In the early hours of 4 September 2010 Christchurch residents awoke to violent shaking and destruction when an earthquake of magnitude (M)7.1 on the Richter scale occurred on the western outskirts of the city. Several sizeable neighbourhoods had their land liquefact, rendering their homes unliveable while others were without power and potable water. University of Canterbury students were amazingly resilient and established the famous “Student Volunteer Army” assisting the community, which was a real credit to them. The city was populated by varying aftershocks between September and the end of the 2010 year. A new academic year came with 2011, and on the second day of teaching, on February 22 at 12:51pm, a massive earthquake struck Christchurch city which sadly resulted in the loss of 185 lives.

From a campus perspective the University of Canterbury was initially shut down pending safety inspections and concerns after both major earthquakes and their significant aftershocks. When the campus reopened after the February earthquake, due to reduced teaching spaces and a shortened semester, changes had to be made immediately including tax classes being taught in tents or audio-recorded in our homes. On 13 June 2011, just before the commencement of exams, two significant aftershocks hit and final assessments for semester one courses had to be drastically modified. This paper considers the earthquake experience from a classroom perspective with comments from students in relation to the impact of these events on them. Students have proven to be resilient and patient, with some of them only knowing the ‘new normal’ post-earthquake environment for their university experience. Grades have been maintained, take-home tests have brought pleasing results and now as the 2014 academic year approaches, lessons learned can be reflected upon.
‘Shake, Rattle and Roll’: Lessons from the classroom following a major catastrophic event – the University of Canterbury Tax Teaching Experience

1.0 INTRODUCTION AND RESEARCH APPROACH

It is only in mid-December 2013, at the time of writing this paper, that after almost three years of being in temporary locations around the University of Canterbury’s (UC) campus, that the UC tax teaching staff (Alistair Hodson, Andrew Maples and Adrian Sawyer) have been relocated into their new permanent location in the refurbished and remediated former School of Law building.

When did it all start? In the early hours of 4 September 2010 Christchurch residents awoke to violent shaking and destruction when an earthquake of magnitude (M)7.1 on the Richter scale occurred the outskirts of the city. Several sizeable neighbourhoods in the city had their land liquefact, rendering their homes unliveable while others were without power and potable water. University of Canterbury students were amazingly resilient and established the now famous “Student Volunteer Army” to assisting those in the community. Adrian was just home from hospital the day before after major surgery, with little time to recuperate following the early morning events of 4 September 2010. The earthquake hit at the end of the first week of the two-week mid-semester break. UC was essentially closed for two subsequent weeks while necessary repairs and related work to make the campus safe were undertaken. The timing of the earthquake was fortunate as it meant only one week of lost lectures had to be accommodated. While the city was subjected to numerous aftershocks

1 The SVA websites provides the following information on its foundation: “The Student Volunteer Army began as a Facebook event in response to a clear and definite need – removal of liquefaction silt from a stunned city in September 2010. Four months later another devastating shake struck leaving 185 dead, a collapsed central city and 450,000 Tonnes of silt throughout suburban Christchurch. Utilising the everyday technologies in their pockets, the Student Volunteer Army mobilised 11,000 fit and able bodies to respond to the cries for help from everyday citizens. The response captured the hearts of New Zealanders near and far, and made international ripples in realising the scale of the self-coordinated youth response was unprecedented. Five efforts were mobilised over 16 months. Members of the SVA core team subsequently spent time assisting Tsunami-stricken Japan, Nelson after 100-year flooding and two weeks in New York assisting and advising Hurricane Sandy response efforts. The lessons learned, processes developed and technologies employed were captured and developed, with the founding members creating a Charitable Trust, the Volunteer Army Foundation, to house this knowledge. Three core team members remain with VAF who now specialise in designing programmes that maximize youth engagement.” Volunteer Army Foundation <http://volunteerarmy.org/about/>.

2 The ‘lost’ lecture week was made up by extending lectures into the study week (the week before the final exams).

3 Technically, the initial M7.1 event was an earthquake and subsequent events are classed as aftershocks not earthquakes as they were caused by the initial event. This paper will use the terms aftershock and earthquake interchangeably.
between September and the end of the 2010 year, there was a sense of relief that despite the size of the earthquake there had been no loss of life and comparatively limited property damage.

February 22, 2011 started like any other with the ‘buzz’ of being only the second day of the new academic year at UC, students joining their respective clubs and enjoying their first lectures. Alistair reflects:

For me personally the day of the earthquake was initially unremarkable, with our first Honours tax class taking place in the morning for two hours and having a visiting professor from Sydney, Chris Evans, as part of the teaching team. Only two hours later, when in my office located on the seventh floor of the Commerce Building, I saw the massive concrete pillars stretch and groan as the earth unleashed a mighty fury that has forever changed not only the Christchurch landscape but also the lives of so many.

The earthquake which struck at 12:51pm generated a peak ground (vertical) acceleration (PGA) of 2.2G (i.e. 2.2 times the acceleration of gravity); the highest peak ground acceleration ever recorded in New Zealand (and possibly ever recorded anywhere). The earthquake which struck at 12:51pm generated a peak ground (vertical) acceleration (PGA) of 2.2G (i.e. 2.2 times the acceleration of gravity); the highest peak ground acceleration ever recorded in New Zealand (and possibly ever recorded anywhere). Once the Commerce Building had been evacuated more terror was to come as further sizeable aftershocks hit the region. As Alistair and Andrew stood outside the Commerce Building it was frightening to see (and hear) it, and the nearby buildings shaking as the aftershocks rippled across the land like waves on the ocean.

Adrian was not at the university at the time but heading towards the Inland Revenue building for a scheduled 1pm meeting which he never made. His experience and quick reaction is forever captured on a remarkable piece of video which featured several weeks’ later on national news. The real impact of the earthquake soon became apparent as smoke rising over the city became visible and we realised that a brother of one of our students had been tragically killed (see Section 3.1 of this paper). Indeed, Christchurch is really a small village

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4 Chris Evans and his wife have their own harrowing experiences following the February 2011 earthquake, and were able to eventually spend some time at Hamner Springs (a resort some 90 minutes from Christchurch) recovering. They were able to get home without their passports, which Adrian eventually recovered from the Commerce Building when the first emergency access was provided.


6 Footage is available on YouTube; see http://www.youtube.com/watch?v=duoS7hwJlrU.
where everyone knew someone who was affected in some way by the earthquakes. Sadly 185 lives were lost in the February event.

