

# Infusing Technology into Early Childhood Education and Professional Development: A Learning Community Approach

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**Abstract:** Technology has become a critical tool in all facets of living and learning. Early childhood education is one area where technology is still not used on a daily basis and is considered by many as inappropriate. In this research, we created a learning community and provided them with technology training to not only use in their early childhood classrooms, but also to empower to take online courses to advance professionally. The data shows that after participating in the technology training, participants: felt more empowered, comfortable in using technology overall and participating in distance/online learning.

**Keywords:** Learning Community, Cooperative/collaborative learning, Adult learning, Interactive learning environments, distance education.

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## I. Introduction

One of the key elements that separates the field of early childhood from other professions is the lack of education that is often required to work with very young children (ages 0-5). Most teachers currently employed in childcare, daycare centers, and preschools in the United States do not hold bachelor degrees or even certificates in early childhood education. Given that research has shown (Shonkoff & Phillips, 2000) the early childhood years to be the most critical time in a person's development, it would make sense for the educators of young children to be knowledgeable in early childhood education and child development. Moreover, we would expect them to be highly qualified in the area of technology as well.

Head Start, a federally funded early childhood program, has aggressively pursued professional development for its teachers, many of whom are currently enrolled in two-and four-year institutions (Slutsky, 2001). In 1998, the national Head Start administration initiated a plan to improve the lives of the young children they serve by increasing the educational requirements for their teachers. Currently, Head Start sites are expected to have 50% of their teaching staff hold at least a two-year degree. However, by 2008 the expectation is that all Head Start teachers will hold a Bachelors degree in education. This is a powerful commitment and a step in the right direction for the field of early childhood education. Other childcare/centers must follow suit and hire degreed teachers in order to provide optimal care for our youngest citizens.

Unfortunately, for many of the teachers currently employed with young children this push for higher education is problematic. Time and money right now are the biggest barriers (Slutsky, 2001). Many have their own families. After a full day of work, most cannot afford the time commitment necessary to enroll in college courses. Furthermore, the low salaries of early childhood teachers leave little if no extra money for them to pay for their own education. The money issue is difficult to overcome, as many early childhood centers cannot afford to send teachers back to school. Perhaps federal, state, and local dollars will become available to help in a fashion similar to what is done to promote professional development and tuition reimbursements for those employed in many K-12 schools. The time issue, however, is much more manageable due to the innovations made with technology, especially in the area of distance learning. Today's students never have to set foot on campus and can gain their degrees solely through online courses. Those individuals who already have very full lives can take advantage of these courses to further their education and to attain a higher degree. The only criteria are that individuals have access to and are comfortable with using technology. That, however, is another barrier in itself and will be discussed further below.

This paper discusses a community of learners (COL) composed of Head Start teachers who enrolled in a series of training sessions to help them learn technology for the purpose of self-empowerment and enrollment in online courses.

## II. Rationale

This project was pursued in order to address the following three goals: To provide opportunities for Head Start teachers to learn about technology and its uses in the early childhood classroom; to provide an alternative avenue by which Head Start teachers could attain four year degrees in early childhood education; and, to promote social learning by creating a COL within the Head Start community.

### **Lack of Technology in Early Childhood Education**

The lack of technology available to Head Start teachers and the children they teach further perpetuates the "digital divide" already threatening low-income communities (Scott, Lynd, Fernie, Kantor, & Sykes, 1999). Students from affluent communities have easy access to computers and technology through their schools and homes (where many teachers and parents are technology proficient) and thus are gaining the appropriate skills necessary to their future success and employment. Head Start provides one avenue to build toward equity in low-income communities. Through their educational programs (teachers educated in the fundamentals then pass those skills along to their pupils) and also because of the unique integration of Head Start programs in low-income communities, Head Start provides an environment where children and parents can begin to build their knowledge and skills with technology. This investment in technology in low-income communities, such as that of Head Start, must begin now. Steele and Marshall (1996) accurately predicted that classrooms in the year 2005 would begin to take on different forms due to technology. They suggested that the following would occur: a restructuring of the student-teacher role; computers and other forms of technology setting the context for learning; and, textbooks becoming obsolete as students increasingly use the Internet to browse sources not only locally, but globally as well (Steele & Marshall, 1996). As predicted, technology has become the key to learning and has influenced teachers and children across the country. However, this transformation is taking place more quickly in affluent areas than in lower socio-economic settings. Thus, the sooner we bring technology to low income communities, the sooner we will close the gap on the technological divide that has been created and prevents all individuals from having equal access to education and information.

