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Caroline Howard
Touro University International, USA

Patricia L. Rogers
Bemidji State University, USA

Judith V. Boettcher
University of Florida, USA

Gary A. Berg
California State University
Channel Islands, USA

Lorraine Justice
Hong Kong Polytechnic University, Hong Kong

Karen Schenk
K.D. Schenk Associates Consulting, USA
Collaboration Among Multicultural Virtual Teams

Kursat Cagiltay
Middle East Technical University, Turkey

Barbara A. Bichelmeyer
Indiana University, USA

Michael A. Evans
Indiana University, USA

Trena M. Paulus
University of Tennessee, USA

Jae Soon An
Samsung Advanced Institute of Technology, South Korea

INTRODUCTION

Due to the increasingly widespread use of various information and communication technologies (ICT), individuals from different countries and cultures are able to learn and work collaboratively in virtual environments (Mowshowitz, 1997). Electronic communication tools, such as chat, e-mail, and the World Wide Web, now make it possible for students and employees to communicate and problem solve with colleagues irrespective of geographical location (Scott, 2000).

One of the major downsides of this form of collaboration, though, is that members of a virtual team do not have the advantage of face-to-face interaction and communication. Instead they must rely solely upon an assortment of computer-supported cooperative-learning and class-work tools and strategies—some planned, some ad hoc—to coordinate resources (Bichelmeyer, Cagiltay, Evans, Paulus, & An, 2004). Unfortunately, little research has been conducted to systematically investigate the dialectic between culture and computer-mediated communication (CMC). There is currently an insufficient understanding of how individual learning and work, cultural features, and CMC mutually influence one another in a purposeful, virtual setting.

Undoubtedly, the ability to learn and work collaboratively within groups of multiple cultures is critical within and across nations as international workers and their families become more mobile and information technologies permit coordination irrespective of geographic location (Maznevski & Chudoba, 2000). A greater understanding in this area is especially important to begin to unravel myriad issues regarding group learning, work, and communication in multicultural, virtual environments. Especially important is the ability to cope with the potential negative aspects of cultural differences, affecting the satisfactory and productive partnership among people separated by culture and communicating via ICT.

As a way to begin to address these matters, this chapter reviews related studies in education and business to present the critical issues and challenges of collaboratively working and learning in multicultural, virtual teams. To conclude, it provides strategies to overcome and leverage similarities and differences inherent in team members, and points to the potential for further research and application in this area.
CULTURE AND COLLABORATION

Culture is a loaded term because much damage can be done when thoughtfulness, respect, and care are not prime goals. When handled appropriately, the concept of culture permits researchers and practitioners traction on the intangible aspects of coordinated activity among individuals comprising national or professional collectives. At its worst, it becomes an instrument for the clumsy manipulation or management of an important aspect of collaborative learning and work. In an unsophisticated way, culture is used as a "glue" to homogenize different views. With tact, it can be used to appreciate the heterogeneous values and norms of peoples of the world. It is in this sense that the term is loaded. However, if we are to make progress in bringing together individuals from different nations to learn and work together, a better understanding of the characteristics and nature of this phenomenon is unavoidable.

To begin, scientific research on culture, as we conceptualize the term today, began in the 19th century. In 1871 English anthropologist Edward Burnett Tylor (1871, p 1) defined culture as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society." The distinguished American anthropologist Clifford Geertz's definition of culture is perhaps the most well-known (Geertz, 1973, p 89) defines culture as "a system of inherited conceptions expressed in symbolic forms by means of which men (sic) communicate, perpetuate and develop their knowledge about and attitudes toward life."

According to some researchers (Berger & Luckmann, 1966; Geertz, 1973), culture is the background set of assumptions and values that structure our existence and orient us through the events of our lives. Cultural elements can only be learned by living in a society for an extended period of time. Often, many people unconsciously hold certain cultural beliefs, and this may easily cause unintended conflicts among people from different cultures (Hambrick, Davison, Snell, & Snow, 1998).

