

E-LEARNING AND THE DEVELOPMENT OF INTERCULTURAL COMPETENCE

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ABSTRACT

This study presents findings on the efficacy of an online learning environment developed to foster EFL students' intercultural competence via reading articles on topics of their own culture and communicating their responses with speakers of another culture. The project offered opportunities for EFL students to use their own societal and cultural practices as the focus for EFL learning. In addition, with the help of an e-forum, the learning environment allowed the students to exchange their views with speakers of the target language. Two e-referencing tools were made available in the system while students were reading and writing. The findings showed that all EFL participants were able to communicate fluently in the target language without much help from corpora-based e-referencing tools provided in the system. The use of the online dictionary decreased drastically after the first two readings. The online concordancer, instead of being used for learning different kinds of cultural meaning on the levels of lexical, syntactic, and textual organization as originally intended, was used by the students to link to articles of similar topics for further explorations of culture and language learning opportunities. Despite some technical difficulties with the computers, the collaboration between the two groups of students was successful, as can be seen from the positive and complimentary comments from the participants. The students' e-forum entries demonstrated four types of intercultural competences: (A) interest in knowing other people's way of life and introducing one's own culture to others, (B) ability to change perspective, (C) knowledge about one's own and others' culture for intercultural communication, and (D) knowledge about intercultural communication processes.

INTRODUCTION

Teaching Culture in an EFL Classroom

The teaching of culture is considered a very important part of language teaching, although how it should be done remains controversial. For many years, the transmission perspective with rote learning of factual knowledge of highbrow (e.g., literature and the arts) and lowbrow information (e.g., customs, habits, and folklore of everyday life) dominated the teaching of culture (Thanasoulas, 2001). Nonetheless, this approach was criticized for downplaying the meaning of culture because it "...virtually blindfold[ed] learners to the minute albeit significant aspects of their own as well as the target group's identity that [were] not easily divined and appropriated" (Huebener, 1959, p. 177).

To make up for the shortcomings of the factual transmission perspective in teaching culture, the cross-cultural contrastive approach was then embraced by language teachers. Drawing upon cross-cultural psychology and anthropology, this approach embedded culture within an interpretive framework and advocated the connection between one's own and the target country. Learners are usually directed to compare and contrast the similarities and differences between their own and the target cultures.

The contrastive approach had its own share of criticism as well. Educators found that the approach might have run the risk of oversimplifying the richness and variety of a culture by reducing it to a few salient principles. It might have also misrepresented a culture or even fossilized stereotypes and hyper-sensitized language learners to cross-cultural differences (Guest, 2002). Overlooking individual variations was another problem of the contrastive approach. When students focused on finding the similar and different elements between their own and the other culture, they might have failed to notice the individual variations within each culture. Therefore, comparing and contrasting stereotypes of home and another culture did not demonstrate clearly enough the subtle differences within each (Ortuño, 1991).

In the 1980s, the importance of culture in the foreign language curriculum was enhanced by the emergence of the communicative approach (Canale & Swain, 1980; Seelye, 1988). Based on the belief that communication is not only an exchange of information but also a value-laden activity, learners were encouraged to take on the role of the foreigners so that they might gain insight into the values and meanings of the foreign culture (Byram & Morgan, 1994). Then again, with the increased awareness of the variety and diversity of the target culture communities, researchers cautioned that within the communicative competence framework, learning a foreign language could become a kind of enculturation where one acquired new cultural frames of reference and a new world view (Alptekin, 2002; Widdowson, 1994). With its standardized native-speaker norm, communicative-competence-based teaching might confine the learners to a model that is unrealistic. In other words, the monolithic portrayal of native speakers' language and culture could not reflect the reality of English as an international language, and thus it fell short in teaching English as such.

The rejection of modeling after native speakers for cultural learning nudged the teaching of foreign culture into a new direction. Communication situations are currently seen as encounters between the learner's culture and that of the other. More recently, the term "intercultural competence" has been used in books and articles dealing with the cultural dimension of foreign language education to indicate the goal towards which students who want to communicate "across different cultures" should work. The use of the term "intercultural" reflects the view that foreign language students need to gain insight both into their own culture and the foreign culture, as well as be aware of the meeting of cultures that often takes place in communication situations in the foreign language (Kramsch, 1993). Learners must first become familiar with what it means to be part of their own culture and by exploring their own culture (by discussing the values, expectations, traditions, customs, and rituals they unconsciously take part in) before they are ready to reflect upon the values, expectations, and traditions of others with a higher degree of intellectual objectivity (Straub, 1999). Foreign language teachers should help learners reorganize their own complex cultural microcosmos and offer learners opportunities to develop skills to investigate cultural complexity and to promote cultural curiosity (Abrams, 2002).

