When the earth stopped shaking where was our Library service?

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Canterbury region

• The most famous fault line in the Canterbury region is known as the Alpine Fault

• University of Canterbury academic Prof R Park and others commented in 1995 that “New Zealanders must not be complacent in their considerations of earthquakes. The attitude ‘that it will not happen to us’ or ‘it will most likely occur only in Wellington’ needs to be eradicated.” (Park et al., 1995)

• He reiterated this statement in 2001 adding “......There is a 65% probability that Christchurch will be effected by a major earthquake over the next 50 years.” (Park, 2001)
September 4\textsuperscript{th}, 2010

- 7.1 magnitude earthquake at 4.35 a.m.

- Buildings damaged, some people injured, thankfully no fatalities

- Caused by a previously unmapped fault line, now known as the Greendale Fault
February 22\textsuperscript{nd}, 2011

- 6.3 magnitude earthquake at 12.51 p.m.

- Region suffered major building damage and building collapses

- 181 people died (this death toll has since risen to 185 as people who survived their initial crush injuries have died, this toll will continue to rise)

- No buildings on campus collapsed and no major injuries were sustained on campus

- Four students (two who were waiting to graduate), two people with teaching affiliations to the University, the wife of a staff member, and 12 University of Canterbury alumni died. (Wood, 2012)
Aftershocks

- Official figure as at January 2, 2012 records over 8,000 aftershocks
- Up until 2.00 p.m. 18\textsuperscript{th} May, for the month of May the region had shaken on 15 different occasions
- The aftershocks are on the whole declining in frequency and intensity

This is the seismogram from the Feb 22 earthquake as recorded in Wellington (GEE)
What happened to the UC Library system
Central Library – Te Puna Maauraka o Waitaha

Education Library – Te Puna Ako

Law Library - Te Puna Ture

Macmillan Brown Library – Te Puna Rakahau o Macmillan Brown

EPS Library – Ka Puna Pukahataka
Education Library

- Not a huge amount of book stock fell from the shelves with either quake, but significantly more in the September quake
- Minimal building remediation required
- Damage to lighting
EPS Library

- Closed due to buildings at either end of the building causing issues
- Larger amount of book stock fell from the shelves
- Retrieval of stock undertaken by Library staff
- September quake some issues with the shelving which were very quickly sorted out
- Ceiling tiles and lighting damage
Law Library

Swinging shelf in the Law Library

- Large amounts of book stock on the floor
- Some shelving failure in the September quake
- Book stock on the floor after the February quake
- No shelving failures in February
- Building remediation required
Macmillan Brown Library

- Very little book stock disturbed in the earthquakes
- Other resources securely stored
- In the September earthquake drawers in map cabinets opened and doors had to be cut through to gain access to the storage areas
- This Library was able to be opened for public access quite quickly
Central Library

- Massive amount of book stock fell to the floor in both quakes
- Shelving failures on Levels 3 and 4 (very old shelving)
- Building remediation work required on all floors and is ongoing e.g. window frames
- Ceiling tiles an issue on Level 5
- Water leak February earthquake Level 2
Lack of physical space

- From a Library perspective the most pressing problem after the earthquakes was the lack of physical space.

- Libraries were considered student and social spaces and were given immediate attention.

- After both earthquakes services were offered from the Macmillan Brown Library, (MB Library) the smallest library within the 5 Library system.

- Library services were offered from MB, Education Library came on stream in March and was eventually followed by the Law Library, Central Library was partially opened later in 2011 and EPS Library re-opened in February 2012.

- Approximately 3 weeks after the February quake a tent city was established in order to deliver lectures.
Students in one of the teaching tents

View of the tent city on the Law car park
Co-ordinating and communication

- Library staff (as were other University staff) were often working from home as there was no workspace available on campus.

- Many Library staff worked alongside other University staff, in order to staff information caravans and information points set up in strategic places on the campus.

- Centralised communication and messages posted on the Library’s website and FaceBook page did not always answer specific needs of students and academics.

- Access for Library staff to Learn was limited.

- Creation of online videos in-between earthquakes helped students locate information.
Online services

- A number of services were in existence and many were bolstered
  - AskLive
  - Subject guides
  - Electronic resources, boosted by generous vendors
  - Library FaceBook page
  - Web pages
  - Online tutorials
  - Self-service interloans
  - Learn
Collapsed shelving

Level 3 – between lifts
Access to print collections

- This was more difficult to achieve
  - Items picked up from the floor and reshelved
  - Items were retrieved, if at all possible, from both the EPS and Central libraries
  - Stock moved wherever possible, e.g. High Demand collections moved from Central to Macmillan Brown
  - Returned Central and EPS stock shelved in the Education Library
  - Use of ULANZ
  - Use of interloan
Book stock damaged by shelving

Book stock damaged by shelving
Other projects happening at the time of the earthquakes

- Between the earthquakes the entrance to the Central Library was remodelled
- Collection security was converted from barcodes and tattle tape to RFID
  - This increased the amount of self-loan of the collections
- Business and Economics collections were moved from the Central Library to the Law Library
- Self-service inter library loan was introduced
- Parts of the Central collections were placed into short term storage to help with building remediation
Central Library main entrance

Post February earthquake, new desk in place, view through to high demand area
Lessons Learned

- Robust online services ensured that the Library online resources were never off line
- Update subject guides regularly to ensure relevant information is available
- Ensure electronic collections are targeted to current course offerings
- Integrate chat services into as many online services as possible
- Damage to physical collections can be minimised by -
  - Use of cantilevered shelves
  - Bungies
View of Level 4 Central Library

Note cantilevered bottom shelves
Commercial bungies on trial
Trial taking place in the Library Warehouse
UC designed bungies in place in the Macmillan Brown Library

These bungies protect the glass negative collection
Lessons Learned contd

- Damage to physical collections can be minimised by –
  - Seismic strengthening of shelving
  - Different shelving configurations
- Staff are our greatest resource
  - Maintain phone trees
- University created new form of leave entitled “earthquake leave” for all staff to deal with a raft of issues in their personal lives
Level 4 – collapsed shelving between the lifts

Level 4 - Examples of centre braces which have been damaged

Level 6 – damaged centre braces – metric shelving

Example of a damaged Centre bracing older style of shelving
Trialling splitting the shelf contents to separate ends. In the December shakes it appeared that one end always came off the shelf.
Trialling no slip matting under the bookends
Additional seismic bracing
Added to all shelving in the University
In memory of all those who died as the result of natural disasters in 2011
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