Preparing MIS Students for the Global Workplace: A Case Study

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This paper proposes a framework of incremental approaches to bring globalization into a university curriculum. These elements are: Infusion, Insertion, Interfacing, Interchange, and Immersion. We utilized an Interfacing case study, where a newly developed course teamed MIS students in the (US) Business School with students at major universities in India to solve real-world business problems. This Global Classroom leveraged interactive technologies to bring students together. We discuss the course progression, dynamics of student interactions, impacts of differing cultures, and overall outcomes, which were positive. We end with impacts of such global classroom implementations and teaching tips for implementing global education.

Keywords: global education, global curricula, higher education, global classroom, business schools, management information systems

INTRODUCTION

Globalization has been a central theme in the operations of most businesses over the last few decades. Enabled in part by the Internet (DeMeyer, 2012), businesses have seized new opportunities and responded to increased threats by reaching out to distant markets and customers. In other cases, companies have sought to reduce their costs and increase business flexibility by using remote workers and suppliers.

Certainly, while critical, the Internet is not the only driver of globalization. There are also economic, political and cultural drivers of globalization (Bond and O'Byrne, 2014). Some examples include the creation of trade pacts and the emerging notion of 'global customers' whose tastes in consumer items and other goods and services are converging over time (Gabriel and Mohamed, 2011). The impact of large transnational companies serving many markets simultaneously with related products and services has also been a central feature of globalization.

The Internet merits more discussion as the major enabler of globalization, and without which globalization would not be possible in its current form. Smartphones for example, enable citizens in less developed parts of the world to feel they are part of this global economy and gain unprecedented insights into the lives of others in distant countries (Gabriel and Mohamed, 2011).

The Internet has not only sped up global communications, but enriched those communications (via voice, video and other multimedia) and increased the operational reach of organizations through such phenomena as virtual workers and global supply chains. ERP and other software also manage polyglot

currencies, tax regimes and languages seamlessly and in real-time. So we have seen not only the reach of business being extended but its speed as well. Not surprisingly then, Pratt et al (2014) report from their research that 52 of 83 or 62.66% of universities polled list globalization and diversity as one of their major curricular goals.

DeMeyers (2012) and Withycombe Keeler et al., (2016) have highlighted the rapid responses of business programs to globalization. He notes the proliferation of overseas campuses of US business schools in Asia and the Middle East – which we call *immersion* – as one aspect of this change. Encouragement of these campuses has often come from foreign governments seeking to avert brain drain by enabling their students to get a degree from a foreign (frequently US) university while remaining at home (Lane, 2011). De Meyer (2012) and Hammond (2019) also list reasons other than financial ones for campuses expanding abroad, such as selling the university's' brand or ideas globally and enriching the home or headquarters program.

Such expansions have not been without problems however, due to issues of market saturation and financial viability. Moreover, physically locating campuses in foreign countries is recognized as only one way to respond to the fact of business globalization. Other forms of responding to the globalization imperative include curriculum enrichment and teaching/research partnerships. Both these approaches have been used heavily by US Business Schools.

Ghemawat (2011) described two approaches to the including international content in business programs, namely insertion and infusion. With insertion, new standalone globalization-oriented courses are introduced into the curriculum, whereas with infusion, existing courses have global content added to them e.g., Ghosh's (2011) use of global-oriented case studies. Sauls and Gudigantala (2013) also describe how IT Security courses can be modified to deal with security issues faced by global organizations. Many times, a project is used as a core element of both approaches (Schaupp et al., 2019; Sanja, 2019).

Interchange programs were also popular in past years, giving exchange students the opportunity to spend a semester or a year at a partner university (Brandauer and Hovmand, 2013).

Brookshire et al (2007) however, in presenting a model IS curriculum, highlight a problem with inserting standalone courses into curricula, namely, the lack of credits available to add new courses to requirements. Even where electives are allowed, global-oriented courses have to compete with many others to make their way onto a student's transcript. This is an argument for Infusion, Interfacing and other approaches to curriculum enrichment.