An overview of the development of the teaching of culture in a foreign language classroom reveals several stages. They include the factual transmission method, the cross-cultural contrastive approach, the communicative competence-based teaching, and the intercultural competence perspective. As the ways in which foreign language educators deal with the teaching of culture evolve, the status of the language learner's own culture begins to be recognized. It is becoming clearer that culture teaching should not ignore the role of the learner's own culture. After all, the learner's interpretation of the target culture is done through the lens of his/her own cultural background and knowledge. Culture learning is not merely learning the target culture, but gaining insights into how the culture of the target language interacts with one's own cultural experience.

Teaching Culture in the Information Age

Culture teaching is obviously not a single-faceted or an easy task for foreign language educators. In the course of searching for appropriate approaches, foreign language teachers have been turning to

information technology for help in delivering cultural lessons. In many ways, CALL and culture are inherently connected. Some researchers assert that it is impossible to separate cultural issues from devising a CALL program, for CALL is about language and language is a cultural issue par excellence (Cameron, 1998).

Over the years, efforts have been made by CALL experts to explore the capability of computer technology in supporting the teaching of culture. Similar to the change of beliefs in how culture should be taught in the foreign language classroom, the exploration of computer technology for culture teaching has also gone through several phases. In the early stage, much computer-assisted language teaching software was developed with the functions of teaching not only language but also culture. Unfortunately, commercial CALL software design has produced software that incorporated many cultural inaccuracies and misrepresentations and thus contradicted the goal of providing learners with a culturally authentic CALL experience (Shaughnessy, 2003). Due to content and delivery isolation and the adaptation of software across languages, students were presented with an ethnocentric view of the world. Students could only learn vocabulary from one cultural reference point since the culturally generic software ignored the cultural differences associated with specific topics.

To compensate for commercial software's inability to live up to the expectations of providing assistance in the teaching of culture and to take advantage of the technological advancements, CALL for culture teaching then began to integrate the use of computer networks. Computer networks are seen as a channel for interactivity and authenticity and for developing language learners' intercultural competence (Abrams, 2002; Hager, 2005; Kramsch, 1993; Straub, 1999). Online interactive courseware has been developed to promote the cultural understanding of ESL/EFL learners. For example, Shawback and Terhune (2002) outlined a course that was developed using online interactive exercises and films to study language and culture. They claimed that the automated feedback functions allowed students to actively explore the cultural aspect of the films and enhance students' confidence and motivation to study the language and culture. Another exemplary effort is an EU-funded, e-learning project which aims to exploit online technology to develop intercultural business and language skills for European managers in the construction industry (Rogerson-Revell, 2003). It advocates an integrated approach to language and culture training, describing how a "cultural syllabus" is designed to develop users' understanding of key aspects of European work culture and practices alongside their professional language skills.

E-projects that took advantage of the capacity provided by computer-mediated communication have been implemented to develop L2 learners' intercultural competence as well (Warschauer & Kern, 2000). By using telecommunication tools, students of different cultures have been linked to develop target language and intercultural competence. To develop the Cultura Project, Furstenberg, Levet, English, and Maillet (2001) used two capacities of the World Wide Web: 1) to bring forward, juxtapose, and connect different and multiple types of materials on the same screen, and 2) to bring users in different cultures to engage in a discussion via a forum. The students at the Massachusetts Institute of Technology in Cambridge and the Institut National des Télécommunications in Evry, France collaborated to observe, compare, and analyze parallel materials from their respective cultures. The Cultura demonstrates how networked communication can be used to develop foreign language students' understanding of foreign cultural attitudes, concepts, beliefs, and ways of interacting and looking at the world. Despite possible problems associated with foreign language intercultural interactions mediated by Internet communication tools (Throne, 2003), characteristics of e-mail exchanges which helped to develop learners' intercultural communicative competence have been identified (Liaw, 1998, 2001, 2003; O'Dowd, 2003). Both "alinguistic" and linguistic aspects of the development of intercultural competence in telecollaboration have been investigated to draw instructional implications (Belz, 2002, 2003). Scholars point out that as online language learning shifts in focus from single classrooms to long-distance collaboration projects, the focus of learning will also expand beyond language learning to an emphasis on intercultural competence, cultural learning, and cultural literacy (Kern, Ware, & Warschauer, 2004).

A more recent development in applying computer technology to the teaching of language and culture has been its integration with corpus linguistics. Researchers believe that the uses of corpora are theoretically warranted and potentially are practically profitable to improve learners' language competence and increase their knowledge of the culture (Aston, 2001). With the accessibility to text archives provided by computers and the Internet, it is now technically and economically feasible for many language teachers and learners to exploit the benefits that corpora and corpora-based activities can provide. Although corpus linguistics studies have been applied to language teaching, it is only recently that corpora have been used for exploring the cultural aspect of language learning. A frequently cited study in this area is the one conducted by Leech and Fallon (1992). They used KWIC (Key Word in Context) concordances of two corpora to investigate the senses in which words were being used in England and the United States. They then grouped the differences which were statistically significant into fifteen broad categories. The frequencies of concepts in these categories revealed differences between the two countries which were primarily cultural, not linguistic.