According to UNESCO (2000), cooperation and appreciation among different cultures consequently is essential for the promotion and building of global peace. However, realizing this mission is by no means a simple task. In today's world—where the threat of terrorism escapes no one—the need for communication between individuals from different countries and cultures increases exponentially. As groups and organizations from different countries increasingly choose to use virtual teams to arrange learning and work initiatives, particularly given the availability and widespread use of ICT, individuals around the globe are beginning to participate collaboratively in what have been dubbed multicultural "virtual communities" or organizations (DeSanctis & Monge, 1999; Riel, 1993). According to Hofstede (1997), a multicultural team is one composed of members who have spent their formative years in different countries and thus have learned different values, demeanors, and languages.

In this chapter, the term collaboration loosely refers to the mutual engagement of participants in a coordinated effort to solve a problem. In their description of a joint problem space, Teasly and Roschelle (1993) claim that participants are responsible for not only solving a problem in collaboration, but also maintaining a shared space where they can work on the problem together by exchanging ideas. Although collaboration may, obviously, take place face-to-face, our focus here is on collaboration mediated by ICT. Examples of collaboration might include the coordinated efforts of technicians and engineers resolving problems with equipment and gear (Evans, in press), high school peers working jointly on a project to elaborate on national dialects and customs (Bichelmeyer et al., 2004), and scientists designing a new propulsion system (Majchrzak, Rice, Malhorta, King, & Ba, 2000).

CRITICAL ISSUES AND CHALLENGES

The literature provides pedagogical recommendations from several researchers regarding approaches to be used in online environments in order to facilitate cross-cultural learning. McLoughlin (2001), for example, has identified 10 pedagogies for cross-cultural teaching in online and technology-supported environments, including creating virtual groups by focusing students on common learning goals and shared knowledge, creating learning tasks that fos-
ter reciprocal learning about cultures, and enabling students to present diverse views.

The literature has also yielded cautionary tales and advice from researchers regarding barriers and obstacles to the successful completion of online cross-cultural learning projects. In a project involving German, American, and Canadian 11th- and 12th-grade students, Muller-Hartmann (2000) reported that time constraints and classroom requirements forced the redesign of a collaborative project to use more teacher-directed approaches. Similarly, McLoughlin (2002) reported that an online instructional project with postsecondary students could have been improved by providing more specific objectives and more direct intervention by tutors with discussion groups. In another study, Cakir, Bichelmeyer, and Cagiltay (2002) reported that culture may be responsible for differences in e-mail communication styles in multicultural environments, but that people do not intentionally bring their cultural values into this virtual environment in the same ways that they do in face-to-face environments.

Goodfellow, Lea, Gonzalez, and Mason (2001) discussed the fact that students in online cross-cultural learning environments have experienced frustrations due to linguistic difficulties. This outcome was also noted by Sengupta (2001), who reported that postsecondary students participating in a Web-based instructional activity expressed fears about imperfect language skills and stated that it was stressful to post messages in another language. Similar problems were reported in a very recent study by Bichelmeyer et al. (2004). The researchers found that geographically separated teams faced both technical and cultural difficulties when attempting to communicate via ICT.

Swigger, Alpaslan, Brazile, and Monticino (2004) reported that multicultural teams working on projects within a geographically distributed learning environment exhibited the following characteristics (pp. 377-378).

- Global distributed learning requires more administrative overhead than traditional group learning
- Global distributed learners need to contact each other quickly and frequently

A review of several different studies indicates that members of cross-cultural virtual teams make their own efforts to overcome problems caused by cultural differences. Thus, it is difficult to claim that an individual would say, “I am from the culture, therefore I can only communicate in this way.” On the other hand, individuals who work in multicultural virtual environments might benefit by being aware of cultural differences between users, noting that certain communication strategies may create problems. Even when a person’s cultural background is different from the cultural background of other members of a team, he or she has the ability to adapt to a different environment.

**STRATEGIES AND SUGGESTIONS FOR MULTICULTURAL VIRTUAL TEAMS**

Researchers have offered a number of suggestions to help virtual team members overcome the problems that can occur in cross-cultural communication. After working with three international teams on a 1-year project, Bichelmeyer et al. (2004) posit that educators may find it helpful to consider the following design principles when attempting to establish cross-cultural communication between students from multiple countries.

