

# Hybrid Learning Environments Across International Borders

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## ABSTRACT

*Distance learning and hybrid learning environments have become much more widely used by institutions of higher learning in the United States in recent years, driven by technology advancements in user interfaces and widespread broadband networking infrastructure. The use of online classroom environments across international borders is much less common these days due to a number of technological and cultural/language concerns. This paper discusses the author's work in recent years in offering online hybrid learning classes that span international boundaries, with some student participants as far away as about 7,000 miles from the hosting university in the U.S. Considerations for other faculty interested in experimenting with, or implementing, international virtual classroom environments are presented and discussed, based on the author's successful experiences and lessons learned.*

## 1. INTRODUCTION AND PERSPECTIVES

A recent edition of "Access: The 2015 Review of Global Opportunity" (Access, 2015), by FedEx Corporation, noted that the global middle class is expected to grow by 100% over the coming 15 years with most of that growth taking place in the developing world. The demand for graduate and undergraduate programs to serve this emerging constituency will be profound. The United States has long been a highly desired venue for higher education for many people around the world, particularly for graduate programs, and the aforementioned forecast presents tremendous opportunity for U.S. institutions of higher learning in the coming decades. This observation begs the question: will academic institutions in the United States incorporate the full spectrum of online educational modalities in providing educational services to the global community, or will their offerings primarily be based on face-to-face classroom modalities as they have up to now? This paper will not attempt to explore this complex question in all of its many facets, but it will examine considerations for online modalities and it will present qualitative empirical results from recent Hybrid Learning environments conducted by the author in graduate and undergraduate IT elective courses involving international students.

Explosive growth has occurred in online learning environments in the U.S. in recent years, particularly in higher education. Online learning environments may be classified into non-real-time formats, such as self-paced online learning modules, and real-time formats. Within the domain of real-time formats, Distance Learning and Hybrid Learning categories may be distinguished. Distance Learning usually refers to a course format that is mostly or totally conducted online, whereas Hybrid Learning generally refers to a course format that is mostly (greater than 50% of total contact hours) conducted in a face-to-face classroom setting with the remainder of the course conducted online. Institution and/or accreditation body guidelines may impact how courses with online components must be administered.

Online learning environments offer attractive characteristics to both academic institutions and to the students that they serve. In general, these advantages involve lower cost structures, which in turn may be

passed along by institutions to students in the form of reduced tuition, and greater flexibility and convenience for faculty and students. The latter benefits include minimized time and cost for travel that faculty and students would incur in typical face-to-face classroom formats. Non-real-time formats further offer students the flexibility to complete modules and assignments at a time that is most convenient to them, and it offers faculty the convenience of asynchronous interactions with students as well as flexibility in choosing when to review progress and completed assignments.

In some cases, entire degree programs may be conducted in Distance Learning formats, and in a subset of these cases faculty and students may in fact never meet in a physical classroom environment. Other degree programs may be offered mostly in online real-time and/or non-real-time modalities, but nonetheless some residency requirements may be involved such as one semester on campus or completion of a capstone course on campus. Other types of programs may incorporate a mix of face-to-face courses, Hybrid Learning courses, Distance Learning courses, and non-real-time independent self-paced study modules.

It is generally assumed that online programs in higher education are offered “domestically” so that potential problematic issues such as language and cultural differences are not involved. For our purposes, “domestic” programs will include courses and/or programs that connect to students in foreign countries via the Internet, but those students are citizens of the offering institutions country, such as may be the case where degree programs are offered by U.S. institutions to military personnel stationed overseas.

The following discussion will focus on real-time Hybrid Learning online formats for graduate (MBA) and undergraduate IT elective courses based on recent courses developed by the author for classes consisting of both domestic and international students.

## **2. BRIEF LITERATURE REVIEW**

Moore et al (Moore, 2011) discuss the terminology and concepts regarding online learning, distance learning, etc. They note that inconsistencies exist among practitioners as to how these various terms are defined and used.

