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Universities Shaken by Earthquakes: A Comparison of Faculty and Student Experiences in Nepal and New Zealand

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Abstract

The authors compare the experiences of faculty and students at universities in Nepal and New Zealand following earthquakes in 2015 and 2011, respectively. Questionnaire data from students at Kathmandu University are analyzed and compared with previously published data from the University of Canterbury. Prominent themes are developed within the context of the cultural and socioeconomic differences between the two settings. Both similarities and contrasts are described, detailing scheduling changes, the role of students in their community's response to natural disaster, flexibility of faculty, psychological trauma and treatment, and use of online-learning as a substitute for classroom learning. Lessons learned from the comparison of the responses to these two earthquakes demonstrate how culturally and socioeconomically different contexts necessitate distinct actions from the faculty of different universities.

Keywords: Nepal, New Zealand, higher education, qualitative approaches, disaster response

1. Introduction and Background

A 7.8 magnitude earthquake struck Nepal on April 25, 2015. Mercifully, it was midday on a Saturday and most Nepalese were not indoors at work or school. Still, approximately 8,800 people were killed and, given that many structures in Nepal are constructed without earthquake resistant reinforcement, 750,000 homes, 30,000 classrooms and centuries old heritage sites were badly damaged or destroyed (OCHA, 2016). One student from Kathmandu University was visiting the historic, nine-story tall Dharahara tower in Sundhara, Kathmandu. He describes what happened when the earthquake struck:

I was at Sundhara when the massive earthquake hit on Nepal. I saw Dharahara falling down in front of me. So, I rushed to the spot with my brother and started rescuing the people and helping others to take out the dead or alive persons buried in there.

Sixty bodies were found in the rubble from this tower, mostly dug out by the Nepali citizens who were visiting the tower on that day (Barry, 2015).

On the eastern edge of Kathmandu Valley, in the village of Dhulikhel, stands Kathmandu University (KU). KU is a relatively young university, founded in 1991. It was built with support from various non-government sectors and it is unique in Nepal in that it is operated as a self-supporting and non-profit university (Widmann & K.C., 2013). The university has a pragmatic focus to foster economic opportunity for Nepal with programs primarily in engineering, business, health and science. Many graduates seek further training abroad and the medium of instruction at KU is English. The pragmatic character of the university makes KU an innovative environment. The university regularly collaborates internationally, hosting conferences and seminars for scholars from the central Asian region and beyond. Several American Fulbright Scholars have served there. This study was initiated during the work that one of the authors (HF) did in such a position.

At Kathmandu University, the buildings were mostly constructed in the last twenty years and followed building codes with earthquake resistance in mind. As a result, only one structure, the library building, suffered earthquake

damage that rendered the building unsafe for use. In contrast, the damage elsewhere in Nepal was much more severe. As we will describe below, it was this extensive damage *off campus*, that led to the decision to close KU for seven weeks following the earthquake.

During the university's closure, the authors searched the literature for information that would be relevant for university instructors in such a situation. The work of Wright and Woodsworth (2013) was suitable, in which they focused on the response of the University of Canterbury to the earthquake in Christchurch, New Zealand in 2011. Wright and Woodsworth used mixed-methods (quantitative and qualitative), but focused on the qualitative analysis of the free-response portion of a student questionnaire. From these data, they compiled a list of recommendations for university instructors in the wake of an earthquake or similar disaster. The purpose of this paper is to replicate their work and to investigate what similarities and differences would emerge given socio-economic and cultural differences in the university settings. For replication, and in order to make as direct a comparison as possible, we used the same mixed methods questionnaire (available in the Appendix) and will also focus on the qualitative data in the free response portion of the instrument. In sum, the purpose of this paper is to compare the response of Kathmandu University following the 2015 earthquake in Nepal to that of the University of Canterbury following the 2011 earthquake in Christchurch, New Zealand.

We note that Comparative Education is a graduate-level program at Kathmandu University since 2010, and that the faculty there have discussed the importance of it to inform educational practices (Parajuli & Prasad Wagley, 2010).

