i-Survive Project: Investigating the use of Internet-enabled mobile phones and social networking in disasters and emergencies

Julie Willems
School of Education,
University of New England.

The aim of the forthcoming *i-Survive* project is to evaluate the use of messages, images and videos sent by participating representatives of key community stakeholders during recent Australian and New Zealand disaster and emergency situations from Internet-enabled mobile phones to Web 2.0 social networking websites to seek help or educate others. It is anticipated that the research findings will help guide and instruct the development of m-learning strategies, including applications and protocols, in order to help better plan and prepare for the use of these technologies in future disaster situations.

Keywords: disasters; emergencies; Internet-enabled mobile phones; social networking; m-learning

Introduction

In recent years, the effects of bushfires, floods, cyclones, and storms have endangered the lives of many, including civilians and those participating in emergency response teams. In such situations, simply surviving the emergency or disaster becomes the paramount consideration for those involved. Often, it can be difficult in obtaining up-to-date information in the height of such situations, especially in changeable and hazardous local conditions. For example, thick smoke can hamper visibility and disorient individuals. Understanding local conditions, knowing what to do, receiving warnings and guidance may help reduce fatalities.

In the face of such extraordinary events, Internet-enabled mobile phones (also referred to as Smart phones, iPhone or 3G phones) coupled with Web 2.0 social networking technologies are swiftly becoming not only a means to personally chronicle the events being witnessed and/or experienced, but are also being used to disseminate information, educate and inform the public and emergency services. Through such technologies, civilians, media personnel and emergency response teams have the ability through the viral capacity of the technology, to alert those in danger and educate them in informal and formal ways more swiftly than traditional broadcast media and telecommunications methods may be able to accomplish.

Formal and informal m-learning via social networking

In a recent press release, one global mobile phone company has claimed that by 2015, 80% of people will be accessing the Internet from their mobile devices (Ericsson, 2010) affording access to information anywhere, anytime. In disaster and emergency situations, hand-held portable devices are likely to be the only teaching and communication provision within a given situation. As such, a better implementation of this 'mobile' strategy has the potential to save lives, as well as to improve emergency services responses.

Two Australian emergency services – the Country Fire Authority (CFA) and State Emergency Services (SES) who actively respond to emergency and disaster situations at the state and national level – have already begun to respond to the potential of this technology by providing applications (apps) or creating a status on sites such as *Facebook*. Preliminary discussions indicate that knowing further information about the use of these technologies in the field, and how such technologies might be employed to an even greater effect in disaster and emergency situations, will be beneficial for strategic planning purposes.

The proposed research

Disaster sociologist, Russell Dynes (1998), observes that in examining events in and around emergencies and disasters, the community needs to be the locus of analysis as it is the community – wherever that community is – which has the capacity and resources to activate a response to the disaster. Further, such analysis has cross-national and cross-cultural applicability (Fischer, 2003).

The aim of this project is to characterise the current usage of Internet-enabled mobile phones and social networking in emergency and disaster situations. The project will draw upon ethnographic (Tedlock, 2000) and autoethnographic methodologies (Ellis & Bochner, 2000; Sparks, 2002) for the exploration of subjective use of Internet-enabled new media in the context of disaster situations. This methodology is ideal and appropriate for this research study as, from a sociological viewpoint, human behaviour stems from a social consciousness. Participants for the research will be recruited via a purposive sample of thirty representatives from the civilian population, disaster response teams, broadcast media personnel, emergency services personnel, and representative of key agencies such as a local Country Fire Authority (CFA) and State Emergency Services (SES) who have used these technologies in recent emergency and disaster situations.

Participants will undertake an initial survey and a subsequent interview in order to provide details of their use of these technologies during a particular recent emergency and/or disaster situation. The survey will ask key questions about what aspects of these technologies respondents have used in a disaster or emergency event, what they thought the benefits were, what the challenges/issues were, and what can be suggested for the future situations, including preferences for the design of new purpose-built application. Digital artefacts which the participants shared on social networking sites by the research participants during the emergency or disaster – such as images, videos, messages, and instant messages – will also be collected where able. Follow-up interviews will allow the researcher to further drill down on participant responses to the survey and allow participants an opportunity to further elaborate. Thematic analysis of the data and digital artefacts collected from the research cohort will be conducted in order to identify patterns and to reduce the qualitative data into themes for the facilitation of interpretation (Boyatzis, 1998).

Conclusion

Learning from past issues in and around saving lives, properties, resources and livestock is essential in preparing civilians and emergency response teams for future disasters. What contribution can Internet-enabled mobile phones and social-sharing technologies make to emergency and disaster responses? This project will evaluate the use of messages, images and videos sent during recent Australian and New Zealand disaster and emergency situations from Internet-enabled mobile phones to Web 2.0 social networking websites (for example, *Facebook* and *YouTube*) in order to help better plan and prepare for the use of these technologies in future situations. It will also suggest strategies and useful apps to educate and communicate during the height of such events. It is anticipated that this research will ultimately benefit all citizens in Australasia, for the purposes of saving lives in emergency and disaster situations through m-learning approaches.

Acknowledgement

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Author contact details:
Dr. Julie Willems,
Honorary Adjunct, School of Education,
University of New England.
Email: Julie.Willems@une.edu.au

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