

PROJECT GRANT: VIDEO INTERACTION FOR TEACHING AND LEARNING

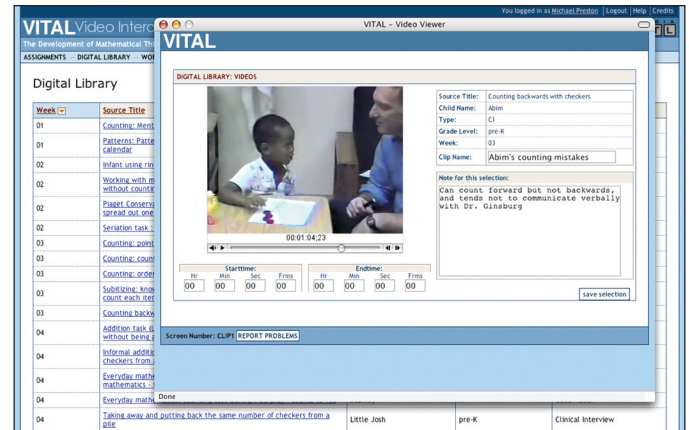
The National Science Foundation is supporting CCNMTL and Herbert Ginsburg, Jacob H. Schiff Foundations Professor of Psychology and Education at Teachers College, with a grant to continue development of Video Interactions for Teaching and Learning (VITAL), a learning environment for early childhood mathematics educators. This web-based application was first used in Professor Ginsburg's "Development of Mathematical Thinking" course at Teachers College in 2003.

Before working with CCNMTL, Ginsburg was already successfully using video in his courses through an assortment of VHS tapes that showed children working through and talking about mathematical problems. But he wanted to find a solution that would be less cumbersome and time-consuming than having to cue a stack of videotapes for each class. He was also looking for a way to allow students to access the videos on their own time so they could practice their observation skills.

VITAL features a digital video library of more than fifty clinical interviews, observations and classroom lessons that Ginsburg has collected during twenty years of research. VITAL allows Ginsburg easy access to the video segments of interest during class, and provides students access to the videos outside of class, along with tools for analyzing content, making connections to theory, and constructing arguments from the evidence. Students compose weekly essays online, incorporating video annotations to illustrate their observations that are shared with other students who have completed the assignment. Student essays are "published" in VITAL for faculty and peer review.

"Allowing students not only to view, but also to actively manipulate and comment on my video library previous to our classes has transformed my teaching and, I believe, my student's understanding of the course content," explains Ginsburg. "Developing the VITAL tool with CCNMTL has helped me to reflect on the educational goals of the course and has resulted in an educational technology that allows me to more effectively teach my subject matter."

The project's main goal is to develop and distribute a resource that will enhance undergraduate- and graduate-level programs in early childhood mathematics education to address the national need for improved teacher training in early childhood mathematics. The content and methodology of the proposed resource are based on a series of mathematics education courses taught by Professor Ginsburg and by Prof. Rochelle Kaplan at William Paterson University.



The major goals of the grant proposal were to (1) create model undergraduate and graduate courses in early childhood mathematics education, (2) design a new version of VITAL based on extensive user testing and formative evaluations, (3) test the VITAL environment and curriculum at partner universities around the country, and (4) conduct an evaluation of learning outcomes.

By the end of the grant period, May 2009, the resource will be ready for distribution to teacher-education programs nationwide. "This is an exciting and groundbreaking new program that will revolutionize the way children are taught mathematics," notes James Neal, Vice President for Information Services and University Librarian at Columbia. "We are grateful to the NSF for supporting a program that will have a powerful impact on teachers and learners."



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