2. Cultural Context

Similar to other South Central Asian cultures (this region is typically defined to include: Afghanistan, Bangladesh, Bhutan, India, Kyrgyzstan, Kazakhstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan, and Uzbekistan (USDOS, 2017)), Nepalese live in a highly hierarchical society (e.g. it is characterized by a large Power Distance Index)(Hofstede, 2001; Lane, 2002; Lemone, 2005). Respect for authority and deference to elders characterize moment to moment exchanges and shape many classroom dynamics. These are sometimes obvious such as when all students stand to their feet when the professor enters a room. Sometimes they are not as obvious, but may be very consequential. As Widmann and K.C. have described, the large power distance in Nepal can cause subordinates to avoid sharing personal details with superiors (Widmann & K.C., 2013). In a university context, this could mean that Nepali students are less likely than New Zealand students to share any details of their emotional lives with their professors. As we will see, contrasting qualitative questionnaire data between the two countries' students' free responses bear this difference out.

Generally speaking, Nepalese tend towards collectivism rather than individualism (Hofstede, 2001; Lemone, 2005) and there are some factors in play at Kathmandu University that reinforce this tendency. Depending on their Secondary Leaving Certificate exam scores, students who enter KU are sorted into "lock-step" cohorts by year and major (Davies, 2016). So, for example, all computer science majors who enter in a given year will share an identical daily class schedule each semester for the duration of their four-year tenure at KU (Widmann & K.C., 2013). This common schedule means that the students in a given class spend the whole of the school day together for the duration of their undergraduate years. They know each other very well and, in many ways, act together as one cohesive group. As a result, professors can easily and efficiently negotiate course and scheduling changes with the group of students as one "whole," rather than consider the needs of each individual student. As we will illustrate, this is particularly valuable when the socio-geo-political situation is changeable (as it often is in Nepal) and when other events demand flexibility such as was the case with the earthquake and subsequent aftershocks.

Like the people in many cultures, Nepalese tend to be *polychronic* in how they deal with time and scheduling. *Polychronic* peoples typically see time as cyclical, punctuality is less important, relationships take priority over fixed schedules, interruptions are acceptable and plans change often and easily (Hall, 1983). This is opposed to the *monochronic* culture in many parts of the world (including New Zealand universities), where time is regarded as linear, people do one thing at a time, lateness and interruptions are not tolerated and people resist change of plans. It has been theorized that polychronic cultures arise in settings where unpredictable circumstances cause unavoidable interruptions and require frequent changes in plan (Hall, 1983). This certainly describes the conditions in Nepal in general and at KU as well (Widmann & K.C., 2013). Underlying causes such as poverty and political instability mean that there are frequent unexpected interruptions to the things of daily life such as the availability of electrical power, public transportation, water, access to roads (e.g. a political party may call for a general strike that closes the roads), etc. As one might imagine, a polychronic mindset and the temporal flexibility it affords would be advantageous when faced with such unpredictability. As we see in our data, in the wake of the earthquake,

instructors and students alike at KU were able to quickly and easily change their plans and schedules to accommodate the needs of each other.

3. Methodology

3.1 Instrument

In order to make a valid comparison of the Kathmandu University response with that of the University of Canterbury, we contacted Dr. Wright and asked for access to their mixed-methods (quantitative and qualitative) questionnaire instrument. Dr. Wright graciously consented. We instituted the questionnaire in the final weeks of the semester following the reopening of KU post-earthquake. Lack of reliable technology led us to use a paper and pencil delivery of the instrument, rather than electronic delivery such as was used in New Zealand. The questions were a verbatim match to those used by Wright and Woodsworth; with the exception of one question added at the conclusion of the questionnaire. This added question probed student participants about their involvement with relief and reconstruction work following the earthquake. The reason for adding this question will be described in further detail below. A copy of the questionnaire is available in Appendix A.

We note that while the questionnaire itself contains both quantitative and qualitative items (see Appendix A), we will focus, as Wright and Woodsworth did, on the qualitative free response items. This questionnaire was developed *ad hoc* by the administration at the University of Canterbury (Wright, 2015). The quantitative items were not taken from the research literature, and their usefulness is limited primarily for use internal to a given university rather than for comparison between universities (Wright & Woodsworth, 2013). Even so, we will report the results of one of the quantitative items in our findings below.

