Cross-cultural Communication Contributions to Professional Military Education: A Distance Learning Case Study
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In our daily lives, we do not interact with cultures, we interact with people. The field of cross-cultural communication (CCC) exists in order to improve such interactions and to predict the cultural dynamics that impact them. Thus, CCC teaching and research clarifies certain cultural complexities by offering a variety of concepts and skills designed to assist in the process of building and maintaining relationships across
cultures. The ability to communicate appropriately and effectively in culturally complex situations is a key predictor of cross-cultural competence and as such, is a fundamental skill and most necessary component of cross-cultural competence (3C).

In a sample of 520 Airmen entering an "Introduction to Culture" course offered by the Air Force Culture & Language Center (AFCLC), over half considered themselves either “not at all effective” or “only somewhat effective” in their ability to communicate with people from other cultures. Additionally, only four percent of students felt that they understood the rules for expressing nonverbal behaviors in other cultures. Since the quality of interpersonal communication (both verbal and nonverbal) often defines success in cross-cultural encounters, lack of efficacy in these domains has the potential to impede cross-cultural performance. Despite the perceived need for CCC knowledge and skills on the part of military personnel, the Department of Defense (DoD) has not yet mandated CCC in its professional military education. Offering an introductory level, distance learning course provides a venue by which Airmen may gain exposure to the field of CCC prior to (and during) overseas deployments, at the time and place of their choosing. The "Introduction to Cross-Cultural Communication" online course is a fundamental component of a university-wide effort to transform how culture is taught at Air University.\(^1\) The course establishes the underlying knowledge and skills that Airmen can implement throughout their careers. It is a self-paced community college-level course offered at no cost to enlisted Airmen. The course was piloted on 17 Feb 2011 and has enrolled over 1000 students thus far.

This chapter will begin by defining the field of CCC and explaining how the course has applied key concepts and skills from the field of CCC (via military and academic readings, videos and a class wiki) to help Airmen become more 3C. It will also look at the success the course has had in terms of creating virtual communities for Air Force personnel. Specifically, the chapter will examine the function, utilization and consequences of wiki utilization throughout two iterations (n=232) of the course. A wiki is defined here as a collection of loosely-structured, collaboratively edited web-linked content on a particular subject.\(^2\) With a significant increase in wiki contributions from the first to second iteration of the course,\(^3\) the wiki has proven to be a useful educational and programmatic tool for future course development in terms of up-to-date, military-centered 3C content it can provide for scenario-based exam questions and situational judgment tests. The potential for student-
generated future course content along with the community-building opportunities associated with a class wiki make the course concept and delivery a potential model for 3C distance learning in the DoD.4

**Defining Cross-Cultural Communication**

Due to the fact that the field of communication came in to existence well after many of the more traditional social sciences, it is often confused with the fields of language, cross-cultural psychology (CCP), and international relations (IR). To be clear, the field of communication makes unique contributions to 3C that are not typically within the theoretical scope of these fields of study. For example, whereas linguistic competence is concerned with the ability to speak a language, communication competence is concerned with the ability to use a language effectively and appropriately in context. Additionally, while IR is primarily concerned with institutional-level analysis of political and economic systems and CCP is primarily concerned with individual-level analysis of the personal characteristics that predict competence, CCC is concerned with analyzing the normative interaction behavior of small groups that can help us identify difference and predict misunderstanding.5

Put more simply, CCC involves comparisons of communication across cultures. A communicator cannot be considered competent without being culturally competent since culture influences the messages we send, the way they are understood and how we understand messages directed, intentionally or unintentionally, to us.6 Communication is both a product and producer of culture and therefore plays an integral role in 3C. The Air Force defines 3C as “the ability to quickly and accurately comprehend, then appropriately engage individuals from distinct cultural backgrounds to achieve the desired effect.”7 Education and training in the various domains of cross-cultural communication can improve competence in dealing with cultural difference and thereby minimize destructive conflict among national, ethnic, and other cultural groups.8 The authors argue that the “knowledge, motivation, and skills to interact effectively and appropriately with members of different cultures”, also known as cross-cultural communication competence,9 is a most necessary skill for military personnel in the diverse operational environment of the 21st century.

