

# **CSCL 2005: STUDENT COMMUNITY WORKSHOP PAPER COVER PAGE**

## **STUDENT DETAILS**

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**Dissertation Title:** Cross-Cultural effects and affects in Asynchronous Learning Networks

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# Cross-Cultural Effects and Affects in Asynchronous Learning Networks

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**Abstract.** Cross-cultural issues in asynchronous learning networks (ALNs) have largely been unexplored. The lack of proper understanding of culture's role in ALNs can be counter-productive to creating communities of learning, promoting collaborative learning and enhancing student-tutor interactions. In this paper I present my proposed PhD dissertation research about the cross-cultural issues in ALNs. I present a meta-summary of the literature review, preliminary research questions followed by a brief discussion of the proposed methodology. Potential contributions to CSCL are listed.

**Keywords:** culture, asynchronous learning networks, multicultural classrooms, online learning, collaborative learning.

## INTRODUCTION

Culture refers to human activity. Culture has been defined in different ways by different researchers. Different definitions of culture reflect different theories for understanding, or criteria for valuing, human activity. My proposal uses Geert Hofstede's definition of culture as "*the collective programming of the mind which distinguishes the members of one group or category of people from another*" (Hofstede, 1997).

Asynchronous Learning Networks (ALNs) according to Mayadas (1997) "*combine self-study techniques with asynchronous interactivity to create environments in which learners can access remote learning resources asynchronously to learn at home, at the work place or at any place of their choosing.*" ALNs can cross the boundaries of countries, cultures, genders, races and religions. This very advantage comes with the serious challenge of addressing and accommodating the inherent potential ethnic and cultural diversity.

## LITERATURE REVIEW

Research into social aspects of Human Computer Interaction (HCI) (Nass, Steuer, & Tauber, 1994) has shown that even computer-literate users tend to use social rules and display social behavior in their interactions with computers. Social behavior is strongly grounded in culture as every person carries within himself/herself patterns of thinking, feeling and potential acting. To learn new patterns of thinking, feeling and acting one has to unlearn the old patterns, which is more difficult than learning for the first time.

### Culture and HCI

The cultural issues in interface design identified in (Fernandes, 1995; Russo & Boor, 1993) consider only the symbols and rituals of different cultures but the potential issues due to the differences in cultural values and practices are left unidentified. The user interface design of ALNs should be sensitive to the cultural issues particularly when students come from diverse cultures.

Prior research has found that culture effects the usability evaluation process (Honold, 2000; Sears, Jacko, & Dubach, 2000; Yeo, 2001) However, the role of culture in usability testing remains largely unexplored and little empirical evidence exists in the literature about cultural effects. It is important to address these issues and concerns during the usability testing of ALN interfaces in cross-cultural settings.

### Culture and CSCL

Kim & Bonk (2002) report cross-cultural differences in online collaborative behaviors of the US, Finnish and Korean participants in their study. Daniels, Berglund, & Petre (1999) found cultural differences in international projects in undergraduate CS education. McLoughlin (1999) based on her experiences with developing web-based instruction for Australian Indigenous education calls for a culturally responsive technology. Iivonen, Sonnenwald, Parma, & Poole-Kober (1998) found culturally influenced differences in language and communication styles in a library and information studies course taught over the Internet in Finland and US.

## Culture and Learning

Hofstede's original cultural model consists of four dimensions. Each dimension groups together phenomena in a society that were empirically found to occur in combination. Hofstede's seminal work on cultures in organizations formulated a framework of four dimensions identified across nations, namely power distance collectivism vs. individualism, femininity vs. masculinity and uncertainty avoidance. For definitions and detailed discussion of each dimension refer to (Hofstede, 1997). Hofstede's cultural model of dimensions indicates what reactions are likely and understandable given one's cultural background. A discussion of the effects of these four cultural dimensions in traditional classroom settings can be found in (Hofstede, 1986) and they are relevant to ALN environments and might have implications.