3.2 Sample and Data Collection

An open invitation was sent via email to all faculty at the main campus (Dhulikhel) of Kathmandu University to solicit participation in the study. Follow-up personal contacts were made in order to recruit a variety of student cohorts (level, program and course type). Altogether, the 499 total responses from 405 unique students represents approximately 19% of the total undergraduate enrollment (2100 students) at the main campus. This is the oldest of the KU campuses and houses only programs in Science, Mathematics, Engineering and Technology. Other student demographic data were not collected, but the campus is co-educational with nearly all undergraduate students in the traditional age range of 18-22. A summary of the cohorts is given in Table 1 below. Note that two cohorts (Pharmacy Year 1 and Year 2) received the questionnaire in two different classes. The researchers decided to keep these data, as the questionnaire prompts students to consider a particular class rather than the university as a whole. Also note that in one instance, three cohorts were combined into one classroom.

Table 1. Sample Description

Cohort program(s)	Cohort year	Number of students	Course
Civil Engineering	1 st	28	MATH 104: Advanced Calculus
Electrical Engineering	1 st	42	PHYS 102: General Physics II
Environmental Science, Applied Physics, Human Biology	1 st	39	CHEM 102: Inorganic Chemistry
Pharmacy	1 st	45	CHEM 102: Inorganic Chemistry
Pharmacy	1 st	43	COMP 102: C-programming
Biotechnology	2 nd	27	CHEM 212: Quantitative Analysis
Computer Science	2 nd	32	MATH 101: Calculus and Linear Algebra
Environmental Engineering	2 nd	24	CHEM 213: Quantitative Analysis Laboratory
Environmental Science	2 nd	17	CHEM 212: Quantitative Analysis
Pharmacy	2 nd	56	CHEM 203: Organic Chemistry
Pharmacy	2 nd	51	MCSC 202: Numerical Methods
Civil Engineering	2 nd	42	MATH 207: Differential Mathematics
Pharmacy	3 rd	53	PHARM 316: Medicinal Chemistry

Student participants were invited to complete the questionnaires at the end of a class period. The instructor was excused from the classroom and one of the researchers explained the purpose and form of the study. Students were told that their responses would be anonymous, and that their instructor would not know whether or not they participated. Students were allowed to opt-out of the study by checking a box on the questionnaire itself.

3.3 Qualitative Analysis

Qualitative analysis was completed by the authors with independent thematic coding and cross-checking to ensure validity (Creswell, 2014). The completed questionnaires were electronically scanned and read into HyperResearch qualitative software. A subset of the data (approximately 1/3) was read independently by the researchers, with each researcher highlighting and labelling text that seemed significant and recurring (this process is called *coding*). This produced independent codes, which were then discussed amongst the researchers in order to come to consensus on significant themes found in the data. Initially, 39 distinct codes were established. Through further discussion, the codes were sorted into five groups of related codes. These five main themes form the basis of the comparisons presented below: impact of scheduling changes, role of students in family and society, flexibility of faculty, psychological support, and technological solutions. These themes were then used independently by the researchers to find and label relevant text passages in all of the data. This was followed by a final cross-checking of these independent analyses to ensure validity. Any discrepancies in the coding between individuals was settled by discussion to consensus.

With each of the five comparisons presented below, we have been able to identify similarities and differences between the situation at a Nepali university with that of a New Zealand university. We also make recommendations for instructors to keep in mind in anticipation of any natural disaster that might strike their home institution, whether that institution is in a developed country or in the majority world.

4. Results

As noted above, the quantitative value of the questionnaire is quite limited. The only quantitative data reported by Wright and Woodsworth is the mean and standard deviation for the students' level of agreement with the statement "So far the course re-organization is working well." Students were prompted to tick a box on a six-point scale: 1 – Strongly Disagree; 2 – Disagree; 3 – Mildly Disagree; 4 – Mildly Agree; 5 – Agree; 6 – Strongly Agree. For the New Zealand students, the mean response was 4.30 with a standard deviation of 1.52. For the Nepali students, the mean response was 3.66 with a standard deviation of 1.22. It is difficult to interpret these data. A naïve interpretation might be that the administration and faculty from the University of Canterbury were more competent in their response to the earthquake. This conclusion is naïve, however, as a direct comparison of these quantitative data fails to control for the differences in situation (e.g. more damage at the University of Canterbury, longer period of closure at Kathmandu University) and culture (e.g. differing concepts of time in Nepal and New Zealand (Hall, 1983); differing student roles in society (Widmann & K.C., 2013)).

