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Internationalizing the Curriculum and the Instructor – Lessons from Teaching the Information Systems Core Course in Nepal

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ABSTRACT

This paper describes the author's experiences teaching the Information Systems core course in an MBA program in Nepal. The goals of the paper are twofold: 1) to prompt other faculty to consider seeking out similar short term visiting faculty positions in the developing world and 2) to spark a dialogue on the state of the IS core course in Nepal that may lead to continuing improvements. Background information on Nepal and its higher education system are presented. The MBA program and business school facilities are described as well as specifics of teaching the IS core course.

Keywords

IS core course, teaching abroad, MBA, Nepal

INTRODUCTION

In addition to revolutionizing industry and commerce, globalization is transforming the teaching of information systems. Not only have the topics covered by information systems expanded to include outsourcing and off shoring as well as cultural aspects of information systems development and use, but the prospects for IS faculty members to teach abroad and for students in a variety of countries to receive faculty from abroad into their classrooms have never been greater. When these exchanges involve institutions in the developing world, these prospects provide additional opportunities for the exchange of ideas and challenges for students and faculty alike. This paper details the experiences of the author as a visiting professor teaching the IS core course in an MBA program in Nepal. Through the sharing of these experiences, the goals are to prompt other faculty to consider seeking out similar short term visiting positions in the developing world as well as spark a dialogue on the state of the IS core course in Nepal that may lead to continuing improvements.

BACKGROUND

The Country

Challenges of teaching IS in an MBA program in Nepal include the general lack of financial and technological resources. Nepal is classified as a low-income economy by the World Bank (2009). In 2004, the median annual household income was approximately \$850 USD in all of Nepal and \$2900 USD in Kathmandu (Wagle, 2010), the source of the majority of students in the MBA program. Households with members with some post-secondary education exhibit significantly higher incomes than those without (Wagle, 2010). The incentives to further education are present.

Nepal has low access to information and communications technologies. Approximately 12% of the population have mobile phones (compared with approximately 37% for all of Asia and the Pacific.) Similarly, only about 1% of the population uses the Internet, compared to 15% of the population across the Asia-Pacific region. Finally, only 3% of the population has a computer at home, compared to 28% for the Asia-Pacific region (International Telecommunications Union, 2009).

Higher Education in Nepal

Students enrolled in an MBA program in Nepal find themselves in an uncommon position. Goyal (2007) found that only 1.0% of the overall population graduate from a university including 1.9% of males and 0.4% of females. 4.8% of the population in Kathmandu completed university including 8.0% of males and 1.8% of females. By enrolling in graduate school, the students find themselves in a fairly select group.

Computer-related Education

Many students do not have a great deal of exposure to computers and related education. Until the early to mid-1990s, there were no textbooks, no curricula, and no trained teachers in computer education (Shrestha, 1998).

Shakya and Rauniar (2002) surveyed undergraduate IT education in Nepal and found deficits such as a lack of qualified faculty, very limited full time faculty, a shortage of current computer facilities and Internet access, and a lack of library-provided electronic resources. Even those students who do study IT at the bachelors level often find their preparation deficient.

The University

The university where the business school and MBA program are located is the first university in the private sector in Nepal (Chauhan, 2008). The institution was founded in 1991 as a not-for-profit nongovernmental public institution (Rosenbloom and K.C. 2003).

The Business School

The business school was founded in 1993 and located in Kathmandu, away from the main campus located in a small town. The school began offering an MBA degree in 1993 and an EMBA degree in 2001. In contrast with the existing MBA program in Nepal, this school emphasizes studying best practices and an entrepreneurial role over theory. The curriculum is modeled on a typical MBA offered by a U.S. business school. The MBA required courses include accounting, economics, finance, human resource management, information systems, management, marketing, and strategy. Cases are a common method of instruction. A goal of the business school is for students to realize that attending the school is a privilege and with that privilege come responsibilities (Rosenbloom and K.C., 2003).

Entrance into the school is extremely competitive. Of the students who meet the GPA and entrance exam requirements for admission, only about ten per cent are admitted. Students are selected through a series of interviews in addition to exam scores and academic records. In contrast to much of the country where caste and connections are paramount, the school seeks to admit students based primarily on their merits.