The University of Canterbury closed immediately for safety reasons with the first concern being for the safety and wellbeing of students and staff. These concerns quickly turned to thoughts of contacting loved ones. Telecommunications networks quickly became overloaded adding to the stresses felt by staff and students. Travel, whether to home (which for many had been irreparably damaged) or to find a loved one, was equally as frustrating as the streets became gridlocked and drivers had to navigate sink holes and liquefaction. What may have normally been a 20 to 30 minute journey home became a three to four hour trip, typified by Adrian’s experience of going into a relatively undamaged car parking building in the city centre, getting his car out of the building and ‘crawling’ home over the next four hours.

This paper narrates the reflections of the UC tax team on the impacts of the earthquakes on the administration of the taxation courses (including lecturing and assessment) and the experiences of the students taking these courses, and highlights the resilience of the students. There is a dearth of literature in respect of a major event and its impact on staff and students. The existing literature considers how an organisation such as a university gets itself going again after a major disruption but little exists on student reactions to such a vast event and the impact on students. Section 2 briefly reviews relevant literature on stress and disasters. Section 3 outlines the gradual return to ‘normality’ after the earthquakes. The challenges for by staff and students as a result of the aftershocks are considered in Section 4. For most of semester one the stage 2 taxation paper was lectured on Saturday. Student’s views on this and general earthquake impacts from a survey undertaken are noted in Section 5. The paper concludes with some general reflections and observations.

Due to the comparatively minimal impact of the September 2010 earthquake on UC compared with the February 2011 (and subsequent) earthquakes the focus of this paper is on the effects of the 2011 earthquakes. Further, the greatest impacts of the February 2011 and subsequent earthquakes were felt in the first semester. While aftershocks continued during the second semester, overall they were smaller than those in the first half of the year and hence the focus of this paper is largely on the first semester impacts. Fortunately from the University’s perspective, after the two June 2011 aftershocks the next major aftershocks (of M5.8, M6.2 and M5.5) struck the Canterbury region on 23 December 2011, after the University had closed for the year.
This paper has adopted a case study methodological approach. According to Yin,\(^7\) “[a]s a research strategy, the case study is used in many situations to contribute to our knowledge of individual, group, organizational, social, political, and related phenomena.” McKerchar observes that:\(^8\) “[i]n terms of a methodological approach, a case study generally involves a researcher undertaking an in-depth exploration of a program, an event, an activity, or a process concerning one or more individuals.”

In this paper, the researchers have considered an event (the earthquakes) and their impacts on staff and students. McKerchar further comments that “[t]he case is usually bound by time and activity”,\(^9\) in our case broadly the greatest impacts of the earthquakes were felt in the 2011 calendar year “and the researcher collects detailed information using a variety of data collection procedures”\(^10\) (in this case a survey, emails and personal recollections). The paper has also adopted a narrative approach which “examines the experiences of individuals as told in stories”.\(^11\) The emphasis in this form of research “is on presenting the stories in a chronological fashion”.\(^12\) In this regard the specific contextualised observations and comments are not generalizable, although in many regards, a situation arising from a major event, such as natural disasters, major staff departures, or other uncontrollable (external) influences, should encourage reflective observation and pedagogical review of teaching.

\textbf{2.0 STRESS AND NATURAL DISASTERS}

According to Smith\(^13\) (1983), the effects of natural disasters are most significant if they are sudden, unexpected or prolonged, and if they occur at night. The first earthquake on 4 September 2010 on the western outskirts of Christchurch occurred at 4:35am and this was the first of what was to prove to be a series of prolonged events that affected people, although fortunately with no loss of life. For months afterwards aftershocks continued on a relatively frequent basis, always unexpected, without warning, part from the rumble that signalled

\begin{footnotesize}
\begin{itemize}
    \item \(^7\) Robert Yin \textit{Case Study Research: Design and Methods} (3rd ed, 2003, Sage Publications, California) at 1.
    \item \(^8\) Margaret McKerchar \textit{Design and Conduct of Research in Tax, Law and Accounting} (2010, Lawbook Co, Sydney) at 102.
    \item \(^9\) Ibid.
    \item \(^10\) Ibid.
    \item \(^11\) Ibid, at 112.
    \item \(^12\) Ibid.
\end{itemize}
\end{footnotesize}
another shake was imminent. Experts advised that there was still a lot of pent up ‘stress’ in the surrounding Canterbury region following the September 2010, and later the February 2011 earthquakes.

Trauma can be divided into three types: natural and technological disasters; war and related problems such as famine; and individual trauma. Natural disasters include events such as tornadoes, tsunami’s, bush fires and earthquakes. Major disasters can share a number of characteristics, the first being that there is often little or no warning that the event is about to occur, resulting in substantial loss of life in certain cases, although there is also evidence suggesting that even with adequate warning, such as the case with floods or hurricanes, that people are quite adept at ignoring or minimising warnings. Secondly, although a disaster generally can occur in a relatively short time frame the aftermath of a disaster may extend over a much longer time frame as is the case with the Christchurch earthquakes. Third, disasters involve extreme threats, up to and including, loss of lives. Alistair recalls following the February earthquake:

I became aware of the loss of life in Christchurch when the first text I received from the city centre while standing outside the Commerce Building simply stated two words ‘people dead.’ At this stage I received a call from Australia on my mobile phone and was relayed an account of events from afar such as the destruction of the Christchurch Cathedral.

Similarly, listening to an Auckland-based radio station (all such stations in Christchurch were off air) in his car while attempting to make his way into town to find a loved one Andrew recalls hearing reports of rising estimates of the likely death toll. “The raw emotion in the announcers’ voices was clear as they recounted the scenes from the first footage of the devastation being aired on television.”

After emerging from the rubble without a scratch, and moving off towards the Inland Revenue building, Adrian saw first-hand the carnage of the CTV building collapse as people were being rescued from the rubble and bodies taken out. At the makeshift hospital in nearby Latimer Square he witnessed the enormous numbers of wounded, dazed and shaken

\[14\] Aldwin, above n 13, at 64.
\[16\] At the time of writing in December 2013 the aftershocks continue, albeit with less frequency and intensity. To date (13 December 2013) since 4 September 2011 there have been 12,844 aftershocks: <http://www.christchurchquakemap.co.nz/>. Only the occasional aftershock is now of a magnitude that it is felt.
\[17\] The greatest loss of life, 115 people, occurred when the building collapsed.
up office workers, shoppers, and the over-stretched medical personnel. Later the traffic chaos in Adrian’s trip home is without precedent in New Zealand history. Little did he know that his experience would be captured on closed circuit TV and become part of the quake archives, seen by millions around the world.