We structure the remainder of our results section around the qualitative analysis of five notable themes found in the Nepali student questionnaires and in the New Zealand student questionnaires as reported by Wright and Woodsworth (2013). Each theme will be presented as a comparison, with our focus on the questionnaire data from Nepali students, but with an eye toward how those data compare with that from the New Zealand students. The first three themes are connected: scheduling changes following the earthquake, role of students in response to the earthquake and instructor flexibility due to the earthquake. As will be explained below, the lengthy delay in restarting the semester in Nepal was partly a result of the role of students in society. Also, instructor flexibility was necessitated because of the lengthy delay. The final two themes are notable in that they are much more prominent in the New Zealand situation than in the Nepali situation: psychological support and technological solutions. We will discuss how the relative absence of these themes in the Nepali students' questionnaires is likely a result of previously documented cultural and developmental differences between the two countries.

4.1 Comparison 1: Scheduling Changes

By far, the most common sentiment of Nepali students surveyed is that their learning was hindered when the earthquake resulted in a shortening of the semester. In particular, loss of class meeting time led instructors to rush to cover material. Several students noted that this rushing meant a prioritization of simply getting through course content over student understanding. This theme was not present in the results as described by the researchers in New Zealand (Wright and Woodsworth, 2013).

It is true that Kathmandu University experienced a much longer pause in the semester (seven weeks) in comparison to the University of Canterbury (some classes resumed after two weeks). In reality, the overall amount of class time

for a three-credit class at KU was reduced by only three contact hours, or the equivalent of one week (see Table 2 for calendar adjustments made). The balance of the seven missed weeks was made up by reducing the number of days in the study recess, eliminating the summer vacation and other holidays, and postponing the beginning of the fall semester. Many instructors may have picked up the pace in their courses to make up for the three missed hours. Although three hours of instruction might not sound like much, most university instructors, anywhere in the world, would feel pressure to pick up that pace to compensate for a week of missed class periods. Further, KU instructors might have felt rushed for other reasons. A long break in the semester means that instructors may feel compelled to spend some time revising (i.e. reviewing) material that students might have otherwise forgotten. Also, instructors may have been rushing through material to counteract the reduction in the study recess and to give back to the students a longer break in order to prepare for final examinations. Several students mentioned that they were anxious about having enough time to prepare for their exam period with only a two-day study recess rather than the twelve-day recess that is typical in the KU system. In the Nepali educational system, final exams are high stakes (Davies, 2016), and comprise 75% of the course grade at KU.

Table 2. KU Spring Semester Schedule 2015 as Originally Planned and as Revised Due to Earthquake

	Original schedule	Revised schedule
First day of class	March 2	March 2
Last day of class	June 18	July 30
Beginning of examination period	<i>July 1</i>	August 2
End of examination period	<i>July 31</i>	September 2
Summer vacation / earthquake recess	<i>Aug 1 – 10</i>	April 26 – June 13 (seven weeks)
Total contact hours	47 hours	44 hours
Study recess	12 days	2 days

Note. Dates in italics were tentative.

In sum, the overly long break that KU took after the earthquake resulted in many of the instructors rushing through the material. There is evidence to believe, however, that a longer break was warranted in Nepal when compared to the situation in New Zealand. Even though the damage was minor to most KU buildings (only the library building remained closed after the break); the devastation off of campus was much more severe. As explained by the Dean of Science at KU, it was the destruction in the countryside of Nepal that prompted the university's administration to extend the break to seven weeks (Gewali, 2015). This freed up students to participate in relief work in the area of the university or in their home villages. With this in mind, we added one question to the survey that was used for this research: "During the weeks of delay, were you involved in relief work or reconstruction? If so, please describe briefly." Consistent with expectations of the KU administration, many of the students indicated that they were indeed involved in this sort of relief work. This aligns with previous research (Silverman, 2011; Sheppard, 2013), which shows that disaster relief in the majority world is much more likely to be a community effort, rather than the task of professionals and volunteers from outside of the community. The role of students in rescue and relief work will be discussed further in Comparison 2 below.

A small number of students did note that some KU instructors did not rush through material in classes, but rather made other adjustments. In some classes, less important material was cut from the syllabus to provide time savings. This is similar to adjustments that were made by some instructors in New Zealand (Wright and Woodsworth, 2013). Students at both universities expressed appreciation for this flexibility. Another strategy adopted by KU instructors was to hold extra classes during what would have been students' "leisure time." This sort of flexibility on the part of both the instructor and the students was mostly appreciated by students, although a minority mentioned that extra classes contributed to unwanted extra time pressure during this already stressful period. The flexibility of KU instructors will be discussed further in Comparison 3 below.

