

EXECUTIVE SUMMARY

Developing Flexibility and Resilience in Teaching in the Faculties of Science, Engineering, Architecture and Design, Victoria University of Wellington

Introduction, purpose, scope, and structure of report

This report serves as a final report for activities conducted by the Flexible and Resilient Teaching Project for the office of the Pro-Vice Chancellor for the Faculties of Science, Engineering, Architecture and Design (SEAD). The purpose of this project was to develop recommendations on how to make teaching within SEAD courses resilient to potential disruptions such as those caused by an earthquake. This report includes the following elements:

- Descriptions of project activities and outputs: Steering group meetings, review of literature, review of resiliency plans, and resiliency pilot courses, and University of Canterbury site visit.
- Recommendations to increase academic resiliency at various levels (SEAD, institutional, course level, and within supporting departments (ITS, CAD)).
- Implementation plan.
- Tool for course level resiliency planning and implementation.

The primary outcomes of this project were a collection of well researched, well-reasoned, and tested recommendations for increasing the resiliency of teaching and learning within SEAD.

Project activities

This project consisted of four major activities: monthly steering group meetings, review of literature, review of academic resiliency plans from other tertiary institutions, and course resiliency pilot projects. Each project activity helped to develop recommendations and many of these recommendations will be trailed in pilot courses and in the course resiliency assessment. Where applicable, final recommendations will be based on the findings of the pilot courses and resiliency assessment.

Steering group meetings: The academic resiliency steering group included 13 members including: academics from each school within SEAD, as well as staff from ITS, CAD, and records management. The purpose of these meetings was to engage academic staff in developing resiliency recommendations that were salient to academic staff and would be effective across the many disciplines, course types, and teaching styles found across SEAD.

Review of literature: We conducted an extensive review of literature related to University of Canterbury response and recovery to disruptions caused by earthquakes. This information helped to identify the challenges and solutions to teaching in an earthquake disrupted environment. The information found in this literature focused on the several topics:

- Communication
- Electronic resources
- Alternative teaching locations

- Use of digital technologies in disrupted environments.

This selection of literature included implicit and explicit recommendations for teaching in a disrupted environment and how to prepare for such a scenario. The academic resiliency working group adopted and adapted many of these recommendations to create VUW and SEAD specific recommendations.

Review of academic resiliency plans at other tertiary institutions: We examined the academic resiliency plans of over 20 tertiary institutions. We found that the majority of plans were created within the last 5 years as a result of the threat of H1N1 flu outbreak of 2009. However, all plans were generalized to accommodate academic resiliency in a wide range of possible disruptions (man-made and natural disasters, and pandemics). All of the academic resiliency plans we examined focused on the use of digital technologies in the provision of teaching in the event of a disruption. Common academic resiliency strategies included:

- Planning and implementation: Course, school, faculty, and institution level academic resiliency plans.
- Dedicated website for academic resiliency which includes the following information:
 - Checklist and/or quiz to determine the degree to which individual courses/instructors are prepared for teaching.
 - Preparation instructions and procedures for communicating with students in the event of a disruption.
 - A list of possible continuity options and with links on how to use them.
 - Information on workshops related to the effective use of academic continuity.
 - Contact information on how to get one on one help from IT, instructional designers, etc.
- Dedicated personnel such as an “academic continuity coordinator” to initiate and implement course, school, faculty, and institutional level plans.

Pilot projects: In consultation with the academic resiliency working group, a wide variety of courses throughout SEAD were piloted for resiliency. This exercise helped to:

- Determine the needs of specific disciplines, and types of teaching scenario, in resilience preparation.
- Identify the resources and processes needed for up-scaling resilience throughout all SEAD programmes.
- Determine the effectiveness of academic resiliency planning tools and processes.

Among our pilot courses we found that nearly every course required minimal to substantial changes to be made resilient. However with the appropriate resources (a person to guide planning, course resiliency planning template, and a person with expertise in digital technologies) these changes could be identified and implemented efficiently.

Major recommendations

- 1.1 Develop and implement course, school, and faculty level academic resilience plans. Planning and implementation will be supported as outlined in recommendation 1.2. Planning and implementation priority will be given to “critical” courses: large-enrollment course, or offered once a year, or required by graduating students, or is a pre-requisite for a major or part of a sequence.
- 1.2 Employ a SEAD Resilience Coordinator to assist schools and individual academics in creating course and department resilience plans.
- 1.3 Development of earthquake teaching recovery team within SEAD.
- 1.4 Development of a SEAD “Academic Resiliency” website. This website would contain the following features and information and would provide the resources required for course level resiliency planning outlined in recommendation 1.1.

Implementation Plan

- Employ an academic resilience coordinator to support recommendations 1.1, 1.3, and 1.4.
- Identify critical courses for each school within SEAD.
- Academic resilience coordinator to guide academic staff in development of academic resilience plans for critical courses using the course academic resilience template (Appendix A).
- Academic staff to work with an instructional designer (ITS and CAD) to implement the use of new pedagogy and technology to enhance teaching and increase resiliency.
- Academic resiliency coordinator to work with ITS and CAD to develop an Academic Resiliency website (recommendation 1.4).
- Course level resiliency planning in non-critical courses. Academic resiliency coordinator to implement course level resiliency planning and implementation in non-critical courses using workshops and individual assistance to academic staff. Instructional designer to support implementation pedagogy and technology needs.