### **Meeting the mandates of the reauthorization act of 1998**

The second major goal was to help Head Start teachers meet the 1998 reauthorization of the Head Start Act that requires 100% of teachers to hold a Bachelors Degree by 2008. This mandate is problematic for many Head Start teachers. With their already busy schedules, many Head Start teachers lack the time and energy necessary to attend traditional college courses (on campus) that will allow them to meet the requirements of the reauthorization act. Furthermore, many Head Start teachers have negative personal histories with schooling that heighten their vulnerability as students, and constrain further their goal of meeting the requirements of the reauthorization act (Slutsky, 2001). Thus, alternatives are needed to support these teachers in their professional advancement to attain higher academic/degree levels.

### **Provide a learning community**

The learning community model that was constructed provided an alternative path to supporting Head Start teachers' achievement and professional growth. At the core of this strategy was the establishment of "learning communities" to provide support for Head Start teachers engaged in higher education and to help enhance their technological proficiency. Our goal was to infuse technology into Head Start classrooms and make the teachers become comfortable with its use. Once they acquired the necessary skills to use technology they would be able to take advantage of distance learning courses as an alternative vehicle to gain their degrees. Distance learning would enable non-traditional learners (students older than your typical college student, and who may have their own families) to have access to college courses in order to help them advance toward a higher degree and meet the 1998 reauthorization act that requires 100% of Head Start teachers to hold a Bachelors Degree by 2008.

The extant literature on learning communities has focused on traditional college freshman who participate in learning communities with the main intent of easing their transition into college life by making classrooms feel more manageable (Hill, 1982; Smith & Hunter, 1988; Gabelnick, MacGregor, Matthews & Smith, 1990). With this focus on traditional students within learning communities, we have little or no information on how this approach may be used to benefit non-traditional students who may find it challenging to attend a traditional college setting. Our goal was to demonstrate that such learning communities can be of benefit to non-traditional learners as well and can be a powerful way in helping them attain professional development and higher degrees. It is our intention to demonstrate that this learning community model is moldable and can be adapted to meet the needs of a variety of learners, including non-traditional, practicing Head Start teachers.

## **III. Project Description**

The first goal of our project was to provide Head Start teachers with technology skills so that they could then use those skills to promote technology with their young students, helping themselves and their students close the gap in the "digital divide." These skills would also serve to address the second goal of the project: to provide an alternative pathway by which Head Start teachers could attain four year degrees in early childhood education.

This project explored alternatives for supporting Head Start teachers' achievement and technology advancement. At the core of this strategy was the establishment of "learning communities" to provide support to teachers engaged in higher education, which was the third goal of the project. The technology training was accomplished first as we needed to be sure that teachers were comfortable with using technology and had the appropriate skills necessary to be successful with learning at a distance/online. Once the technology skills were in place, we

developed opportunities for distance learning as well as ways to integrate technology into their own preschool classrooms.

The outcomes we wanted to achieve included:

Head Start teachers would be able to navigate through a Microsoft Windows environment, Head Start teachers would be able to send and receive e-mail messages,

Head Start teachers would be able to dialogue in a chatroom,

Head Start teachers would be able to post and reply to messages through a threaded discussion,

Head Start teachers would be able to participate in distance learning courses.

Head Start teachers would feel empowered to use technology in their own classrooms to help empower their students.

#### IV. Methodology

##### Participants

Head Start teachers were recruited from a large, urban center with over 25 classes serving in excess of 250 children. The project was made available to all teachers and administrators. Twenty five teachers and administrators showed interest and wanted to be part of the learning community. Of the 25 who showed interest, 15 ended up in the this study. Of the 15 (all female) participants, 13 were teachers and two were administrators. Additionally, three faculty members from a four-year institution, one faculty from a two-year institution, and two trainers from a university distance education division partnered to design and provide technology training to empower the participants to use technology in their classrooms and to develop their skills pertinent to taking distance learning courses.