A number of studies have examined the efficacy and differences between traditional and online pedagogical environments. For example, Kupczynski et al (Kupczynski, 2012) present analyses based on quantitative and qualitative data regarding graduate students in traditional formats versus cooperative learning in a virtual setting. They found no significant difference on student success between these formats, and noted that there were positive qualitative indications of student satisfaction with cooperative online formats.

Gemmell et al (Gemmell, 2014) present a case study regarding student views from participants in an online education format involving students from multiple countries. They noted benefits perceived by the participants and they noted that supporting technologies can enhance the learning experience.

Lynch (Lynch, 2014) discusses an online pre-session English course for international students prior to their beginning a graduate program using online distance learning format.

### 3. DESCRIPTION OF OUR INTERNATIONAL HYBRID LEARNING ENVIRONMENT

Our Business School primarily operates its graduate MBA program on a trimester basis (Fall – Spring – Summer) and its undergraduate programs on a semester basis (Fall – Spring), although some undergraduate courses are offered during the summer term. For many years, several IT electives have been offered during the summer term, including both graduate MBA and undergraduate courses. The summer term typically begins in late May and ends in late July, with the succeeding Fall term beginning just about 3 weeks later. Traditionally, these summer courses were offered in a face-to-face physical classroom format only, but in recent years they have been offered in online Hybrid Learning format. The initial motivation for this change was the fact that we had a substantial number of international students concentrating in IT that were faced with the dilemma of taking summer elective courses and foregoing most, if not all, of their summer opportunity to go back home and spend time with family and friends, or taking several months to travel back home for the summer and miss taking the IT electives (some of which were only offered during the summer term). The time and costs involved with international travel precluded most of our international students from taking the brief one to three week break after summer courses ended as an opportunity to return home; the return on investment was just not worth it to them. Given that a substantial portion of our international business students concentrating in IT that were from Islamic countries, and given that the occurrence of the Ramadan holidays came in mid-summer in recent years, we found that most of these students would have to forego taking the summer IT electives. The win-win solution that we adopted was to use online Hybrid Learning formats for these summer courses. This approach enabled us to conduct over 50% of contact hours in the face-to-face physical classroom mode in May and part of June, and thereafter allowing all students to finish the term by participating in online class meetings. This solution was greatly appreciated by the students, particularly the international students, and it also enabled our Business School to maintain a healthy enrollment level in our summer IT electives. Domestic students also benefited from this approach because they now had the flexibility to plan to take summer vacations with family during the span late June to late August, since they could complete the summer IT electives online as long as their vacation travels enabled them to have broadband Internet access.

Since the primary LMS (learning management system) used at our institution is Blackboard, it was decided to use its online virtual classroom environment known as Blackboard Collaborate to conduct the online classes during the summer. Blackboard Collaborate provides a wide range of attractive online pedagogical tools and capabilities, including:

- two-way interactions via audio and/or video
- identification of students logged in to a particular online class session
- capability to present slides
- session recording capabilities
- a whiteboard for real-time multimedia interactivity
- a chat facility that can be used for the entire class or structured to allow students to interact in smaller groups
- sharing of the presenter's desktop for presentation purposes or to demonstrate applications
- the ability to grant various privilege levels to participants (primarily presenters/moderators with full control of the interface or student participants with limited privileges such as writing to the whiteboard or chat window), and
- the ability for the presenter to move about from site to site on the Web with participants' automatically tracking that navigation.

In most of our online class sessions, we used two-way audio and chat capabilities but typically did not use the desktop video capability since it primarily allowed the participants to simply see one another. This was an acceptable choice since the face-to-face classroom sessions at the beginning of the summer term meant that students and faculty all knew each other already, and the bandwidth usage for real-time video would not be necessary. The Blackboard Collaborate interface allows each participant to use a self-photograph as a visual avatar to identify themselves with much better bandwidth utilization. Of course, in some online courses, it may be important for participants to see one another in real-time (say for facial expressions, body language, etc.), but our IT courses generally did not require this.

