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Editor's Note:

This special issue of *Contemporary Issues in Technology and Teacher Education* focuses on intercultural education and the role of technology to facilitate such education in formal courses of teacher education and in the lifelong reflective practice of educators. The role that information and communication technologies have in increasing the need for education related to globalization and to the increasing digital divide is also recognized. Intercultural education is a general term pertaining to the ability to understand, empathize with, and respect all ethnicities. Multicultural education, inclusive education, education for social justice, and international education are terms often associated with intercultural education. Niki Davis, the special issue editor, invited articles from a variety of perspectives, including those associated with intercultural education in specific disciplines and content areas, equity and social justice, and the use of technology to enhance multicultural and international education. Contributions to this special issue were sought worldwide, having been stimulated by the International Leadership for Educational Technology initiative (ILET; <http://www.public.iastate.edu/~ilet>) that is building a transatlantic doctoral community between six universities in four countries. This editorial introduces the challenges of applying technology to intercultural education using our ILET experience before using three complementary theoretical perspectives to introduce the articles in the special issue. The publication establishes a continuing opportunity for dialog and scholarship on intercultural education and technology due to this online journal's invitation to submit articles in response to articles. Please contribute!

Intercultural Competence and the Role of Technology in Teacher Education

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“Competence in intercultural education is not an extra facet of teachers’ professional development but should become an integral part of that profession.” (Leeman & Ledoux, 2003, p. 282)

Culture has been defined as shared interpretations about beliefs, values, and norms, which affect the behaviors of people (Adams, 1995; Lustig & Koester, 1999). A specific culture can be viewed generally as an integrated pattern of human behavior that includes knowledge, thought, communications, customs, beliefs, and values of an ethnic, religious, or social group. Clearly, using this broad concept of culture, there are many different cultures within every nation, as well as worldwide. Therefore, it is imperative for people to understand different cultures in order to take an active role in today’s complex world. Complex and critical perspectives are also essential to increase equity and respect for cultures locally and globally. Thus, intercultural competence, which is the capacity to change one’s attitudes, values, and behavior so as to be open and flexible with other cultures, has become increasingly crucial for individuals to survive in our increasingly globalized society.

Taylor (1994) defined intercultural competency as a transformative process whereby the “stranger” develops adaptive capacity, altering his or her perspective to understand and accommodate the demands of the host culture effectively. As such, intercultural competency is not a result of something, but an ongoing, individual internal process. An interculturally competent person manifests increased affective, behavioral, and cognitive abilities, such as empathy, adaptive motivation, an ability to tackle alternative perspectives, behavioral flexibility, and person-centered communication. Thus, intercultural competency can be defined as transformation of learning and a growth process where an individual’s existing, often implicit, knowledge is diversified to intercultural knowledge, attitude, and behavior. The learning and growth process allows individuals to incorporate intercultural knowledge into their high level cognitive schema.

Teaching in a U.S. school is increasingly an intercultural phenomenon, in that teachers are frequently not of the same race, ethnicity, class, cultural background, and linguistic dominance as their students (Gay, 2003). In addition, events of the 21st century, such as increased terrorism and multinational economic processes, press educators and educational leaders to change curriculum and learning in order to help our students develop intercultural competence. Becoming an intercultural educator involves allowing oneself to develop a multicultural perspective for teaching and learning (Nieto, 2000) since culture is perceived as being shaped by the lived experiences. Educators and educational leaders need to reflect and be conscious about their own intercultural beliefs, experiences, and behaviors. They need to develop professional competence and confidence in intercultural education in order to support all students and prepare them to become interculturally competent global citizens. This is also crucial for those who support instructional development, educational software design and student services.

Achieving intercultural competence through intercultural learning is a major goal that complements development of students’ language competence. Many modern foreign language experts claim their own working definitions of intercultural learning, and related research has identified ongoing challenges in assessing learners’ intercultural competence. Byram’s (1995) model of intercultural competence, which is widely used in foreign language classrooms, requires the development of the following:

- Readiness to suspend disbelief about other cultures and belief about personal culture with an attitude of openness and curiosity.
- Knowledge of social groups and their products in personal and foreign cultures and of the general processes of societal and individual interaction.