Following a review of all extant literature on cross-cultural communication competence, both civilian and military, it was determined that the course would focus on developing the knowledge, skills, and attitudes of Airmen in such areas as:
1. Paralinguistic use and perception (i.e.; effective and appropriate use of rate of speech, volume, & intonation across cultures).

2. Nonverbal communication skills (i.e.; effective and appropriate use of touch, space, time & gesture across cultures).

4. Active listening (i.e.; identification of culture-specific feedback preferences).

5. Identification and adaptation to communication styles (i.e.; identification of the communication patterns associated with high and low-context cultures).

6. Interaction management (i.e.; effective and appropriate use of conversational turn-taking).

7. Relationship building (i.e.; apply the skill of communication adaptability to create a variety of explanations for others’ culturally complex behavior).

These skills and concepts are just a sampling of the resources provided by the CCC course that help Airmen create a variety of explanations for confusing cross-cultural behavior. Unique course content was written expressly for a military audience by citing a variety of civilian and military scholarship. Each lesson is accompanied by a military-relevant and academically-based reading, as well as video illustrations and case studies of communication successes and failures. The course is filled with examples and non-examples of cross-cultural communication and the ways in which they can impact both personal and professional relationships. An emphasis on the skills associated with competent CCC throughout this course reinforces the importance of mission effective and culturally appropriate communication for Airmen.

Overview of the “Introduction to Cross-Cultural Communication” Self-Paced Course

Developing a sense of community for students in self-paced courses is challenging on many levels. It necessitates bringing course content to life on a computer screen in such a way that students can relate to the material; making the course accessible to students at the time and place of their choosing; and providing students with an opportunity to connect their experiences with the course content so their classmates can learn from these experiences and be prompted to share their own. There has been a call for more research addressing how web 2.0 and social tools are
being utilized in instruction and this chapter aims to contribute to that call.

As such, the end of this chapter will discuss wiki utilization, perceptions of the course, and student outcomes throughout two iterations (n=232) of the self-paced “Introduction to Cross-Cultural Communication” course offered to enlisted Airmen. In the Fall 2011 iteration of the course, wiki contributions were optional and unrewarded whereas in the Winter 2012 iteration of the course, wiki contributions were optional but rewarded with extra credit. After briefly reviewing the literature surrounding the use of the wiki in distance education, the remainder of the chapter will be devoted to a discussion of wiki participation effects on course grades, student satisfaction, and student retention as well as an explanation of how student wiki contributions were used to create novel content for future iterations of the course. However, before the wiki data are introduced and analyzed, it is important to describe the unique educational and military constraints in which this course exists.

“Introduction to Cross-Cultural Communication” serves as an introduction to cross-cultural communication by identifying the key challenges to cross-cultural interaction and examining how those challenges affect people, their jobs, and their relationships. The course equips students with tools needed to manage these challenges so they may develop the skills to call upon in episodes of interaction. As such, students are exposed to a range of military-based case studies, research applications and strategies in order to develop an appreciation of the communication processes necessary to avoid misunderstandings. Students are given 14 weeks to complete the 12 lessons via Blackboard. Following the completion of the course, each student is required to respond to a 40 item survey with both qualitative and quantitative measurements.

After the course pilot was launched, 18 students requested (in the end-of-course survey) that an “interactive” item be added to the course. As a result, the Fall 2011 iteration of the course included a wiki. In this course, the wiki (a collection of loosely-structured, collaboratively edited web-linked content on a particular subject) is distinct from a traditional discussion board in several ways:

- It is non-linear.
- There is no involvement by the instructor (other than to answer technical questions) or deadlines for posting (other than the last day of the course).
- It is collaborative.
• Similar to the concept of Wikipedia, the end result of each lesson’s wiki is a collaboratively written “Air Force experience” connected to that lesson’s communication concept or skill.

