Education Research Grant: A Study of the Scientific Epistemological Views of Undergraduate Students

Funded by:
National Science Foundation

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Units:
Center of Excellence for Learning Sciences
and College of Education-Department of Teaching and Learning

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INVESTIGATORS

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SUMMARY

Researchers at Tennessee State University (TSU) will examine students’ knowledge and ideas on the nature of science with a $422,000 education research grant received from the National Science Foundation’s Historically Black Colleges and Universities Undergraduate Program (HBCU-UP). The study will explore the scientific epistemological views of undergraduate students in science, technology, engineering and mathematics (STEM) majors in order to assess the impact of the current science education curriculum on students’ views.

The research will also begin to create a comprehensive quantitative and qualitative portrait of HBCU and majority university students’ epistemologies of science by further contributing to evidence that there are fundamental differences in the ways in which students of different backgrounds approach and are attracted to STEM careers. TSU will begin conducting this three-year study in the Spring of 2011 in conjunction with Austin Peay State University, Fisk University, and Lipscomb University to provide a varied picture of undergraduate students’ epistemologies and offer results that can help retain diversity among students in STEM major fields.

This funding supports two graduate research assistantships and an undergraduate student researcher each year of the grant. The research itself involves the participation of hundreds of undergraduate students in surveys and questionnaires at four different universities in the Middle Tennessee area.