There was no mention in the KU student questionnaires about how these calendar changes were communicated to them. In general, in a collectivist society such as the one that characterizes Nepal, news travels quickly and by word of mouth. Schedules are understood to be tentative, and changes are easily accepted. We note that this stands in contrast to the New Zealand questionnaire results (Wright and Woodsworth, 2013), where the appreciation of communication to individual students and a return to the "normal" schedule were prominent themes.

Recommendation regarding Scheduling Changes:

Although there were good reasons for KU to make significant adjustments to the academic calendar, an adjustment like this is likely to overwhelm many students unless instructors make other changes to compensate for lost time. Cutting inessential material from the syllabus is universally appreciated by students across cultures. In a collectivist society, it may also be acceptable to schedule extra classes outside of normal class hours to make up for lost time (Hall, 1983; Hofstede, 2001). Communication to individual students about schedule changes appears to be less important for collectivist societies because any news of such changes will travel quickly by word of mouth.

4.2 Comparison 2: Role of Student in Family and Society

Many Nepalese, including many KU students, were immediately and extensively involved in rescue, relief and reconstruction work following the earthquake. According to research on disaster relief, it is both likely (Silverman, 2011) and fitting (Quarantelli, 1997; Sheppard, Tatham, Fisher, & Gapp, 2013) that this work is to be done by local community members rather than by expatriate professional or volunteer relief workers from outside of the community. In her study of Bhutanese refugees in Nepal, Evans showed that participatory development can be an empowering antidote to externally planned, “top-down” development interventions (Evans, 2008). It is analogous and probable that participatory disaster relief would also be appropriate and empowering. Indeed, although there were certainly many professionals and non-governmental organizations (NGOs) that got involved in this work, our questionnaire evidence shows that a majority of KU students were directly involved in rescue, relief and reconstruction (see Table 3). The list of organizations involved is long indeed. Given that this is more likely to be a factor in the majority world, it is an important consideration for comparison with the Christchurch earthquake.

Table 3. Summary of Volunteer Work Conducted by KU Students

Rescue, relief, reconstruction organizations students mention working with
Aishwarya Vidya Niketan, Amnesty Banepa, Art of Living Nepal, Association of Youth Organization Nepal (AYON), Banepa Boys Club, Bibeksheel Nepal, Bir Hospital, Blood Donation Area, Buddha Light International Association (BLIAC), Child Workers in Nepal Concerned Centre (CWIN), Community Educaiton Project (CEP) KU, Dhulikhel Hospital, Donate Nepal, Drinking Water Supply and Sanitation (DWSS), Environmental Camps for Conservation Awareness, Freelance Press, Himalayan Climate Initiative (HCI), Hope Worldwide Nepal, Junkiri Relief Program for Children, Kathmandu University, Lions Club, Maltester International, National Trauma Center, Navjyoti Youth Club, Nepal Crusher Organization, Nepal Youth Foundation, Nepali Army, Nepali Government, Paila, Phyangpi-rog Initiative, Rapid Building Assessment Programme, Rapid Disaster Assessment, Rato Mato, Red Cross Society, Revive Nepal, Rotaract Union, Rotarians, Sano Prayash, Sarvodaya Nepal, St. Xavier College, Tarwani Doctors, The North Face Nepal, UNICEF – Nepal, United Nations Volunteers, Young Men's Buddhist Association Nepal (YMBA)
Type of work done
Rescue persons from rubble; medical first aid; psychological first aid; removal of rubble; gathering and donation of food, clothing, other materials; retrieval of valuables from damaged homes; construction of temporary shelters

From an instructor’s point of view, a two-week recess in a course is qualitatively different from a seven-week recess. The relatively short two-week recess at University of Canterbury brought students and instructors back to their “normal” roles of teaching and learning even while the work of relief and reconstruction was being done on campus. Wright and Woodsworth (2013) describe classes being held in tents on carparks because classroom buildings were compromised and had not been repaired or reconstructed. It might be surprising by comparison, that the administration at Kathmandu University did not call for classes to begin again until seven weeks after the earthquake, especially since inspectors only found one building to be unsafe for use. But, when asked, the KU administration explained that they decided on a seven-week recess, in part, to free up students for relief work (Gewali, 2015). This loose coordination between the university and other relief efforts may be a welcome change from the hegemonic policies and practices of educational institutions in the 1990s that ingrained social divisions and contributed to rising conflict and civil war (Shields & Rappleye, 2008).