Collectively then, we can define a basic framework for Business School globalization initiatives summarized as the 'Five I's and as shown in the table below:

TABLE 1
HOW BUSINESS SCHOOLS INTRODUCE GLOBALIZATION INTO THEIR CURRICULA

Method	How It Works	Strengths, Weaknesses
Infusion	International content introduced into existing courses	Often limited impact and poor fit to current content, but the least cost alternative.
Insertion	Standalone new courses added to the curriculum with an international flavor	Costlier alternative but greater impact and coherence.
Interfacing	Joint programs created between global partner Business schools.	Greater effort and cost, coordination required between partner programs, but much bigger impact.
Interchange	Exchange students go from one country to another for a semester or a year.	Costly for entire cohorts, also includes travel risk.
Immersion	Branch campuses created in different countries	Highest cost and risk. Cost of failure may run into the millions of dollars.

Regardless of the approach taken to the globalization of business school programs - overseas campuses, global business school partnerships, curriculum insertion or infusion, or a combination of all the above, there is a clear impetus and imperative for business schools to make their programs more global in orientation. The encouragement comes not only from the business world seeking 'internationalized' workers, but often surprisingly, from alumni of these same business schools who have returned home and want the 'presence' of their alma mater in their home countries.

The challenge for business schools therefore, is to develop 'best-of-practice' models for the different forms of course and program enhancements that make their programs and curricula more global in orientation. The goal also is not only to graduate students with expanded global perspectives, but to graduate students who are more valuable to their future employers. This is a reason that many of these initiatives are supported by businesses (Schaupp et al., 2019).

In this paper we focus specifically on the *Interfacing* method and discuss in depth, the authors' experience in creating and operating a collaborative program between "University" and partner Indian universities, together with lessons learned.

Supporting Frameworks

Based on the literature and our own experiences, we believe that cultural differences – as expressed in language, work styles, work schedules, and such like – can exacerbate friction in international collaborative projects. Hence, we focus on cultural differences not only as a factor that can inhibit the establishment of trust – which is essential to desired business outcomes (Gefen and Ragowsky, 2014), but which can affect project success in many other ways (Withycombe Keeler et al., 2016).

Here we conceive of culture as a particular "way of life" founded on some combination of shared norms, values, history, language, geographical space, or religion. Our purpose here is not to define culture precisely, but rather to focus on the difficulty of bridging the cultural chasm in order to find common ground for cooperation on discrete business projects. This is not easy to do, for distrust can arise from clearly identifiable cultural reasons.

For instance, while Japan and the United States practice what can be called democracy and capitalism, Americans perceive that Japan "practices both democracy and capitalism according to a

different set of cultural norms than does the United States" (Fukuyama, 1996; Sanja 2019)). This has led to fissures along the business divide as Asians look askance at the American business environment as too litigious and see Americans as too individualistic, too ready to sacrifice the collective good for their own professional goals. Americans, by the same token, dislike the cloistered Japanese keiretsu system that locks them out of competition for Japanese markets.

Entire theories of conflict have been erected upon cultural differences, perhaps the most well-known of these the "civilizational clash" model offered by Samuel Huntington, in which the major future conflicts will not be ideological, but rather cultural – Western, Confucian, Hindu, Islamic, and such like (Huntington, 1996). Others, such as Fukuyama, have argued that cultural collisions need not be played out in conflict, but can engender cooperative outcomes as well.

A major indirect contribution to the literature on trust is Geertz Hofstede's (2001, 2003) Dimensions of Culture project. Hofstede, a Dutch researcher, began his work in the late 1960s to produce perhaps the world's most comprehensive data base on national cultural differences. The Hofstede project provides a tool whereby country cultures can be measured and assessed against each other; this tool helps us to uncover the fault lines between different cultures, the focus of our attention in accelerating the trust-building process. We used Hofstede's tools as an aid to analyze differences between cultures among students in the US and India.