While the business school seeks to provide a degree at an international standard with best practice teaching techniques and high admission standards, there are areas that require increased efforts in order to achieve this goal. One area is faculty research. Brown and Masten (1998) develop a 2 X 2 Business School Development Grid based on whether the mission of the school is comprehensive or traditional and whether the spectra of economic development are local or national. The business school's mission clearly places it in quadrant 4, national/comprehensive. The school has a national reputation and provides graduate education. Nevertheless, the relative lack of research and small number of outreach programs to the business community more resemble a school in quadrant 1 (local/traditional). Both areas require significantly increased attention.

Information Systems in the MBA program

The information systems area in the MBA program is quite small. The business school has no regular full-time faculty member in information systems. Of more than 9000 entries in the AIS Faculty Directory, there are no listings for IS faculty members in Nepal.

There are four information systems courses in the catalog, the core management information systems course required of all students and courses for an IS concentration including systems analysis and design, decision support systems, and enterprise resource planning. Due to little student interest and lack of a full-time IS faculty member, these courses appear to not have been offered for some time, if ever.

THE INFORMATION SYSTEMS CORE COURSE

Prescribed Curriculum

The curriculum for all courses in the MBA program, and indeed in the entire university, is prescribed. A set list of topics is approved by a governing board along with the classroom time to be devoted to the topic. The course description and list of topics in Table 1 was presented to the author shortly before the first teaching term commenced.

Course Title	MANAGEMENT INFORMATION SYSTEMS
Course Code Number	MAS 530
Credit Hours	Three (3)
Course Objective	This course will deal with information systems and the role they play within the broader framework of the corporate decisions making process and management. It will also provide the skills necessary to plan, design, and operate information systems and apply information technology to a wide variety of business problems.
Learning Unit	Topics
Learning Unit One Net contact hour-3 hrs	1. MIS – the basic concept
Learning Unit Two Net contact hour-3 hrs	2. MIS 2.1 Goals of an MIS 2.2 Outputs and Inputs 2.3 Communication in an organization 2.4 Data 2.5 Information and Knowledge
Learning Unit Three Net contact hour-6hrs	3 Information Systems 3.1 Transaction Processing Systems 3.2 Executive Information Systems 3.3 Strategic Information Systems 3.4 Office Automation Systems 3.5 Expert Systems 3.6 Decision Support Systems
Learning Unit Four Net contact hour-6 hrs	4.1 Decision Making 4.2 Problem Solving Methods 4.3 Decision Models
Learning Unit Five Net contact hour-9hrs	5 Today's MIS Perspective 5.1 ERP 5.2 BPM 5.3 BI 5.4 DW
Learning Unit Six Net contact hour-3hrs	6 ICT (Communication Technology) 6.1 Networking 6.2 Intranet 6.3 Internet 6.4 E-commerce etc.
Learning Unit Seven Net contact hour-3hrs	7. ICT (Data/Database Technology) 7.1 Relational Database Management Systems
Learning Unit Eight Net contact hour-3hrs	8. ICT (Software Technology/ Software Development Technology) 8.1 Object Oriented Programming 8.2 Service Oriented Architecture, etc.
Learning Unit Nine Net contact hour-3hrs	9. ICT (Software Development Technology) 9.1 Systems Analysis and Design Method
Learning Unit Ten Net contact hour-3hrs	10.1 Data and Information Policy 10.2 Privacy and Data Security 10.3 Cultural and Ethical Issues 10.4 Cyber Act, etc.
Total contact hours	45 hrs (including assessment and final examination)

Table 1. Prescribed Course Syllabus

Many of the topics are familiar to anyone who has taught or taken an IS core course in an MBA program in the U.S. The inclusion of topics such as business intelligence and service-oriented architecture demonstrate that an attempt was made to keep the curriculum current. There was little evidence of a tailoring of the curriculum to the environment in Nepal. Culture is mentioned and the Cyber Act listed during the last section of the syllabus refers to legislation in Nepal designed to facilitate the use of e-commerce.