It is not only the individual or their family that are threatened by a disaster, but survivors may witness the deaths of others, as happened in the Christchurch Central Business District (CBD). A natural disaster provides individuals with very little chance to exercise personal control. There is usually very little that a person can do in an earthquake or massive flood except to try to escape or seek a safe place, if possible. People who attempt to exercise control, primarily by engaging in rescue or relief efforts, often after the event itself, may show the least psychological trauma after the event. Finally, disasters happen to many people simultaneously. Rather than an individual or isolated event, a disaster may feel like generalised chaos. While this may initially create a great deal of stress, it also provides an opportunity for community support subsequent to the event. This was evidenced in Christchurch, especially with the SVA and other assisted relief.

After a disaster people often will talk about how supportive everyone was, how they pulled together, or how they were in awe of the heroic efforts of people to help others. An example from an earlier earthquake event is from the 1989 Loma Prieta earthquake in the San Francisco Bay Area. Most loss of life occurred because a freeway ramp collapsed in Oakland, in a very poor neighbourhood. There was widely televised coverage of ordinary citizens risking their own lives to rescue people trapped in cars. Following the February 2011 Christchurch earthquake the greatest loss of life occurred when two buildings (the CTV and PGC buildings) collapsed. People risked their own safety to help others trapped under rubble while aftershocks continued. An Australian surgeon based at the Christchurch hospital, risking his own life with on-going aftershocks, performed an amputation using a knife in a very confined building space in order to free an individual trapped in a collapsed building. The group nature of disasters is a key characteristic that sets them apart from individual life events.


19 Aldwin, above n 13, at 65.
On the Holmes and Rahe Stress Scale\textsuperscript{20} many of our students and staff experienced stressors a number of times throughout the 2011 academic year.

The preceding paragraphs provide a general backdrop to both the stress and constantly changing environment that staff and students had to begin to cope with and develop their ‘new normal’ which is discussed in the following sections of this paper.

3.0 UC RESPONDS

3.1 The first few days

The initial automatic and instinctive response after such a traumatic and shocking event is to ensure the safety of family and friends. Along with immediate concerns regarding food, shelter and utilities, the first few days following the February 2011 earthquake were really spent ensuring colleagues and loved ones were okay. Aftershocks were not only frequent but also quite violent. People remained on edge waiting for the next rumble which preceded so many earthquakes. Several colleagues left the Christchurch region to simply have a break from the continual aftershocks. Messages of support flowed in from ATTA tax colleagues and others around New Zealand and overseas, including members of the profession, professional bodies, and previous students based as far away as London. We had offers of assistance with lecturing as well as of accommodation if we wished to take time out away from Christchurch. The responses reinforced the view of how strong the tax academic community is. It was wonderful to feel the support of the wider community at such a traumatic time.

\textsuperscript{20} A useful and widely accepted definition of stress is mainly attributed to Richard S Lazarus (see for example, Richard S Lazarus, Psychological stresses and the coping process (1966, New York, McGraw-Hill) where it is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilise. In less formal terms stress is when we feel that “things are out of control”. Our ability to cope with the demands upon us is key to our experience of stress. The Social Readjustment Rating Scale (SRRS), more commonly known as the Holmes and Rahe Stress Scale was created to measure the amount of stress load carried by an individual. A ‘life change event’ is given a different weighting for stress. The higher the score, and the larger the weight of each event, the more likely the patient would become ill. By way of example the death of a spouse has a value of 100, death of a close family member a value of 63. A business readjustment has a value of 39, death of a close friend 37. Perhaps the most relatable to a major catastrophic event is a change in living conditions with a value of 25, a change in work hours or conditions; a change in residence and a change in school/college each with a value of 20. Although lower weightings are provided for a change in recreation, church activities, social activities, and sleeping habits, if the same event has been experienced more than once, to gain a more accurate total, the score for each extra occurrence of the event is added together. A score of 300 plus would indicate a high or very high risk of becoming ill in the near future, and a score of greater than 150 a moderate to high chance of becoming ill in the near future. Stress levels are still very evident in Christchurch with on-going insurance delays, delayed travel across the city and as at December 2013, over three years since the first September 2010 earthquake, only 21 per cent of the city’s road infrastructure has been renewed. The Social Readjustment Rating Scale table can be found in Thomas H Holmes and Richard H Rahe \textit{Journal of Psychosomatic Research} 11:2 (1967, Elsevier Science Inc.) at 213-218. See also <http://www.mindtools.com/pages/article/newsTCS82.htm>.
The reality of the impact of this event became more apparent over the next few days when news came that one of our students was killed on the day of the earthquake simply being a passenger in a bus which was stationary at a bus stop in the CBD at the time of the earthquake struck. A building collapsed onto the bus, killing all aboard apart from one survivor. This was just one example of the chilling reality of the impact on people’s lives. Further sad news flowed in when we learned that one of our tutors had been killed in a collapsed building in the city where many others had also perished.

Another tragic story concerned the brother of one of our Honours students. After surviving the earthquake in his Woolston joinery factory he set out in his Land Rover for his home in the port of Lyttelton (on the other side of the Port Hills from Christchurch). When he arrived at the base of the Port Hills he found the tunnel (the usual access to Lyttelton) closed, so he turned up the Bridle Path\(^{21}\) to drive over the top. While desperate to get home to his young family he also wanted to help out:\(^{22}\)

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\text{… [s]o as he passed tired, scared people trekking on foot up the Bridle Path, he stopped time and time again to pick them up. He would drop some off at the top - then go back for more. Eventually, he parked the Land Rover at the top, where the road was blocked, and set out on foot himself, down the Major Hornbrook Track towards his Lyttelton home. He texted his wife of 17 years again: ‘Home in 10,’ he wrote. That was his last contact. As he walked down the path, almost within sight of his home, another aftershock hit. The keen outdoors-man was crushed by boulders. (paragraph breaks removed)}
\]

Unfortunately, “his determination to help others came at the cost of his own life.”\(^{23}\)

The campus was closed while safety inspections were carried out. The Commerce Building was ‘red stickered’, in other words no one was allowed in the building due to safety concerns. Personal effects were simply left in the building from the day of the earthquake. One staff member commented at the time with regard to re-entering the building for collecting belongings: “I for one am not keen to re-enter any multi-storey buildings for a long time, and

\(^{21}\) The Bridle Path is a steep track that traverses the northern rim of the Lyttelton volcano connecting Christchurch and Lyttelton. Constructed in 1850 as a path for leading horses, it was used by the early European settlers as a route from the port to new settlements on what was to become Christchurch. It was the only means of traversing the hills until the Summit Road over Evans Pass was completed in the late 1850s.


\(^{23}\) Ibid.
definitely not a red-stickered one! I'd rather go through the process of replacing my passport, bank cards, handbag, phone etc. etc. than risk dying in an aftershock.”