- Skills of interpreting and relating to events, discourse, and media from another culture and relating it to a personal culture(s).
- Skills of interaction and discovery that promote acquisition of new knowledge of cultural practices and the ability to use them to operate under constraints of real-time communication and collaboration.
- Critical cultural awareness and political education with an ability to evaluate critically and on the basis of explicit criteria, perspectives, practices and products in multiple cultures and countries including personal culture(s).

Research into intercultural competence has identified a range of issues, including cross-cultural adaptation (Kim, 2002), cross-cultural effectiveness (Kealey, 1989), intercultural effectiveness (Cui & Van Den Berg, 1991), cultural shock, and intercultural communication competence (Wiseman, 2002), cultural adjustment (Benson, 1978), cultural communication effectiveness (Ruben, 1987), intercultural communication competence (Gudykunst, 2004; Gudykunst & Kim, 1997; Kim, 1991), and intercultural transformative process (Taylor, 1994).

Educators have been developing an intercultural dimension in education with innovative uses of such tools as e-mail, Internet, and computer simulations. In 1999, the first author of this editorial proposed three reasons for including intercultural education within teacher education programs but, as will be discussed later, her view has developed into multiple perspectives. Many technology-using teacher educators start with similar views:

- Education, as with all modern social systems, now operates in a global context;
- [Technology] and in particular, interactive distance learning technologies, can easily be used to increase access to education on a global scale. This is especially important for previously underserved nations and communities; and
- Providing pre-service teachers with an opportunity to learn from peers in other cultures may help them gain a better understanding of their own educational culture and the social, economic and political context that affects it. (Davis, 1999, p. 9)

The application of technology to link students in teacher education with contrasting cultural perspectives and complementary curriculum needs was developed over 20 years ago using email. For example, Roger Austin's (1995) research resulted in secondary school students studying cultural conflicts in each other's regions and developed teacher education across borders. Austin connected curriculum and classrooms in Northern Ireland and Belgium to study respective religious divides. A decade later his systematic emancipatory research also worked to include preservice teacher education across Ireland's borders. Email collaborations have also been developed in US multicultural teacher education. Merryfield (2003) provided a recent review in this journal of related practice.

The articles in this special issue of *Contemporary Issues in Technology and Teacher Education* focus on intercultural education and the role of technology to facilitate such education in formal courses of teacher education and in the lifelong reflective practice of educators. The detailed illustrations provide a foundation to expand this practice. We begin with our own illustration to engage readers in the challenges of integrating intercultural education with technology. Our experience in the ILET project challenges Davis' (1999) view that interactive distance learning technologies can easily be used to increase access to education on a global scale.

Problematizing the Role of Technology in Intercultural Education

The introduction has established the concept and need for the development of intercultural competence in teacher education and this special issue. However, we recognize that many readers will also need support to recognize the challenges that developing this intercultural competence brings. We now use our experience in developing intercultural competence within six doctoral programs in four countries for the next generation of leaders of educational technology to highlight the potential benefits and challenges that technology brings to intercultural education.

The vision of our project, International Leadership for Educational Technology (ILET), is to promote an intercultural learning environment that facilitates preparation of future educational leaders of educational technology to develop good practice for today's diverse digitally networked global society. The project is developing six leading doctoral programs in educational technology (Brown & Davis, 2004; Hagenson et al., 2004). Faculty members and students have participated in internships abroad, intensive international courses, and Web-based learning to develop the programs' community of practice and individual competence. The collaborative development of these strategies across six universities' doctoral programs has been challenging.

Working in a foreign culture is generally recognized to be a transformative intercultural experience. It is an intense process of sensitization and adaptation that may be facilitated by cultural preparation and debriefing (Mestenhauser & Ellingboe, 1998). Our experience in ILET confirms the value of study abroad, including internship for both students and faculty. It is related to the common belief that intergroup contact can reduce prejudice. Hewstone (2004) provided a useful update of psychological research on intergroup contact.

