

Hi-tech innovation gauges science learning in preschoolers

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Researchers are blending technology with nature, as they present details on an iPad application to examine how young children are learning science skills in nature-themed outdoor play settings. Alan Wight, a doctoral candidate in the University of Cincinnati School of Education; Cathy Maltbie, a research associate for the UC Evaluation Services Center; and Victoria Carr, a UC associate professor of education and director of the UC Arlitt Child and Family Research and Education Center, presented details on the innovation at the annual meeting of the American Educational Research Association (AERA) in Philadelphia.

The app, developed in partnership with UC and Kinetic Vision in Evendale, Ohio, is part of a National Science Foundation-supported project to examine preschool-age children's learning and interest in [science](#) through their play and interactions in natural settings, such as PlayScapes.

The study locations are the intentionally designed PlayScapes nature environments set on UC's campus and at the Cincinnati Nature Center.

The iPad application is being used to streamline a research technique known as behavior mapping. The researchers say this form of data collection has been used for 40 years to assist environmental psychologists and landscape architects in studying the connection between behaviors and physical characteristics of space.

Instead of the pen-and-paper method that has been used over the

decades, the iPad app allows researchers to record a number of interactions in the PlayScapes that indicated the children were gaining skills in science, socialization and physical movement.

The app also allowed researchers to upload and e-mail their data onto a shared server location, eliminating the risk of potential loss of data. A backup system built into the application saves all data in the iPad's memory.

"The development of our [app](#) has led to a flexible tool that can be adapted to other research sites, via changes in maps and codes," says Maltbie.

Provided by University of Cincinnati

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