attest.

"Statistics and research tools are wonderful but unless you measure something correctly, anything you do will be meaningless," she said. "The people who are doing research in the College of Education, for example, usually have instruments to measure things. But you have to establish measurement equivalence first before you're able to compare any groups."

Oshima also hopes her software and research on differential item functioning can be applied in other educational settings.

"I'm more interested in developing instruments, establishing measurement equivalence and the applications of these in schools," she said. "I'm sure there's a lot more we can do with this."
How do you know the Earth is round?
A kindergarten student may answer this question differently from a student in sixth grade, 10th or 12th grade.

Maggie Renken, assistant professor in the Department of Educational Psychology and Special Education who studies students’ conceptual understanding, is working on a research project that analyzes students’ sources of science knowledge — how they come to know certain concepts and which methods of gaining knowledge they prefer over others.

This semester she and a group of research assistants visited Mt. Carmel Elementary School and Stockbridge Middle School, in Henry County, Ga., to survey students in all grade levels about their science content knowledge. She conducted one-on-one interviews with kindergarten students and first graders and administered an online survey for the second through 12th graders to see how they rank the various ways people come to understand science topics, including personal experience, cultural accumulation of knowledge, inference and reasoning, and design and completion of an experiment.

“We’re trying to understand what kids are thinking about science phenomena,” she said. “There’s not a validated measure of epistemology related to source of science knowledge out there, so we’re hoping this becomes a measure we can use to assess students’ understanding before and after science inquiry interventions.”

In developing the survey, Renken has not only learned more about online data collection options, but also about creating a survey that can be administered across all grade levels that reveals accurate, relevant data about developmental trends.

She also hopes the study leads to professional development opportunities for teachers to better understand their students’ sources of content knowledge and their own.

“The literature suggests that we, as adults, become very good at relying on fast, automatic processes for evaluating things rather than stopping and carefully evaluating all the evidence that’s been presented to us,” she said. “So this study could be something that also lends itself to professional development for teachers because beyond understanding your students’ epistemologies, you also have to understand your own. We want people to understand that multiple and varied sources of knowledge are available to us, that we should really draw from all of those sources and that we should find a way to integrate them in an educated, informed way.”
Putting teaching experiences on film allows students to reflect on their practice.

Student teaching experiences are a standard practice for most degree programs preparing college students to become teachers.

College students are assigned to classrooms in local schools for a set period of time, offering them an avenue to write and implement lesson plans, test classroom management strategies and evaluate how students respond to different teaching techniques.

College of Education Associate Professors Brendan Calandra and Laurie Dias have taken this one step further by asking students to pair up and film one another teaching. Students use this footage, often recorded and then viewed on tablet devices, to examine their teaching methods and think critically about their teaching strategies.

“The videos help students make connections to a wide range of issues related to teaching,” Calandra said. “Some of them reflect on teaching methodologies or classroom management, but some of them have also gone much deeper, thinking about who they are, what it means to be a teacher and how their life experiences affect the way they think about teaching now.”

Calandra and Dias have also developed a protocol students can follow when reflecting on these recorded teaching sessions. They ask students to review the videos of their teaching to identify one or two moments that stand out most, and to consider not only how they taught a particular lesson, but how students responded to their teaching. Calandra and Dias have found that students who use video footage to reflect on their teaching tend to reflect more often and more deeply than those students who don’t use this method.

Some of them have also become more amenable to this process as the technology has become more mobile and easier to use.

“Having this footage on mobile devices is like carrying around teachable moments in your pocket that you can access anytime, anywhere,” Calandra said. “That’s a powerful thing.”
W hen **Rebecca Ellis** began working on a healthy aging study a few years ago, she noticed older adults were not really interested in participating in a research study that involved exercise. This begged the question, what kept the older adult population from participating?

“We started thinking about what health-related issues are most important to older adults and what would affect their participation in our study, and the research showed that falls are the leading cause of injury and injurious death among people ages 65 and older,” said Ellis, an associate professor in the College of Education’s Department of Kinesiology and Health. “One of the best things you can do to prevent falls is improve balance and strength through exercise. So, we thought we could encourage them to exercise if we came to them from this concern.”

Since joining the College of Education faculty in 2007, Ellis has worked with faculty at Louisiana State University and New Mexico State University to create the Comprehensive Falls Risk Screening Instrument, which uses factors such as age, history of falling, mobility, balance, medication use, home environment and vision to calculate an overall risk score and give older adults a more complete picture of their risk of falling.

Ellis and her colleagues partner with senior centers and housing facilities near their respective institutions to run falls-risk screenings. For Ellis and her students, this means making half-day visits to senior living centers in Georgia’s DeKalb and Fulton counties to survey residents about their living styles and administer balance, mobility and vision tests. Then, students calculate the risk scores on site, give each person a report card detailing the risk factors and offer falls prevention tips and exercises they can do at home.

In Atlanta, about 500 older adults have been screened in the last three years. Of those, between 75 and 85 percent have been African-American and about 60 percent have come from low-income households.

“In one of the studies we published in 2012, we found that when looking at different demographic variables, such as income, ethnicity and education, African-American and low-income older adults had significantly greater risks of falling than other groups,” Ellis said. “We’re really trying to tap into groups of people in Atlanta who are typically underserved and don’t get this kind of individualized attention.”

Moving forward, Ellis plans to keep her students involved in conducting these screenings and train staff members at senior living facilities how to use the Comprehensive Falls Risk Screening Instrument with their residents.

She also hopes to take her research one step further by developing behavior counseling interventions for older adults hesitant about exercising more.

“I hope to take this and build off my psychology background to create an intervention that targets people who may not be ready to exercise,” she said. “I’m trying to offer some behavioral counseling so that after a screening we could take a group of older adults and try to motivate them and make them aware of the benefits of physical activity.”

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While middle and high school teachers tend to specialize in one or two subjects, elementary school teachers typically study all academic disciplines taught in the early childhood classroom.

Research has shown that elementary education students tend to be most anxious about teaching mathematics, so early childhood education faculty members Lynn Hart, Stephanie Smith and Susan Swars began collaborating almost a decade ago to study prospective elementary teachers' mathematical knowledge and beliefs. Their efforts have produced journal articles, book chapters and conference presentations that analyze how teacher preparation programs' features affect students' mathematical knowledge.

They began this research when the Georgia Board of Regents changed the teacher preparation requirements for early childhood education students to include nine hours of upper division mathematics for teachers courses.

“We began this longitudinal study and collected data twice every semester for four years with multiple groups,” Swars said. “We were looking at their specialized content knowledge in mathematics — analyzing and interpreting students’ conceptions of mathematical concepts and other techniques you may use in your everyday practice — and their personal mathematical beliefs. The Board of Regents change created this really great research context to study how changes in program features and coursework impacted elementary teacher development.”

Since then, Hart, Smith and Swars, known collectively as the Mathematics Education Research Group (MERG), have also studied which classroom teaching techniques best combat students' anxieties about teaching elementary mathematics, the findings of which were published in a 2013 issue of the Yearbook of the Association of Teacher Education.

“Because they come in so anxious, traditional teaching methods such as PowerPoints and lectures aren’t received as well and sometimes create more anxiety,” Hart said. “They need an environment where they can take mathematical risks through things like class discussions and small group work.”

In conducting these kinds of research studies, the MERG faculty have had the opportunity to study what they’re teaching in their classrooms and make changes based on what they’ve found works well for their students.

“What I find really compelling and exciting about this work is that we’ve studied what we’re doing and we’re putting what we’ve found into practice,” Smith said.