Improving Cross-Cultural Communication through Collaborative Technologies

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Abstract. The paper discusses an original research project in the area of education and cross-cultural rhetoric on the use of persuasive digital technologies to enable intercultural competencies among students and teachers across globally-distributed teams. The paper outlines the methodology for the research, including the use of video conferences, collaborative blogs, a project wiki, webforums, and Google documents, and presents the findings on how such information and communication technologies can influence people to approach cross-cultural communication with greater political understanding, ethical awareness, and intercultural competencies in order to bring about improved international and social relations. The paper presents statistical data pertaining to qualitative and quantitative assessment of project outcomes; it situates the project within current debates in intercultural communication and digital pedagogy; and it concludes with a projection on the scalability and sustainability of using computers to change human attitudes and behaviors in positive ways in an international context.

Keywords: education, trust, productivity, culture, social relationships, ethics, human attitudes, collaboration, international research, cross-cultural communication, and rhetorical theory.

1   Introduction

Through a Wallenberg Global Learning Network (WGLN) grant, our project aims to contribute new learning in the fields of education and cross-cultural rhetoric through application of persuasive digital technologies as the mode and apparatus for changing attitudes about cultures and for empowering users to develop intercultural competencies as a means for improving international relations, social relations, political understanding, and trust in educational and cultural exchanges. In this paper, we offer an international perspective on the use of persuasive technology in creating what in the literature is termed "intercultural competencies" among students and teachers across globally-distributed teams.

1.2   Overview and Research Goals

The past two decades have witnessed an explosion of interest in globalization, transnational studies, and cultural codes of communication and the concurrent scholarly attention to developing better methods of implementing technological tools in educational settings. Yet, a key problem remains: how best to use information and communication technologies (or ICTs) to offer students hands-on learning of transnational and intercultural differences. To address this problem, our WGLN project "Developing Intercultural Competencies through Collaborative Rhetoric" experimented with innovative uses of technology by bringing together students at Stanford and Örebro Universities in globally-distributed teams to analyze rhetorical artifacts (speeches, advertisements, architectural landmarks, representations of nationhood) with the aim of facilitating both practical and deep learning of effective cross-cultural communication skills and transnational cultural understanding.

In addition to this academic impetus, this project emerged to meet a very practical goal: how to prevent deep misunderstandings that can lead to conflagrations such as seen in the recent furor over a series of cartoons depicting the Prophet Muhammad; this incident focused worldwide attention not only on the power of images but also on the violence that can result from miscommunication stemming from narrow perspectives that fail to take into consideration intercultural contexts. Scholars Carl Lovitt and Dixie Goswami label this increasingly important skill intercultural competence and sensitivity. [1]

In such a globally connected world – where published words and images give rise to bombing and burnings – teachers need to know how to instruct students in intercultural rhetoric, that is, how to persuade people to understand the way in which others located in different global contexts perceive, analyze, and produce situated knowledge. By addressing this situation faced by academics and people in the field, this project aims to contribute both theoretical knowledge and a practical methodology for scalable implementation in other institutions as well as business and professional settings. Our larger goal is to build meta-knowledge about the critical role that intercultural competences and effective technologies solutions can play in global communication and international relations.

1.2 Intercultural Theory and Cross-Cultural Conflicts

Firstly, this project responds to debates within the field of intercultural theory about how best to approach developing sensitivity to and understanding of differently situated subject positions. The past decade's work in intercultural communication focused on emphasizing diversity and isolating differences; as researcher Dean Barnlund asked about the global village, "Will its residents be neighbors capable of respecting and utilizing their differences or clusters of strangers living in ghettos and united only in their antipathies for others?"[2] More recent scholarship in the field of intercultural communication, such as Fred Edmund Jandt's book, *Intercultural Communication: A Global Reader,* emerges from a sociological or cultural anthropological perspective and emphasizes deep immersion. However, while theorists such as David Vicor recommend learning "as much about another culture as possible" before initiating intercultural communication, this methodological approach to developing intercultural competencies leads to the pitfall that researchers Ronald Scollon and Suzanne Scollon describe as partial attention to specific cultural factors (such as ideology, discourse patterns, and facial features) at the expense of other interpersonal and cultural factors that influence the site of transnational exchange and understanding. [3]

Our project builds upon both this substantial body of research as well as upon rhetorical theory that offers ways of reading visual and verbal texts with attention to audience and cultural context. Thus, our approach relies on rhetorical theory, with its emphasis on audience, decorum, and doxa; we also build on digital technology and new media theory, building on scholarly advances in how individuals collaborate in multimedia modes across differences in abilities.

1.3 Information and Digital Technology Research

In addition, our project situates itself within new research in digital technologies for cross-cultural communication and international relations. Current work in intercultural theory, transnational studies, global rhetoric, and writing pedagogy all point to the need for new empirically tested practices and scholarly sound methods for developing solutions for how best to use information and communication technologies to offer students hands-on learning of transnational and intercultural differences.