This proposal will investigate if Hofstede's four cultural dimensions have the same effects and affects in ALNs as in traditional classroom settings. Observation and demonstration of the cultural dimensions' effects and affects in ALNs is the critical first step in problematizing cultural identity of students in ALNs. Exploratory and empirically rigorous studies are then conducted to formulate multicultural ALN design guidelines. I intend to compare and contrast the cross-cultural issues in both multicultural traditional classroom settings and ALNs.

## PRELIMINARY RESEARCH QUESTIONS

**R1:** Given the cultural diversity of students taking an ALN course, do cross-cultural issues influence the communication, interaction, collaboration, cooperation, behavior, perception and learning outcomes of the students? If so, what are the significant cross-cultural issues?

**R2:** Given the multicultural student composition, what differences and similarities in cross-cultural issues exist between traditional classroom courses and the ALN courses? What, if any, are the kinds, types and degrees of the cross-cultural issues?

**R3:** Can the cross-cultural issues identified in R1 be empirically evaluated and established under controlled experimental conditions?

**R4:** Can the cross-cultural issues be integrated into the design and delivery of multicultural ALN courses with noticeable benefits?

## PROPOSED METHODOLOGY

I propose to study ALN students from the 8 cultural groups belonging to the United States, Indian, Chinese, Korean, Vietnamese, Filipino, Indonesian and Japanese cultures. The proposed research work is divided into four phases.

**Phase One:** Phase One is the empirical verification and validation of the cultural diversity of the students taking the selected ALN courses. Hofstede's original questions will be used to revalidate the four dimensions for the cultures studied in the project. The SL-ASIA acculturation scale (Suinn, Ahuna, & Khoo, 1992) will be used to assess the effect of the US culture on the students in the Asian cultural groups. The PRICA scale (Neuliep & McCroskey, 1997) will be administered to assess the students' intercultural communication apprehension. English language proficiency scores will be obtained for students who are non-native speakers of English. Correlations between the different measures listed above will be calculated.

**Phase Two:** All activity in the selected ALN courses- emails, online discussion board messages and reactions, questions and comments will all be observed, recorded and transcribed. The transcripts will be analyzed to discover the various patterns, methods, modes and techniques students' communication, collaboration, cooperation and knowledge building. Curtis & Lawson's (2001) coding scheme will be used to find evidence of collaboration. Critical incidents, if any, will be identified, recorded and classified. Discourse analysis, narrative analysis and other interpretative techniques will be deployed to investigate and interrogate the transcripts. Results from the various analyses mentioned above will be used to explain the differences and similarities among students both within and across the cultural dimensions groups. Follow-up instructor and student interviews will be conducted to qualitatively assess the data analysis results. Their overall significance to the design and implementation of ALNs will be discussed and reported.

**Phase Three:** Based on the results of phase two, guidelines and techniques to address and accommodate cultural effects in ALNs will be arrived at. These will help design culture conscious and culture specific ALNs that enhance and enrich the learning experiences of the students by providing a culturally sensitive and adaptable learning environment.

**Phase Four:** This phase involves the design and implementation of a pilot ALN according to the guidelines and techniques developed in phase three. The pilot ALN will be tested for empirical validation and verification under controlled laboratory conditions. The results from the pilot study will be further analyzed to refine, revise and finalize the guidelines and techniques for multicultural ALNs.

## POTENTIAL CONTRIBUTIONS TO CSCL

The potential contributions to CSCL from my planned dissertation proposal are:

- Application of Geert Hofstede's cultural dimensions model to address the cultural diversity of ALN courses.
- Exploration and identification of the cross-cultural issues in ALNs by studying the kinds, types, degrees, modes, styles and patterns of collaboration, cooperation, interaction and learning outcomes of American and International students enrolled in selected ALN courses at the University of Hawaii at Manoa.
- Empirical verification and evaluation of the cross-cultural issues identified in ALNs through controlled experiments.
- Development of cross-cultural implications, guidelines and techniques for interface and interaction design of multicultural ALNs.

## ACKNOWLEDGMENTS

I thank my PhD advisor Dr. Dan Suthers for his valuable advice, suggestions, comments and generous support.

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