Geoscience and geohazards education research at the University of Canterbury

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Science Communication

Project Outcome:
Build and assess curricula that improves students’ communication skills.

Research Objectives:
1. Test and develop evidence-based measures of communication.
2. Variables/Proxies of Communication
3. Assessment of communication (pre- and post -interviews)
4. Compare proxies to interviews.

Science & Risk Communication

Note-taking Skills

Research Objectives:
To understand the content and perceptions of students’ note-taking to deduce strategies students use in the field.

Results:
Analysis of the notebooks revealed note-taking strategies: students preferred to write in their own words (uniqueness; 87) and some had rarely complete notes (completeness; 3).

Several factors influenced the students’ notes:
- Previous field experience, lecturer differences, and gender.

Place-based Learning

New research initiatives seek to understand how people engage with geologic significance in informal and formal learning environments, using the broader notion of landscape heritage.

Natural Hazards Curricula

Goals:
Teach students how to manage a natural hazard crisis in a resource and time-constrained environment with conflicting needs and priorities, and justify their decisions.

Preliminary Results:
- Improved communication skills among students.
- Increased problem-solving, decision-making, and communication skills among students.

Role-play & Simulation

Simulations of disasters require students to synthesize prepare data sets and provide real-time advice in order to minimize impacts from major geologic events.

Geology Content:
- Communication strategies and tools.
- Communication modes and methods.
- Communication objectives and outcomes.

More experienced students (green) wrote more complete notes.

Note-taking Skills

- Unique type
- Dual type
- Complete type
- Completeness (100)

Lecturer Differences

- Completeness
- Competence

Note-taking Skills

- Complete notes
- Complexity (40)

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