Our intern teacher educator scholars have used technology to work at home while also working abroad and to remain within peer and family networks. The building of our transatlantic doctoral community has also supported recruitment into study abroad's immersive intercultural education. One such doctoral student is Rema Nilakanta. Rema's increasing collaboration with an ILET community resulted in her studying abroad in autumn 2004 with her daughter in Denmark, in addition to visits to and from her peer, Olatz Lopez, in the University of Barcelona in Spain. Olatz had interned abroad in Iowa State University (ISU) the previous year (see http://www.public.iastate.edu/~ilet/student_files/ILETolopez/english/past.htm for Olatz' reflection on the experience).

As an intern teacher educator and visiting scholar in Denmark, Rema used Web-based technologies of email, chat, and videoconferencing to stay in touch with family and friends and to continue to work from a distance for the eDoc project in Iowa State University. She also supported several offerings of an Aalborg course using these technologies, a managed learning environment (Virtual U), and the ISU e-portfolio software, eDoc. Democratic software design in the eDoc project is the focus of Rema's dissertation (Nilakanta, 2005). Although the use of technology reduced Rema's immersion in the Danish culture, her intense engagement on many levels were enhanced by her internship in Denmark. The technology extended the experience, most notably in working with the Aalborg course before her departure and on her return (Sorensen describes the course in this special issue of the journal). The project has further instances of ongoing collaborations and networking of interns and faculty (Davis & Cho, in press).

This strategy of study abroad promoted by the European-US initiative (see <http://www.ed.gov/programs/fipseec/index.html>) is an outstanding success, but the significant logistical challenges keep participation low in the US. It was, therefore, important for the project to research and develop additional strategies: an annual intensive summer course and an online course each fall. The ILET annual international intensive summer course (an academy) is held in one of the partner universities in Europe or the US. The first academy took place in London in June 2003 for 10 days with a US-led workshop on digital story telling, visit to a UK city technology learning centre, numerous expert seminars with international experts and educators, and participation in the Institute of Education large doctoral conference, plus free time to explore. Further details can be found in Rex Heer's student reflection and charming digital story, "Mind the Gap" (<http://www.public.iastate.edu/%7Erex/London/londongaps.html>).

A similar academy in May 2004 in the University of Florida highlighted the challenges of promoting intercultural education with reduced "foreign" experience that was particularly notable for US participants. Iowa State University's WebCT environment was used to enhance the onsite presentations, but our hope that participation would be extended over the summer was not fulfilled. Faculty and students returning to their home institutions were overwhelmed with conflicting responsibilities. Although both time and location can be "bridged," logistical constraints remain embedded in personal and organizational cultures. It should also be noted that virtual communication reduced cues of cultural identity and patterns of behavior. The use of WebCT also contributed to the overpowering influence of the US culture in the academy. It did not promote our ILET vision of a transatlantic community of practice informed by Wenger's (2000) theories (see [Sorensen](#), this edition of the journal, for a discussion of Wenger's perspective applied to technology enhanced learning).

The third and final strategy we discuss is the use of an online course or reading group. It proved more challenging than expected to design an activity that fit with all six doctoral programs because of the disparity of organizational cultures and languages. Courses are commonplace in US doctoral programs. However, doctoral students in Europe study few prescribed courses, instead focusing more their dissertation study. Therefore, the strategy of an online reading group at a time of year when students and faculty members are on campus was adopted, with topics chosen carefully to attract students and to make good use of the complementary expertise spread across the six doctoral programs.