After the campus reopened, due to substantial damage to the Commerce Building, it was not able to be occupied. Initially staff had limited access to enter the building and collect their personal belongings– the time allowed in the building was gradually extended as the threat of aftershocks diminished. We were required to pack up our offices and remove all our belongings in July 2011. The Commerce Building now sits empty behind hoardings awaiting its fate subject inter alia to negotiations with the insurer. Some of the material packed up in July 2011 still remains in boxes, waiting to be unpacked once we are settled in the new home of the College of Business and Law in 2014. In the interim we have spent time in various temporary accommodation, including open plan units built on a running track and student accommodation with the beds removed!

3.2 The restart

The Vice Chancellor’s intention was that, despite the earthquakes, UC would offer a full equivalent year of teaching and courses and importantly students’ studies would not be disadvantaged through the events that had happened. This view informed the decisions made through the year. Through reorganising the first semester, including shortening the mid-semester break, the teaching period was reduced by only two weeks from 12 to 10 weeks.

Adrian had been invited to become part of the Senior Management Team (SMT) as from April 2011, initially as Deputy Pro-Vice Chancellor for the College of Business and Economics, and later as Acting Pro-Vice Chancellor and Dean of Commerce. Consequently he was fully involved in the decisions made by SMT concerning the University’s recovery up to the end of March 2012. Major decisions included building temporary accommodation, setting a weekly timetable, and keeping in regular contact with staff and students.

The tax group had a meeting at Adrian’s home to plan the course and assessment changes that were needed to be made and conveyed to the students. To make assessment valuable and

24 Staff were permitted access to get personal effects from their offices. A five minute timeslot was initially granted for this purpose. Staff were fully escorted by UC earthquake rescue personnel. The tax staff were based on the seventh floor of the Commerce Building. A 20 minute timeslot to access the building was later granted. This included transit time up several flights of stairs to one level, then around to get up to the top floor, fully escorted by UC earthquake rescue personnel. Instructions were to take only a backpack, to keep hands and arms free in case of an aftershock occurring while in the building.

25 The College of Business and Law came into effect from 2013, comprised of the School of Law and School of Business and Economics. Prior to this date the School of Law and College of Business and Economics (BSEC) were separate.
useful, it must evaluate whether the teaching objectives have been met and be aligned with those objectives. Also, it must be relevant to the instructional activities and include both formative and summative assessments.²⁶ Assessment should be focused on improving student learning in the process of learning (formative assessment) and at the end of the educational process (summative assessment). In the affected earthquake year when the earthquake struck on only the second day of the first term assessment methods had already been finalised and made available in the respective course outlines. Being thrust into a situation of having less class time available for the first semester meant that topics taught in some cases had to be modified but still deliver the content sufficient for the accounting bodies’ requirements. The immediate discussion among colleagues was how to deliver the programme (including relevant assessment) with less time.

The teaching term recommenced with a staggered start from 14th March 2011 – some courses in fact commenced the following week. It was quickly evident that the 2011 teaching and delivery methods would need to be very different to what was initially planned for the year due to the loss of at least three teaching weeks and a shortage of safe teaching spaces as a result of damage to a number of buildings. Some students were selected to travel to Adelaide²⁷ to study for a semester there, with several of our tax students included in this cohort. The timetabling of classes was revised week to week as buildings being available for use. As a result both students and staff were finding out their schedules a week at a time.

BSEC was allocated a new location on campus, a converted wooden house, which had been the home of the UC Department of Social Work (DSW) prior to the February earthquake. Computers were installed in three large rooms for students and the common reception area was available to meet with students. Smaller rooms and offices were also equipped with computers for staff. The building was too small house all staff, hence ‘hot desks’ were available to staff who were predominantly working from home but coming on to campus for meetings, to print out material and load material onto the student-based learning website.


²⁷ As part of an existing relationship between the University of Canterbury and University of Adelaide (Adelaide is a sister city of Christchurch), the University of Adelaide offered to accommodate up to 500 selected UC students for the first semester. The students were housed in halls of residence or private billets in Adelaide and joined existing academic programmes, mainly at first-year level. No additional tuition fees were charged to students. Some University of Canterbury staff were sent to provide academic and practical support. See ONE News “Christchurch uni students being sent to Australia” (2 March 2011) <http://tvnz.co.nz/national-news/christchurch-uni-students-being-sent-australia-4043441>.
‘Learn’ (also known as ‘Moodle’) for the students to access.\(^{28}\) As the main student car park was now a ‘tent city’ (see following section) parking around campus was at a premium. It was not unusual to have a solid walk to the hot-desking location.

Initially, before assessments had been undertaken of the buildings to ascertain if they were safe to enter; ‘lecturing’ meant making audio-recordings of our lectures,\(^{29}\) tutorials and (for our stage two taxation paper) workshops\(^{30}\) at home.\(^{31}\) These recordings were then made available through Learn. Email and Learn were vital communication tools at this point in the year. The initial lectures were also prepared without much of our usual material and various illustrative ‘props’ which remained inaccessible in the Commerce Building.

For the tax team (in which Adrian was not able to play a full role due to his College and SMT leadership role) this was the first time we had been exposed to recording our lectures in this manner. This took some adjustment – learning to use the software was a challenge as was making a lecture interesting without the visual cues and props and interaction associated with a face-to-face lecture. Essentially it felt like one was simply talking to oneself. There were also technical issues – the first software package made available did not allow opportunity to pause the recording, on more than one occasion an audio file became corrupted and the lecture had to be re-recorded. While students appreciated the audio recordings, they were far from perfect. One student commented on the survey of the stage two taxation paper (see Section 5): “make sure recording of lectures went a bit better – sometimes couldn’t hear or bits weren’t recorded.”

As well as funding microphone headsets for recording the lectures, workshops and tutorials at home, modem sticks were provided by the University to enable staff to link in on the internet for work purposes.

The tax teaching staff have predominantly always had an open door office policy for students. Such a policy was very difficult in the ‘hot-desk’ environment. Once the campus

\(^{28}\) Loading certain larger files onto the Learn system from home was at times painfully slow.

\(^{29}\) Two tax courses are offered in Semester one – a stage two introductory paper and a stage three advanced tax paper – both are required for the New Zealand Institute of Chartered Accountants (NZICA) and CPA Australia. In semester two we offer an advanced elective stage three tax paper and a paper in the Law School for law students. As mentioned, the greater impact of the earthquakes was on the semester one courses; hence the focus on those courses in this paper.

\(^{30}\) The purpose of the workshops is to work through questions and examples with students.