- Develop the content for intercultural activities by using topics that students can relate to from their everyday lives
- Start projects with indirect communication strategies (such as using a mediator) and move toward more direct communication between international students
- Create national student teams in order to facilitate interaction with international teams
- Provide students with opportunities to engage in informal research in order to develop skills that will transfer to more formal problem-solving activities
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- When deciding what technologies will best facilitate completion of an international project, take into account the technological skill sets of teachers and students, and the technical support that will be needed for the project. Determine what the "lowest common denominator" will be in terms of technologies that will be needed in order for the project to succeed.

As a result of extensive literature review, Cagiltay and Bichelmeier (2002) have proposed a list of suggestions that need to be taken into consideration by the people who work with multicultural teams. These are as follow.

- Create awareness of cultural values.
- Consider motivation.
- Consider the relationship between content and cross-cultural relevance.
- Recognize the critical role of facilitators.
- Consider the user-interface design.
- Manage the issues of communication.
- Develop conflict resolution skills.

Create Awareness of Cultural Values

One major problem facing multicultural virtual teams is that members are not generally aware of their own cultural values. To minimize the potential problems and to communicate successfully with a culture that is different from one's own, whether with a person from a specific company or from a different country, groups should try to identify the cultural values of their members and how they differ from each other (Elashmawi & Harris, 1993; Harris & Moran, 1996; Robinson, 1997).

Consider Motivation

Motivation is another important aspect of multicultural communication. What motivates a person within his or her own culture is not necessarily what motivates someone from another culture. For example, some cultures have a tendency to study and learn in groups rather than working alone (Han, Kim, Wang, & Bhattacharya, 2001; Lucas, Diener, Grob, Suh, & Shao, 2000; Wilson, 2001). According to Keller (1987), learners are motivated by four conditions of motivation, that is, attention, relevance, confidence, and satisfaction. To motivate learners, one must first gain the attention of learners and engage them in the learning activity. Once involved, students must believe that the learning is related to their personal goals and will meet their specific needs. In addition, they must not have fears about the subject, which impedes their learning effectively. Finally, learning must result in a sense of satisfaction by providing opportunities to use newly acquired skills and receive positive consequences such as verbal praise and real or symbolic awards by maintaining consistent standards, or by matching outcomes to expectations. Attention may be gained in a universal manner; however, the other conditions of relevance, confidence, and satisfaction are likely to interact with the learner's culture. It is important to recognize that there may be cultural differences regarding what is worthy of attention, what is perceived to have general relevance, what impacts confidence, and what provides satisfaction.

Consider the Relationship between Content and Cross-Cultural Relevance

Related to the previous discussion regarding motivation is the observation by Pincas (2001, p 46) that "perhaps the most difficult aspect of cross-cultural discourse, whatever the medium, is in the perception of relevance." If a multicultural team works on an educational project or a course, the facilitator or the instructor should consider carefully the relevance of the course content (Wilson, 2001) to each member of the team. The relevance of course content is represented in at least several forms, including examples, practice activities, feedback statements, and evaluative strategies. The content presented in each one of these forms may be interpreted differently based on the perceived relevance by members of the team from different cultures.

Critical Role of Facilitators

A common element cited by several different cross-cultural researchers is the critical role of the manager, facilitator, or coach of the multicultural team (Berge, 1995; Harris & Moran, 1996; McLoughlin, 1999; Robinson, 1997; Williams, Watkins, Daley, Courtenay, Davis, & Dymock, 2001). Williams et al. have found that facilitation in online cross-cultural
environments is a very challenging task. They list some of those major challenges as questioning, participation, interpersonal and group dynamics, and facilitator expectations and anxieties.

In order to overcome the challenges and create a synergy between different cultures, Robinson (1997) advises intercultural facilitators to alert and guide multicultural team members about value differences, and lead them to realize the critical importance of learning with and from each other.

