CROSS-BORDER STUDENT COLLABORATIONS: OPPORTUNITIES FOR VIDEOCONFERENCING

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Globalization has prompted businesses to adopt burgeoning technologies that support the efforts of distributed teams. This project unites students from geographically dispersed master's-level programs on two continents. Using videoconferencing, virtual workspace, telephone, and e-mail, MBA students at a U.S. university teamed with students from Germany to prepare reports on behalf of the International Trade Centre. In addition to mastery of course content, students on both sides of the Atlantic experienced and conquered cultural, language, and logistical complexities associated with cross-border collaboration. The use of videoconferencing promoted stronger relationships among distributed team members and increased student satisfaction with the cross-border assignment.

Globalization has fueled the need for collaboration over substantial geographical distances, prompting businesses to adopt technologies that facilitate communication and ongoing interaction among a distributed and diverse workforce (Chidambaram and Tung 2005). Some businesses that use the growing portfolio of digitally based collaboration tools such as e-mail, virtual workspace, document sharing software, and videoconferencing have reduced costs and travel requirements, saved time, and improved worker productivity (Blaskovich 2008). Intercultural teams have been found to create significant competitive advantage for organizations by bringing together different ideas, knowledge, points of view, and approaches to work, outperforming homogeneous teams as a result of their diversity (Snow et al. 1996).

However, virtual collaboration among distributed teams is not a guaranteed panacea to a business's globalization efforts. When team members live and work in different countries, dissimilar languages, diverse cultures, and time zones add complexities to the difficult tasks associated with successful teamwork (Barczak, McDonough, and Athanassiou 2006). In a study by DiStefano and Maznevski (2000), for example, culturally diverse teams were found to perform differently from culturally homogeneous teams, with a tendency to perform far worse rather than better. Also, the substitution of technology for face-to-face interaction has been found in some cases to reduce the quality of business decisions and promote social loafing among distant group members (Blaskovich 2008). In theory, virtual collaboration among culturally and geographically diverse teams provides organizations with significant advantages. In practice, it also provides formidable challenges.

Given that a primary objective of higher education in business is to prepare students for the challenges of the global work world (AACSB International 2010), there is a surprising dearth of curricular attention related to developing cross-border student collaboration opportunities using high-tech formats. Marketing educators have long used group projects to make it possible for students to put theory into practice with actual "clients" (e.g., Goel and Straight 2005; Stanton 2006), but group members are typically within the same course or institution. Likewise, academia has focused extensively on many technology-based collaboration tools. Indeed, a "top ten" higher education information technology issue in 2009 was teaching and learning with technology (Scrivener Agee and Yang 2009).

Videoconferencing has been used to facilitate learning in specific courses and across multiple institutions within a country (Selim 2005; Stafford and Lindsey 2007). In addition, there has been an abundance of studies about technology that supports online courses and distance learning programs (e.g., Campbell and Swift 2006). However, in these examples, students are typically within the same institution so the impact of language, cultural diversity, and time zones are minimized. The only example found of cross-border/cross-university student collaboration using high-tech virtual formats was within MBA programs

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in the United States and the United Kingdom (Newman and Hermans 2008). In this award-winning assignment, student groups from the United Kingdom and the United States worked as a "think tank," collaborating to solve customer service issues for the Halifax Bank of Scotland via e-mail, telephone, videoconferencing, and Web-based technologies.

This paper describes a class project involving a semester-long international collaboration conducted by students at two different universities via videoconferencing. Specifically, graduate marketing strategy students at a U.S. university teamed with graduate global sourcing students from a German university to research and write market briefs for their respective countries with a format established by the United Nations International Trade Centre (ITC). These reports are used by government agencies, business associations, and private companies in developing nations that require market due diligence to assess export opportunities of specific products to highly industrialized nations. To date, the project has run for three semesters over three academic years. Teams and their leaders determined methods of collaboration, with most resorting to e-mail, instant messaging, and Skype.