Knowledge of the culturally connotative meaning of words is important for effective intercultural communication, and non-native learners need to acquire this sort of knowledge to avoid potential misunderstanding and social awkwardness. Target language corpora can be particularly valuable for understanding and conveying cultural connotations because corpora usually contain multiple examples that can facilitate inferences of cultural connotations. To help their students satisfactorily translate a particular word (i.e., *clochemerlesques*) in a French newspaper article in which particular socio-cultural connotations exist and for which no conventional reference tools would provide appropriate explanations, Bertaccini and Aston (2001) used a variety of CD-ROMs and Internet searches to form a target language corpus that students could explore for themselves. They concluded that ad hoc corpora can result in incidental, tangential discoveries for culture learning. Partington (2001) also asserts that teachers and learners can use small- to medium-size corpora to explore different kinds of cultural meaning on the levels of lexical, syntactic, and textual organization.

In addition to target language corpora, language learner corpora have been proven to be useful for culture studies as well. For example, Ringbom (1998) explored how vocabulary frequencies revealed cross-linguistic differences by contrasting seven western European learner corpora from the International Corpus of Learner English (ICLE) database with each other and with the LOCNESS native speaker (British and American) corpus of argumentative essays. It was found that the English of advanced learners from different countries with a relatively limited variation of cultural and educational background shared a number of features which made it different from native speaker language: advanced learner language was in some respects more, in others less, vague than native speaker language, and learners with a particular first language (L1) tended to use a particular word or phrase more or less frequently than both other learner groups and native speakers. In another study, Petch-Tyson (1998) examined the writing of EFL students from four different language and cultural backgrounds (French, Dutch, Swedish, and Finnish) to determine whether there were differences among the different language/cultural groups in the ways the participation of writer and reader were explicitly coded in the discourse. Concordances of the first person singular pronoun *I* were examined across the corpora. It was found that learner writers were much more overtly present within the discourse than the native speaker writers and the reasons could be culturally induced.

The term "parallel corpora" or "equivalent corpora" (Partington, 2001) is generally used to designate a collection of texts in one language and of their translations into another. Corpora of this kind are generally aligned on a sentence-by-sentence or phrase-by-phrase basis and, for any textual string in the corpus, both the source sentence and its translation can be retrieved and displayed. Zanettin (2001) used a translation activity as an example to illustrate a variety of potential learning benefits which may accrue from the use of comparable corpora. He contends that using comparable corpora and concordancing software as aids in translation activities can help learners gain insights into the languages and cultures involved and develop

their reading and writing skills. As learners exchange and debate their ideas and discoveries, they can exercise their search strategies.

A review of the application of computer technology to teaching culture reveals that with its adaptability and advancement, computer software, computer networks, corpora and corpora-based tools (e.g., concordancing software), via different ways, can all play a role in assisting the development of learners' intercultural competence. Although combining computers and corpora linguistics to foster students' intercultural competence is still an evolving approach, it has demonstrated exciting results and certainly deserves further exploration.

Rationale for the Design of the Project and Focus of the Study

As previously mentioned, the conventional model of communicative language teaching, with its strict adherence to native speaker norms within the target language culture, seems inadequate in fostering intercultural competence. However, intercultural communicative competence must be developed to prepare learners to be both global and local speakers of English and to feel at home in both international and national cultures (Kramsch & Sullivan, 1996). Instructional materials and activities, therefore, may involve local and international contexts that are familiar and relevant to language learners' lives. Instructional materials and activities may also include ample discourse samples pertaining to native and nonnative speaker interactions, as well as nonnative and nonnative speaker interactions. Discourse displaying exclusive native speaker use should be kept to a minimum (Widdowson, 1998). EFL educators need to consider the implications of the international status of English in terms of appropriate pedagogies and instructional materials that can help learners become successful bilingual and intercultural individuals who are able to function well in both local and international settings (Alptekin, 2002).

In response to the concern of providing learners with opportunities to reflect upon and gain an understanding of their own culture, a project that attempted to nativize English and provide an alternative to the conventional view that English could only be taught within the target culture was launched. In the project, the reading materials were reports on the students' own culture, so they were given the "home court advantage" while creating the "third space" (Kramsch, 1993), where their home culture and the target culture met. To take advantage of e-learning technology, the project also provided the students with opportunities to engage in intercultural communication via online discussion boards. The intercultural communication aimed at enhancing the students' intercultural competence, which was defined as the ability that allows foreign language learners to "function as mediators between their home culture and the target culture and to use the target language as contact language with people who use this language as a first language" (Risager, 1998, p. 244). Furthermore, having the chance to express views on their own culture to peers of a different culture, the students were expected to be "compelled to better understand their own and their counterpart's cultural views" and that this type of activity would "simultaneously challenge their sense of self and their cultural identity and worldview" (Hager, 2005, p. 279). In addition, the students had at their disposal an online dictionary and a domain-specific (i.e., Taiwanese culture) concordancer while reading and writing responses to articles on Taiwanese culture.