PROGRAM SETUP AND DELIVERY OF THE INTERNATIONAL COURSE

Our case study from "University" originated from the university's Office of International Programs. In 2013, they launched the ***Global Classroom Program*** to internationalize the classroom and provide students with opportunities for international experiences at home. The "University" has a demonstrated commitment to international collaboration and educational partnerships, fostering a global ecosystem to address global challenges. This commitment is underscored in the "University's" Strategic Plan, under Initiative Three, to Enhance "University's" Global Impact. Global Classrooms are courses that engage "University" undergraduate and graduate students with partner universities abroad through a range of interactive technologies.

From 2013 onward, one of our authors designed and conducted several multidisciplinary Global Classroom projects within the College of Business within "University", to foster collaborative problem solving between the College of Business students and students from major Indian universities. For-profit, nonprofit, and government entities sponsored the projects and required students to develop business solutions where IT was a major contributing element.

More than 325+ "University" students collaborated with 100+ students from two major universities in India as part of the Domestic and Global Information Systems Outsourcing course within the MIS program in the Business School. In general, all the joint projects were conducted under comparable conditions, with similar offshore complexities, project time frames and resources to permit reasonable assessments and inference.

The feedback from the assessments of the global classroom offerings included not only how well the students developed joint technical solutions, but how they handled challenges of project requirements, communication, negotiations, trust, cultural sensitivity, risk tolerance, and language/jargon misunderstandings all in the global context. The typical project characteristics and conditions include the following:

Team Structure
- The project team includes the following three major players: the customer, the management team, and the technical development team (see Figure 1 below).
- The Customer organization is typically located in the US in the EST time zone.

- The Management team comprises of business students from the College of Business, "University", is located in the Northeast USA, and thus, in the same time zone with its respective customers.
- The Technical Development team comprises of computer science/IT/computer engineering students from a major university in India in the IST (Indian Standard Time) time zone.
- The time-zone difference between USA-India is either 9.5 or 10 hours depending upon the time of the year the projects gets carried out.