Comparisons with a Model IS Core Course

Gorgone, Gray, Stohr, Valacich, and Wigand (2006) describe a foundation course on the fundamentals of Information Systems that may serve as a model. (Note: the IS model curriculum is currently undergoing an extensive revision. The version of the course presented here is the one in place during the author's tenure in Nepal.) The following topics are suggested:

- systems concepts
- system components and relationships
- cost/value and quality of information
- competitive advantage of information
- specification, design, and re-engineering of information systems
- application versus system software
- package software solutions
- procedural versus non-procedural programming languages
- object oriented design
- database features, functions, and architecture
- networks and telecommunication systems and applications
- characteristics of IS professionals and IS career paths
- information security, crime, and ethics.

Of these, glaring omissions from the prescribed curriculum in the IS core course as taught at the business school in Nepal appear to be systems related concepts, discussions of the competitive advantage of information, and reengineering. Characteristics of IS professionals and IS career paths are not included, but are probably less relevant in a program without an active IS concentration.

Comparisons with Similar Courses at Other Institutions

A number of IT faculty members teaching in a variety of business schools, predominantly in the U.S. were asked to rate the popularity of the core MBA IT/IS course in their own programs. A plurality (43%) rated the course as “neither popular nor unpopular” (McAfee, 2007). Experience in Nepal was similar. A number of the students were somewhat apprehensive regarding the topic, but not to a significantly differing degree than in the U.S.

The amount of time devoted to the IS course, and indeed all core courses in the MBA, was greater than is typical in U.S. and other international business schools. The spring classes met 28 times during the term for one and one-half hours per class. More commonly schools provide ten to fifteen sessions (McAfee, 2007).

Textbooks

Selecting a textbook provided three major challenges, coverage, availability, and cost. It was difficult to find a suitable textbook that covered all of the topics in the prescribed curriculum. The syllabus included a selection of readings from Laudon and Laudon (2007), O’Brien and Marakas (2009), and Rainer and Turban (2009).

Previous visiting faculty to Nepal advised bringing copies of the textbooks for personal use as textbooks were not widely available locally. The school library was able to order copies of textbooks from some publishers for reference purposes. Although the cost of international editions of textbooks is typically significantly less than in the U.S. (U.S. Government Accountability Office, 2005), the cost is still an obstacle for the students in a country with a per capita GDP of \$999 USD (UNESCO Institute for Statistics, 2007). Students shared copies of the textbook placed in the school library. Upon departure the author donated copies to the library to enhance their collection.

The lack of easy access to textbooks meant that students relied greatly on the lecture materials to learn the concepts. When asked to complete cases from the textbook, assigned groups would make one copy of the case to share.

Virtual Classroom

The business school has a course management system called “Virtual Classroom” based on the free open-source software package Moodle. Virtual Classroom allowed the posting of schedules, the syllabus, PowerPoint presentations, and assignments as well as access to student rolls, and the ability to post grades. Moodle was installed by an IT specialist staff member with the help of a paid consultant. Thereafter, the IT specialist for the school supported Moodle. All classes in the MBA program had Virtual Classroom sites, though a number of faculty only used them to post a syllabus.

Although the author was not familiar specifically with Moodle, the software was fairly easy to use and class materials were regularly posted there. During the first term, the entire schedule was detailed on Virtual Classroom at the beginning of the semester with set dates for lectures, assignments, and exams. Changing a date entailed moving items around on the class calendar, a process that required reloading the web page. Dates needed to be changed often, as detailed below. As the speed of the Internet connection at the school and at the author's home was fairly slow, it became clear that a more general schedule firmed up a week or two in advance was more practical.

One other issue related to Virtual Classroom was that it was supported solely by the one IT specialist. If the server went down during the evening or on his day off, the resource would be offline until his return. Partially due to bandwidth considerations as well as storage capacity, there was a limit of 2 MB per posted file. This required that many PowerPoint presentations be divided into multiple files and changed to the generic Office theme before uploading.

Nevertheless, access to Virtual Classroom was an advantage the business school had over the rest of the university. In general, the IT infrastructure and support at the business school were superior to that of other schools throughout the university. Additional resources, including a highly trained IT specialist, made a difference.

INFRASTRUCTURE

The infrastructure in Nepal in general and in the school in particular led to challenges at times.

Class Representatives

One innovation that facilitated efforts was the existence of class representatives. Each class had a student representative responsible for taking care of course-related matters and acting as a liaison between the professor, classmates, and the school.

Computers

There was a desktop in the office at the school. A portable laptop was brought into the classroom along with a portable projector. In addition, the author brought a laptop from the U.S.