Researchers such as Cynthia Selfe and Gail Hawisher [4] have called for studies on how technology can address global needs, and our research project attempts to explore the use of persuasive technologies for producing positive change in global worldviews, improved cross-cultural communication, and a deepened understanding of audience and context to facilitate improved international relations. To this end, we draw on the work of scholars such as Chris Abbott [5], who has argued persuasively for a reevaluation of the use of ICTs in the classroom based on their increasing prevalence as a mode of communication within an international context. In addition, our practical applications of ICT technologies in the classroom have been largely informed by scholars such as Robert Godwin-Jones [6], who argues that users increase their sense of personal accountability through engaging with a real audience via ICTs, and Ernst Bekkering and J.P. Shim, who theorize about how to optimize video conferencing interchanges to best facilitate the formation of strong working relationships [7]. Moreover, within the Wallenberg Hall Learning Network, the work of Renata Fructer on globally-distributed teams provided a foundation for our development of a protocol for small-group collaboration practices [8].

At its heart, therefore, this project builds on current scholarly literature and research to offer a model of pedagogical instruction and cross-cultural learning using ICTs to develop innovative classroom practices with persuasive, social end-goals. This project builds on the scholarly literature and previous research on digital technologies for collaborative global learning to present the design, implementation, and dissemination of a model for cross-cultural learning using persuasive digital technologies.

2 Methodology and Outcomes

2.1 Cross-Cultural Collaboration through Persuasive Technology

For our approach and specific kind of intervention to the problem at the intersection of intercultural communication and digital technologies, we developed a protocol for employing the collaborative use of digital technologies – including webcam-enabled Marratech video conferencing among students, teachers, and researchers distributed across universities in two countries; five collaborative blogs and a project wiki for rhetorical analysis of controversial political texts; webforums for peer review of research on rhetorical texts of cultural significance; and Google documents for collaborative writing concerning the development of intercultural competencies. Our project locates intercultural competencies within collaborative activities made possible by implementation of these sorts of information and communication technologies, challenging users to examine political perspectives and cultural assumptions in order to produce positive change in social, cultural, and international relations.

2.2. Pedagogy and Research Protocol

While we build on other scholarly models of globally-distributed teamwork, our project isolates diverse configurations of participants (small teams of 3-4 students; 1-1 partner interaction; large class conversations) for collaborative work facilitated by our dedicated collaboration stations, blogs, student wiki, and live video conferences. Our methodology uses video-conferencing technologies to facilitate collaborative projects and self-determined work by globally-distributed student teams that accomplish cross-cultural learning about how best to communicate with diverse audiences through digital modes. In this way, we strive as much to meet deep learning objectives about intercultural competencies as we do to meet digital technology aims for best practices among globally distinct collaborators. Thus, while we seek to foster effective intercultural communication

and use ICTs as a means to reach that goal, at the same time, we also recognize improved competency in ICTs to be an educational need. Our activities include the following:

- Globally-distributed work by small groups of students that involved collaborative analysis of different texts (online ads, websites, political speeches, and cultural artifacts) through the use of the mobile, collaborative stations and video conferencing. In-class video exchanges between student pairs during which time they actively engage in more individualized collaboration leading to a deliverable (a written text, an oral presentation) that is shared with the class as a whole at the end of the session.
- Outside of class one-on-one real-time interaction between student pairs from the different countries, using video MSNchat or Skye-hosted exchanges.
- Asynchronous exchanges through e-mail, collaborative blogs, and wikis.

Our virtual "Cross-Cultural Rhetoric Center" (http://www.stanford.edu/group/ccr) serves as an online nexus for our collaborative endeavors, houses the digital repository of pedagogical apparatus (project materials such as lesson plans, related readings, primary texts for analysis), links to our asynchronous collaborative platforms (the wiki and blogs), identifies project publications, and provides a common virtual meeting ground for institutions interested in joining in our cross-cultural exchange.

3   Results

We found that globally-distributed team work mediated by effective use of digital technologies can motivate and influence people to approach cross-cultural communication and cultural exchanges with greater sensitivity, understanding, and ethical awareness in order to bring about positive international and social relations. Our analysis of data collected as part of our assessment process (comprised of surveys, exit interviews, and focus groups) shows that technologically-mediated collaboration benefits participants in allowing them to develop their analytic skills and persuasive abilities in rhetoric and argumentation while building intercultural competencies and sensitivity to international contexts.

3.1   Quantitative Assessment of Research

Initial quantitative data from our fall exit survey show successful accomplishment of specific project learning outcomes with mean ratings well above the midpoint (3.0 on 6.0 Likert scale). The highest rating (mean = 5.4) is for the measure "sensitivity to and consideration for others," two key traits identified in the scholarly literature as essential for effective intercultural communication. We also learned that a rhetorical approach to cross-cultural texts led to increased sensitivity and cultural understanding; students achieved deep learning of intercultural competencies from collaborative rhetorical analysis of political texts (mean = 5.3), from analysis of writing (mean = 5.1) and from exchange of cultural identity (mean = 5.0).