The research focus of this study then is to investigate responses from the students toward the design of the project and in particular their intercultural competence as demonstrated in the discussions with their e-pals in the US based on the reading of articles about their native culture. This study also explores the efficacy of using two corpora-based e-referencing tools for reading and writing English. How the availability of the tools affected the students' English language learning and intercultural communication is examined as well.

THE PROJECT

In a nutshell, the design of this project attempted to foster the growth of tertiary level EFL students' intercultural competence via English language development¹. To reach this aim, this project experimented with three important innovations: (a) instead of reading articles about the target culture, the students of this project read articles about their native culture, (b) e-forums were employed for intercultural discussion, and (c) two online reference tools were available to assist the students with the reading of the articles.

The selection of reading materials

Articles in *Sinorama* were chosen for the project. *Sinorama* is a popular bilingual magazine which includes insightful reports on the lifestyles, society, economy, and cultures related to the people in Taiwan. The *Sinorama* articles written in English were provided to give students opportunities to read in English about their own culture, to have the kind of content information Taiwanese students were familiar with, and to employ language that was specific to the Taiwanese context, through which students were expected to sharpen their intercultural sensitivity. The four articles were *Good-bye, Marian* (word count: 970, Flesch-Kincaid grade level: 8.4), *The Flea Market Sociology* (word count: 1,783, Flesch-Kincaid grade level: 8.3), *Questions and Answers on Children's Classical Studies* (word count: 997, Flesch-Kincaid grade level: 11.3), and *Sketches of Dreams amidst Generational Change* (word count: 2,426, Flesch-Kincaid grade level: 12.0) (Flesch, 1974). Synopses of the articles are in the [Appendix](#). The lengths and readability levels of the articles increased incrementally due to informal feedback from students demanding more challenging readings.

The system design

A web-based reading and writing environment for EFL and culture learning was designed for the project. The environment contained four instructional units. Each unit included an article, five comprehension questions and five vocabulary questions, a response section, and a forum for cross-cultural discussions. For the reading of the *Sinorama* articles, two corpora-based e-referencing tools were provided: a *Sinorama*-based bilingual concordancer, TOTALrecall (Wu, Yeh, Chuang, Shei, & Chang, 2003)² and an online dictionary. It was hoped that the linguistic and semantic support of the concordancer could assist learners to acquire new vocabulary (Zahar, Cobb, & Spada, 2001) and give them chances to exercise their ability to use contextual clues to read authentic texts (Cobb, 1999) on culture. As for the use of the online dictionary, it was to provide contextual inferences for lexical acquisition (Fraser, 1999). After reading each article, students were asked to answer the comprehension and vocabulary questions and then write responses to the instructor/researcher online. Online forums were for students to share their views about their reading with a class of thirty-two students at Sam Houston State University in Texas, U.S.A. The students at Sam Houston were prospective ESL/bilingual education teachers and their participation in the project was part of their course requirement.

Besides the above independent, self-access instructional features, this web-based system also included personal account management and records. The account management and record-keeping are parts of the system design and were anticipated for research purposes as well. For account management, students used their own account numbers and passwords to log in. The personal records kept track of each student's login and logout time, the words s/he looked up using the online dictionary and concordancer, the comprehension test scores, and written responses to the reading. In addition, the words that students looked up were automatically included in a vocabulary notebook for the student, so they could easily review the vocabulary words. The post-reading peer interaction and shared responses on the culturally relevant questions were recorded and made available both to students and the instructor/researcher. The URL of the website is: <http://fild.thu.edu.tw/candle>

Implementing the system and data collection

Although the construction and revision of the system is on-going, the system has been piloted with sixteen freshmen majoring in Foreign Languages and Literature at a private university in central Taiwan. After a brief orientation to the system, the students started to access the system independently. For the intercultural communication, each Taiwanese student was grouped with two peers in the United States with whom s/he exchanged views via a discussion board in the instructional unit, after reading each article.

