

# Research aims to boost dual-language learners' reading comprehension

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A quickly growing student population of dual-language learners tends to have much lower high school graduation rates as well as reduced outcomes on measures of reading comprehension and vocabulary, and an interdisciplinary team led by Amy Crosson is researching why that particular population is a vulnerable one.

Crosson, assistant professor of education in the Department of Curriculum and Instruction in Penn State's College of Education, is working in conjunction with a group of people in the College's Department of Educational Psychology, Counseling and Special Education (EPCSE). The team is in the third year of a three-year, \$1.5 million grant; they have a no-cost extension period which will enable them to continue working together to analyze the data next year.

The most desirable conclusion of the study, Crosson said, would be to have an impact on overall language development and comprehension outcomes across disciplines and opening up access to engaging in academics across the disciplines for the students.

"There's all of this research on bi-literalism and bi-literacy showing all of these advantages to learning more than one language," Crosson said.

"There's that body of research, but there's this other body of research looking at educational outcomes of students who are bilingual at U.S. public schools and they tend to be overall very poor. There is this disconnect and we know there is so much potential.

"For the most part we're not serving the kids the way we need to because they're not doing well enough; there are too many kids not graduating from [high school](#) and not reading at grade level, etc."

Discovering what can be done about the issue is paramount. "We know that limited word knowledge in English is one of the major obstacles," Crosson said. "What we're trying to do here is intervene and that's with a relatively small, very powerful set of academic words and also some generative word-learning skills to help address that issue of vocabulary knowledge.

"Vocabulary knowledge is the strongest predictor of reading comprehension; it's really critical for comprehension. We know it's an

area of need but the question is how can we intervene in a way that will promote deep, rapid word growth?"

EPCSE personnel bring invaluable measurement expertise, according to Crosson. Her expertise is in word learning and cognition and the social and cognitive aspects of learning in middle school environments and also bilingualism and second-language learning.

"They (EPCSE) are the critical measuring people; we can't do our work without them and they can't do their work without us," Crosson said. "That's where the synergy is and that's really important."

The middle-school intervention study is addressing general academic vocabulary, according to Crosson. "It's addressing a set of words that students are going to encounter across disciplines," she said.

"It will really help comprehension and reading and writing across disciplines," added Crosson. "Words like 'innovative' and 'ambiguous' and 'analyze,' those kinds of words that are discipline-specific, but you really have to know what they mean to be able to make sense of what you're reading in different content areas."

Crosson said the project is a development study—a series of design-based studies in which intervention has been developed and implemented with different classes of English as a Second Language (ESL) students in the Pittsburgh Public Schools and the Salt Lake City School District.

"I had a relationship with the director of ESL in Pittsburgh Public Schools and I knew about the population there," Crosson said. "In Salt Lake City, my co-PI, Margaret McKeown, knew people at the University of Utah reading clinic who are also very interested in these issues, so that's when they came up as part of the team."

"In Pittsburgh, we have a linguistically diverse group of students and in Salt Lake City we have a majority of Spanish speakers. Part of our question is, how does the intervention play out in these two different contexts? Based on what we learn from that intervention from that experience, we redesign the intervention and then we try it again. We study the results, redesign it, try it again and this year we're doing a pilot study," she said.

Intervention testing will be done versus a control group; thus, reliable, precise measures are vital, according to Crosson.

"We don't want to just know is the intervention effective or not, we want to understand for whom it is effective and in what aspects ... in what ways does it have an impact?" she said.

The interdisciplinary aspect helps ensure accuracy. "To address real problems of practice—really meaningful big problems of practice—any single angle of expertise to address educational problems that kind of by their nature are so sticky and large and the issues at play that there are so many, any one angle can't do justice to addressing major educational issues," Crosson said.

"For me, I haven't had the training to have the kind of expertise that Pui-Wa Lei has for data analysis. At the same time, someone can have very advanced statistical knowledge but they don't understand the conceptual importance of word learning and some of the issues around instruction and learning processes ... then all of that knowledge about data analysis is for what purpose? ... So I see them coming together," she said.

Crosson cited the College of Education for encouraging the building of collaboration across departments. "When somebody who does work that's interesting to me that I know is a little bit different from what I do but it's connected, I know that will be supported if I reach out and try to

build a connection," she said.

Crosson also is involved with EPCSE assistant professor Elizabeth Hughes (special education) as well as the Center for Language Science about understanding word knowledge and different aspects about word knowledge and language processing in relation to mathematics.

"We started a really small-scale project but we are working together in really interesting ways to look at multiple-meaning words in math and we're looking at several different populations," Crosson said. "We have English language learners and we're also working with students with learning disabilities or learning difficulties."

Provided by Pennsylvania State University

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