PowerPoint 2007 on the author's laptop was used to prepare lectures. Even though the files were saved as PowerPoint 97-2003 presentations, they could not be opened on the laptop provided by the school with a version of PowerPoint 2003.

Another issue was whether the portable projector was in the classroom. At one point, the facilities staff member responsible for the projector went on vacation, the replacement staff person often did not have the projector set up for class. Once the role of the class representative was recognized, he or she was regularly dispatched to find the staff member and the projector.

Internet

Access to the Internet was available at the school in the office and classroom as well as at home, though the reliability and speed of the connection were both challenges. The maximum download speed available for purchase at the author's home was 256 kbps. The connection was wireless and shared with another apartment so this speed was rarely achieved. The

Internet service went out fairly regularly and the router required daily rebooting. The ISP was responsive to support calls, sending out multiple technicians on several occasions.

The Internet speed at the business school was somewhat faster, though shared throughout the building. Wi-Fi became available throughout the building during the spring term, though the changeover from a wired to wireless network meant there was a ten day period with no Internet available. There was no notice given that the Internet service would not be available for some time and no estimate as to when it would return.

Many students did not have access to the Internet at home. They needed to access the computer lab at school in order to check e-mail or assignments. A longer lead time for electronic communications was necessary than with students in the U.S.

Electricity

Power cuts are extremely common in Nepal. Indeed, during the author's first four months in the country, there were scheduled power cuts, termed "load-shedding," of 16 hours per day. Typically an area would receive four hours of electricity during the day and four hours during the night.

The school had a generator which was started when the power went out. It required manual starting, so there was a lag between the time the electricity was cut and the generator was started. During this time, which would last from three to fifteen minutes, the projector used for class presentations was off. Even when the electricity came back on, the cutover from the generated power to the electrical grid led to a brief power interruption that caused the projector to turn off. During these periods of interruption it was necessary to keep the class discussion going. Preparing regular class discussion topics occupied these time.

At home, the author had access to an inverter, a large battery that stores power when the electricity is on and provides it when the power is off. Several lights and the router for the Internet were connected to the inverter. In general, the author used lights as little as possible in order to conserve power for the router. Work on lectures or checking e-mail would continue by candlelight and laptop battery while hoping the inverter would continue to power the router. Due to the length of the power cuts, the inverter battery generally would be exhausted before the electricity returned. Scheduling many activities around the load-shedding schedule was necessary.

By the time of the author's departure, electricity was regularly available for 16 to 20 hours per day although the timing of the cuts did not adhere as closely to the posted schedule.

Bandhs and Holidays

As alluded to above, term schedules were somewhat fluid. Any number of events led to postponing class. The most common cause of class cancellations were "bandhs." A bandh is a strike in a specific location to call attention to some grievance. Occasionally the bandhs were widespread enough to lead to serious transportation disruptions. Classes falling on holidays were also rescheduled. There were so many of these events that every class had a set time and day set aside for makeup classes. If a class was cancelled on a Monday, it might be rescheduled for Friday, for example. One class period was cancelled during such a bandh, then made up later in the week. On another occasion, a number of students were traveling back to their undergraduate institution for convocation and classes were rescheduled. Flexibility in scheduling was key.

STUDENTS

Language of Instruction

The general language of instruction at the business school and, indeed, in higher education in Nepal is English. Much of this decision is based on the availability of materials in English compared to Nepali. Although Nepali is the official language of the country, it is the mother tongue for only about 40% of the population. Students study Nepali beginning in 1st grade in primary school and English beginning in 2nd grade (Dahlin and Regmi, 1997). In general, the students' command of the English language was excellent. Other than avoiding colloquial phrasing and speaking a bit more slowly than normal, little adjustment was necessary.

Methods of Learning

Students in Nepal employ different methods of learning than in the West. Dahlin and Regmi (1997) cite a common prejudice that students from Nepal and other developing countries are more likely to employ rote memorization as a learning tool. The

students in Nepal were more likely than students in the U.S. to use language closely related to that in the textbook to describe a concept on an exam. Nevertheless, when Dahlin and Regmi examined Nepali students they found that the students did not conceive of “memorizing and reproducing” as learning. While memorization is considered near worthless in the West in order to promote understanding, Nepali students do not share this attitude. When Nepali students comprehend material they use memorization as a strategy to assimilate and remember the information.

