Introduction
The internet is an ever-expanding tool for learning, including distance education (Barison & Maysers, 2005; Lan, 1999; Owston, 1996; Williams, 1996). Whether or not the internet can be an effective tool for training staff within the human services sector, particularly within childcare, has been explored. Our project evaluated the effectiveness of the Internet training in terms of learning outcomes and engagement (specifically web-based technologies), and the students’ level of satisfaction with the course. The impact two courses had on the students was assessed.

First, Pennsylvania delivers childcare training to all licensed and registered childcare providers in the state and is interested in making this system more cost effective and efficient. Discussions related to utilization of the latest technologies, such as the Internet, are being considered. Secondly, a new initiative, CyberStart, will link all licensed childcare centers in Pennsylvania to the Internet. While this initiative is specifically designed to offer Internet access and educational programming for children, it will also make this technology available to childcare staff. Hence, there is a need to evaluate the feasibility and effectiveness of Internet-based distance education as it becomes more available to childcare centers.

Methodology
A quasi-experimental design was employed, which consisted of four groups of five students who enrolled in the early childhood education (ECE) course ECE 479: The Young Child’s Play as Education Process, which focused on play, communication, and curriculum.

1) A group experienced the traditional lecture/discussion course format.
2) A group took the course on the Internet, but within the context of a classroom setting (Penn State York) where they had the opportunity to interact with their peers and the instructor.
3) A group took the course on a computer lab (located at Penn State York) where they had the opportunity to interact with the instructor.
4) A group took the course on the Internet, but as part of a statewide DE group. This group had no face-to-face interaction with their peers or the instructor.

This research design enabled us to examine the effectiveness of this technology to determine any hardware or software constraints, as well as the efficacy of the technological support services, by comparing groups that took the course via the Internet in different environmental circumstances (i.e. the on-campus computer lab vs. a home computer set up). The research design also permitted us to evaluate the importance of the human element and the impact that the face-to-face interaction modality since participants were involved in settings with varying possibilities for face-to-face interaction.

Given the exploratory nature of this study, a qualitative approach with a small sample was employed to generate data from questionnaires and interviews, as well as from course assignments completed by students. The questionnaire included items that tapped demographic characteristics (age, sex, and prior education), current position and experience within childcare, and experience with computers. Phone interviews, administered before and after the course, and lasting from 30 to 45 minutes, assessed students’ reactions to the course and play perceptions about the course. In addition, select course assignments were independently graded to assess knowledge about play and its practical application. Two measures of the learning outcomes were used:

- Interview responses to questions about play given before and after the course.
- Grades on selected course assignments.

A group took the course on the Internet, but as part of a statewide DE group. This group had no face-to-face interaction with their peers or the instructor.

Results

Question 1: What is the definition of play?
All classroom and computer lab students improved, as did the three statewide DE students who stayed in the course. However, local DE students showed few negative responses before or after the course, while the statewide DE students gave 13 negative responses before the course. However, in post-course interviews the six DE students made only five negative replies.

Conclusion
This evaluation provides insights into offering ECE courses over the Internet. It seems that the success of this technology is dependent upon the persistence and knowledge of the student for learning to occur. Four students who did not complete the course were from the local (N=2) and statewide (N=2) Internet based distance education groups; none were from the traditional classroom or computer lab settings. The students had considerable difficulty in accessing and doing the course online. Possibly the drop-out rate would have been higher if the students were at a beginning stage of their career (Cohen, 2000; but see Scrim, 1992). Students in the traditional classroom and in-state computer lab groups, where there was more face-to-face interaction, scored the best on the interview play evaluations.

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Methodology
From the phone interviews, students’ answers to four questions about play were categorized as:
- What is play?
- What is the purpose of play?
- What is positive play?
- How can adults make child’s play better?

An empirically based coding system was developed and employed to score students’ answers. Participants of the study consisted of 20 students who were female and ranging in age from 25 to 63 with a mean of 39 years.

The course The Young Child’s Play as Educational Process (ECE 479), offered by the Department of Curriculum and Instruction in the College of Education at The Pennsylvania State University, was the focus of this experimental study of Internet-based instruction. Developing the course for Internet-based instruction required consulting with the Penn State World Campus (on-line learning). The stages of the course development include:

1) Course structure – Requirements included an observation project, designing play environments, writing letters explaining play-based teaching to parents and a ‘blue ribbon’ committee of educational professionals, as well as doing an implementation project and keeping a journal. The Internet-based course enabled ‘computer mediated’ play and early childhood development. Second Edition (Johnson, 1999) provided the guidelines for the overall course organization and sequencing, which followed the chapters of the text, with the content going from theory and research to policy and practice.

2) Course content – The course was organized into four modules with a number of online lessons or sessions in each module. Students had a reading assignment for each session and a self-administered objective item test (after each module). Students generated feedback for self-evaluation. The objective items and the open-ended discussion questions came from the instructor’s manual.

3) Course programming – The course program included some special features to make the online learning experience more interesting. An animated pop-up window was designed to capture students’ attention and interest. When students clicked on the various selected spots throughout the sessions to ask questions as a real classmate might. A home page was also created for the course.

References


William, A. (1998, June). Integrating courses with the Internet: Preparing the teacher as well as the learner.