

Computing with Culture

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This presentation reviewed “Culturally Situated Design Tools” (CSDTs), a suite of applets based on the math and computing knowledge embedded in cultural designs such as cornrow hairstyles, Native American beadwork, Latino percussion rhythms, and urban graffiti. CSDTs allow students to use these underlying computational principles to simulate the original cultural designs, create new designs of their own invention, and engage in specific math inquiries. The supporting materials for the CSDTs include lesson plans and evaluation instruments to ensure they are integrated into the curriculum through state and national standards. Preliminary evaluations indicate statistically significant increase in both math achievement and attitudes toward technology-based careers (see <http://www.csdt.rpi.edu/teaching/papers/aa.2006.108.2.pdf>).