Consider the User-Interface Design

Since multicultural team members meet in cyberspace, they interact first with the physical device (the computer), then with the user interface. Therefore, international user-interface design guidelines and strategies, as well as core functionalities should be followed (Collins, 1999; Fernandez, 1995; Galdo & Nielsen, 1996; McLoughlin, 1999). As ways to improve international usability of the user interface, Nielsen (1996) suggests that designers conduct international inspection and user testing. He explains that “an international inspection simply involves having people from multiple countries look over the user interface and analyze whether they think it would cause any problems in their country” (p. 3), and that “the two fundamental parts of international user testing are to involve real users and have them do real tasks with the system without getting any help” (p. 5). Galdo (1996) recognizes that there are cultural differences in design preferences that cannot be addressed by the commonly practiced localization and translation effort, contending that “design preferences evolve from cultural attitudes and expectations toward the task to be performed and the technology used to perform the task” (p. 82). Hence, she suggests that designers collect information on “cultural attitudes, practices, norms, and artifacts that affect the product’s overall model” (p. 83) in an early phase of the design process to produce truly usable internal user interfaces.

Manage the Issues of Communication

In a collaborative virtual work environment, communication and interaction are the key factors for success. However, in cross-cultural contexts, it is not always correct to assume that more communication and interaction is better than less. Frequency and complexity of team communication has to be carefully managed by virtual team facilitators (Collins & Remmers, 1997; Pauleen & Yoong, 2001).

The lack of social cues or emotions (facial expressions, body language, etc.) makes electronic communication different from communication in the face-to-face environment (Cakir et al., 2002). Since social norms and standards disappear, virtual environments can lead users into unintended conflicts. Therefore, it is critical to explicitly include expectations for interactions into the design of the project.

Develop Conflict-Resolution Skills

Being prepared for conflicts and having some method to deal with them appropriately are the key factors in assuring better solutions, enhanced understanding, and improved working relations (Kollock & Smith, 1996; Pincas, 2001). In case of a problem or conflict, the facilitator or coach has to know how to apply constructive conflict-management strategies.

CONCLUSION

In regard to the findings and implications of this chapter, the researchers acknowledge that cultural differences do not eliminate individual preferences, nor do they negate an individual's ability to change and adapt to new situations. This overview does, however, appear to support the general notion that different cultural influences have some impact on communication strategies. Oetzel, Burris, Sanchez, and Perez (2001) note that not only can communication be impacted by cultural and contextual factors, but communication also impacts group outcomes and serves as a way of developing group culture.

Information and communication tools offer one of the most exciting yet challenging ways to teach learners and workers to collaborate through the connection of individuals to create teams around the world. Collaborative learning and work become even more significant when members are from different nations with varied cultures, languages, histories, and sociopolitical beliefs. Such an environment can only be productive if participants are well.
prepared for potential problems, and necessary actions are taken in advance.

This entry illustrates the growing research and practical potential of distributed learning and work systems. With ICL, organizations can reach greater numbers of culturally diverse learners. Learner mobility continues to increase across subject areas, geographic borders, and curriculum areas; therefore, the need to accommodate cultural differences in an increasingly heterogeneous program will also increase dramatically. There are some reflections in the literature on the educational impact of new technologies and multiway interaction among cultures. Nevertheless, there is no well-defined model that specifically investigates the problems of designing and implementing complex sociotechnical systems for multiple cultures (Lipnack & Stamps, 1997; Steinfield et al., 2001). Further research needs to be completed in order to more fully and thoroughly understand the nature and range of these influences.

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KEY TERMS

Collaboration: The mutual engagement of participants in a coordinated effort to solve a problem.

Culture: Culture is the background set of assumptions and values that structure our existence and orient us through the events of our lives.

ICT: Information and communication technologies. Electronic communication tools, such as chat, e-mail, and the World Wide Web.

Multicultural Team: A multicultural team is one composed of members who have spent their formative years in different countries and thus have learned different values, demeanors, and languages.

Virtual Team: A team that does not have the advantage of face-to-face interaction and communication. Instead they must rely solely upon an assortment of computer-supported cooperative-learning and class-work tools and strategies to coordinate resources.