Engaging the local population in relief work has been historically undervalued by relief agencies that fly in from the developed world. Indeed, research regarding the 26 September 2009 typhoon in the Philippines shows that the utilization of local people improves the effectiveness and efficiency of logistics and response processes (Sheppard et al., 2013). Because of their knowledge of local realities, it is often the local community members themselves that have the greatest capacity to respond to natural disasters (Silverman, 2011). Pre-existing social networks are resilient and are easily re-oriented to address needs for rescue and relief. This is particularly true in remote areas and in the final stages of delivery, that is, in the “last mile.” Even though local people may lack in financial resources and

specialized training, they will obviously be the first responders in any area that is difficult to reach. This is probably even true for university students who return to their home villages to aide their families. These students will be familiar with who is likely to need help and will have knowledge of the best way to reach those in need. The students will have specific information in terms of both the demand and supply side of how to get to persons who need relief and to distribute needed goods (Sheppard et al., 2013).

In cultures categorized as collectivist, community and family ties are strong and members in the community depend on each other heavily (Hofstede, 2001 p. 236). South Central Asian cultures such as that of Nepal are very collectivist. By comparison, cultures such as that of New Zealand are more individualist and each household is more likely to be self-reliant and autonomous. In response to a natural disaster in an economically developed society, these households primarily depend on the emergency professionals that such a society can afford.

Recommendation regarding Role of Student:

Because of the role that community members, including university students, play in a given country, it should not be surprising that how a university responds to a natural disaster will vary along with the culture of the country. In a country like New Zealand, it may be easier for students to return to their studies even as relief and reconstruction professionals do their work in the background. In a collectivist society like Nepal, the university administration appears to have acted wisely in allowing students enough time to return to their home villages and to get involved in a somewhat prolonged period of relief and reconstruction. Timing of resumption of studies at a university must take these cultural roles of the community into account.

4.3 Comparison 3: Instructor Flexibility

In both universities, surveyed students were appreciative when their instructors were flexible enough to adjust schedules and expectations to accommodate students who were impacted by the earthquakes. And while the need for flexibility in general may be universal, the ways in which this flexibility manifested itself varied by culture. In New Zealand, students appreciated when instructors were flexible with assessment submission dates and with methods of submission (physical copy or electronic)(Wright & Wordsworth, 2013). In Nepal, it was much more likely that a surveyed student would mention appreciation for the scheduling of extra classes to make up for lost time. In contrast, a prominent theme amongst New Zealand students was that they found comfort in the relatively quick (two-week) return to the established class schedule. This concept of comfort in routine was not found in the questionnaires of the Nepali students.

It is useful to consider the cultural perception of time as we reflect on how university instructors make decisions about flexibility with assessment dates and course scheduling. Research shows that cultures can be classified as having *polychronic* or *monochronic* perceptions of time (Hall, 1983). Polychronic cultures emphasize the pre-eminence of relationships over time obligations, whereas monochronic cultures emphasize set schedules and punctuality. These different time orientations have been shown to influence pedagogical strategies at the university level (Prowse & Goddard, 2010).

A polychronic orientation towards time has advantages in a country like Nepal, where daily life is prone to unexpected disruption. On short notice, the university may be completely closed due to a national strike called by a political party (i.e. a "*bundah*"), a labor dispute such as a bus strike, an ad hoc holiday called by the government such as a day to read a draft constitution, etc. Furthermore, even if the university is not closed, a class may be cancelled due to a professor being called away to a department seminar scheduled at the last minute, a technical problem in a laboratory class, a professor choosing to attend to personal or scholarly business, etc. In these cases, it is better for all concerned if the class meeting can be rescheduled.

Rescheduling of all things, including university classes, happens frequently in Nepal and with ease that was surprising to one co-author (HF), who was coming from a monochronic background. In one instance, Dr. Fynewever was approached by a student asking to reschedule the class for an earlier time slot because another professor had cancelled a class. The class of students wanted to rearrange their schedule for the day to fill that gap and, as a result, have an earlier finish for the day. When asked about whether this would be possible on such short notice, the student expressed an easy confidence that he could contact the other students in the class and get them all to attend the earlier timeslot. When this proposal was accepted, Dr. Fynewever was amazed to see that all students did indeed receive the information in time and attend during the earlier slot.