##### Technology Training

All training took place at a computer lab one mile away from the Head Start center. This made attending the training easy and convenient for the participants. The laboratory was equipped with 15 new computers. All computers had access to the Internet, WebCT, Microsoft Word and Powerpoint. All training took place on Friday afternoons from 2:00-5:00 pm (eight total training sessions were scheduled; see table 1 below). Originally we scheduled for the training to occur during the teachers' and administrators' work hours (9:00-12:00). However, because of difficulties in obtaining work release time, it was necessary to have the training scheduled in the afternoons, after working hours. The 15 participants who attended the training sessions did so out of their own interest in technology and professional development. It was due to their strong personal commitment that we were able to form this community of learners.

##### Technology Training Provided

Session	Training
1	Basic Windows Environment
2	Basic Microsoft Word
3	Cancelled due to power outage. Online Internet use and search were covered in the next session (3/07/03).
4	Online communication (e-mail, chatroom, threaded discussion) and Internet use and search
5	Mock distance learning course
6	Practice using chatroom
7	Practice using threaded discussion
8	Final focus group and certificate distribution

Table 1: Training provided

### Data Collection

During the first training session, 15 participants (13 Head Start teachers and 2 Head Start administrators) were asked to sign consent forms and complete a technology questionnaire (OAEYC Computer Skills Self-Assessment, 2002). The same questionnaire was given again to all the participants at the final training session. Also, during the final training session, all 15 participants were asked to take part in an online focus group via a chatroom. The OAEYC questionnaire asked teachers to rate themselves on 53 technology items within three large domains: 1) computer skills, 2) using and navigating the Internet and 3) using sophisticated tools. The following response choices were available and each participant was asked to select only one of the choices below for each item:

*“I have never tried this before”,  
“This is difficult for me”, “I can do this. I would like to learn more about this”, or “I can do this very well”*

### V. Results

As stated in the rationale, this project was pursued in order to address the following three issues: 1) lack of technology in early childhood education, 2) meeting the mandates of the reauthorization act of 1998, and 3) provide a COL. The data collected provide both quantitative and qualitative evidence that these three goals were addressed and that candidates demonstrated an understanding of and increased awareness of each goal.

#### Lack of technology in early childhood education

Data from the OAEYC questionnaire provided evidence that prior to the training, there was a definite lack of technology understanding and use by the Head Start teachers. The fact that basic computer skills appeared to increase after the training indicates that the lack of technology in the lives of these early childhood educators was successfully addressed.

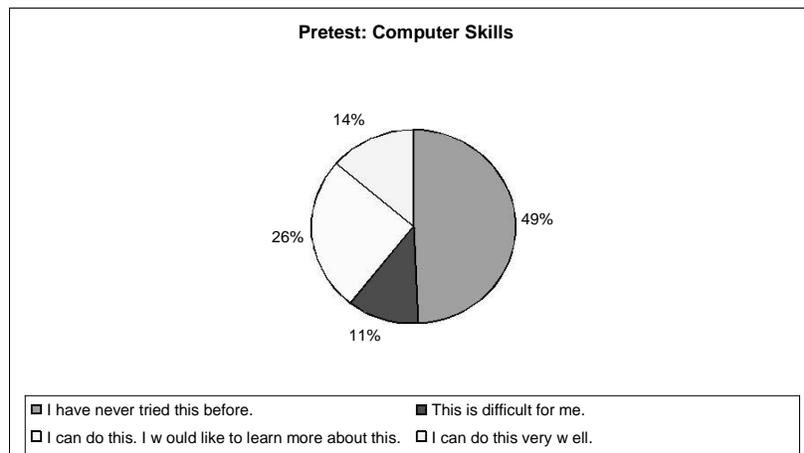


Figure 1a: Pretest computer skills.

