**Enhance Teachers’ Global Awareness through Information and Communication Technologies (ICT)**

Hui-Yin Hsu  
New York Institute of Technology  
USA  
hhsu02@nyit.edu  
Sarah McPherson  
New York Institute of Technology  
USA  
smcphers@nyit.edu  
Mengping Tsuei  
Taipei Municipal University of Education  
Taiwan  
mptsuei@tmue.edu.tw  
Shiang-Kwei Wang  
New York Institute of Technology  
USA  
skwang@nyit.edu

**Abstract:** This project uses information and communication technologies (ICT) which includes wikis, blog and email to facilitate knowledge exchange between pre/in-service teachers in New York City and Taipei to increase their awareness of globalization.

**Purposes**

A report released by Pew Research Center for the People and the Press (2003) revealed that the concept of globalization is becoming more accepted all over the world. There is a common sentiment that, for the most part, globalization is *somewhat good*, but there are concerns about financial and social issues that may result, as well as the loss of the traditional way of life. An important message is conveyed by this report: There is a need to prepare students to be effective citizens in a global society, and to create an environment in which global awareness and attitudes can be learned in the United States. Large majorities in every country contend that all children should learn English to ensure their success in today’s world.

Inspired by the Pew Research Center’s survey, we proposed a study to use information and communication technologies (ICT) to facilitate knowledge exchange and communication between pre/in-service teachers in two cities (New York City and Taipei, Taiwan). ICT tools, blogging, e-mail, and wikis, were used to in this project to
create educational experiences to develop globalization awareness in teacher education. Globalization curriculum is designed to produce citizens with global knowledge, skills, attitudes, and values (Clarke, 2004). While online technologies provide a channel to enrich pre/in-service teachers’ global awareness, they also provide opportunities to model how to plan and design effective learning environments to maximize student learning supported by technology. The purpose of this project is to develop teachers’ awareness of globalization issues through collaboration, as well as to develop ICT skills. In this presentation, the team will discuss how we established collaboration among two groups, what technologies we employed, as well as difficulties and challenges encountered during the process.

**Literature Review**

**Globalization and Education**

According to Smith and Doyle (2002), globalization is a term commonly used to describe worldwide connections economically, socially, and culturally. Because of the trend toward globalization, there is an increasing need for global citizenship to address transnational politics, such as pollution, terrorism, literacy, health issues, disaster relief, and human rights (Global Transformations). It is important that people expand their understanding of citizenship to include a sense of obligation to a global community as well as to their nation (Kubow & Crawford, 2001). Homes and schools can provide the nurturing environments for children to practice decision-making, where prosocial and ethical behaviors are modeled, and multiple perspectives are shared to understand injustices and conflict resolution (Carlsson, Paige & Lantieri, 2005).

**ICT and teacher education**

Technology is rapidly increasing the speed, volume and complexity of the development of global interconnectedness. Cogburn (1998) discusses the implications of globalization for knowledge, education and learning. He identifies ten components to consider in designing education and learning to address globalization. These components include critical thinking, acquisition and analysis of information, teamwork and communication skills, all enhanced by uses of advanced ICT. Schools and universities are positioned to use ICT to foster virtual communities, induce critical thinking and decision making, and support exploration and experimentation as suggested by Cogburn (1998).

**Research Methods**

**Research questions**

(1) What is the role of ICT in online collaboration between two groups of participants? (2) What activities help teachers build their global awareness and their belief of infusing globalization into their teaching? (3) How does the use of ICT help teachers with their understanding of globalization?

**Participants**

Twelve participants from NYIT taking a course called *Language Arts and Technology* were selected from in-service teachers participating in the Instructional Technology master’s program. Eight participants from Taipei taking *Topics of E-Learning* were selected from in-service teachers in a graduate program for Curriculum and Instruction in Taipei Municipal University of Education. Two instructors were responsible for facilitating discussion.
and providing guidelines and instructions, and two researchers were responsible for designing research, developing instruments, collecting and analyzing data.