In the study, both quantitative and qualitative data were collected and analyzed. The students' uses of the online instructional system, including the numbers of times they logged on and off the system, their comprehension and vocabulary quiz scores, and their use of e-referencing tools and the e-forum, were conveniently collected by the built-in account management system. The descriptive statistics was to yield quantitative information on the general efficacy of the system design; for example, the students' preferences in using the different components of the e-learning environment, particularly the online dictionary, concordancer, and e-forum. Nevertheless, to achieve greater reliability and a better understanding of the issue, perceptual data was collected and analyzed qualitatively via semi-structured informal interviews (Denzin, 1989; Nunan, 1992) with participating EFL students and e-mail discussions with the instructor of the students at Sam Houston State University. As for the students' intercultural discussion after reading each article, they were content-analyzed by using Byram's (1997) model of intercultural communicative competence³ and the guidelines for assessment of intercultural experience (Byram, 2000). The reason for adopting Byram's model was because of its wide acceptance by foreign language teachers and researchers as a representative guideline for classroom practices (Belz, 2003; O'Dowd, 2003). The intercultural discussion entries were read many times to find examples of the different categories in a classification system based on the modification of Byram's assessment criteria (2000)⁴. The categories used for this study included: (A) interest in knowing other people's way of life and introducing one's own culture to others, (B) ability to change perspective, (C) knowledge about one's own and others' culture for intercultural communication, and (D) knowledge about intercultural communication processes. The number of examples in each category was calculated to understand the possible effects of this type of learning environment on the development of the various categories of intercultural competence. The categorization was done by this researcher and a graduate assistant. Discussions were held between the two raters until complete agreements were reached on the categorization.

FINDINGS

Quantitative data

The management system record shows that the sixteen students logged onto the system a total of 605 times, averaging 9.45 times per instructional unit, per student. While all of the students read and wrote responses to the articles, only three of them answered all the comprehension and vocabulary questions in all four units. For the first unit, all sixteen students answered both comprehension and vocabulary questions. For the second unit, eleven students answered comprehension questions whereas thirteen students answered the vocabulary questions. For the third unit, only six students answered both sets of questions. For the fourth unit, only four students did so. The use of e-referencing tools showed a similar drastic decrease in number and this decrease of uses of the e-referencing tools was the same for all participants. The students looked up e-referencing tools 716 times when reading the first article, 982 times when reading the second article, one time when reading the third article, and 121 times when reading the fourth article. Among the uses, the students used the online dictionary when reading the articles most often (N=1,740). They also used the online concordancer when reading, but the frequency was a lot lower (N=74). Even though they could use the tools when writing, the numbers were quite low (online dictionary, N=52; concordancer, N=3). As for the use of the discussion board for intercultural

communication, the students in the two universities posted and replied to a total of 371 entries (Taiwan students N=165; U.S. students N=206), averaging two entries per student for each article. Among the entries written by the Taiwanese students, most of the entries (N=121) were categorized as demonstrating "knowledge about another country and culture," thirty entries showed "interest in other people's way of life," two entries revealed "ability to change perspectives," and four entries fell into the category of "knowledge about intercultural communication." While most entries demonstrated the characteristics of more than a single category, the researcher decided to list only the categorization which seemed to be more obvious than the others.

Qualitative data

The qualitative data of this study included interviews with students and e-mail discussions with Dr. Susan Bunn, the instructor at Sam Houston State University. The intercultural communication entries were also analyzed to ascertain the development of intercultural competence (or lack thereof) of the Taiwanese EFL learners within the framework of Byram's model (1997). The semi-structured interview was informally conducted after the students finished all four instructional units and the discussions with Dr. Bunn were continuous throughout the entire semester via e-mail correspondence.

End-of-project interview

All of the participating students felt that the experience was very interesting and rewarding. Although they had prior experience using computers for learning and communication, it was the first time they used computers for reading and writing in English and they found it exciting. The part they liked the most was reading English articles on their own culture and having the chance to describe and explain their own culture to others. As one of the students stated, "English suddenly becomes familiar and close to me." Another part that they also liked a great deal was having reading-writing buddies in the US. One student exclaimed, "This is so different from high school English classes! We can use English for real purposes and not only pretending to talk to a foreigner!" However, there were problems with the intercultural communication due to technological difficulties. The students found it very frustrating when the system suddenly broke down and they could not get back to the discussion. Unfortunately, they found this happened "way too often." The different academic calendars in the two countries which made the corresponding period short also caused complaints. They felt that the duration of the communication was "unreasonably" short because their partners could only be on the project till Thanksgiving.

In the interview, they were asked how they used the online dictionary and online bilingual concordancer. The students found the online dictionary "helpful but not very convenient." Almost all of them had pocket-size electronic dictionaries which they had been using and they did not find particular reasons to switch to the online dictionary provided in the system. The reasons why they used the online dictionary were to "give it a try" and to look up words that were not found in the pocket-size electronic dictionaries. In addition, after successfully communicating with their U.S. e-pals, they gained confidence in their own English writing ability. Getting help from e-referencing tools did not seem to be necessary anymore.