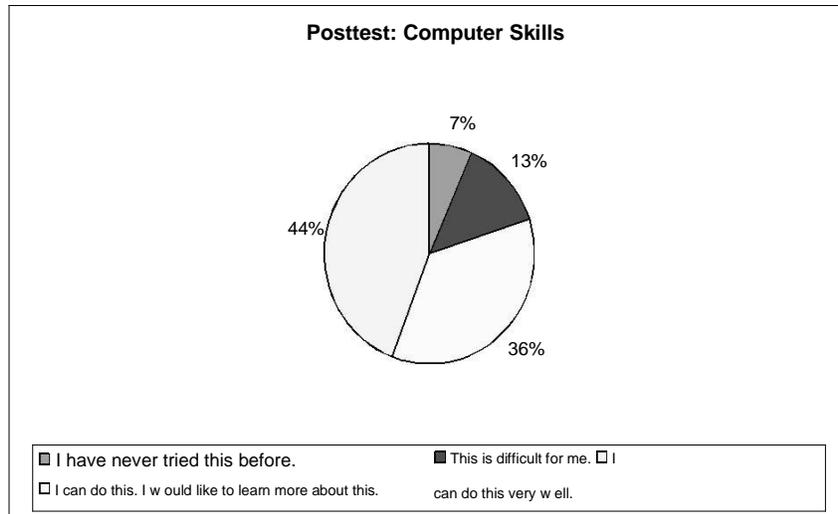


Figure 1b: Post-test Computer Skills

At the onset of this project, 49% of the respondents answered questions with “I have never tried this before” in the computer skills domain. Most of the questions in this category referred to basic computer skills such as turning the equipment on and off, and using specific software programs and hardware equipment. This initial data confirmed the need for the trainings; almost half of the participants had not been exposed to computers in any way.

At the conclusion of the training sessions, only 7% of participants answered “I have never tried this before.” This suggests that the participants were able to explore new technology applications and software that was previously unavailable to them. It was encouraging to see that not only were they able to explore these technology applications, but also that 44% of them felt that they could “do this very well.”

In order to further document and understand the extent to which participants grew in their technology use and comfort, it was important to identify how participants used technology before this study began. Below are some of the participant’s responses:

- *In the past I basically used technology to get my college papers done* (focus group participant).
- *Used for entertainment* (focus group participant).
- *I didn't use technology a whole lot, writing papers, sending e-mails* (focus group participant).
- *I have always been worried in the past that I would not know enough* (focus group participant).

A total of four participants said they used technology to get their schoolwork done. Three participants reported using technology to send e-mail. Another two participants reported not using technology at all, while two reported using it for entertainment and another for surfing the Internet (see table 2).

How Technology Was Used in the Past by Participants

Help others	1
Work	2
School	4
Entertainment	2
Internet	1

E-mail	3
Not used	2

Table 2: How technology was used in the past by participants.

At the conclusion of the project, however, three participants reported being able to use the chatroom for personal and online course use and another three said that they felt more knowledgeable and comfortable in using technology in general. A total of six people reported using technology for work, school, and to surf the web. Below are some responses from the participants on current technology use:

- *I will be able to take a class online now for my BA* (focus group participant).
- *I learned how to chat and I learned some neat shortcuts* (focus group participant).
- *I feel more relaxed to try all areas of the computer's technology* (focus group participant)
- *I can e-mail, cut and paste, and feel more comfortable using the computer now at work* (focus group participant).

Upon completion of the training participants had learned the necessary technology skills such as chatroom and e-mail. These newly learned skills helped them become more comfortable in enrolling in online courses to work toward higher degrees.

In addition, we found that participants were using technology in three distinct ways: school, fun, and communication (e-mail). Below are some quotes:

- *I feel more comfortable communicating with the professors through e-mail* (focus group participant).
- *I am able to create better memos and [my] paper writing is much better* (focus group participant).

Tabular data in this regard was not possible due to the numerous and varied responses received, so only samples of responses were presented above.

The combination of the quantitative and qualitative data presented here leads the researchers to believe that there was definite change in the amount of knowledge of technology and use of technology at the conclusion of the training sessions. It appears that the participants learned about and became more comfortable with technology in general.

### **Meeting the mandates of the reauthorization act of 1998**

The mandates of the reauthorization act of 1998 state that all Head Start teachers must earn a bachelor's degree by the year 2008. As stated previously, this is problematic for teachers, as it will be difficult for them to attend school full time while still maintaining their teaching positions. This series of trainings was designed to provide the teachers with internet skills which would allow them to take online courses as a vehicle to earn the bachelor's degrees.

Once again, the OAEYC questionnaire was used to determine whether or not participants' skills and comfort levels with the internet and sophisticated technology tools improved. The results show that the trainings were effective in helping the participants understand and feel more comfortable using the internet, and using a variety of tools necessary for success in an on-line course environment.