Throughout the course, optional discussion prompts were inserted into each lesson where students could write about their personal connections to the course content. This wiki option aimed to promote a sense of community among the students in the course and enabled students to provide educational vignettes for both current and future students. The wiki prompt in each lesson began with the phrase “Be the Ethnographer” so that students would be encouraged to take part in the course and apply course concepts to their past experiences. A brief introduction to the role of an ethnographer is provided in the beginning of the course so that students understand the role of the ethnography of communication (EC). As summarized by Carbaugh,\(^\text{13}\)

EC is an approach, a perspective, and a method to and in the study of culturally distinctive means and meanings of communication. The approach has been used to produce hundreds of research reports about locally patterned practices of communication, and has focused attention primarily on the situated uses of language.

Further, EC assumes that culture and communication are inextricably tied and that the relationship between them can be studied through ethnography. The wiki option in the course provides students with the option to examine such culturally distinctive meanings of communication in their lived experiences. Students had the option of commenting upon other students’ wiki postings or creating a new one of their own.

Student feedback on these improvements were compiled after November 2011 upon the completion of the course. The authors then used the stories and vignettes provided by students in their wiki entries to update the existing situational judgment tests (SJT) found throughout the course. Thus far, 10 novel SJTs have been created based on student wiki contributions,\(^\text{14}\) and as will be discussed later in the chapter, wiki participation has been positively correlated with students’ overall course grade. Further, in order to determine whether or not the amount of wiki contributions would improve if students were rewarded for participating, the Winter 2012 iteration of the course offered students extra credit if they contributed in all of the wiki prompts found throughout the course.
However, before the wiki contributions and effects on student learning are discussed, it is necessary to first provide a review of the literature devoted to interaction in distance education.

Interaction and Student Learning

Although it is well-established that traditional class interaction facilitates learning,\(^{15}\) the literature is promising, however not yet conclusive, on the connection between student learning outcomes and online interaction through the use of “social software tools” in distance education.\(^{16}\) Collaborative learning modes have been shown to support individualized and group learning\(^{17}\) and social software and web 2.0 tools have been credited with abating the negative effects of distance learning social isolation\(^{18}\) by allowing students to relate gained knowledge to previous experience, creating new meaning through interactivity, dialogue, reflexivity\(^{19}\) and practical course content application.\(^{20}\)

The online classroom offers a number of instructional design choices in terms of synchronicity and web interactivity tools, each with unique benefits and drawbacks.\(^{21}\) Choosing which type of interactive mode to use is cited as a challenge,\(^ {22}\) and instructional designers of distance learning course must attempt to successfully meet both delivery and content needs of student populations.\(^ {23}\) Often this means making the choice between having online course interaction mandatory or voluntary, for credit or not-for-credit, and whether it will take place in a discussion board format or be confined to a group-edited wiki. This is especially relevant for those who educate military students.

The Wiki

The online classroom can cause a sense of social isolation for online students lacking a sense of belonging and community akin to that of face-to-face classroom.\(^ {24}\) A variety of interactive technology can be employed to maintain communication in the classroom,\(^ {25}\) the newest mode of interaction and student learning is the wiki. To restate, a wiki, or a collection of loosely-structured, collaboratively edited web-linked content on a particular subject,\(^ {26}\) offers distinct advantages over the traditional discussion board format utilized by many distance education courses\(^ {27}\) in that it allows for more flexible and collaborative interaction than a linear, ‘post and response’ discussion board. This increased flexibility makes it ideal for creating community within self-paced courses in which progressing through material at the same rate for whom community may be difficult to build.\(^ {28}\)
Wikis are highly conducive to a constructivist perspective due to the focus on student-generated content and emphasis on collaboration, thereby creating the potential for a deeper relationship with the material than traditional student writing. Despite the great number of benefits available to instructors looking to create a sense of interactive community within the online classroom, wikis have only recently begun to be employed in education. Consequently, scholars from diverse backgrounds have called for further examination of social interaction and student learning in distance education design, stating that more research is needed on the different dimensions of online self-paced academic courses.