This flexible strategy has proved successful, and the project has settled into an annual reading group for the month of October. For example, in October 2003 Niki Davis and Elsebeth Sorensen collaborated to facilitate a reading group focusing on e-portfolios, in which Elsebeth is recognized as an international expert (see, for example, the award winning article, Sorensen & Takle, 2001) and Niki as a university-wide expert leading the eDoc project (Sheppherd, Wang, Hassall, & Nilakanta, 2005). Readings and assignments were provided through the ILET project's international Web site (see http://www.public.iastate.edu/~ilet/students_files/student_ac_program.html) and complemented with a Web-based discussion group. Students drawn from all six universities discussed common reading for around 4 weeks. While these reading groups provide an opportunity to "study abroad virtually" in a small way, we recognize that the Web-based environment always has an overriding white US culture, due to the influence of US on software tools. For example, Virtual U adopted by Aalborg University in Denmark does not feel Danish because Virtual U was developed in North America. The ILET reading groups have provided useful opportunities for graduate students to engage with the international ILET community, and they support recruitment to intern abroad. Participants have acknowledged that their awareness of international perspectives

increased. Sensitivity to other cultures may be increased, but there has been minimal evidence of the development of intercultural adaptation (Davis & Cho, in press).

Over the last 3 years we have come to understand intercultural competence as an ongoing process that requires strategic adaptation of our degree programs and complementary communities of practices. Our earlier naïve technology rationale has given way to a deeper understanding of the challenges that technology brings to society and to our own work as technology-using teacher educators who aspire to model effective practice. The theoretical perspectives that underpin intercultural competence are also multidisciplinary. Our experience has led us to recognize the need to engage several perspectives to further our ILET vision. This realization set the stage for this special issue and the resulting articles.

Theoretical Perspectives on the Development of Intercultural Competence

This special issue of *Contemporary Issues on Technology and Teacher Education* also provides a view of complementary conceptual models of intercultural education and strategies for teacher education that include educational technologies. It brings together for the first time a representative range of theoretical perspectives and current practice in teacher preparation and professional development, including detailed examples.

The articles in this special issue are now discussed to provide a view of the theoretical perspectives illustrated with current practice. The editor's aim is to set the stage for an ongoing scholarly discussion and the dissemination of effective practice. All articles in the general section of this special issue have a theoretical perspective illustrated by current practice. The aim is to bring to the fore the multiple perspectives on intercultural competence. These theoretical perspectives are complementary rather than contradictory. They appear to come from commonly accepted world views or paradigms often used to clarify different approaches to action research. For example, Masters (1995) discussed three perspectives of action research:

- Problem solving, a scientific technical view arising from natural sciences.
- Practical-deliberative view arising from historical critical views.
- Critical-emancipatory view arising from a sociological and political perspective.

Educators naïve to the history of intercultural education may start with a theoretical perspective related to solving the problem of a deficit in education. This editorial and at least two articles in this special issue best fit this problem solving perspective. Davis (1999) and the original conception of the ILET project came from this perspective through which we sought to solve our "problem" by incorporation of an intercultural dimension in our collaborative doctoral community. Our problem solving approach was informed by the common belief that bringing the cultures together would result in reduction of prejudice (Hewstone, 2004).

The original vision of ILET promoted a deductive approach to curriculum and organizational development, and our funding agencies continue to demand evidence from us that the doctoral programs are becoming more effective. Objective evidence will also be useful to support change in our universities. Our current evidence base for development of intercultural competence in the ILET project is described in Davis and Cho (in press).

[Sorensen](#) (see this issue) solves her design problems through an iterative process of critique and redesign of discursive electronic portfolios. She is also a member of the ILET consortium who applies Wenger's (2000) communities of practice theory in her masters program from this perspective. Hilary Wilder's commitment to reform for equity is extraordinary. [Wilder](#) (this issue) discusses her problem solving to illustrate the extreme logistical, technical, and ethical challenges of collaboration with a low income nation, Namibia (see Shalyefu & Nakakuwa, 2005, for a discussion of this context for technology in education). Although many educators have dreamed of the "good" they could do, very few teacher educators have attempted such collaboration. Wilder's case study should also cause reflection on what we mean by "good practice" within high and low income contexts, including multinational efforts.