\(^{31}\) As a result of the shortage of teaching space, and priority given to assigning rooms to formal lectures, we did not run a physical workshop; rather it was audio recorded at home and loaded onto Learn. As noted in Section 4 of the paper, students in this course missed having face-to-face workshops.
reopened weekly one-hour drop in sessions were held in the foyer of the former DSW building. Alternatively, students could arrange to meet at available locations of the campus - the campus cafes, including one set up in a marquee, were often used by staff and students for this purpose.

3.3 The ‘canvas’ class rooms

Once the University had made the necessary building assessments and determined those buildings which were and were not fit for occupation, the Commerce Building being in the latter category, the campus reopened for staff and students. At this stage the main priority was to welcome the students back and re-establish some sense of normality from a teaching perspective. The tax classes were reassigned to several different locations.

Tents, both large and small, were erected in the UC Law School and Arts car parks, including a specific tent café. The tents were equipped in a ‘minimalist’ fashion with white plastic outdoor chairs (being in fact marquees used for weddings and other functions), a microphone and whiteboard but no projectors or screens. Unsurprisingly paper hand-outs to support the material being taught were common. The larger (and longer) tents were used for lectures, the smaller ones for tutorials.

Attendance at lectures and tutorials held in the tents was very good, a testament to the adaptability and resilience of the students at this time. The only problem with the tents for staff and students alike were the ‘acoustics’. Although equipped with a primitive sound system, on a day with any amount of wind the sound was poor at best and on a blustery day an added ‘feature’ - the flapping of the sides of the tent – made lecturing almost impossible. The roar of the occasional aircraft coming in to land at nearby Christchurch International Airport also brought teaching temporarily to a standstill. The tent classes had a relatively short life and were dismantled before the end of the first semester. Winter tent classes in Christchurch would not have been an option due to the harsh Canterbury winters.

To accommodate the space shortage and issues with the tents, some stage one classes decided on having one lecture per week (rather than the usual two lectures), essentially to review the key points from each topic and to answer questions. Students were expected to read the assigned chapters in the textbook and review the lecture materials on Learn before attending these lectures.

It was important at this time to connect with the students and provide a level of assurance to them given the tumultuous start to the academic year. Unlike our stage three taxation papers,
tutorials for the stage two taxation paper are usually taken by a tutor not the lecturing staff. One way to provide a level of reassurance to these students was to personally attend the first face-to-face tutorials which were scheduled in week 4 of the first term at various sites across the two campus locations and to welcome the students back to the campus. The lectures at this point had only been audio recorded so this was the first face-to-face meeting with the students after the earthquake. These tutorials provided an opportunity to go over the revised post-earthquake course outline, to meet the students face to face for the first time and more than anything else to ‘settle’ them.

Students rose to the challenges of this environment with a colleague noting that “the students seem to be taking it well and are very positive and flexible.”

3.4 Saturday tax – the crowds roll in

Lecture timetables were being produced on a weekly basis so where (and when) particular lectures would be located changed from week to next. We were perhaps fortunate that the stage two taxation paper was allocated a permanent time slot on a Saturday morning from 9:00am to 11:00am. There were 223 students enrolled and the lectures were well attended. There were understandable minor complaints about the time slot from a few students with other responsibilities, such as family members to take care of, and those who had work or sporting commitments. We opted to also record our lectures with a personal audio recorder for those that were unable to attend. For an analysis of student feedback on ‘Saturday tax’ see Section 5 of this paper.

3.5 Village life (aka ‘life in podville’)

A new ‘village’ of prefabricated buildings (also known as the “pods”)

32 was constructed on piles very quickly after the earthquake to replace some of the teaching and academic spaces that had been lost due to the Commerce Building (along with other buildings) being uninhabitable. BSEC staff moved into the temporary village in July 2011, with the tax team in the first group to move. As a consequence of Adrian’s role, he was able to have shared space in the Law Building which had since reopened, which provided some space and

32 Some 57 ‘temporary’ buildings were constructed on UC-owned sports fields at the Ilam campus (known as Kirkwood Village, after the street from which it is entered) and another 47 at the nearby Dovedale campus at a total cost of $26 million. Jo McKenzie-McLean “Students now out of tents” The Press (online ed, 30 July 2011) <http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/5363016/Students-now-out-of-tents>. The initial expectation was for the Kirkwood Village to remain in use for three to five years: ibid. That now seems optimistic, with the building likely to be used as decanting space for at least ten years from their initial construction.
facilities closer to the pre-earthquake environment. These open plan environments became our home for the next 18 months. There were the upsides to this open-plan environment – it was great to be back among colleagues from the same Department, to have a desk and limited storage space for our own materials and to be in the ‘thick’ of student life. However, there were also significant downsides, including the disparity between the behaviours of colleagues, some of who were talkative in this work environment while others preferred almost total silence. At times this became an issue. It also meant meeting students was difficult with a scarcity of available quiet spaces in which to meet. Although our pod had a small office in one corner it was often occupied and hence a quick chat with a student in the pod (by our desk) was often very disruptive. In addition, as access to the pod was by staff swipe card, students could not freely enter the pod; rather they would have to knock on the door (or jump up and knock at a window), a person located nearby the door would often be the one to have to open the door and direct the student to the staff member. Where students required more assistance, often it was easiest to meet them in the pod cafe.

3.6 Village proper

At the end of 2012, BSEC staff relocated to individual offices in what had been student apartments, approximately one block away from campus. These offices provided a quiet research environment for staff as well as an area for storing materials. Due to the distance of these offices from the main campus, the downside of this arrangement has been an understandable reluctance on the behalf of students to make the trek to the offices – certainly few if any students ‘popped in’ without making an appointment first. Feedback from students simply dropping in has always been valuable as feedback in ‘real time’ as the various courses proceed and is something as teaching staff that we have missed. Being away from the main campus has also meant we have not had the usual level of interaction with students – even simply ‘bumping into’ students - leading to a sense of disconnect among the tax team with the students. It has led to a feeling of being ‘disconnected’ from the University after a period of ‘high connectedness’ following the February 2011 earthquake, a feeling that started to lose some of its lustre with the move to the pods.
4.0 CHALLENGES FROM THE EARTHQUAKES

4.1 Course assessment

4.1.1 The best laid plans ...

One of the more challenging aspects of the 2011 teaching year following the February 2011 earthquakes was course assessment. In April 2011, due to lack of available rooms in which to hold mid-term tests and similar assessment, the University advised that all tests were to be replaced with take home tests, in-class quizzes etc. For the stage two taxation paper, the planned pre-earthquake assessment for the course had been two assignments totalling 10 per cent, a test worth 40 per cent and a final exam contributing 50 per cent of the course grade. Following the UC mandate concerning term tests, the assessment for the course was changed to two assignments (each worth 20 per cent of the grade) with a final exam worth 60 per cent. These changes also reflected a shortened teaching period and reduced mid-semester break.