More specifically:

- Is interaction in asynchronous classrooms valuable?
- Is there a relationship between wiki participation and course evaluation?
- Do the benefits of using a wiki outweigh the limitations?

Answering these questions from a communication perspective focusing specifically on how interaction in online courses improves student learning - will serve to inform future improvements for virtual 3C education and training for today's modern military.

**Method**

Based on the calls for further research in the literature reviewed above, the following hypothesis was created to define the scope and focus of the present study:

H1: The inclusion of a student Wiki improves virtual 3C DoD courses for military personnel.

To effectively test the above hypothesis, it is necessary to operationally define how improvement will be measured. For the purposes of this research, the quality of the course is defined along several dimensions:

- Ability of students to apply course material
- Student grades
- Retention rate
- Student self-reported assessment of quality

To test the hypothesis, the authors tested the effects of increased student communication on performance using two groups of students, one
of which was a control group. Based on the above review of the limited extant literature on social interaction needs in virtual classrooms, the authors hypothesized that adding an opportunity for student communication would increase the quality of the course, as operationalized above. Conditions manipulating the independent variable, wiki participation, occurred within each iteration - with students self-selecting into the wiki participation condition. As will be discussed in the next section, a positive connection was found between those students who participated in the wiki and those who completed the course. Aside from the addition of the wiki to the next iteration of the course, no other content or delivery changes were made. The first iteration was launched with 150 students (135 Active Duty, 11 Reservists, 4 National Guard). The second iteration was launched with 150 students (124 Active Duty, 12 Reservists, 14 National Guard). Student data (from both conditions in two iterations) was examined for correlation between participation and student outcomes.

Results and Discussion
To assess the results of the dependent variable “course quality”, figures were examined indicating the ability of students to apply course material through situational judgment tests, student final grades, course retention rates and self-report survey responses indicating students' opinions of the course.

Correlations between Wiki Participation and Student Outcomes
Student participation in the Wiki was scored either as a 1 (contributed to all Wiki requests, for a total of 11 Wiki entries) or as a 0 (did not contribute to the Wiki or contributed less than 11 entries). Wiki participation was positively correlated with two important student outcomes of the course. First, participation was correlated with the overall course grade which included lesson quizzes, a midterm exam, and a final exam ($r = .33$, $p < .01$). Second, participation was correlated with a situational judgment test score ($r = .22$, $p < .05$), which was an 8-item scenario-based assessment which determined students’ ability to apply the course material to novel contexts.

Wiki Participation Effects on Situational Judgment Test Scores
The effects of wiki participation on scores on SJTs were analyzed in a one-way analysis of variance (ANOVA). SJTs are application exercises allowing students opportunities to practice the skills they have learned
throughout the course. The results demonstrated significant positive main effects for Wiki participation on the SJT score, \( F(1, 104) = 5.50, p < .05 \). Thus, students who contributed to the Wiki were better able to apply their knowledge and skills to novel contexts \( (M = .89, SD = 2.30) \) than students who did not contribute to the Wiki \( (M = 3.68, SD = 2.70) \).

**Wiki Participation Effects on Overall Course Grade**

The effects of Wiki participation on the final course grade were also analyzed in an ANOVA. The results demonstrated significant positive main effects for participation in the Wiki on the overall course grade, \( F(1, 121) = 14.69, p < .01 \). Thus, students who contributed to the Wiki had significantly higher final course grades \( (M = .84, SD = .14) \) than students who did not contribute to the Wiki \( (M = .67, SD = .28) \).

**Wiki Participation Effects on Student Satisfaction**

Three Likert scale survey questions were coded as indicating student satisfaction with the quality of military-relevant 3C instruction being delivered in this course. These were “I would recommend this course to others”, “The course content was valuable to my professional development” and “In my opinion, this course developed the skills necessary for me to work effectively in cross-cultural contexts.” Although the researchers hypothesized that responses indicating course quality would be more likely from wiki participating students, no significance was found when examining the correlation between wiki participation and an increase in positive responses. Consequently, in this case the null hypothesis was supported. However, only 4 students in the entire course who responded to the post-course survey \( (n=122) \) indicated that they were dissatisfied with the course. Because satisfaction with the course was generally universal across both conditions, analyzing for differences was not feasible. Though irrelevant to the discussion of student perceptual improvement, these findings are a promising indication that military students are receptive to virtual asynchronous CCC instruction and find it useful.