Byram's model that is widely used in foreign language education, which was described earlier, is probably more representative of the practical-deliberative approach that is derived from historical and critical views of intercultural education. It is also the perspective of [Carroll and Carney](#) (this issue), who describe current practice with the infusion of literacy methods into two courses. The first course on culturally responsive teaching sets up the context for a project within the course on instructional technology. Students engage in deep learning about themselves and their own culture through digital stories. The authors note that this personal perspectives project demonstrated how "careful scaffolding, thoughtful collaboration, and the choice of appropriate technologies can create a synergy for deep learning," accompanied by identity development, which is part of developing intercultural competence. The double infusion model described and illustrated by [McShay](#) (this issue) provides an in-depth illustration of critical thinking in multicultural teacher education, which comes from this practical-deliberative perspective. The strategy scaffolds a critical review of past events in order to raise students' awareness of the ways in which culture has evolved in the US. McShay also illustrates his double infusion model (McShay & Leigh, in press), whereby multicultural perspectives are infused into technology courses and technology courses model critical multicultural pedagogy.

Through the seminal reading of Geertz (1973), [Ferdig and Dawson](#) (this issue) challenge teacher educators to present the complexity of culture that exists around us locally and globally in "webs of significance." They also prompt us to explore the creation of new cultures with technology, including those inside technology and teacher education (see, for example, Mottart, Soetar, & Bonamie, 2004). They stop short of emancipatory action.

The third and final perspective promotes emancipatory action for educational renewal. Merryfield (2003) in a previous issue of this journal provided a well-argued case for applying technology from this perspective. [Malewski, Phillion, and Lehman](#) (this issue) provide an illustration in which teacher educators in their courses are actively promoting emancipation for students in an inner city school using the Libratory pedagogy espoused by (Friere, 1972, 1995). The article illustrates the application of videoconferences for an extended virtual multicultural field experience. In this way they model emancipatory action for future teachers.

Current emancipatory practice by a high school history teacher is described by [Marri](#) (this issue). Marri reflects on this low technology context (for the US) and explores the implications for teacher education. The history teacher used Internet and presentation software in his teaching with a critical and transformative pedagogy, drawing upon key events from a US view of multicultural education. One of these events is the desegregation of education in the US. The history teacher uses a picture of an African American child, one of the Little Rock Nine, bravely carrying her books to school through an angry crowd of white adults (most of whom probably originated from Europe). A later

transformative episode of this teacher's class uses the Internet to inform research and action in the context of the local community in a way that will enhance the life chances of these challenged students.

Taken together, the articles in this special issue provide a rich resource for future development of intercultural education enhanced with technology.

The Way Forward

This editorial clarified our understanding of culture and of intercultural competence. It has illustrated three theoretical perspectives on intercultural education that build upon one another with increasing scope. The problem solving approach is the most confined perspective. The critical-emancipatory perspective takes a wide sociopolitical perspective. The three perspectives can and should be used together to realize improvements in education for all, locally and globally.

The editing of this special issue has provided an opportunity to compare and synthesize theoretical perspectives and relate them to current practice. Working on the ILET project, including this special issue, has also served to transform our understanding of the role of technology in intercultural education, which spans multicultural and international education. The application of technology is challenging. It is not easy, as suggested by Davis (1999). Model practice involves a lifelong process of intercultural, multidisciplinary education for students and faculty. Our increased knowledge of multiple perspectives will enable us to innovate more effectively and to disseminate our current practice to prepare future leaders of educational technology, along with its theoretical underpinnings. This approach is more appropriate for spreading practice that is sensitive and adaptable to multiple cultures and contexts, locally and globally.

The publication of this issue establishes a continuing opportunity for dialog and scholarship, due to this online journal's invitation to submit articles in response to articles. In addition, new submissions for the sections without an article are welcome, namely science, mathematics, and English teacher education. As editor, Niki Davis plans to continue to lead refereeing and to edit future articles with the ILET community's support. The special issue will also provide further resources for the development of intercultural competence in graduate education for future leaders of educational technology, including our planned reading group for October 2005.

Please volunteer to join with the process as a journal referee and/or to contribute an article or a response to the articles published here.

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Internet Links

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