THE NEED FOR INNOVATIVE TEACHING TECHNIQUES

The assignment is challenging and requires students to identify existing trade patterns (production, consumption, imports, exports) within industrialized countries and assess economic prospects for potential new players. The assignment also fulfills a broader curricular objective to expose students to the complexities of working internationally. Many universities promote study abroad programs as a way to expose students to the cultural differences and help prepare them for a career in a global work world. According to the Institute of International Education, a record 240,000 U.S. students studied abroad during the 2006–7 academic year (Marklein 2008). However, when compared to the 18.2 million individuals enrolled in degree-granting higher-educational institutions (U.S. Department of Education 2009), only a small fraction of enrolled students (1.3 percent) participate in study-abroad opportunities. Cross-border collaboration among students from multiple universities was seen as a way to extend the cultural lessons learned by studying abroad to those who could not or did not participate. However, the mechanics involved in cross-border collaboration can and have presented real problems.

Final market brief report quality was considered high by ITC standards for the first two projects. The instructors developed and used a common rubric to assess content and writing quality of student submissions as well as to accommodate the different grading scales used at the two institutions. This ensured that team members on both sides of the Atlantic received comparable grades for their efforts.

Less formal mechanisms were used to ascertain student opinions about the collaborative process. Overall, student evaluations of the experience were marginal. In both weekly class discussions about the project and at the end of project debriefings, students noted numerous issues stemming from cultural differences, time zone variations, and finding communication tools for effective collaboration. While all the students indicated they were excited to participate when teams were formed and training was conducted, unanticipated process difficulties seemed to affect their sense of accomplishment and overall satisfaction once the assignment concluded.

Postassignment satisfaction discussions revealed that the experience was difficult, frustrating, and unfulfilling. Specifically, the students noted that it was very difficult to communicate with the teammates in other countries, and an "us versus them" relationship had developed. The biggest problems involved the lack of timely response, periodic disappearances of team leaders or members, and miscommunication due to language differences. The students also noted difficulties with the preliminary training for the project. Further analysis of student feedback as well as new findings about distributed teams and the advantage of technology-facilitated face-to-face interaction (Westerlund 2008) caused the professors to try alternative and more managed means of collaboration—videoconferencing.

THE TEACHING INNOVATION: VIDEOCONFERENCING

Videoconferencing was introduced as the way to train students on researching and writing the market briefs, select teammates and products, and periodically present their finding to all participants at both universities. We needed a way to bring the students together and help them understand the importance of teamwork. Periodic visual contact has been found to reduce the distance gap and fosters a level of collaboration we had not experienced (Westerlund 2008). On a more practical note, both universities were looking for ways to collaborate without having to bear the expense and time loss caused by sending a faculty member to another country. Figure 1 illustrates the players, technologies,