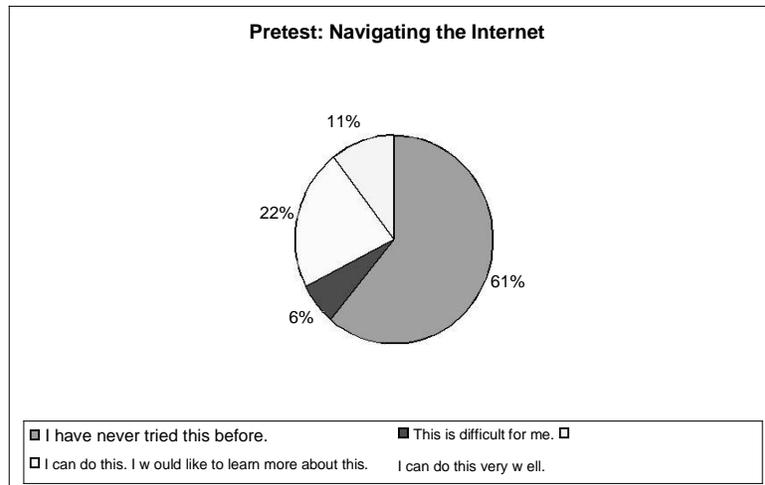


Figure 2a: Navigating the Internet pretest

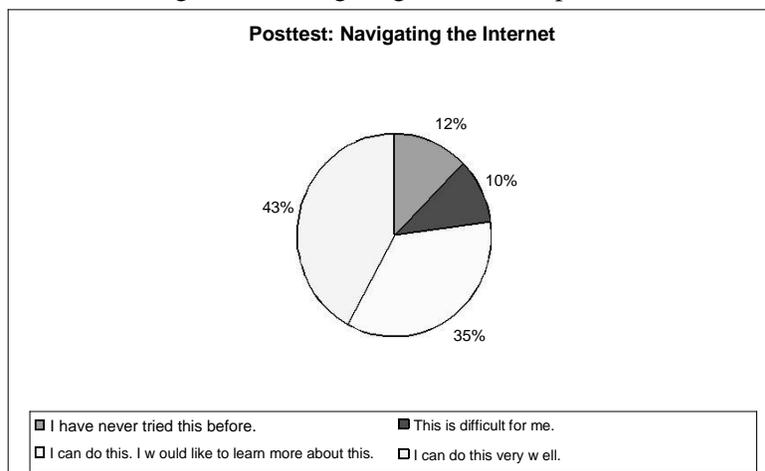


Figure 2b: Navigating the Internet posttest

Before beginning the training sessions, 61% of participants noted that they had “never tried this before” in the using and navigating the internet environment. Questions included email use and internet use. Further, only 6% of participants felt that they were ‘very capable’ of completing these tasks. Again, this confirmed the need for training.

Upon completion of the training, 78% of participants felt that they could do these things, or do them very well (35% marking “I can do this. I would like to learn more about this” and 43% marking “I can do this very well”). These results suggest that not only were the training sessions helpful in exposing participants to the Internet, but that they served as one viable tool in helping them learn how to learn via the internet.