FIGURE 1
THE PROJECT TEAM
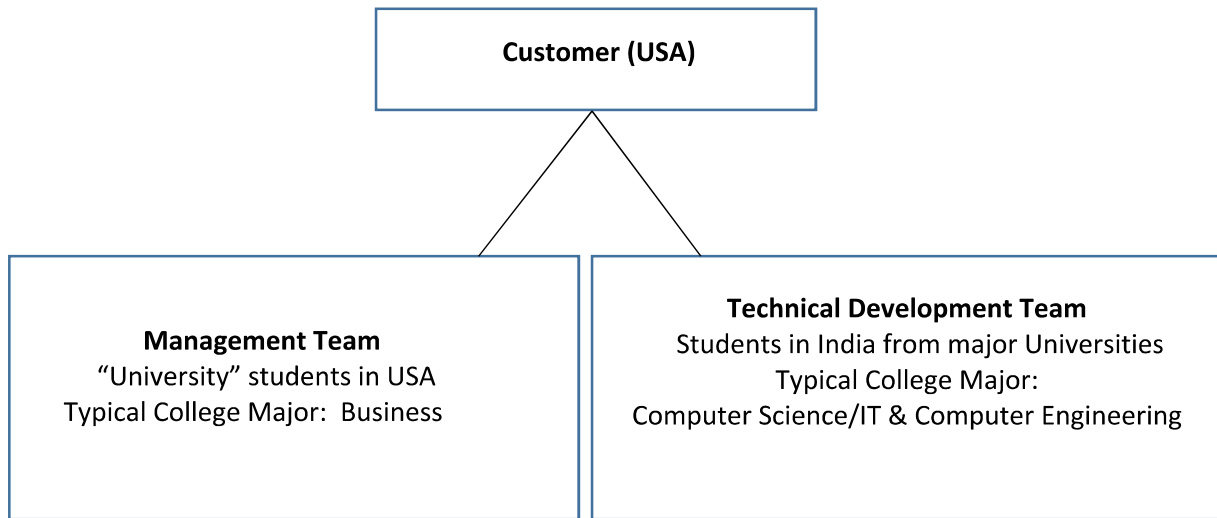
FIGURE 2
THE PROJECT PROCESS
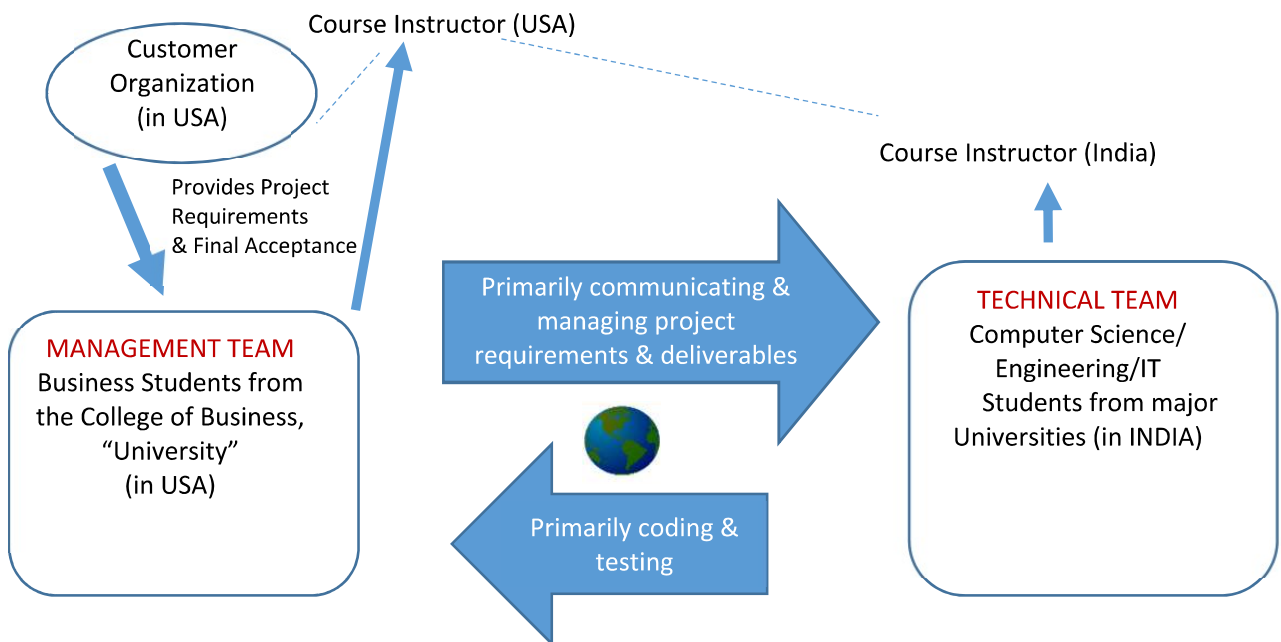
Overall Roles and Responsibilities and the Project Process

As outlined in figure 2:

- The Customer provides the business requirements as he or she accepts/rejects the final product as part of their major responsibilities.
- The Management team is responsible for consulting with the Customer to understand and analyze the project requirements, to manage the overall project, to communicate the project scope and deliverables to the Technical Development team in India, and assess the final product.
- The Technical Development team is responsible for completing the technical development (coding, testing etc.) as per the requirements provided by the Management team.
- There is no direct communication between the Technical Development team in India and the customer in the US.
- The Project Manager from the Management team is overall responsible for the completion of the project.

The Management team typically includes the following positions:

- Project Manager, Business Analysts, Document Writer, and Systems Analysts
- The Technical Development team typically includes the following positions:
- Technical Lead, Programmer Analyst, Computer Programmer, Database Developer

The Project Process

- The Management team keeps the Customer informed at all the times regarding the project progress and deliverables.
- The Management team also is responsible for acknowledging and/or responding to the Technical Development team's emails with questions, concerns, and requests for any additional information within reasonable time frames.
- The Technical Development team is prohibited from making assumptions regarding the business requirements; instead, they communicate with the Management team for any clarifications or additional information.
- Both the Management and Technical Development teams use a common online web portal (such as BB LEARN, Google Documents, Skype and Zoom video conferencing) for their team communications and document sharing.
- Both the Management and Technical Development teams are asked to document their project meeting minutes.
- The Technical Development team provides weekly progress reports to the Management team.
- The Management team is responsible for providing weekly progress reports to the customer.