Two significant aftershocks measuring M5.9 and M6.4 struck early in the afternoon on 13 June 2011, only a few days before final examinations for semester one courses were due to commence. This temporarily closed the University again and meant a new round of building inspections and delay. Tax review ‘clinics’ planned for our courses had to be rescheduled. The UC Students Association (UCSA) representatives were reporting that students were suffering from very high stress levels and were not able to study effectively, and that many feared sitting exams in tiered lecture theatres in case another aftershock occurred. As a consequence we were given 20 minutes to decide whether to continue with the final exams or make alternative arrangements for our papers. The overall objective was to minimise the number of invigilated exams with, inter alia, options of take home exams recommended.

Against a background of heightened stress levels of students (and staff), we decided to cancel the exam for the stage two taxation paper. The final course assessment was to be based on the two assignments already completed with the weightings increasing from 20 per cent per assignment to 50 per cent per assignment. Historically the assignments have provided a clear indication of student performance in the course, although they are by their nature un-invigilated pieces of assessment.

33 Including the initial 4 September 2010 earthquake, there have 59 earthquakes of magnitude 5 and greater (Geonet, Aftershocks, <http://info.geonet.org.nz/display/home/Aftershocks>).
Cancelling the stage two taxation paper final exam was a difficult choice. We believe, based on comments made on some of the aegrotat application forms received at this time, that this was the correct choice. For example:

As the most noticeable aftershock the week before [the scheduled exam] that caused me and my flatmate to question the integrity of our house in [name removed] Road. Ended up pressuring our landlords to let us move out and terminate our lease term but to no avail even if we were stuck without water.

…all the aftershocks made me so tired and stressed so I couldn’t concentrate on study.

I was without power and water after the Feb 22 earthquake, water for a few weeks. I have also felt greatly affected mentally due to the on-going quakes. [I am q]uite stressed out and unable to concentrate on my studies. These events have been hugely detrimental to my overall study ability.

I have had high stress levels, difficulty with sleeping and significant trouble with concentrating and remembering things since the earthquake, having a big impact on my preparation for the exams. I am also dealing with the stress of three children I live with.

Not surprisingly, the exam cancellation was not supported by all students. In fact as soon as the revised assessment policy was announced students emailed us saying how hard they had studied for the final exam and even though some of them were sitting on an ‘A’ grade from the assignment assessment believed that an ‘A+’ was where they felt they would perform in an exam and would we reconsider their overall grade. Students were offered the opportunity of sitting a special exam (see 4.1.2 following).

Recognising the level of the first semester stage three – as an advanced tax course required by NZICA and CPA Australia - the final exam was treated as a ‘take home’ assessment; an option adopted for a number of the higher level courses. There was a requirement that all final exams be no longer than 2 hours.

Students were advised to “spend no more than 2 hours on the assessment.” It appears students generally observed this stipulation, for example one student’s answer in their exam script was left mid-sentence, while another student only answered three of the four questions – the clear inference being that they had run out of time.

The decision to convert the final exam for the stage three tax paper into a take home test was also supported by students as evidenced by the following two comments:
Due to worrying about aftershocks, the safety of my child, being a solo parent through earthquake aftermath has been a most difficult trying time….I am grateful that there are no finals as I don’t feel like I could concentrate on study and actually sitting the exam….this semester has been trying for all students and I know my performance has been impaired by dealing with aftershocks and trying to feel safe after the earthquakes.

I have not been able to sleep as a result of the aftershocks and I am always tired.

Students did raise concerns about how the NZICA and CPA Australia would view the restructured assessments, especially the lack of invigilation in the stage two taxation paper. Both organisations supported the decision of the Department of Accounting and Information Systems to cancel or modify the final exams and determined that students were not required to have had invigilated assessment for the semester one courses.

As the year progressed, while the threat of significant aftershocks began to recede, measures were still required in case of a significant aftershock around the time of the final end of year assessments. Accordingly, with respect to end of year exams and marking guidelines, we had to prepared a second ‘reserve’ exam for each course in the event that while students were sitting the exam an aftershock occurred and the exam had to be cancelled and re-sat.

4.1.2 Student responses and the special exam

While it was clear that many students appreciated the cancellation of the final exam for the stage two taxation paper, understandably not all students were happy with our decision. Several student emails stated how much effort they had put in preparing for their final exams and considered themselves well prepared. One student emailed how the decision to cancel the exam was ‘unacceptable’ and the assignments being used for grade determination was not a reasonable basis to use in determining grades. Another student advised how he had prepared a 35 page summary and spent hours preparing, while other students expressed concerns that they did not get the mark expected from an assignment and essentially wanted an opportunity to redeem themselves. A student who had only completed one assignment (and presumably had not performed very well) was concerned that she may automatically have failed the course.

Any student that considered themselves disadvantaged by the cancellation of the final exam was encouraged to sit a ‘special’ one-hour test early in the second semester (at a time when hopefully the aftershocks would have subsided). Students were advised that grades could be adjusted upwards or downwards as a result of the one hour test which would be weighted as
60 per cent of the final grade with the assignments back to 20 per cent each, in essence the same assessment as the original course outline. Interestingly several students that had emailed their disappointment over their ‘A’ grade replied promptly saying they were happy to keep their grade originally assessed. Thus “a bird in the hand is indeed worth two in the bush.”

This solution did not place any more stress on those happy with their current grade but allowed those who had either failed the course or wanted to better their grade to prepare for the test over the semester break. The test was sat by 27 students, just over 10 per cent of the class. Sitting the special exam was beneficial for the majority of these students with their course grades increasing as a consequence.

4.2 The aegrotat ‘mountain’

With respect to first semester courses the University policy was that the earthquakes were an event that had clearly impacted students and could be the subject of aegrotat applications. The person that was charged with receiving these applications had at one stage over 1,500 aegrotat applications to sort through and they were coming in at a rate of one per minute!

The following application illustrates student stresses at this time (and also appreciation for what the University was doing):

The earthquakes caused me quite a bit of distress whilst I was trying to study. I live in Ilam Apartments [on campus] and we have been evacuated numerous times now, the latest on 21 June severely disrupting my study for [xxx] course. We were not able to get back into our flats until 2:30am and had to attend our exam at 9:00am. … The effects of the February earthquake have definitely affected my learning and I found it hard to concentrate with these constant aftershocks. I haven’t been able to get a good night sleep for ages and especially during exam week I have been very stressed and worrying about the aftershocks. This has definitely affected my ability to learn the material well and to perform in the exams. Whilst I was completing the take home exam for [xxx course] I found out my dog is really sick …thank you for all you are doing for us students.