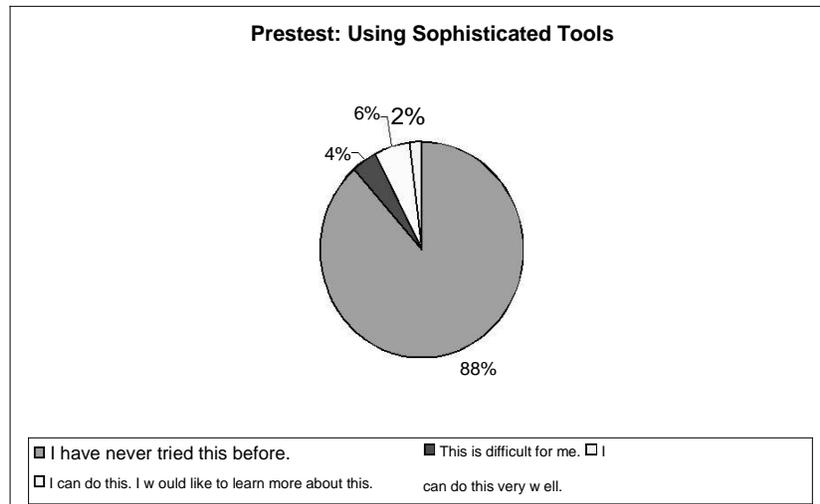


Figure 3a: Using Sophisticated Tools pretest

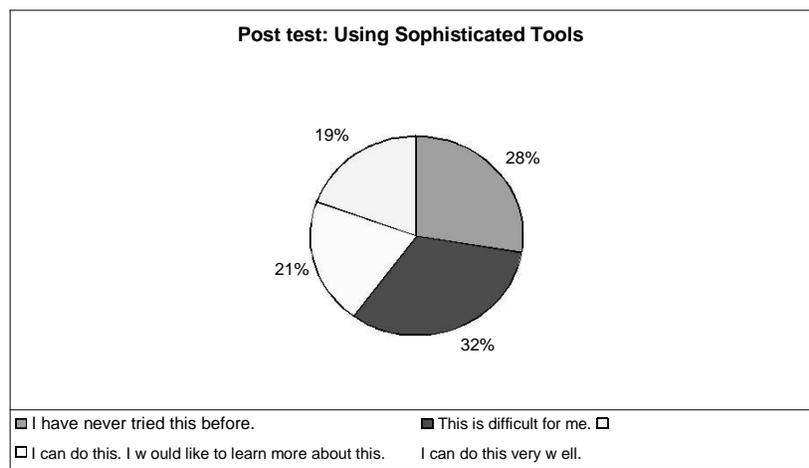


Figure 3b: Using Sophisticated Tools

Before beginning this series of training sessions, a striking 88% of participants shared that they had never tried many of the sophisticated tools listed on the OAEYC questionnaire. Questions covered topics such as making and managing websites, privacy and security issues, and using PDA's. The small percentage of participants who felt that they could do these things (6% marking "I can do this. I would like to know more about this", and 2% marking "I can do this very well") provided us with additional encouragement to offer these training sessions to this group.

After the training, many more participants noted that they felt increasingly competent in using the more sophisticated tools. While not all participants marked that they were fully comfortable with these tools, the results indicated that the majority of participants had a learning curve when it comes to using sophisticated tools. 40% felt that they could perform these tasks (21% marking "I can do this. I would like to learn more about this" and 19% marking "I can do this very well").

Additional qualitative data was collected to inform the researchers about participants' views of the Internet and sophisticated tools. With respect to using technology to help them with school, participants reported feeling more comfortable using e-mail to communicate with professors. No longer were they fearful that their message would not be received. Once we practiced sending e-

mail and they practiced it on their own, they came to the realization that this was a more convenient and effective way to communicate and get responses back from professors. Another developed skill was how to use Microsoft Word to help them better write papers for their classes (how to set margins, format spacing, font and etc.). Participants felt more comfortable writing papers on the computer once they knew how to save and retrieve them. One fear they had at the beginning of the project was saving their papers and never being able to find them again. This fear was overcome as most participants were using Microsoft Word or another word processing program to help them with school work and professionally at work in helping them create newsletters for parents.

Participants were asked two questions in order to gather data about their level of preparedness to take distance learning/online courses. The questions and some sample responses are listed below.

In the first question we asked, in what ways are you more comfortable in taking distance learning courses?

- *I now have a better understanding of how chat rooms work and I have a better understanding of the internet* (focus group participant).
- *Before this class I didn't know what to expect from taking a distance learning class. Now I have a general idea of what to expect and how to use chat rooms and message boards necessary to take a class* (focus group participant).
- *I'd be not afraid to try one out. I look forward to doing a distance learning class* (focus group participant).

The second question asked, what other training do you need to feel more comfortable taking distance learning courses?

- *I would probably need a basic guide that showed me how to get to the right place on the web* (focus group participant).
- *More time practice and more time with a class like this where I can be more comfortable with it* (focus group participant).
- *A basic guidebook would be very helpful on what we have just learned* (focus group participant).

These statements provided project directors and trainers with valuable information about how comfortable participants were feeling with the concept of distance learning courses. The feedback became helpful in planning future training sessions.

A third question was directed at identifying how the series of training sessions increased the likelihood that participants would use technology as a way to help them earn a college degree and meet the mandates of the 1998 Head Start Reauthorization Act. Participants were asked: "How do you see technology helping you achieve a college degree?" Sample responses are listed below. It is clear that participants see technology as an important piece of their own educational endeavors, and it appears that at least some of the participants would welcome and opportunity to take distance learning courses in the future.