Project Timeline and Approach

- The course and project timeline is typically 11 weeks.
- The project teams were asked to generally follow the Project Management Institute's recommended project management approach of five phases (initiating, planning, executing, controlling, and closing) to complete the project activities and deliverables (http://www.pmi.org/PMBOK-Guide-and-Standards.aspx).

- The following diagram (figure 3) provides an overview of major activities/deliverables that are completed in context of the above-mentioned PMI-based project management process groups and their associated timelines.

FIGURE 3
THE PROJECT TIMELINE
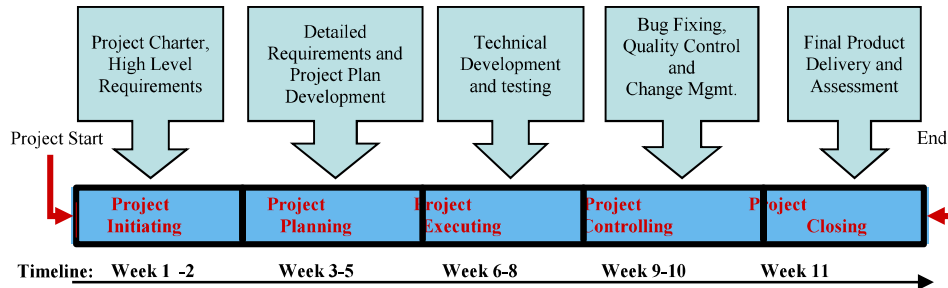
The Project Initiating phase [week 1-2] begins with a kick-off meeting and developing of the Project Charter to inform the start of the project to all stakeholders involved. Customer team is invited to provide an overview of their business problem during the kick-off meeting. Next, students are assigned to complete the Initial Project Proposal which requires them to include the information such as Project Goals and Objectives, Project Description, Roles & Responsibilities, Project Deliverables & Timeline and Sign-off based upon their understanding of the project so far.

This document is also shared with the customer team for their review to make sure that everyone is on the same page. The Project Plan development [week 3-5] is the next activity which includes important information such as detailed project requirements, current business process, list of all deliverables, risk assessment, project assumptions and constraints, proposed solution, change management process, project success criteria, and customer sign-off process. Typically, the majority of these activities, between week 1 and week 5, are carried out by the Management Team. As the project planning phase begins students are responsible to provide a weekly Project Progress report to their course instructor/customer to assess their project progress.

Once the planning is completed, the Technical Team in India performs the Project Execution [week 6-8] activities such as coding and testing. During the mid-semester, the professor asks students to do a mid-term presentation with updates on their projects. Once the project execution phase is completed the testing and quality control of the solution developed during this phase begins [week 9-10].

The final proposal and solution related documentations are also developed during this phase. Lastly, the final presentation is scheduled during the Project Closing phase [week 11]. This activity requires students both at "University" and in India to present their project activities and solutions "live" via online video conferencing where customer team is also present to assess the final product. Due to the time-zone difference between US-India these presentations are typically scheduled around 6:30 am EST.

The Role of Technology

The universities provided basic technical infrastructure to the Management and Technical Development teams as they worked on these projects, similar to the institutional support recommended by Keelet al., (2016) and others.

In order to communicate effectively and share project documents between the team members in the US and India, technical support configured web portals (such as BB Learn, Google Docs) to use as central repositories for all project documents as well as email exchanges, use of message boards, and to chat.

Additionally, video conferencing tools such as Skype, Zoom, and Google Plus were also used for team communication.

DATA COLLECTION AND OBSERVATIONS

As shown in Figure 4 below, project data collection and observations are in the context of typical project management and offshore parameters such as distant communications, dealing with time-zone differences, building trust, and overcoming of cultural and language challenges.

They mostly included three project evaluation areas: scope, quality, and time. The measurements relating to scope were based upon overall product functionality. Quality was based upon the number of defects recorded during the final product assessment period. Time was based upon achievements of project deliverables within the expected timeframe.