4.3 Students, frayed nerves and on-going aftershocks

While the initial February 2011 earthquake and immediate aftershocks caused considerable stress, the resilience of students (and staff) was clearly tested by the on-going aftershocks:

Since aftershocks, I feel so stressed, even [I] can’t focus on anything. Until now, I still feel very anxious about earthquakes and aftershocks. Sometimes, even cannot fall asleep. My studies have been interrupted by aftershocks, [I] cannot find quiet places for study, my
parents don’t need to work during that time and my sister does not need to go to school. The house is full of people. … The night before the [xxx course] exam, there is a 5.3 magnitude earthquake, which caused a power outage, and the information about the exam is not been confirm until the morning of the exam, that is very affect me to concentrate on study.

In addition to issues of lack of concentration and difficulty sleeping arising following the earthquakes, other stresses faced by student arose from “[having] to shift house twice during the period”, and intermittent access to the internet.

For some the stress from the earthquakes was too much and they permanently left Christchurch. One previous student emailed that he had moved away from Christchurch to Melbourne to “get away from all of the earthquakes and all. I guess it was just too much for me to handle.” The practical impact on families was succinctly described by one student who commented: “that their house was partly damaged and they did not have water for weeks and that they had to look after their son while the childcare centre was closed due to the earthquake”. Another student noted (with respect to their aegrotat application):

I have selected a mild to moderate due to the issues in having three small children to help through the after effects as well as deal with it myself and still try and put in an uninterrupted effort at studying. I would put myself in a mild condition and the children in the beginning of the moderate scale.

Keeping in touch with students especially early on in the semester was especially important. To this end, the College (including support from Adrian) organised a number of pizza lunches for various students and their needs were assessed through surveys that were conducted. Efforts to help students did not go unnoticed: “I would like to thank you for all of the effort you have put into the semester. You lecturers make all the difference and I don’t think you could have done better under the circumstances. Cheers!”

The post-earthquake environment did have its lighter moments. Due to the threat of aftershocks, strict attendance records were kept of those entering buildings. At one stage some tutorials were held on the fifth floor of one such building. A student on crutches following surgery, after first having to locate the building (as tutorial rooms changed from week to week), had come all the way down a long corridor to the tutorial room only to be politely advised as he had not signed the attendance book at the other end of the corridor he had to go back to sign it. It turned out that this same student, who fortunately had a good
sense of humour, was also very resourceful. The building lifts were not able to be utilised. In an emailed apology after the tutorial explaining why he had been late, he wrote:\textsuperscript{34}

> Also, I apologise for being a bit disruptive with coming and going in the Monday afternoon tutorials, and thank you for your understanding. I really didn't expect to find the lifts inaccessible, and didn't like the prospect of climbing 5 floors in crutches! Fortunately I eventually got a ride up in the goods elevator, but that was why I was late.

As a lecturer the primary concern was always for the class – for example, what if an aftershock did occur during the middle of a two hour lecture. Normal bumps and noises could sometimes get your thoughts immediately back to the 22 February 2011. Students coped remarkably well throughout the whole period given their often difficult personal circumstances.

### 4.4 Storage

Once lecture and other materials were able to be removed from the Commerce Building, storage of these items was an issue with limited space available on campus. Some books and materials initially had to be stored at home, and once the building was cleared, all remaining items went into storage initially in part of the Commerce Building, and then elsewhere in longer term storage on site. Storage of student assessment was also an issue, especially when we were ‘hot desking’. The relocation into the pod village and subsequently into the Homestead Lane accommodation provided more opportunity to store materials on site. However, at the time of writing the authors still have much material stored in their homes and some in long-term storage on campus. Locating and then accessing materials has at times been very difficult, if not impossible, and very frustrating.

### 4.5 Postgraduate students

The earthquakes also impacted the post-graduate students. Honours classes were re-scheduled from the Commerce Building to a suburban church once the University engineers had approved the structural integrity of the Church building. Staff had offered to hold classes in their own homes for the Honours students; however, this was not permitted as the homes had not been structurally assessed by engineers.

The postgraduate students lost their dedicated study/computer facilities in the Commerce Building and, until space was provided for them in the pods later in 2011, had limited available space on campus. Library access was greatly reduced both in terms of physical

\textsuperscript{34} Student email of 4 May 2011.
access and terms of hours. Initially safety and evacuation briefings were required for all that entered the library. General extensions to deadlines were provided to postgraduate students, along with limited access to rental laptop computers.

5.0 STUDENT SURVEY

5.1 Background

The tax team decided to conduct a student survey on the 2011 stage two tax students essentially seeking feedback with three questions asked, namely:

1. In the circumstances, what worked well this year?
2. What didn’t work well?
3. What would you have changed or what could have been better?

As mentioned the total number of students enrolled in the stage two taxation paper in 2011 was 223. The number of responses back from students during the Saturday morning survey totalled 58 responses. At this stage, due to the disruption to UC administrative processes, UC Human Ethics approval for the survey was not sought. Indeed, as can be seen from the brevity of the survey, it did not purport to be any more than a mechanism to gauge the mood of the class and their views.

5.2 Analysis

The key findings and responses to the survey are outlined following:

5.2.1 “In the circumstances, what worked well this year?”

A comment of ‘having a classroom instead of a tent’ showed in some part the impact of the disruptions early on in the 2011 year on students. With respect to the Saturday lectures, students appreciated having ‘face to face’ lectures (after simply audio recordings) and the fact these lectures were also audio-recorded “took the pressure off” for those students with other commitments. A number of favourable comments were received including “lecturers [were] good, lectures were well organised.” Prior to the earthquakes, the practice, at least within the tax courses, had been not to record lectures due to a fear that it would negatively impact on student attendance. Reflecting on both the general changes in classroom teaching due to
technology and the positive student feedback to lecture recording following the earthquakes, UC’s preference is now for (at least) audio recording of lectures.\textsuperscript{35}

With respect to the various audio recordings (including the workshops), students appreciated the flexibility of being able to pause the recordings to assist their study. In general, there was also support for increasing the assignments to 50 per cent each on the basis that they were less stressful than a mid-term exam would have been. One student indicated a preference for assignment based assessment for the reason that: “[h]aving two assignments rather than a test meant we really learn and apply the class material.” In sum this approach facilitated various learning styles as well as the time when students could reflect upon course material. ‘Learn’ was well utilised by the students.

5.2.2 “What didn’t work well?”

The second course survey question was directed at gauging what did not work well in the aftermath of the 2011 aftershocks. The most predominant comment was the Saturday morning lectures and time slot:

Saturdays are hard when you have a young family. I have now got uni 7 days a week.

Having lectures on Saturdays because I have to work so can only come to half the lecture each week.