- *Being able to take classes at your own pace and not having to fight for a parking space at college* (focus group participant).
- *It would make it convenient and lot easier to acquire* (focus group participant).
- *We live in a computer world and everyone needs to be able to use a computer. College on-line courses seem to be the wave of the future, and this class will help me take a course on-line moving toward a degree* (focus group participant).

Of note is the empowerment these teachers now felt. It was clear that they felt they could use technology on their own without having to have to turn to someone for help. An additional way

that teachers became empowered was the realization that there were many ways to get an end result/product using the computer. There was not one specific way to do something, but rather numerous ways to get things done. This was quite a revelation for many of the teachers and it made them feel more at ease with using computers alone. Below are some quotes from the participants:

- *The most beneficial part has been working in programs that I thought I knew about, but finding that there were many techniques that I could still learn. I learned more about surfing the web, which I don't do very often because it can be so frustrating (focus group participant).*
- *I don't have to keep asking my family how to do something on the computer (focus group participant).*
- *I have been empowered to try more things. I was afraid to venture out and try anything different that I was not familiar with. Now I am willing to take more risks (focus group participant).*

### **Provide a learning community**

We were very interested to understand how the learning community could be an asset in helping teachers learn technology together. What we found was that just being next to someone you know and to be able to ask them for help was an environment many felt was conducive to risk-taking and learning (“*I enjoyed the fact that if there was something I didn't understand the person next to me or across from me would guide me through what I was trying to do*”, focus group participant). Also, teachers felt strength in numbers, saying that they were much less hesitant to ask questions because they were with people they knew well and who were at a similar level as they were in their technology expertise. Below are a few responses:

- *I liked taking this class in a group because of the support it provided. It let me know that I am not alone in my personal journey to learn more about technology and make it my friend (focus group participant).*
- *Group settings make everyone more comfortable and open to asking questions (focus group participant).*
- *Just being in a class with peers who were as eager to learn as me helped very much. Helping each other was a great plus (focus group participant).*

When teachers were asked if the learning community approach helped them learn technology, the overwhelming response was a “yes”. Many cited that the success was due to the sharing that teachers were allowed to freely do amongst themselves during sessions. This ability to learn from peers and instructors simultaneously is one of the most powerful reasons to employ this type of approach in any learning environment. The continuous reminder that no one is perfect and that it is okay to make mistakes when we're learning was also helpful and allowed many of the teachers to relax and not be as fearful in approaching something new.

The responses indicate that these teachers felt a sense of community in this learning endeavor. They relied on each other to help with computer skills during training, as well as in the workplace. This sense of community appeared to alleviate many of the fears and anxieties that the participants noted at the beginning of the project. By working collaboratively, the collective whole was able to move forward and develop skills in technology together.

The participants also felt that their newly learned computer skills allowed them to work in other communities of learners, and to be a part of the computer community in general. Many shared stories and experiences of being able to use the computer to communicate with loved ones and friends, and being able to use the computer for multiple reasons.

More teachers reported using technology for fun than they did prior to the training. Many teachers had reported at our meetings that they were not as apt to use technology for leisure activities because they feared pushing the wrong button and breaking something. This attitude has obviously changed as all 15 participants reported using technology for fun at the conclusion of the project. Six participants were using the Internet daily; four were e-mailing; one was using her computer to create certificates for children; and, four were using it for playing games and listening to music. A few quotes from the participants are below:

- *In the evenings I really enjoy exploring the Internet* (focus group participant).
- *I am surfing the web, e-mailing family and friends, playing games, listening to music while on the computer* (focus group participant).
- *Research things for a family vacation, surfing the web* (focus group participant).
- *I don't have time. But when I do I am looking for maybe a coupon to a favorite store or some kind of deal* (focus group participant).
- *Email has taken over my life. I have it at work and home and it takes forever to get through it all each day. I love it though because I can send quick messages and not wait for a phone call when trying to reach someone* (focus group participant).
- *I e-mail my son who is on a coast guard cutter. Before I didn't answer him that much, I let my husband do it, now I get on the net and write him* (focus group participant).

Collectively, these data provide ample evidence that the training sessions were successful in helping these Head Start teachers learn how to use technology in ways that could enhance their professional lives. All participants reported growth in both skills and comfort levels throughout the trainings. We believe that these data demonstrate the effectiveness of the training, and credit it with being the impetus behind that growth.

