To predict student success, there's no place like home: study

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(PhysOrg.com) -- Current school reform efforts, like No Child Left Behind, emphasize teacher quality as the most important factor in student success, but University of Florida researchers have identified another, stunningly accurate predictor of classroom performance -- the student's home address.

Right down to the neighborhood and street number.

The researchers attribute their finding to a profound correlation they documented between home location, family lifestyles and students' achievement on state standardized tests.

"The core philosophy of school reform today is that effective schools and quality teaching can correct all learning problems, including those of poor minority students who are most at risk, and if they fail it's the educators' fault," said Harry Daniels, professor of counselor education at UF's College of Education and lead investigator of the study. "While school improvement and teaching quality are vital, we are demonstrating that the most important factor in student learning may be the children's lifestyle and the early learning opportunities they receive at home.

"Where students live — their neighborhood and even the street — may be the most accurate indicator of academic achievement."

Since 2006, the researchers have conducted ongoing studies in two Florida school districts, in Alachua and Bay counties, tracking children

from working poor families compared with more well-off counterparts.

Daniels and co-researchers Eric Thompson and Dia Harden, both UF graduate students in counselor education, reported their findings March 20 in Pittsburgh at the American Counseling Association's annual conference and exposition, the world's largest gathering of counselors.

Collaborating with UF business geography professor Grant Thrall, the Florida researchers produced special "geo-demographic" maps of the two school districts, showing every student's home address, color-coded to indicate their household lifestyle traits. The researchers borrowed "lifestyle segmentation" profiling methods used by direct marketers and political strategists to classify every student into one of several lifestyle groups (four in Bay County, three in Alachua), each based on a common set of values, income level, spending patterns, education level, ethnic diversity of neighborhood and other shared traits.

"The color-coded patterns on the maps reflect the tendency of families with like lifestyles to live in clusters in the same neighborhoods, and family income level is just one of several variables they share," Daniels said.

The researchers then examined the relationship between each group's lifestyle profile and their math and reading scores on the Florida Comprehensive Assessment Test, the state's standardized exam used to evaluate student and school performance. Researchers discovered the groups' socio-economic level corresponded with their group ranking on FCAT scores. The most affluent lifestyle group registered the highest FCAT scores, the second richest group ranked second in test scores, and so on. On the math tests, the gap between the highest and lowest scoring lifestyle groups was more than two grade levels.

"The testing patterns in both counties virtually mirrored each other,"

Daniels said. "Every lifestyle group improved in FCAT scores from year to year until the 10th grade exam (which students must pass to graduate high school), when improvement leveled off. But they all improved at the same rate, so the achievement gap persisted year to year."

On the researchers' special maps, the color-coding patterns by neighborhood were almost identical for both FCAT achievement levels and lifestyle profiles.

While neighborhood location and a student's home life are factors beyond teachers' control, Daniels said such home-based variables merit heightened attention in bridging the achievement gap in America's schools.

"The promise of this approach is its potential to help schools reach those younger students in time to improve their chances for success," he said.

The UF study entailed analysis of massive student test results. Researchers tracked five years' worth of test scores for Bay County public schools (2003-2007), and three years' worth (2004-2006) in Alachua County schools. They analyzed scores only from students who took the FCAT every year of the study—more than 14,000 in each county. Over the years, those students generated more than 42,000 FCAT scores each in reading and math in Alachua County, and some 72,000 test scores in each subject in Bay County. Overall, more than a quarter-million test scores were analyzed.

William Goodman, supervisor of guidance and student services for Alachua County Public Schools, said the UF team's data-mapping methods can help school districts target specific neighborhoods and schools for federal and state grant money to improve educational services.

"Data mapping and life-segmentation research is likely to become more prevalent as there is a growing awareness about how this decision-making tool might best be used to improve the quality of life for students," Goodman said.

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