Abstract

Engineers often receive limited or no formal training in risk communication and may not have time to be up to date with current communication research. Additionally, communication training of practitioners is often 1-dimensional and recipe-style, and doesn’t explore contextual and situational nature of communication. Over the past couple of years, we have developed innovative curricula to teach risk and crisis communication to upper year geoscience, emergency management and engineering students at the University of Canterbury and affiliated institutions in New Zealand. This research involved measuring students’ communication performances and building a new model for understanding how communication is learned, resulting in statistically significant improvements of students’ perceptions and confidence.

There is considerable experience and innovation within the New Zealand natural hazard risk communication community, so we aim to integrate this knowledge with our research as a ‘value add’ project (funded by EQC and QuakeCoRE), in which we will work with practitioners to create joint recommendations for improving risk and crisis communication, for the benefit of the wider community.

In this paper, we will share the ‘lessons learned’ from our communication training experiences, and why they are important for teaching scientists and engineers how to communicate. Additionally, we will highlight some preliminary findings from engaging with professionals and ask the QuakeCoRE community to consider working with us on this important initiative. Lastly, we will discuss our plan for implementing a knowledge transfer initiative, which is useful for the QuakeCoRE community to consider working with us on this important initiative.

We are now implementing a knowledge transfer initiative (funded by EQC and QuakeCoRE) which brings the lessons from this ongoing research to practitioners.

Risk Communication Lessons

Lesson 1. A holistic and interdisciplinary approach
Understanding and teaching communication requires a holistic approach which incorporates advice from the scholarly literature from many disciplines.

Lesson 2. Communication is cultured and contextualised
Communication is culturally and highly contextualised. Learning about communication should incorporate social, political, economic and cultural elements.

Lesson 3. Communication is multi-faceted
Communication is multi-faceted (i.e., occurs in multiple formats and styles) and should be carefully considered to match the appropriate situation and information needs of the audiences.

Lesson 4. Role-play can be used to improve communication perceptions and confidence
Role-play is effective at improving people’s confidence and perceptions of communication in complex scenarios and to different stakeholders.

Lesson 5. Feedback is key
Meaningful feedback is key to improving communication. It allows students to try out new strategies and receive specific feedback in a safe learning environment.

Lesson 6. The value of evaluation and education research
Education research is vital for teaching communication effectively. Effective practice uses sound pedagogy to build and evaluate communication curricula.

Preliminary Results

Our research involved measuring students’ communication performances and building a new model for understanding how communication is learned, resulting in statistically significant improvements of students’ perceptions and confidence.

Engagement will involve the interview process and subsequent risk communication events (i.e., workshops, seminars, etc.)

We will highlight: 1) Risk communication strategies which are suited to specific audience needs and contexts; 2) Managing risk communication challenges, and 3) Risk communication innovations.

We hope to integrate these best practices into New Zealand’s science and engineering sectors.

Ultimately, the project will develop several types of resources:

- Summary report
- Presentation slide decks

References
