Abstract: This paper reports on the experience of a two-person team instructing urban high school teachers to use computer technology. The course is presented entirely on-line in an asynchronous environment. It is the first course in a series of four in a Teaching and Learning with Technology certificate program.

Course I, Educational Technology Theory, presents and actively involves student in discussions of cognitive science and learning theories and their practical applications. At the same time, students receive instruction on constructing a web site. As the course progresses, the students build an instructional resource web site that they will be able to use in their classes.

This presentation will describe the process used in the on-line environment, demonstrate student projects, and relate student's plans to implement technology in their own classrooms.

I hear and I forget
I see and I remember
I do and I understand
(Ancient Chinese Proverb)

The pilot program offered by the New School University in the fall of 2000 explored the significance of this proverb and the implications it has for teaching in a 21st century urban classroom. Well situated in the heart of Greenwich Village, New York City, the program was nevertheless delivered asynchronously via the web. Participants were all teaching in New York City alternative high schools or middle schools. Although most of the schools implemented a project-based curriculum with portfolio assessment the teachers were responsible for ensuring that their students would meet new standards on state achievement tests.

The first course in the sequence was Foundations of Educational Technology Theory. Participants examined philosophical and pedagogical underpinnings of the current educational system and began to explore cognitive science principles that facilitate meaningful learning. They reevaluated the work of John Dewey, one of the founders of the New School. They applied constructivist theory to project-based curriculum while focusing on the new state standards.

At the same time they engaged in a parallel activity, learning basic html coding and Macromedia Dreamweaver™, the web-site authoring program. In addition to learning new skills, they engaged in active learning. We believed that they would master the technology and apply it in a meaningful way if they used it in their own learning process.

The New School University provided an opportune environment for this experiment since it has a solid history of offering robust distance learning courses. Dial, a proprietary instructional interface, provided the discussion-based environment. Participants were able to respond to instructors’ questions or assignments, upload responses, and email individuals privately. An orientation period preceded the regular class session so participants would not be overwhelmed by the technology. On-line and telephone support was available 24/7. Our program thus began with a solid technical foundation.
Participants came to the program with a variety of skills. Some were quite proficient with computers. Others were hesitant, to say the least. We wanted to find out how to engage each one on his or her level and help them develop the technical skill set. As you can see in Figure 1, they started by uploading a message introducing themselves.

Figure 1: sample on-line dialogue, student introduction

They then conducted on-line research in their subject matter areas and constructed a Virtual Field Trip lesson as seen in Figure 2.

Figure 2: web-based lesson, Virtual Field Trip

The asynchronous environment enabled participants to fit the course into already crowded work and family schedules. The discussion based environment facilitated group interaction, resulting in sharing and helping each other, in short, creating a community of learners.

At this point we have only anecdotal observations. More extensive studies will be conducted in the spring. We are especially interested in identifying factors that facilitate conversation and participation.