Although students did not provide overwhelmingly positive evaluations of the wiki in the winter 2012 iteration of the course, it is nonetheless a useful educational and programmatic tool for future course development (i.e.; in terms of up-to-date, military-centered content it can provide for scenario-based exam questions and situational judgment
tests). For example, a situational judgment test was created the Winter 2012 iteration of the course based on student contribution to the Fall 2011 class wiki. This supports the assertion that student-derived content is a potential source for unique course content and can inform future academic research. The potential for student-generated future course content along with the community-building opportunities associated with a class wiki have convinced the authors that there is little to be lost in maintaining the wiki option in the course and much to be gained.

Wiki Participation Effects on Student Retention Rates

It is worth noting that since the wiki was introduced to the course, student retention rates have remained steady, with a slight increase. The first iteration of the course (without a wiki option) had a student retention rate of 73%. The second iteration of the course (with an unrewarded wiki option) had a student retention rate of 75%. The most recent iteration of the course (with a rewarded wiki option) in 2013 had a student retention rate of 81%. Although this particular chapter is not devoted to uncovering a direct correlation between student wiki contributions and student retention rates, the increase in retention rate since the introduction of the course wiki is certainly a promising indication of the lack of negative effect of wiki utilization.

To summarize, wiki use was shown to correlate with increases in overall course grade average, linking the students' participation in an asynchronous participation exercise to better mastery of course concepts. Likewise, wiki use was shown to also correlate with an increase in SJT scores. This indicates that students who fully participated in the wiki were also students who performed better on exercises designed to test the students' ability to apply the academic course content to real-life cross-cultural decision making scenarios. Student retention rates, as an indication of course and instruction quality, remained stable indicating that there was not an adverse impact on retention due to the addition of the wiki option. Because there was no adverse effects observed by the addition of the course wiki, and there was significant correlation noted between desirable student outcomes and wiki participation, the researchers have found substantial evidence that potential positive consequences of the addition of a wiki outweigh potential difficulties.

Conclusion, Limitations, and Future Research

Despite increasing deployments and temporary duty assignments, the number of military members seeking higher education is increasing.
Research devoted to student service members indicates that flexibility and convenience related to academic programs and support services are necessary to most effectively instruct the military population. Keeping these unique 3C education needs in mind throughout the instructional design process, the authors inserted opportunities for virtual communities via wiki contributions into their on-line, self-paced “Introduction to Cross-Cultural Communication” course beginning in Fall 2011.

The present research focused on examining the correlation between quantitative course outcomes and participation in the course wiki. The wiki contributions, being ethnographic in nature, served as a collaborative ‘Lessons Learned’ post-hoc report linking 3C experience with military experiences, thus reflexively strengthening the case for 3C in the DoD. The correlation between connecting 3C concepts through experiential learning in the wiki creation process was positive, improving students’ mission-critical 3C interaction skills (quantified by performance on scenario-based cross-cultural SJTs) without the traditional face-to-face classroom interaction. The unique collaborative-yet-asynchronous nature of the wiki allows DoD educators to deliver 3C instruction to its geographically dispersed students on par with courses delivered to students in-residence. Wiki-enhanced virtual courses provide service members instruction flexible enough to allow for deployments and TDYs, maintaining mission readiness and improving 3C effectiveness. Additionally, the authors maintain that wiki use has the potential to improve not only the quality of the course for students by providing opportunities for interaction, but also to improve the quality of course material by using these student service member-generated “Lessons Learned” to generate fresh and engaging, military-relevant course content.