FIGURE 4
INFLUENCING FACTORS, EVALUATION AREAS, AND MEASUREMENTS
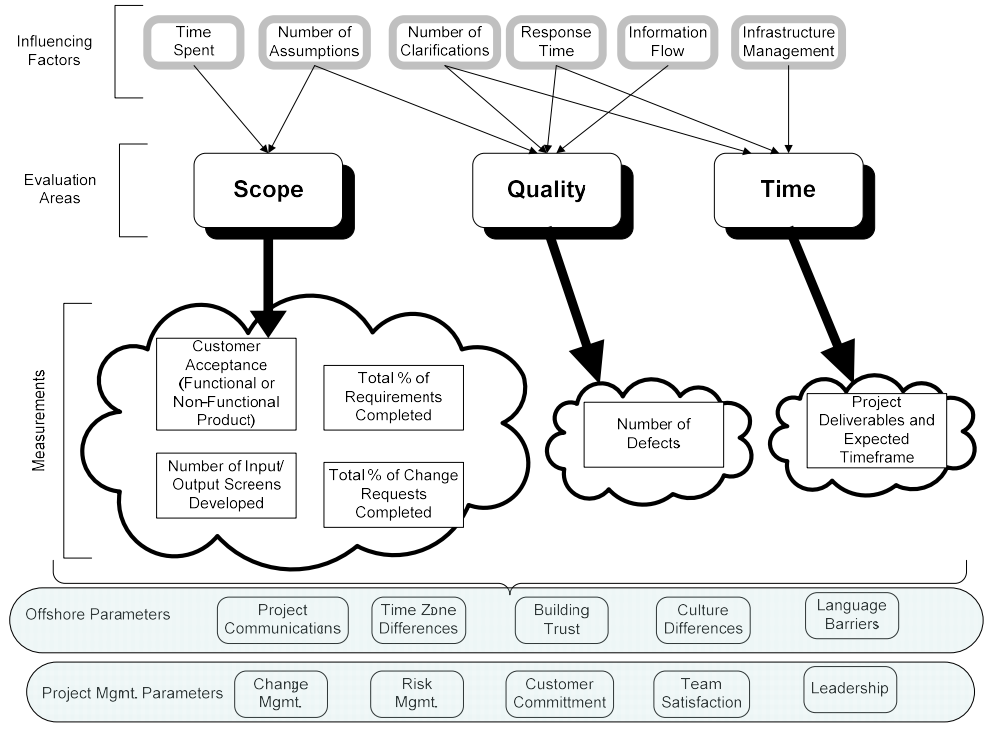
The foregoing provides the model for a typical Global Classroom project. One such project was orchestrated during AY 2013-14, where a group of 45 students were challenged to build awareness (by developing customized website using Web 3.0 technologies) for a non-profit organization based in Northeast USA. The 25 College of Business students ("Management team", USA) and 20 engineering/IT students from a major university in New Delhi, India (Technical Development team, India") were divided into five teams and collaborated for ten weeks using PMI-based approach as part of this project.

The Management team students were responsible for consulting with their customer to understand and analyze the project requirements, plan and manage the entire project, as well as communicate the project scope and deliverables to the Technical Development team in India. The Technical Development team was responsible for designing, coding, and testing the website based upon the requirements provided by the Management team. No direct communication between the Technical Development team and the customer was allowed, a typical real-world outsourcing scenario.

In addition to their individual work hours, students from both the teams (in the US and India) exchanged more than 500 emails, 4000+ chat/text messages, and spent close to 175 hours in face-to-face/video conference meetings using various technologies.

DISCUSSION AND PAPER CONTRIBUTION

All the partner universities and the students themselves viewed the partnerships between "University" and its Indian partners as hugely successful. All the projects were taken to a successful conclusion and client benchmarks for success were achieved. Being the third method in the earlier globalization curriculum development framework - *Interfacing*, faculty, administrators, and business clients needed to exert significant effort to achieve success. Each course in a different quarter was also unique in ways that lesser methods of curriculum enhancement were not.