Figure 1
Participants and Communications Framework for Market Brief Collaboration
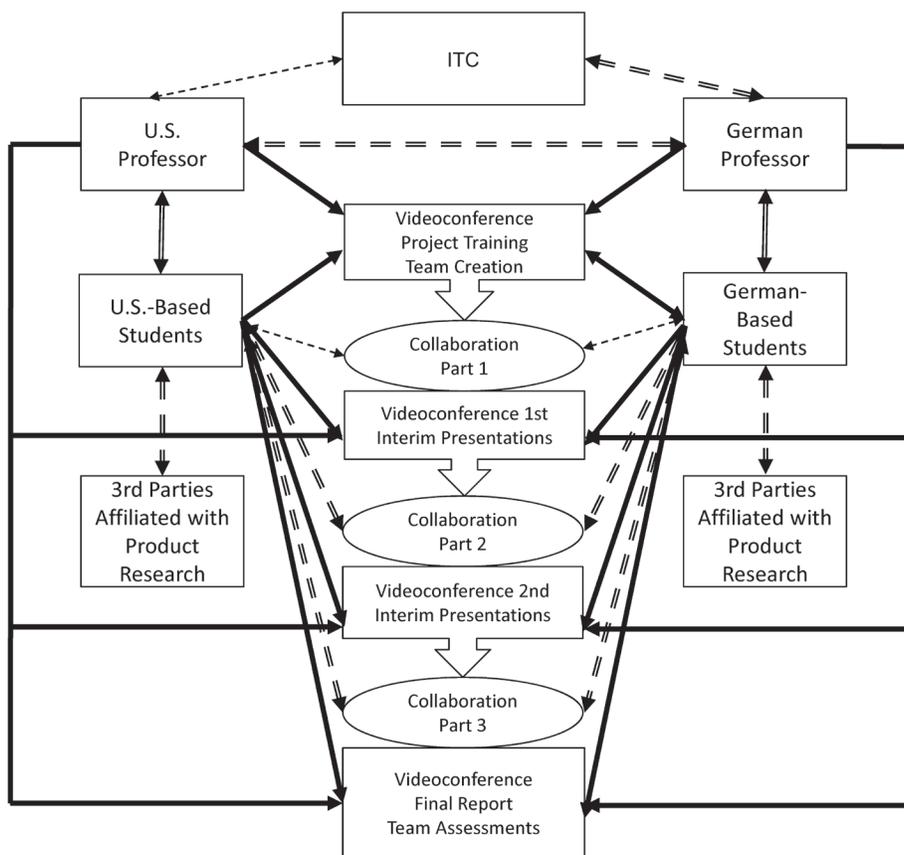
Notes: Direct face-to-face contact—thick line; non-face-to-face content using one communication method—thin dashed line; non-face-to-face contact using multiple communication methods—double lines; students working together or with industry professionals without instructor involvement—double dashed lines. Arrows indicate communication direction.

and sequence of events of the most current collaboration experience for the cross-border marketing courses.

Not all videoconferencing equipment is the same. The U.S. side used a Cisco TelePresence, a high-definition videoconferencing system that enables screen and document sharing as well as enhanced audio. The German side used a standard definition Polycom system. As a result of the diverse manufacturers with different capabilities, only standard definition videoconferencing was used as the means to connect the two sides. This is important to understand given that the level of system interoperability is restricted to whatever the lowest level connection is capable of delivering.

To kick off the project, the U.S. and German instructors presented a seven-hour training session using each university's videoconferencing facilities. Videoconferencing provided a visual forum by which students and professors could meet and interact despite a 7-hour, 5,000-mile gap between them. A total of five teams with German- and U.S.-based students were established.

Given the differences in the semester schedules, initial collaboration among the teammates was primarily via e-mail. Instructor-established expectations for the initial collaboration period were limited to research on the nature of the product and economic data as well as the establishment of communication links among team members. Six weeks after the initial training session, the students and instructors met via videoconference to assess group progress with their research as well as discuss content and process issues.

During the first interim session, students were encouraged to use technology other than just e-mail to facilitate their work. Optional technologies were discussed but actual group communication decisions were left to each team.

As a result, the students established virtual workspace for sharing documents, used instant messaging, and made periodic phone and video calls using Skype. Overall output of the virtual groups improved dramatically after the first student presentations.

The final videoconferencing session with all of the participants required the students to briefly recap their findings as well as articulate and assess the collaboration processes utilized. Specifically, they were asked as a team to explain the assignment of tasks, decision-making processes, and major issues encountered. They were asked to pinpoint specific successes and failures, and recommend changes the professors might implement should the project continue.

ASSESSMENT: VIDEOCONFERENCING CONTRIBUTES TO CROSS-BORDER COLLABORATION SUCCESS

Each course had its unique set of learning objectives, some of which were related to the market brief project. However, both courses shared the objective of requiring students to deal with the work world complexities of virtual collaboration among distributed teams. Results from the final videoconference session suggest that videoconferencing permitted better cross-cultural collaboration, enabling students to work together remotely, build valuable relationships between team members, manage content, provide greater transparency to the project components, and create a team synergy. Videoconferencing allowed student teams to have face-to-face discussions and presentations in real time, which facilitated the successful achievement of the marketing project goals. The final videoconferencing session also uncovered that teams who used shared workspace and private videoconferences over Skype perceived they had built stronger relationships with the other side of the Atlantic than did teams that continued to use e-mail as their primary communication method.