In rating activities designed to facilitate intercultural competencies and cross-cultural collaboration (see Figure 1), our findings indicated that students learned most when working within a globally-distributed team across both countries mediated by effective use of information and communication technologies or ICTs (mean = 5.1).

Fig 1. Fall 2006 Project Outcome Analysis
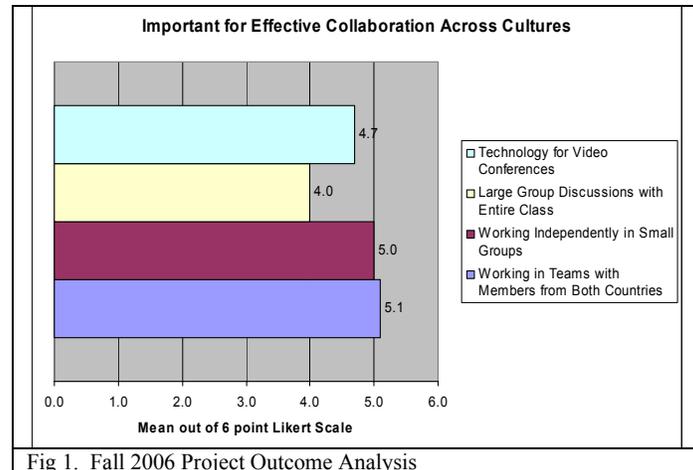
Subsequent to this data collection, the study team redesigned the implementation of technology at both Örebro and Stanford to facilitate group collaboration in a *dedicated learning space*. In Winter 2007, we put our redesign into practice through the acquisition and effective implementation of dedicated collaboration stations at both Örebro and Stanford. This new, strategic use of technology enabled students to form strong interpersonal relationships that facilitated more effective group work.

3.2   Qualitative Assessment of Research
The qualitative data confirms these findings. One open-response from our data collection reads as follows: "I learned that by doing group work assignments [in globally-distributed teams or pairs], our ideas can really form within the cross-cultural context. We can really learn a great amount by sharing these ideas found within these small exchanges."

The exit narrative of Dennis Rydgren, a Swedish student, confirms these findings: "The idea to have a cross-cultural rhetoric education between Örebro and Stanford is something quite unique. We as students believed it to be a first step towards a global university and a new kind of education." In his closing evaluation, Dennis asserted the project provided "a foundation for global collaborations later on in life. The use of the Internet in education, and the doors it opens […] gives the student 'global experience' not only through the social factor but also in a technical way." His words show development of intercultural competencies – sensitivity towards and understanding of others on a cultural level – as mediated by the technological practices of the project.

4   Significance and Implications
The project implementation and the data analysis both confirm the importance of strategic implementation of digital technologies as a persuasive tool for cross-cultural understanding and positive change with regard to intercultural competencies. We find the use of technologically-mediated collaboration to be an influential tool with regard to social relationships and improved cross-cultural understanding. Our research shows that three factors need to be met in the establishment of an effective protocol for digitally mediated cross-cultural collaboration and consequent intercultural understanding: *dedication of*

focus to the task at hand; *simulated proximity* to the communicators; and close *transparency* of medium.

4.1 Observations for Best Practices with Persuasive Technologies

Our project discovered that when students and teachers learn best practices for using information and communication technologies, they gain knowledge not simply in modes for digital discourse but the development of tools to build relationships, cross-culturally situated knowledge, and new media writing products that in turn advance research and learning in the field.

4.2 Scalability & Sustainability

Now that the research protocol has been established, the project can scale up to include additional partners, across countries and institutions. In year 02 of our project, we plan to broaden our collaboration to include partners in Sweden (at Södertörn, Uppsala, and Umeå) and internationally (University of British Columbia, Canada; University of Sydney, Australia; and University of Cape Town, South Africa).

This diversification across institutions is possible because, once the technology and protocol are in place, the project is highly sustainable given a dedicated project instructor and minimal infrastructure. The long-term sustainability of using computers to change human attitudes and behaviors in positive ways merits closer examination, and we have plans to follow our study participants as they graduate and move into professional careers that will place them in the global market place. As a future project, we seek to track the effective of the participation in an intercultural rhetoric collaboration for how it might have had lasting persuasive effects on their worldviews, approaches to cross-cultural differences, and strategies for intercultural communication.

The stakes are high for this project, for, as Larry Samovar, Richard Porter, and Edwin McDaniel argue in their seminal work, *Intercultural Communication, "*successful intercultural communication is a matter of highest importance if humankind and society are to survive" [9].

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