Mathematics in 2003. He has taught mathematics education courses at several European and Latin American universities and has received Fulbright awards to support his work in New Zealand, Spain, Colombia and Sweden.

Born in Iowa and raised in Southern California, Kilpatrick began his teaching career in 1957 at Garfield Junior High School in Berkeley, Calif. After earning a doctorate at Stanford University, he worked his way through the ranks at Teachers College at Columbia University before joining the UGA faculty in 1975.

Q: One of the basic premises of the National Research Council report, *Adding It Up*, is that all students can and should be mathematically proficient. Where did that idea originate?

JK: It's been around for some time, but it recently became prominent as part of the movement to raise standards in education, and particularly through the efforts of the National Council of Teachers of Mathematics to change mathematics curricula and the way mathematics is taught. There is a tension between educators who believe that mathematics should be taught in a direct way – just explain the mathematics children need to learn and give them lots of practice doing it – and those who believe that rather than just emphasizing procedures and skill, teachers should pay attention to children's ideas and understanding.

Both of these positions, in my opinion, have some merit, but they are not enough. That's basically our message in the book: It's not really a question of either/or but of both and more if we want all children to be proficient.

Q: Aren't the grades from pre-kindergarten to eighth – the ones discussed in your book – the most important in building a foundation for any learning?

JK: Well, every mathematics teacher would say that his or her grade was important. I think grades pre-K to 8 certainly are a critical time for foundational learning to take place,and yet that's often when students turn away from mathematics. Children start school for the most part with good attitudes about mathematics. While they're in middle school,many decide that it's con-

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Young Researcher Strives to Make a Difference

By Janet Jones Kendall

Denise Mewborn's vitae reads like that of a senior professor who has spent decades teaching and conducting research in mathematics education.

The University of Georgia associate professor's research has been published in dozens of academic journals, and she has received numerous awards for her excellence in teaching.

Last spring, she was inducted into the Illinois State University College of Education's Hall of Fame – an honor that recognizes extraordinary contributions to education in leadership, service, practice, scholarship, productivity and innovation.

Notably, Mewborn has accomplished all of this before even celebrating her 40th birthday.

After receiving her bachelor's degree in elementary education and her master's in mathematics from Illinois State in the late 1980s, Mewborn stayed at Illinois State until 1991 as a temporary instructor before coming to UGA to begin her doctoral work in mathematics education. After receiving her PhD from Georgia in 1995, Mewborn was offered an assistant professor position at UGA's College of Education – a dream job for a young scholar.

"I think the University of Georgia Department of Mathematics Education has a premier reputation around the country for doctoral education and K-12 teacher education. There are some outstanding nationally and internationally recognized faculty members here with whom I'm thrilled to be working," she said.

And work she does. In addition to teaching, Mewborn is the principal investigator for a five-year project, Learning to Teach Elementary Mathematics – a study funded by a $250,000 grant from the Chicago-based Spencer Foundation.

"My whole goal in research is to understand how pre-service teachers learn to teach math so that we can do a better job of that at the college level," she said.

Mewborn and her two doctoral student assistants began studying 30 juniors and seniors in mathematics education at UGA and then following them into their first couple of years of teaching. The researchers looked at how the students viewed their own mathematics education from kindergarten through college, what they thought teaching math would be like and how they interpreted their experiences in the teacher education program.

With the study now in its fourth year, Mewborn has narrowed it and is following two cohorts of six students in their first and second years in full-time teaching positions. She and her assistants review videotapes of the 12 teachers in the classroom, observe them teaching in person and interview them. These findings and observations are then cross-referenced with their written work during their two years in UGA's mathematics education department (providing evidence of their mathematical understanding) and with recorded examples of their explanations of their own math education experiences.

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Denise Mewborn has been recognized for her extraordinary contributions to education in leadership, service, practice, scholarship, productivity and innovation.

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