This year, overall student satisfaction at the conclusion of the project was considerably higher than in previous years. As in previous years, these discussions took place prior to the release of final project grades so as not to influence responses. What differed is that students shared their feedback with both instructors simultaneously in a group presentation. Students still experienced many complexities of cross-border collaboration, but their comments suggest the video sessions, as well as the use of Skype and having them set up their own shared workspace, caused them to build stronger personal relationships, which in turn positively affected the quality of their work. All the teams

indicated that their decisions were made by "democratic process," coming to consensus using Skype and e-mail. Unlike in prior years, neither the U.S.- or German-based students indicated the development of an adversarial "us versus them" relationship. It is also interesting to note that participating instructors noted minimal differences in student satisfaction with the project and ultimate group grades in a "closing the loop" assessment meeting conducted after final grades had been posted at both institutions.

The biggest obstacles encountered included time differences, semester schedule differences, misunderstandings caused by language differences (one group of seven students had seven different native languages), keeping track of the latest version of the paper, and document formatting. Even those who used document collaboration Web sites such as Google Docs ran into formatting problems when content shifted between A4 and letter formats. The level and amount of collaboration achieved was considered the greatest success of all.

Student participant recommendations to the professors included additional training prior to the start of the project as well as while the project progresses; more specific guidelines about document content and format, including selection of either A4 or letter-size document; scheduling another interim videoconference to review document content; and fewer people on the German side per team.

INSTRUCTOR PERSPECTIVE: CHALLENGES POSED BY VIDEOCONFERENCING

As in the previous semesters, the instructors found that the lessons learned from all involved go far beyond course content. With varying degrees of success, the students dealt with communication, time zones, and project management issues. The instructors also dealt with issues caused by the use of videoconferencing. Specifically, even though both schools had equipment, neither had the same system nor were members of the same established videoconferencing networks. This meant that each university's network specialist had to write custom programming so each system could link to a common portal. After these adjustments were made, video communication worked flawlessly. Other minor technical issues included microphone placement, camera placement, and the two- to three-second signal delay resulting from video transmitted via the Internet. As previously mentioned, the U.S. side was unable to take advantage of its telepresence capabilities.

In the future, wikis will be tested so that team members and instructors can provide more ongoing feedback as

research results are documented. Preevent, interim, and postevent surveys are being developed to monitor cultural, technology, and project management issues. Both professors will continue to refine the project based on student input to reduce confusion and further facilitate communication. Arguably the most important lesson learned is the importance of comprehensive planning and willingness to be flexible to deal with all the unforeseeable complications such a project encounters.

CONCLUSION: FUTURE ADAPTATION OF VIDEOCONFERENCING FOR MARKETING COURSES

The addition of videoconferencing added new life to the U.S.-German student collaboration project. While videoconferencing is not a panacea for virtual collaboration, the opportunity for students to periodically work in an environment where they can see each other facilitates interaction between sessions.

The successful integration of videoconferencing in this assignment begs the question about the role of videoconferencing in higher education. Is it an ad hoc or a vital technological tool in the classroom? Also, does undergraduate or graduate student status affect its value? In this project, graduate students were selected to participate based on their educational experiences and level of maturity. Could such projects be successfully implemented at the undergraduate level?

Finally, the complexities associated with students from multiple universities working together needs further exploration. From the outset, there was a close relationship between the two participating schools. The faculty members at both universities were willing to experiment with the pedagogy and their administrations championed their efforts, providing the travel funds and facilities needed to implement the project. For those considering such a project, communication with foreign partner schools is a good place to start.

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