Our summer IT online class sessions included international students from as far away as Saudi Arabia (about 7,000 miles from our university's main campus), as well as domestic students participating from any location of their choosing. Since the student participants were located in a number of different time zones, it was decided to keep the online class session time that same as it had been scheduled in the time zone of our main university campus. This did present a small inconvenience for students far from our campus' time zone, but it did not result in any problems and there were in fact no student complaints associated with this scheduling.

In our experiences, the Blackboard Collaborate virtual classroom provided an excellent environment for our needs, particularly in terms of two-way audio interactivity. In one of our summer IT elective courses, the class sessions were almost entirely comprised of student presentations of cases followed by the presenting team leading an interactive discussion with their classmates. Notwithstanding the extreme physical distances and transnational Internet infrastructure underlying our virtual classroom, the results we experienced were outstanding. There were essentially no delays or latencies in the real-time interactivity, and the audio quality, critical to achieving the pedagogical goals of these online sessions, was excellent. Of course, occasionally an international student would have to repeat what they said due to their particular accents and pronunciations in speaking English, but this was generally no worse in the virtual classroom environment than what was also experienced when students interacted face-to-face in our physical classroom.

#### **4. GUIDING PRINCIPLES AND LESSONS LEARNED FROM OUR INTERNATIONAL HYBRID LEARNING EXPERIENCES**

After several years of conducting international Hybrid Learning classes for our summer IT electives, this author's assessment is that excellent results can be achieved in terms of both learning outcomes and student satisfaction.

Perhaps the most important lesson learned and suggested guiding principle for conducting online sessions across international borders is that, based on the author's experiences, such course offering modalities should involve both face-to-face physical classroom sessions as well as the online components of the course. Having the initial class meetings be face-to-face enables the professor and students to all get to know one another and to build a foundation of familiarity with one another that greatly enhances the subsequent online portions of the course. While our experiences did not include pure Distance Learning online-only formats, it nonetheless seems to be at best problematic to attempt to conduct online sessions across international borders with students and faculty that have not first established face-to-face relationships in a physical classroom setting.

Other lessons learned and suggested guiding principles for conducting Hybrid Learning environments spanning international borders include:

- be bandwidth efficient and use real-time two-way video conferencing only if required to accomplish pedagogical objectives for a particular course
- ensure that all students have been adequately trained on using the virtual classroom environment and its associated tools during the initial face-to-face party of the course in a physical classroom (it is quite difficult and inefficient to try to troubleshoot problems in the online classroom that students may experience if they have not been appropriately trained beforehand)
- faculty must be especially vigilant in maintaining student involvement and interactivity during online sessions (while often true in physical classroom settings, it is especially important for faculty to “draw out” any student(s) who are “coasting” instead of actively participating)
- encourage students to find a “quiet place” to engage in the online classroom experience so that distractions, noises, etc. do not hinder their focus on learning or disrupt the other students in the virtual classroom
- headsets should be mandatory (students attempting to use laptop or desktop speakers and microphones often cause feedback and other distractions)
- when using two-way audio, students should be encouraged to mute their microphone except while actively speaking to the class.

It should also be noted that no significant difference was observed between undergraduate and graduate students participating in our Hybrid Learning classes in terms of participation and learning outcomes.

## **6. CONCLUSIONS AND CONSIDERATIONS FOR FURTHER WORK**

This paper has presented considerations for conducting Hybrid Learning environments for higher education across international borders. Experiences were shared based upon the author’s use of this modality for summer term IT elective courses involving a significant percentage of foreign students over that past several years. Lessons learned and suggested guiding principles were presented to assist other faculty considering the implementation of Hybrid Learning environments across international borders.

One interesting question that this paper did not address is the efficiency and efficacy of conducting pure online Distance Learning environments for cohorts of international students who initially meet face-to-face in physical classes, and subsequently return home and participate in the rest of their degree program using only pure online course formats. This appears to be a reasonable approach and should be considered for further research and experimentation.

## **7. REFERENCES**

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