As for the concordancer, they found it "interesting" and "informative." They liked it because it provided examples of the many contexts in which the vocabulary words were used, but they also found a way of utilizing the tool which was quite different from what the researcher/instructor had anticipated. Whereas the researcher/instructor planned to provide contextual supports for students at the lexical level (e.g., finding examples of uses of culturally-embedded words), the students used it for links to extensive reading materials. TOTALrecall, a domain specific e-referencing tool, provided not only sentences containing the vocabulary words but also links to other *Sinorama* articles from which the sentences had been taken. The students, therefore, after looking up one particular word, then linked to the various articles from which the example sentences containing the word were extracted. For instance, one student, who looked up the word "classical," ended up reading several articles on Chinese classical texts and children's classical studies. However, the system only recorded the one time when the student looked up

the word "classical" but did not track the student's links to and reading of related articles. This interview finding helped to explain the small number of uses of the concordancer. Basically, according to the interview findings, the "concordancer" was used mainly as a portal to the reading of more articles on the same or similar topics.

When asked what they got most out of participating in the project, the students answered "reading interesting articles" and "intercultural communication." They found the topics of the articles relevant to their experiences and at the same time they learned something new, too. The articles were considered suitable for intercultural communication since the students could relate to the issues and had their own views to share with their partners. Due to familiarity with the discussion topics, the EFL students found the intercultural communication exciting yet not intimidating.

E-mail between the U.S. instructor and this researcher

The content analysis of the e-mail correspondence with Dr. Susan Bunn mainly confirmed the enthusiasm and positive responses from the participating students at Sam Houston State University. The Sam Houston students also felt frustrated when computer problems occurred. Nevertheless, many of the e-mail messages were about how to get the Sam Houston students registered to the Web site and solve technical problems.

Intercultural communication

One more important aspect of the qualitative data analysis was the EFL students' intercultural discussion entries. An analysis of the EFL students' forum entries revealed examples of the four types of intercultural competence: (A) interest in knowing other people's way of life and introducing one's own culture to others, (B) ability to change perspective, (C) knowledge about one's own and others' culture for intercultural communication, and (D) knowledge about intercultural communication processes. The number of examples in each criterion was calculated. [Table 1](#) provides examples of the entries in the four categories based on Byram's (2000) criteria.

Most of the entries fell under the category of "knowledge about one's own culture and others' culture for intercultural communication" because the entries showed evidence that the students were aware of and learned important facts about living in Texas and that they could successfully communicate with their U.S. partners about the cultures in both countries and maintain the communication for a sustained period of time. In these entries, the participants used personal experiences and responses to the articles to describe and explain their own cultures. They also compared and contrasted the way they did things in the two cultures. The EFL participants enthusiastically described their high school teachers after reading the first article *Good-bye, Marian*, explained the reasons for Taiwanese people's love for bargaining when exchanging views on *Flea Market Sociology*, defined what Chinese and Taiwanese classical studies were for their U.S. partners, and argued to clear their names as described in the article *Sketches of Dreams amidst Generational Change*.

The second biggest category was an "interest in knowing other people's way of life and introducing one's own culture to others." These entries were usually the first or second entries that the EFL students wrote to their intercultural partners. In these entries, they expressed their excitement about the experience. Except for a couple of students who were worried that their English ability would not allow them to do a good job of communicating, most showed clear confidence that they would learn a great deal and gain friendship via the experience.

Table 1. Examples of the Assessment of Intercultural Communication Entries

Category	Description	Example from students' writing
A. Interest in knowing other people's way of life and introducing one's own culture to others	<p>- I am interested in other people's experience of daily life, particularly those things not usually presented to outsiders through the media.</p> <p>- I am also interested in the daily experience of a variety of social groups within a society and not only the dominant culture.</p>	<p>It is interesting to know different cultures about bargaining skills from this article. The author analyzed the bargaining skills of his customers and found out what he should do when his customers were bargaining with him. I seldom bargain with vendors because I don't know how to do it. Besides, it is hard to lower the price. How about Americans? Is this phenomenon common in your country? –<i>The Flea Market Sociology</i></p>
B. Ability to change perspective	<p>- I have realized that I can understand other cultures by seeing things from a different point of view and by looking at my culture from their perspective.</p>	<p>When I read the article, I really hope Marian is my teacher. I think that will be great!! Marian teaches her students not only in curriculum but other things...And from that article and what you say I learn that I can't judge a person by his look. –<i>Good-bye, Marian</i></p> <p>Chinese think frugal is important. Frugal is a kind of traditional virtue in China. However, foreigners think that behavior which is stingy. Especially it often happens in the business shops in some countries. I think we can balance between ours and other countries. I agree what you said, there are different cultures from country to country. We should learn to tolerate and respect different cultures. –<i>Flea Market Sociology</i></p>
C. Knowledge about one's own and others' culture for intercultural communication	<p>- I know some important facts about living in the other cultures and about the country, state and people</p> <p>- I know how to engage in conversation with people of the other culture and maintain a conversation.</p>	<p>I can imagine that your home is very big! You said you have a cow, a goat, and some pigs. It's cool! I think it's hard to take care of animals. So how could you take care of them? In Taiwan, there is not enough space to have these animals. Taiwan is too small. Have you ever been to Taiwan? Where are you from? Everyone can learn lots of things from others, so do I. We can sure both grow culturally.</p>
D. Knowledge about the intercultural communication process	<p>- I know how to resolve misunderstandings which arise from people's lack of awareness of the view point of another culture.</p>	<p>"The strawberry set" (so soft they burst at the first pressure), "the back-to-the nest set") (happy to stay at home being taken care of by their parents), or "the buy-now-pay-later set" (deep in credit</p>