For me Saturday classes – as a solo parent weekend time is precious – there has been a lack of it.

Saturday morning tax lectures…the novelty wore off pretty quickly.

9am on a Saturday morning.

If Saturday morning lectures are a must, start them later!

Perhaps not surprisingly, as already noted, students also did not enjoy the lectures held in tents. The importance of face-to-face interaction was also stressed with many comments made about the audio recording of lectures and tutorials (initially), and workshops:

Both lecturers like explaining concepts in not only word but also with some body languages, which has worked so well, but with the audio we could not see them at all. Personally I did

\textsuperscript{35} Unfortunately, as feared this has negatively impacted on attendance at lectures in 2012 and 2013, especially when a test is on or other piece of assessment is due at the same or similar time in another course.
not like the online audio workshops. I struggle to concentrate when just listening to a tutor rather than seeing them face to face. If the lectures and workshops were videoed and not just audio recorded it would be easier.

Audio files required computers and headphones (if used on University computers) which are not always available.

While the online tuts were the best of most of the ones I had I would have really preferred to have real ones – more teacher contact.

Video recording is good but should [have] had either one face to face workshop or tutorial so able to interact and ask questions.

Our favourite response to the question “what didn’t work well” was “the earthquake.”

At UC we have always had a two hour lecture for both our stage two and stage three courses. Some comments were made that it would have been better to have broken up the lectures into two one hour classes, whereas other comments were that the two hour lectures were a great idea and worked well in the ‘new normal’ environment to get them out of the way. Some further suggested also having a workshop or tutorial immediately following the lecture,\(^{36}\) again for ease of travel and better utilisation of time amongst other issues.

5.2.3 “What would you have changed or what could have been better?”

As already noted in the prior sub-section, it was clear from the majority of comments that students saw as crucial the ability to be able to interact face-to-face with the lecturers (for example via a weekly workshop and/or weekly tutorial) and to be able to ask questions in that environment. Clearly they were looking for a reassurance from the teaching staff that they were on the ‘right track’. This highlights that with online audio lectures, PowerPoint and Word notes, online tutorials and online workshops do not provide the feedback students want nor the opportunity to ask questions. Classroom discussion amongst peers was also stressed as of value to students (and something they missed, especially at the start of the year when there was limited ability to interact with the teaching staff and other students). The following is a sample of the feedback received with respect to the lack of face-to-face tutorials (initially) and workshops:

\(^{36}\) One student suggested lectures from 5 – 7 pm followed by a one-hour workshop.
It would have been preferred to have tutorials in person so questions could be raised and answered as necessary.

…had either a workshop or tutorials available to attend, that were “live”.

…could have face to face tutorials or workshops once a week, this allows questions to be asked, as content is being revised.

… face to face tutorials/workshops to get feedback on our progress.

Students would have preferred that the Saturday morning lectures had been videoed. “[It was quite hard to listen to a 2 hour audio file and [I] missed out on all the little documents put up on the overhead projector [document camera].” Similarly, “If lectures were [video] recorded so we could actually see what was happening rather than just audio.” With regard to the cancelled term test the students commented:

A term test would have been beneficial, however this wasn’t possible. It might be interesting going into an exam and having everything closed book.

No term test. Would have preferred one to gain an idea of what to expect in the final.

5.2.4 Additional observations

With respect to a wider UC matter, as part of restructuring the teaching, the University shortened the mid-semester break – a fact noted by students. Some students’ commented on the difficulty in getting to the campus due to road works etc.

Students genuinely appreciated the efforts of the staff and UC and expressed this

… not sure what [else] you could have done given the circumstances.

… congratulations I think the Uni Team did the best and thank you

6.0 CONCLUDING REFLECTIONS AND OBSERVATIONS

We have witnessed students’ achieving their goals in the most trying of circumstances. It is sobering to realise that the majority of completing students in 2013 have only ever known a somewhat disrupted university experience. In December 2013 and April 2014, the students who commenced their university studies and had on their second day of their university life a mammoth earthquake, graduate. They displayed a resilience that will follow them through their working life - an unquenchable spirit in times of adversity. Our experiences of the last
three years is of students that have qualities of adaptability and tenacity. They did not grumble or complain but accepted that they had to adapt to new routines – a ‘new normal’, which meant being taught via audio-recorded lectures and later in noisy tents and on Saturdays. Of those times Andrew observes: “There was a real sense of community among staff and students – we were all in this together and had to pull together to get through. Students understood we were also under stress, both in our personal lives and at university. They were very patient.” Adrian reflects that these times were unprecedented and shaped our lives forever – they are a point in time like BC and AD from which the history of Christchurch and the University of Canterbury will always be compared. In one sense we wish they never happened and that we did not need to be part of them, but in another way they enhanced our resolve and have enabled new opportunities to emerge and bonds strengthened through a greater sense of community.

What conclusions can be drawn from our experience? First, it is people that matter – whether they are students, staff or family. As long as they are safe you can cope with the impacts of an adverse event. Second, and without being clichéd – if an event like this occurs you need to ‘expect the unexpected’. When the earthquakes initially occurred in February 2011 we had no idea of the wide-spread impact on all aspects of University life. While we had experienced the September earthquake, as the impacts on UC were relatively minor we were not personally prepared for what would unfold after the February earthquake. The June aftershocks so close to the first semester final exams caused huge complications for the assessment process, but we were better prepared given the February experiences.

While students adapted well they clearly missed the face-to-face interactions of the lectures and tutorials – the audio-recorded lectures were a less than ideal substitute. Video-recording would have been a better, albeit an unfeasible option. As lecturers, we also found audio-recording difficult with no way of gauging student understanding of the material. Further, lecturing with only some of our available materials was challenging. At the end of the day the earthquakes show how, as a lecturer, you can get by (and just so) with limited resources. Students also missed the ability to ask questions in tutorials and hear the response to other student’s questions. In terms of future research, it would be most insightful to follow up with some of our 2013 and 2014 graduates in four or five years’ time to see how their earthquake-

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37 The University itself did implement certain measures after the September earthquake, including building inspection processes, which undoubtedly ensured an earlier reopening of the campus after the February earthquake than otherwise would have been the case.
influenced university education has shaped them in their professional lives. This would also be an opportune time to review whether the earthquakes have had a lasting impression on our teaching pedagogy and assess what our new students think about studying in a post-earthquake environment.

We would encourage other teachers and researchers who may have worked through dramatic natural disasters or similar events to reflect upon their experiences and add to the paucity of teaching-informed research addressing these issues. Being a reflective case study, this paper comes with the usual caveats of such research, along with the unique (and hopefully unrepeatably) events that were the Christchurch earthquakes.