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Title: A Networked, Media-Rich Programming Environment to Enhance Informal Learning and Technological Fluency at Community Technology Centers

Research Objectives:

- Advance understanding of the design of new technologies to support learning in informal settings
- Develop new approaches to help inner-city youth become fluent with information technologies

Approach:

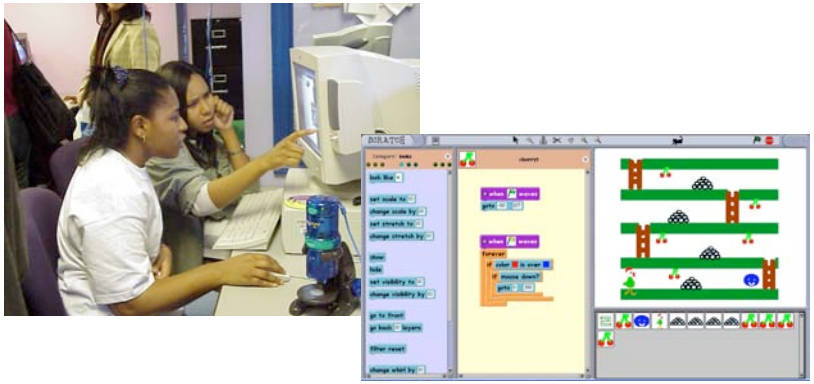
- Develop programming environment specifically for after-school centers in low-income communities
- Test in Computer Clubhouses, network of 90 community centers for youth (ages 10-16)
- Use data collection and analysis methods most appropriate for informal settings: participatory design, case studies, analysis of digital artifacts

Broader Impact:

- Broaden opportunities for youth from low-income communities to become designers and inventors with new information technologies
- Foster collaboration among young people across geographic, cultural, and language barriers

Significant Results:

- Building-block approach eliminates syntax errors, makes programming accessible to non-experts
- New broadcast architecture for communication among objects
- New programmable, interactive image-processing



Scratch programming environment

- Building-block programming paradigm
- Programmable manipulation of rich media
- Seamless integration with physical world
- Objects sharable across Net, on diverse platforms

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