	<p>- I know how to discover new information and new aspects of the other culture for myself.</p>	<p>cared debt) are the product of this time. I can't agree with it. I am just one, "the back-to-the-nest-set." I had part-time jobs in summer vacations. I do not have credit cards, either. As far as I know not everyone in this generation is so, at least I am not. I hope you know this. Maybe all we got to do is changing our attitudes. -<i>Sketches of Dreams amidst Generational Change</i></p> <p>I was terribly sorry of my misunderstanding about you. I just only asked. Thank you for let me know it was just your reply to the story. -<i>Flea Market Sociology</i></p>
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The category "ability to change perspective" was the one with the least number of entries. Basically, the transpacific e-pals shared common views on most of the cultural issues in the articles, which left little room for the need to change perspectives. The very few times when misunderstandings arose from lack of cultural awareness, the students bridged the communication ruptures by way of more elaborate explanations or courtesy, demonstrating the knowledge of intercultural communication processes (i.e., Category D).

CONCLUSIONS AND DISCUSSION

The purpose of the project was to foster EFL students' intercultural competence by having them read articles on topics of their own culture and communicate their responses with speakers of another culture. The project offered a unique opportunity for EFL students to use their own societal and cultural practices as the focus for EFL learning. With the help of computer technology, it also allowed the students to state their positions on their own culture and cultural practices and to exchange their views with those held by speakers of the target language. The findings showed that all EFL participants were able to communicate fluently in the target language without much help from the corpora-based e-referencing tools provided in the system. The use of the online dictionary decreased drastically after the first two readings. Interestingly, the online concordancer, instead of being used for learning different kinds of cultural meaning on the levels of lexical, syntactic, and textual organization as originally intended (Partington, 2001), was used by the students to link to articles on similar topics to explore further culture and language learning opportunities. Despite some difficulties caused by computer problems, the collaboration between the two groups of students was successful and this success can be seen from the positive and complimentary comments from members of both groups. The students' e-forum entries also revealed different types of intercultural competences.

Byram and Fleming define "intercultural speakers" as people who can "establish a relationship between their own and the other cultures, to mediate and explain differences – and ultimately to accept that difference and see the common humanity beneath it" (1998, p. 8). Intercultural language teaching should recognize that language and culture are intertwined and that by adopting an inquiring and reflective approach to language learning, students can be "intercultural speakers." For teaching intercultural competence, Kramsch (1996a, 1996b) suggests using summary as a way of having students, after reading a short story, express in their own words what they believe the story is about. She postulates that by openly comparing their summaries, the students can reflect on why their choices are different than or similar to those of others and realize how they have constructed meanings of the story according to their

own life experiences, ethnicity, social and economic background, attitudes and beliefs. In this study, thanks to the interactive capacity of the e-forum, summary writing was expanded to include intercultural exchanges of summaries and reflections. In addition, the students played the role of "intercultural speakers" in the environment where cultures were compared and contrasted within both individual and holistic planes (Ortuño, 1991). Similar to the students in the Cultura project developed by Furstenberg et al. (2001), the EFL students in the present study did not learn the target culture as a checklist of knowledge. With the help of computer-mediated communication, the students took a journey of discovery and reflection where their understanding of the behaviors, beliefs, concepts, ways of interacting in their own and the other culture was exchanged, discussed, negotiated, and even refined.

While the findings of the project further demonstrate the benefits of using computer technology for intercultural learning as many researchers have suggested (Belz, 2002, 2003; Furstenberg, et al., 2001; O'Dowd, 2003; Throne, 2003; Warschauer & Kern, 2000), technical problems remain an issue to be overcome and finding better matches between computer-assisted learning tools and pedagogical objectives is a topic that demands further investigation and exploration. Although problems such as lack of access to the Internet and online project system instability are sometimes inevitable, they should be controlled and minimized so the students won't be too frustrated to enjoy the benefits of using the online learning system. This project experimented with several computer-assisted learning tools. The computer-mediated communication component of the project has successfully given the participating students an environment for intercultural communication. Nonetheless, the findings that the students have exercised intercultural competence in Category C (i.e., knowledge about one's own and others' culture for intercultural communication) and Category A (i.e., interest in knowing other people's way of life and introducing one's own culture to others) more than in Category D (i.e., knowledge about intercultural communication processes) and Category B (i.e., ability to change perspective) may suggest that this type of learning environment is conducive to the development of knowledge and attitudes of intercultural competence, but not necessarily to the development of empathy and (meta)intercultural skills.