A further extension of this research will be to examine students’ attitudinal changes as they relate to wiki participation. Continued research devoted to future iterations of the course could reduce some of this study’s limiting factors by randomizing which students participated in the wiki, or by holding concurrent sections - one which assigns the wiki and one without a wiki option. This would improve the experimental design and reduce the possibility of correlation due to self-selection of higher achieving students into the wiki condition. There may, however, be a shift in student perceptions should the wiki be made a graded requirement rather than an optional feature. More research is needed to determine if this would be the case. Further, two conditions within the quality assessment of the wiki simply indicated a lack of change, rather
than positive effect. This was a limiting factor in that the hypothesis was not universally supported. However, because there was no negative impact, and significance was found in the balance of the indicators, the researchers feel comfortable asserting that the wiki impact valance was overall a positive one. This supports its continued use in virtual and asynchronous 3C DoD instruction.

Finally, the authors are reminded that more research is still needed on the different dimensions of online self-paced academic courses.\(^4\) However, a strong case was made in this chapter for the importance of wiki opportunities in self-paced courses given the positive correlation found between students’ final grades and the number of their wiki contributions.\(^4\) It goes without saying that descriptive study of the development and implementation of this course in subsequent iterations will be closely examined, as courses such as these are the future of 3C distance education in the DoD.

### Notes

1. This effort was undertaken by Dr. Brian Selmeski who authored the Quality Enhancement Plan “Cross-Culturally Competent Airmen” for Air University. The document explains how Air University defines, operationalizes and teaches culture at the various levels of PME. The document can be found at: [www.culture.af.mil/qep](http://www.culture.af.mil/qep). Pgs 12-15, in particular, are devoted to defining culture and its accompanying components and skills.


3. Wiki participation increased over 800% between Fall 2011 (when the wiki was offered but not rewarded with extra credit) and Winter 2012 (when wiki participation was rewarded with 5 extra credit points.)

4. Two Air Force Culture & Language self-paced courses: “Introduction to Culture” and “Introduction to Cross-Cultural Communication” are described in terms of lessons learned and best practices in the article *A Model for On-line Military Culture Education: Key Findings and Best Practices*.

5. Milton Bennett. *What All Interculturalists Need to Know: Why They Are Not Cross-Cultural Psychologists, Anthropologists or Internationalists*.

6. William Gudykunst. *Cross-cultural and intercultural communication*

9. Richard Wiseman. Intercultural communication competence. 208-212
11. For a complete description of the design and development of the Air Force Culture & Language Center’s “Introduction to Cross-Cultural Communication” course, see Lauren Mackenzie and Megan Wallace Distance Learning Designed for the U.S. Air Force.
12. Although a total of 300 students enrolled in the Fall 2011 and Winter 2012 iterations of the course (150 students each), only 232 completed the course.
14. It is worth noting here that due to the programmatic nature of the SJTs created from the course wiki, IRB approval is not necessary. The professor does, however, contact and request permission from all students whose wiki contributions are converted into SJTs, and all students have been more than happy to have their Air Force experiences used as educational tools for future iterations of the course.
17. Thierry Volery and Deborah Lord. Critical success factors in online education; Terry Anderson. Distance Learning – Social Software’s Killer Ap?
22. Tom Franklin and Mark van Harmelen. Web 2.0 for Learning and Teaching in Higher Education.
23. Deborah Ford, Pamela Northrup and Lusharon Wiley. Connections, partnerships, opportunities, and programs to enhance success for military students; Lauren Mackenzie and Megan Wallace. Distance Learning Designed for the U.S. Air Force; Mary Lou Santovec. Doing online professional development — Online.


29. Kevin Parker and Joseph Chao. Wiki as a teaching tool; Chien-min Wang and David Turner. Extending the wiki paradigm for use in the classroom.


40. Deborah Ford, Pamela Northrup and Lusharon Wiley. *Connections, partnerships, opportunities, and programs to enhance success for military students.*
42. Consistent with the findings of Lih-Juan ChanLin’s study *Applying motivational analysis in a web-based course.*
References