Differing, but always significant, setup time was needed for relationships with different colleges, faculty, business partners, cohorts and often, different administrators. What this emphasizes is that Interfacing or partnerships require at the very least, College-level support and dedicated resources in order to be successful (Withycombe Keeler et al., 2016). Administrators and faculty alike agree that without this minimum level of support, success would be much more difficult to attain.

While teams in these projects successfully completed the final solutions, executing the projects were not without challenges of varying difficulty. For example, many students of this project had never traveled outside of their home country, and the concepts and practice of global competence and cross-cultural communication were new to them. Challenges in long-distance communication, trust-building, negotiations, time differences, cultural sensitivity, risk tolerance, language/jargon misunderstandings, and the availability of technologies were very much in evidence. Some interesting differences included:

- Greater reticence to speak up during meetings and greater deference to authority figures by the Indian students.
- Indian students placed a greater emphasis on collective goals and team than US-based students, who demonstrated more independence and were less consensus-oriented.
- US students featured more casual and less formal behavior, with greater formality shown by their Indian counterparts.
- Use of language, where for example "OK' means '*I heard you*' to Indian students, while it meant '*I am expected to do that*' to their American counterparts.

Technical and organizational challenges included:

- Slow networks and computing infrastructure were often a problem on the Indian side
- Time zone and different public holidays differences posed challenges in coordination
- Lack of business domain knowledge and organization/cultural contexts of the other partner was occasionally an issue

Based on lessons learned from multiple iterations of the course over different quarters, we offer the following guidelines:

1. Helping students understand potential differences in culture and behavior on both sides of the divide. For example, explaining how one culture (in this case, India) is more likely to defer to authority figures such as team leaders and professors might be countered by more informal communication settings, where more frank input may be collected by the American side.
2. Expressing deliverables in a more specific way that is neutral to each side's cultural expressions is helpful to avoid ambiguity. Some of these ambiguities impacted outcomes in a few instances.
3. Understanding and explaining to each side differences in expression and social norms and rituals. Indian behavior for example, differed from Americans in ritualistic behavior, so students in India would often address their American counterparts formally as "sir". This

formalistic behavior constituted a barrier to frank communication. This reflects the findings of Shrivastava (2019).

4. Helping each side reduce ambiguity in communications. For example, the pace of delivery of communications (generally faster by Americans and slower by Indians) often led to disinclination to ask for clarification and, instead, rely upon hip-pocket understanding. This sometimes led to misunderstandings that inhibited project progress.

5. Making allowances for technical mismatches, such as networking speed, differences in software and computing platforms is also essential.

6. Anticipating and preparing for time zone differences as well as public holiday schedules is also a key to projects with greater prospects for success.

CONCLUSIONS

In this paper, we introduced a taxonomy outlining varying degrees of integration of globalization within university curricula. The taxonomy included Infusion, Insertion, Interfacing, Interchange and Immersion, relating to the degree of effort and expense expended to bring a global-oriented education to the student. We further outlined in detail, an example of Interfacing, relating to a collaboration between the authors' university and Indian universities. Our experience with this course over multiple quarters has led to helpful teaching tips for universities seeking to achieve globalized curricula through such collaborations.

Global collaborative projects have a profound impact on students both in the US and abroad (in our case, it was India) as they develop valuable insights into diverse cultures and "people" skills at a global level, helping them to be more effective emerging industry leaders. However, while the learning opportunities are great, the participants experience many challenges and barriers related to distant communication, negotiations, synchronization of calendars, cultural sensitivity, risk tolerance, language/jargon misunderstandings, distant technologies, and trust building. In addition, we found support for Hattinger and Erikssons' (2019) conclusions that industry-related projects led to more practical work-focused vs. theoretical learning.

Many lessons were drawn from this partnership regarding the social, organizational and technical aspects of Interfacing - the third level of globalized curriculum development from the framework. We believe that the issues we faced and lessons we learned would applicable to other universities seeking to use such partnerships to give their students a more globalized curriculum.

Certainly, the Interfacing arrangement provides much more exposure to a global education that merely inserting material into the curriculum via whole courses or subsets of courses. In addition, the expenditures and risks that accompany Interfacing partnerships are significantly less than those for exchange students or branch campuses.