Readers with a monochronic point of view might see the seven-week recess due to the earthquake in Nepal as a nearly insurmountable barrier to the success of the semester. But, for Nepali instructors at KU who are accustomed to disruption and have a polychronic perception of time, rescheduling classes, even at odd hours, can be done easily.

Because the students of a given major and year have a common, fixed schedule, they can shift their day's work in a way that is consistent with their collectivist culture. Many students, as noted above, mentioned that professors made up for lost class time by scheduling "extra" classes during what would otherwise be leisure time. This sort of rescheduling is done easily and is readily accepted. Further, students and faculty alike expect and assent to changes in the academic calendar. Initial dates for the beginning and end of semester are understood to be tentative at KU.

Recommendation regarding Instructor Flexibility:

While students in a monochronic culture likely find comfort in returning to a normal class schedule as soon as possible, students in polychronic cultures will likely not struggle with prolonged delays in the face of a natural disaster. The prioritization of relationships over adherence to a calendar means that universities serving polychronically oriented and collectivist students may undertake rescheduling of classes at odd hours or later dates than what might be tolerated in monochronic and individualist situations.

4.4 Comparison 4: Psychological Support

Concerning psychological trauma that resulted from the earthquakes, there is a stark contrast between our data and the data as described after the New Zealand earthquake. While addressing psychological needs was a major theme mentioned by Christchurch students (Wright & Wordsworth, 2013); only very small minority of Nepali students mentioned psychological trauma at all. Furthermore, only a handful of KU students mentioned receiving psychological help. No Nepali students mentioned receiving any psychological support from instructors. This contrasts with the supports specifically mentioned by New Zealand students from professors such as: acknowledging the difficult nature of the situation; providing psychological aspects of their learning; and giving opportunities to discuss experiences of the earthquakes with their peers in class.

These differences can be partially understood as stemming from the different cultural context of the two earthquakes. Psychological practices can be very different from one culture to another. Indeed, some ideas of psychiatry have been shown to sometimes cause more harm than good when applied in other cultures. While Nepali culture can be characterized as highly spiritual, religious and collective (Hofstede, 2001); often psychiatry has a biomedical and individualistic focus (Almedom & Summerfield, 2004; P J Bracken, Giller, & Summerfield, 1995; James, Noel, Favorite, & Jean, 2012). When these methods have been imposed on members of contrasting cultures, they have sometimes exacerbated trauma-related distress by undermining victims' confidence in the meaning-making "unscientific" systems that their culture has come to rely on in crisis (Bracken, 2001; James et al., 2012).

It should be expected that the spiritual and collectivist approach to dealing with traumatic events would not manifest itself within the student/instructor relationship. The large power distance (Hofstede, 2001), means that students treat professors as content experts that should be listened to regarding subject matter rather than confidants to be spoken to regarding personal issues. The formal nature of Nepali society (Widmann & K.C., 2013) further exacerbates this, as emotions -- even strong emotions such as psychological trauma -- would only be discussed with close friends and family members, if at all. These factors make the Nepali faculty/student relationship dramatically different than one might expect in a less formal society with a smaller power distance (such as might be expected in New Zealand).

Nevertheless, careful studies have shown that symptoms of post-traumatic stress disorder (PTSD) certainly do present themselves in victims of war and natural disaster in across many varying cultures (Droždek & Wilson, 2007; Kagee, 2004). Given that there is some evidence that these symptoms appear to be universal, some have argued that best empirical practices from across cultures can be blended as psychological first aid principles and can be adapted into any culture. In their study of the post-earthquake interventions in Haiti in 1999, James et al. (2012) provide compelling evidence that a "train-the-trainer" approach to address victims' psychological needs is effective. In this approach, all interventions are more likely to be congruent with the native culture as the aid is ultimately provided by a lay member of the victims' community.