### **Implications**

Several implications can be drawn from this research study. There is a strong need to professionalize the education of early childhood teachers by upgrading technology training and currency of their degrees. Further, there is a need to break structural and economic barriers to professionalism by looking at alternative pathways to degree attainment and other professional development opportunities. Additionally, there is a need to establish value for the “learning community approach” as a vehicle to enhance technology learning. Finally, we need to support the increased investment in technology training as a professional development tool.

### **Limitations and Strengths**

In order to fully identify the benefits of the project, it is important to conduct additional post-data surveys and determine how these teachers are using technology as a professional development tool in their classrooms. However, obtaining this type of data has proven to be difficult.

It has been difficult to obtain any longitudinal data about all of the participants. Due to the high turn over rate in early childhood, many of the participants have since taken other positions, making it nearly impossible to locate them and track their professional development. Others were difficult to contact because their e-mail addresses changed. This made it difficult to get in touch with them to determine if they enrolled in online courses or used technology in their professional lives.

A strength of the project and the success of the training sessions was largely due to the skills and knowledge base of the trainers. Many of the project directors knew how to use many of the applications, but the trainers were experts in technology and distance learning and could use that expertise to teach others how to use the technology themselves. This was something we were unable to do as daily users of technology. Having expert trainers, partnered with experts in the field of early childhood education resulted in learning opportunities that were appropriately

directed to this group of educators. The trainers were a key component to the success of the project.

## VI. Conclusion

Conclusions from this study are clear and inescapable. First, Head Start teachers, typically unfamiliar with and lacking skill proficiency to utilize technology, made major strides as a result of the project. Most Head Start teachers in the project perceived themselves as having tried all of the technology options, learned them well and wanted to learn more. Second, Head Start teacher's use of technology at the end of the project grew from infrequent and basic or entertainment to frequent and focused in all areas including course assignment preparation and communications. Third, Head Start teachers were significantly more comfortable with the use of distance learning/online technology. It may be inferred that this increased level of comfort will encourage them to enroll in distance learning classes thereby increasing their options for degree completion. They feel empowered – a feeling directly linked to self-efficacy. Finally, revealed is the power of the learning community. We have established the learning community model as a key ingredient to facilitate Head Start teachers as they move beyond the traditional 'lock-step' teacher education programs which have failed them in the past.

In re-visiting the three goals of this project we believe that the training sessions, within a COL model, were very successful way to help teachers become more comfortable with technology. The results indicate that teachers did indeed increase their knowledge bases and skill levels in terms of technology. The data also indicate that the participants felt more comfortable with using technology in a variety of forms and that they benefited from the community of learners approach.

We believe that we were able to provide opportunities for Head Start teachers to learn about technology and it's uses in the early childhood classroom and that the opportunities were welcomed by the participants. Both the quantitative and qualitative data suggest that learning took place, and that we met this goal. Participants' responses validated what we were seeing during the training sessions: that the participants increasingly became more comfortable with technology in its many forms.

We further believe that we were able to provide an alternative avenue by which Head Start teachers could attain four-year degrees in early childhood education. At the onset of the project, distance learning was not an interest at all for these teachers who had very limited technology skills. However, after the training, most were very interested in distance learning and knew what it would take to be a part of an on-line course. The data show that at least some of the participants would approach a distance learning course with a positive attitude and adequate ability.

Lastly, we believe that we were able to successfully promote social learning by creating a community of learners within the Head Start teacher community. The training, conducted within a community of learners model, was very successful in helping teachers become more comfortable with technology and use it in ways that they never did before. The participants' responses indicated that they enjoyed the collegial environment and that they were able to depend not only on the trainers to help them with skills, but also on each other. This suggests to us that these teachers developed a level of trust among each other that will hopefully continue in the workplace. Additionally, this project brought teachers together for a common purpose. Teachers who had worked together for years, but were on different floors never corresponded with or even knew each other. The project allowed the teachers to form a stronger community outside the project.

This project was a success on all levels. Teachers benefited in a number of ways, trainers were able to build relationships with a community of teachers with whom no relationship existed prior to the trainings, and children were able to reap the benefits of their teachers' newfound knowledge of technology. This model was a very successful way to begin to bridge the technological gap that exists in the field of education. Clearly, helping teachers become more comfortable in working with technology is the first step in having them help children feel comfortable doing the same.

## VII. References

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