

Math professor designs project to make students 'statistically literate'

By Joshua Preston

Dr. Karen Briggs, in her second year of teaching at North Georgia, is confident that an information literacy project she's designing will enable students to understand the statistical references they are given in news articles, Web sites and on TV and assess their validity — rather than relying on what they see streaming across the TV on CNN and other popular media.

Her opportunity came when she was awarded one of 16 Leaders in Information Literacy Grants this semester. The \$1,000 grant will permit her to work closely with her statistics students and help them to become "statistically literate."



Dr. Karen Briggs (Photo: Joshua Preston)

Information literacy (www.il.ngcsu.edu) is at the core of North Georgia's Quality Enhancement Plan, a component of institutional accreditation, and helps students develop critical thinking skills that encourage them to effectively seek, evaluate and use information.

With the grant, she will develop Statistical Literacy Projects, or SLPs, that will engage math majors, as well as other students taking statistics, to make the subject a meaningful experience, rather than just a course requirement.

"My teaching philosophy is centered on the belief that students will become more engaged in the learning process, if I can make the material matter to them," Briggs said.

Through the SLPs, students will look at statistics found in the popular media on current national issues of interest to them, such as the link between autism and vaccinations. This summer, TIME magazine focused on the topic and used data from the Centers for Disease Control and Prevention.

Briggs said that after identifying the news topic of interest, students would obtain the original research reports and use class concepts to evaluate the validity of the statistical argument reported by the news article.

"I came to understand from students that they thought that most statistics were made up, and I wanted to dispel the notion that you can make up any statistical lie that you want," Briggs said.

She added, "You would expect students to associate information literacy with areas like the humanities, so I thought an information literacy project in mathematics would be something new for them to explore."

How does Briggs expect to bridge the gap between students accepting or rejecting statistics at face value and getting them to understand how to make that assessment?

"I plan to hire four math majors who will serve as teaching assistants to help the Math 2400 students identify, compare and evaluate the statistics that they find in both the popular media and research articles," she said. "Students will then reflect upon how the process of gathering relevant information and using statistical knowledge has changed or strengthened their opinions and values."

The remaining part of the grant will support a subscription to the Mathematical Association of America's Special Interest Group on Statistics Education and opportunities for Briggs to present the results to other teachers of college statistics courses.

Math education majors will be among the beneficiaries of Briggs' statistics experiment.

"Our math education majors are going to be teaching students at a young age even before a college professor can get their hands on them," she said. "The better [math education majors] are prepared, the better teachers they'll be."