It is perhaps no coincidence that two of the few mentions of psychological first aid mentioned by KU students seem to be consistent with a train-the-trainer paradigm. The students write:

I was involved in relief work, health camp volunteering, psychological aid program conduction....
[This included] *health camp volunteering and psychological aid program conduction with CWIN*
[Child Workers in Nepal] *in Bhaktapur, Lalitpur and Kathmandu. [Chemistry 102]*

[I was involved in] *post trauma psychological aid volunteering from CWIN after acquiring 2 days*
of training. [Computer Science 102]

Here we see evidence that non-governmental organizations (NGOs), such as the children's rights advocacy group mentioned, CWIN, are embracing and using a train-the-trainer paradigm (CWIN, 2015). Although there is evidence that this nascent approach is useful to provide relief post-disaster, our questionnaire data suggest that it did not reach a significant number of students at KU. As was detailed in Comparison 2, a much larger number of students were involved in physical and financial relief work (e.g. rescue, medical first aid, reconstruction, financial fundraising and donation). Many university students are actively involved as members of standing NGO clubs (e.g. Lions Club, Red Cross Society, Rotarians) which immediately mobilized them into relief work. This suggests that there is an existing infrastructure of aid organizations with a significant number of willing volunteers that could feasibly add a train-the-trainer psychological first aid component.

Recommendation for Psychological Support:

Ideas of psychological first aid from one culture should not be imposed without modification in contrasting cultures. It is likely misguided to expect that university professors in a highly spiritual, collectivist and hierarchical culture could play the same role in providing psychological support as was provided by the professors in New Zealand. Research shows that a train-the-trainer approach that works through NGOs to empower victims and their peers to provide psychological first aid can be beneficial. With a train-the-trainer approach, best practices from across cultures can be adapted in a culturally appropriate way by a lay member of the affected community. Support of dissemination of this approach should be increased.

4.5 Comparison 5: Use of Online Learning to Substitute for Classroom Learning

A stark difference between the situation in New Zealand and Nepal is the feasibility of using online learning as a substitute for classroom learning. At the University of Canterbury, the administration initially mandated that all faculty deliver learning online through the university's online learning environment until the physical infrastructure was restored (Wright & Wordsworth, 2013). New Zealand student perceptions the online learning that was provided were mixed, some appreciating the connection and the flexibility, but some finding it to be an inadequate replacement for face-to-face meetings. There was no such effort to use online learning at Kathmandu University.

For comparison, the population in New Zealand has more ready access to technology than the population of Nepal including regular internet access (88.2% vs. 17.6%), smart phone ownership (114.2% vs. 21.1%) and availability of electrical power (steady vs. intermittent) (BBCSD, 2016). Even though technology access would likely be higher for the students at Kathmandu University, who are relatively more tech savvy and affluent than the general population of Nepal, it would still be unlikely that online learning could have been productively utilized at KU during this crisis.

Recommendation regarding Online Learning

At this point in time, the use of online learning as a response to a natural disaster is not feasible in some countries. Even given a technologically advanced society such as that in New Zealand, professors and students do not necessarily appreciate the substitution of online learning when face-to-face meetings are not possible. This problem is further compounded when technology is not as readily available, such as in the majority world. Of course, technological advances over the next years to a decade could substantially alter this recommendation.

5. Conclusion

As might be expected, a society's response to a natural disaster will be partly determined by the cultural norms and the socioeconomic realities that make up the context of the response. This is not only true in a population at large, it is also true on a university campus. Any generalizations from the lessons learned from these two disasters must be informed by the differences in the cultural and socioeconomic settings. Given the prominent role that community members, including students, play in response to a national crisis in the majority world, it should be expected that universities in the majority world will take longer to return to business as usual in comparison to other universities. While overcoming any delay of return to classes, however, collectivist and polychronic societies may enjoy greater flexibility than those of individualist or monochronic ones. A hierarchical society with a large power distance may make it infeasible for university faculty to provide psychological first aid that benefits students. On the other hand, train-the-trainer initiatives may make it possible for a culturally appropriate version of psychological help to be delivered to the many victims who would benefit. Finally, technological solutions such as online-learning are, for the time-being, impractical in communities without widespread access to the internet or reliable electrical service.

It is our hope that this comparison between these two tragic events will inform university faculty and administrations on campuses in both the majority and the developed world. Through a greater understanding of how these two universities responded in the face of these earthquakes, academic professionals may be better prepared when such a disaster strikes their own campus.

We end by noting the immense benefits of being a faculty member in a country that has a different culture from one's home country. Cultural aspects permeate the character of a disaster response, but also most characteristics of everyday life. Understanding how students and colleagues from other cultures view concepts such as role in community, time, power distance and technology, can go a long way in smoothing out tensions that might arise from mismatches in cultural assumptions. These lessons learned will have an enduring influence on interactions with future colleagues and students who originate from other cultures.

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