The students actively participated in classroom discussions to a similar extent as MBA students in the U.S. The students in Nepal were more eager than their U.S. counterparts to work in groups and prepare and present cases. The collectivist nature of the culture leads to greater acceptance of group efforts and credit.

One classroom exercise led to unexpected results. In the U.S., the author has used the "Near Beer" simulation (Bean, 2009) to demonstrate the "bullwhip" effect in supply chain management. Typically, in a class demonstration students in the U.S. figure out how to reach equilibrium during the online version of the simulation within two to three tries. Once the students in the U.S. get close to equilibrium, they are able to make adjustments to reach optimal order decisions quite quickly. The students in Nepal could not do this in the classroom setting. At one point a group of students stumbled upon a strategy close to optimal, but the next round they moved farther away and never could improve again. The students could guess as well as their U.S. counterparts at the beginning, but were not able to refine their strategy with incremental improvements. If the students in Nepal had previously been given an algorithm to solve the problem they would likely have had no trouble recalling and applying the solution. If they had learned and understood similar problems, they may have been more likely to construct the appropriate algorithm in this situation, as well.

Plagiarism and Other Forms of Cheating

Students in some cultures cheat to a greater extent and perceive specific behaviors as cheating differently than their U.S. peers (Lupton, Chapman, and Weiss, 2000; McCornac and Chi, 2005). The students in the business school in Nepal were much more likely to attempt to copy off a fellow student's exam or to share their answers with a fellow student than students in the U.S. In addition, a small number of students were greatly surprised when caught copying information directly from web sites for papers without attribution. Responses ranged from claiming another similar site was the source (even when the passage in their paper was identical to the actual web site from which they had clearly copied) to explaining that none of their other professors had ever checked or at least not done so effectively. None of the students exhibited the more emotional responses typical of U.S. students under similar circumstances. Much of this sharing of information, generally discouraged in the U.S., may be due to cultural differences attributable to what is clearly a more collectivist viewpoint.

Lack of Knowledge Regarding IT

Students in different countries exhibit different levels of computer and software experience (Jones and Berry, 2000). The MBA students in Nepal demonstrated familiarity with word processing and presentation software such as Word and PowerPoint and e-mail through use in the IS core course. Nevertheless, an impromptu demonstration of the pivot table function in Excel during one class led to the revelation that many of the students had no knowledge of or experience with spreadsheet software. Due to their facility with other office suite software, this was unexpected.

LESSONS LEARNED

Lessons were learned on both sides. The school, while striving to achieve an international standard, is farther from this goal than many faculty members realized. The quality of the students and teaching by the full-time regular faculty is quite high. Nevertheless, the level of research activity is quite low even among full-time faculty members. One session on best practices in North American MBA programs involving a discussion of the research requirements for AACSB accreditation resulted in better understanding on the part of the faculty as to the hurdles before them.

One other more immediate recommendation made was to institute sessions on the use of Excel. At least half of the students had never used Excel before and were not required to do so for any of their MBA courses. Developing such skills should allow them to better apply lessons learned during the MBA in their professions.

In the U.S. the students in the author's home institution have benefited as well. Examples of cultural differences and infrastructure and economic challenges to developing and implementing information systems have been incorporated into class lectures and discussions. Examples of the adjustments made as an expatriate worker have been used in international management courses as well.

PERSONAL REWARDS

Garson (2005) details her own experiences in teaching in Egypt with the hope of stimulating other faculty with similar experiences to share them in order to help future faculty to become better prepared to teach abroad and the author of this paper wishes to achieve similar goals. Teaching the IS core course in the MBA program in Nepal is a professional highlight. It is possible to teach an information systems course successfully while experiencing power cuts of 16 hours per day in an MBA program located in a country governed by a democratically-elected Maoist government. The challenges were many, but the rewards were greater. At the end of the first teaching term, a conversation with several students led to the author informing the students of the end date of the teaching assignment, about two months in the future. The students expressed surprise and several inquired "But you're coming back, aren't you?" with such sincerity that no answer other than "yes" was possible. In fact, although the challenges will be greater in some ways due to returning alone, as opposed to as part of a sponsored program, the author does plan to return and to continue to teach in Nepal as well as mentor individual faculty members while conducting joint research projects.

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