When revising the e-learning environment for future uses, careful planning should be done to ensure that more types of intercultural competence can be fostered. The effectiveness of the e-referencing tools used in this environment might have been questionable as well. In some earlier studies, positive results were found using corpora and concordancing software as aids in translation activities that helped learners gain insights into the languages and cultures involved, and developed their reading and writing skills (Bertaccini & Aston, 2001; Zanettin, 2001). Others have concluded that teachers and learners could use small-to medium-sized corpora to explore different kinds of cultural meaning on the levels of lexical, syntactic, and textual organization (Partington, 2001). In this study, the concordancer, TOTALrecall, did not serve the purpose of providing the students with the learning of cultural meanings on lexical, syntactic, or even textual organization. Surprisingly, it was creatively used by the students for extensive reading on similar cultural topics. Since this was not expected by the researcher, how that had affected the students' learning of culture and language was beyond the scope of this study. In future studies, such interesting developments should be taken into consideration. In addition, the use of TOTALrecall in the online learning system may need to be modified so students can search and form a target language corpus for themselves to explore cultural meanings. Although the students reported that they enjoyed reading the articles selected for the project, how the selection of reading materials affects students' use or development of different types of intercultural competence, especially category B (i.e., ability to change perspective), would be an interesting point of future investigation as well. Finally, the focus of this study has been on the intercultural competence of EFL students; further analysis of their U.S. e-pals' perspectives or a comparison between the views of the two groups might provide interesting additional information.

APPENDIX

Synopses of *Sinorama* Articles

Good-bye, Marian

The author of the article is a Taiwanese who immigrated to the United States and the article was about her experience of taking an English class in the US with a teacher called Marian. Because Marian was a large woman, the author first thought that Marian would be just one of the many overweight American people and could not be a good teacher. However, in her classes, Marian used many teaching methods that were new and exciting to the author. Eventually, the author was hooked on attending Marian's class and learned that she should not have judged a person by his/her looks. Although she did not want to leave Marian's class when the semester was over, Marian forced her to move on to a more advanced class. The author knew she would never forget Marian.

The Flea Market Sociology

A Chinese immigrant in New Zealand ran a stall at a flea market. From his daily observation of the people who came to the flea market, he discovered the different shopping behaviors of people from different ethnic groups. He especially compared the bargaining behaviors among the Chinese, Indians, and New Zealanders of Caucasian descent. Finally, he raised the question of why China and India, the world's two most populous nations, each with an ancient culture and people known for their formidable bargaining skills, were not among the world's most powerful economies.

Questions and Answers on Children's Classical Studies

The article discusses the issues related to the increasing popularity of having young Taiwanese children study Chinese classics. It first defines children's classical education and then explains the reasons for implementing it. Questions and answers regarding the benefits and concerns of teaching children classics are then listed. Finally, suggestions of ways parents can help their children study classics are given.

Sketches of Dreams amidst Generational Change

The political environment and economical situation in Taiwan have changed a great deal in the past few decades. The attitudes and outlook towards life of the young people in Taiwan have also gone through various phases. This article explores how the current "pluralistic and affluent" generation copes with the world they live in, their sense of values, and their dreams. The author ends the article with an optimistic note that generation gaps are not to be feared and young people should stretch out their arms to catch the dreams that belong to their own generation.

NOTES

1. This project is a sub-project of a national project, CANDLE: Corpora and NLP for Digital Learning of English, funded by the National Science Council of the Republic of China.
2. The bilingual concordancer, TOTALrecall, is the product of another sub-project of CANDLE.
3. Byram's model (1997) can be summarized as the following: (a) attitudes of curiosity and openness, readiness to suspend disbelief about other cultures and belief about one's own, (b) knowledge of social groups and their products and practices in one's own and in one's interlocutor's country, and of the general process of societal and individual interaction, (c) skills of interpreting and relating: ability to interpret a document or event from another culture, to explain it and relate it to documents from one's own, (d) skills of discovery and interaction: ability to acquire new knowledge of a culture and cultural practices and the ability to use knowledge, attitudes and skills under the constraints of real-time

communication and interaction, and (e) critical cultural awareness/political education: an ability to evaluate critically and on the basis of explicit criteria perspectives, practices and products in one's own and other cultures and countries.

4. The criteria included: (a) an interest in other people's experiences of daily life, (b) ability to change perspective, (c) ability to cope with living in a different culture, (d) knowledge about another country and culture, and (e) knowledge about intercultural communication.

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