**Research design**

A Blog called Global Teachers in the 21st Century (http://www.wretch.cc/blog/global06) was designed to allow participants from the two islands, Long Island in New York, and Taiwan to exchange concerns and ideas for preparing their students for global citizenship.

During the two-month period, participants discussed topics related to cognitive, affective and participatory domains identified by Diaz et al. (1999). Specifically topics embedded in the curriculum included the knowledge and culture of each city, personal history, similarities and differences compared to the others, and the education systems in each country. Major activities include:

1. **group wikis**: each group used wikis to generate a list of clues for the other group to guess the location of their city.
2. **individual life-map**: each participant presented the significant events in their lifetime with graphics to represent locations on their life-map.
3. **e-pal**: participants were divided into 4 groups for using email to share personal experiences with their group members.
4. **group discussion on the blog**: discussed the guiding questions related to educational issues.

**Data collection**:

Two researchers collected data from the following sources to measure the degree of participants understanding in these domains.

- **Quantitative data**: Pre-post attitude survey to measure how helpful, interesting, easy, adequate information, enjoyable, and engaging. Data sources include interview with the participants and the instructors.
- **Qualitative data**: frequency of communication and qualitative of responses from wikis, e-mail, life map and blogging content contributed by participants.

Surveys and open-ended questions were used to measure aspects of participants’ online learning experiences. Instructors were interview for their perspective of the online learning experience.

**Data analysis**

Descriptive analysis was used to described means and standard deviation of the survey data. The analysis of the open-ended responses follows the Miles and Huberman’s (1994) analysis model which includes transcribing, identifying themes, and revising results based on member checking.

**Findings**

**Results**

The presenters will discuss the findings of the survey, interviews, and the blog content. Both groups were highly motivated from the learning experiences on the virtual community. Participants had opportunities to learn about each other’s culture and know more about their own culture. This pilot study has potential for future
collaborative teacher education projects ..

**Difficulties and challenges**

There are several challenges and difficulties that hinder the interactions through ICT.

1. **Language barrier**: English is not the official language in Taiwan. Although most of the participants have been learning English, they are not able to use the second language to carry on a complicated discussion. This created a major problem because participants in Taiwan needed more time to interpret messages in English which delayed responses and interfered with participants’ willingness to discuss.

2. **Time difference**: The team was planning to implement online chatting activity. However most of the participants are in-service teachers who work during weekdays. The twelve hour time difference made it very difficult to find a time slot that worked for the majority of participants.

3. **Technology challenges**: Nearly half of the participants are older than 40 and many reported that they are not used to communicating with online tools. The course at NYIT was offered online so it was very difficult to help participants resolve technical problems.

**Recommendations:**

1. **Increase the sense of a virtual community**: Creating an atmosphere of trust and openness is the key to the success of developing an online environment. In addition to the Blog, both synchronous and asynchronous methods should be employed to enhance participants’ sense of a virtual community. We will adopt video email in the future to help participants sense the existence of all members.

2. **Have more face-to-face sessions**: We can implement more activities with face-to-face sessions, for example, design a tour brochure using multimedia. The instructors could offer more in-depth assistance when meeting with participants face-to-face.

3. **Use simple English to exchange opinions**: Language barriers cannot be resolved in a short period of time; however English at this point is considered the primary language adopted all over the world. We will encourage participants to use simple English to express ideas.

**Educational Importance**

Globalization, an inevitable trend everywhere in the world, is an idea that must be practiced and implemented in the learning environment on a daily basis. With the assistance of online technologies, global connections become possible. It is expected that more organizations will create connections with people from different countries in the future. The finding of this project include: (1) how participants form understanding and beliefs about various issues relating to globalization, (2) what impact the lessons have on the participants’ teaching, and (3) strategies for collaborating and facilitating an online learning environment with participants from different backgrounds. The knowledge contributed by all pre-service/in-service teachers is archived on the Blog to disseminate to any educators interested in this topic. This Blog will continue to be available on the Internet and serve as a knowledge center for those who want to exchange experiences or knowledge about educating teachers on global perspectives.

**References**