As these engagements represent a case study (with multiple course sections over time), we are careful not to generalize its results for all such potential interfacing partnerships, even those between the US and India. Even though feedback from all the actors involved - faculty, students and administrators - was almost universally positive, reinforcing the conclusions of studies like that of Keeler et al., (2016), we believe that more research would help to better quantify the efficacy of such partnerships and the various elements involved.

REFERENCES

Bond, C., & O'Byrne, D. J. (2014). Challenges and conceptions of globalization. *Cross Cultural Management, 21*(1), 23-38.

Brandauer, S. C., & Hovmand, S. (2013). Preparing business students for the global workplace through study abroad. *Journal of International Education in Business, 6*(2), 107-121.

Brookshire, R. G., Yin, L. R., Hunt, C. S., & Crews, T. B. (2007). An End-User Information Systems Curriculum for the 21st Century. *The Journal of Computer Information Systems, 47*(3), 81-88.

De Meyer, A. (2012). Reflections on the globalization of management education. *The Journal of Management Development, 31*(4), 336-345.

Fukuyama, F. (1995, 1996). *Trust: The Social Virtues and the Creation of Prosperity.* New York: Simon and Schuster.

Gabriel, B. A., & Mohamed, A. (2011). Impact of globalization. *European Business Rev., 23*(1), 120-132.

Gefen, D., Shah, S., & Ragowsky, A. (2014, June 9-11). It is all personal: dealing with the revolving door in the Indian high tech industry. *Proceedings of the European Conference on Information Systems (ECIS).* Tel Aviv, Israel.

Ghemawat, P. (2011). Bridging the Globalisation Gap at Top Business Schools: Curricular Changes and a Response. In C. Jordi (Ed.), *The Future of Leadership Development.* Palgrave Macmillan, Basingstoke.

Ghosh, B. (2011). GlobePort faces global business challenges--assessing the organizational side of information systems projects. *Journal of Information Systems Education, 22*(2), 87-94.

Hammond, C. D. (2019). Dynamics of higher education research collaboration and regional integration in northeast Asia: A study of the A3 foresight program. *Higher Education, 78*(4), 653-668.

Hattinger, M., & Eriksson, K. (2018). Co-construction of knowledge in work-integrated E-learning courses in joint industry-university collaboration. *International Journal of Advanced Corporate Learning, 11*(1), 10-16.

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations.* Thousand Oaks: Sage Publications.

Hofstede, G. (2003). *Cultures and Organizations.* London: Profile Books.

Huntington, S. (1996). *Clash of Civilizations.* New York: Simon & Schuster.

Lane, J. E. (2011). Global expansion of international branch campuses: Managerial and leadership challenges. *New Directions for Higher Education,* (155), 5-17.

Lilley, K., Barker, M., & Harris, N. (2014). Educating Global Citizens in Business Schools. *Journal of International Education in Business, 7*(1), 72-84.

Pratt, J. A., Keys, A., & Wirkus, T. (2014). Preparing information systems graduates for a complex society: Aligning IS curricula with liberal education learning outcomes. *Journal of Information Systems Education, 25*(1), 35-44.

Sauls, J., & Gudigantala, N. (2013). Preparing information systems (IS) graduates to meet the challenges of global IT security: Some suggestions. *Journal of Information Systems Education, 24*(1), 71-73.

Schaupp, L. C., & Vitullo, E. A. (2019). Implementing experiential action learning in the MBA: Use of an international consulting experience. *The International Journal of Educational Management, 33*(3), 505-517.

Shrivastava, A. (2019). Using collaborative project for learning effective ways of working harmoniously with people from different cultures. *International Journal of Marketing & Business Communication, 8*(1), 47-54.

Withycombe Keeler, L., Wiek, A., Lang, D. J., Yokohari, M., van Breda, J., Olsson, L., & Evans, J. (2016). Utilizing international networks for accelerating research and learning in transformational sustainability science. *Sustainability Science, 11*(5), 749-762.