Disaster response *in* Chile

Public libraries as critical communication and information infrastructure

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Public libraries, as public Internet access points and as physical and social community hubs, play an important role in the aftermath of disasters. Information and communication resources are critical. Communities also need spaces for regrouping and organizing. The 2010 earthquake in Chile dramatized the emergency value of these facilities.

Background

What role do public libraries play in disaster management and prevention? The Technology & Social Change Group studied that question by focusing on three main areas: (1) post-disaster communication needs; (2) coordination with citizen groups and government agencies; and (3) success factors in providing emergency communications.

In February 2010, Chile experienced a magnitude 8.8 earthquake (Richter scale) followed by a tsunami, a disaster that devastated coastal and inland regions and caused loss of life and massive destruction. The earthquake severed energy, water, and communication networks (Internet, television, and in some instances radio). The resulting sense of isolation compounded the psychological impact of the disaster.

Emergency communication initiatives were implemented in the aftermath through *public Internet-access points* — schools, libraries, telecenters, and mobile laboratories. These initiatives were largely decentralized, emerging spontaneously from the efforts of actors in businesses, government agencies, and non-governmental organizations.

Research design

This project examined how Chilean public libraries assisted with disaster awareness, response, and prevention. Data was collected from five libraries in two areas most affected by the earthquake (Region VII and Region VIII) as well as metropolitan Santiago. Researchers conducted two sets of activities: (1) semi-structured interviews targeting librarians, library staff members, and government representatives, and (2) focus groups with users and non-users of public Internet access. (The larger study encompassed telecenters, Internet cafés, and other public access venues, however this brief is limited to the role that libraries played.)

The research addressed five issues related to disaster response: (1) communication needs of affected people; (2) communication services offered, and the time required to establish services; (3) factors that contributed to successful outcomes; (4) gaps in emergency communication that were not remedied; and (5) strategies to improve future post-disaster communication services.

Findings

The post-emergency response of library staff was driven by improvisation and local initiative. Libraries were critical emergency infrastructure. There was no immediate national response or coordinated emergency plan. Indeed, government agencies had little awareness of the potential role of these organizations in emergency response — even a year after the earthquake. The creativity and initiative demonstrated at the local level, combined with intense advocacy by BiblioRedes to publicize local efforts, has now earned libraries a seat at the table in emergency planning in Chile — both local and national.

The ability of libraries to respond depended on infrastructure, individual initiative, and community relationships. Three factors determined a library's ability to meet community needs: (1) infrastructure damage (building, connectivity, electricity, etc.); (2) staff initiative and leadership; and (3) the strength of social networks, including links with other institutions,

neighborhood committees, and community stakeholders. Librarians erected tents and established mobile computer labs. They printed flyers and distributed them at other organizations advertising library services.

Libraries provided communication and information access that fulfilled crucial emergency functions. Three ways in which librarians were helpful: (1) to help individuals contact families and friends; (2) to research government assistance resources; and (3) to share that research in public locations, such as shops and churches. They also helped people gather the documentation required to apply for government subsidies to rebuild their homes. The regular trainings provided by BiblioRedes not only honed librarians' information, research, and technology skills. The trainings also built personal connections between librarians that proved invaluable as librarians in different towns helped connect people and share information.

In addition to providing communications access, many libraries served as relief stations, offering space for people needing refuge and providing other emergency assistance. Libraries collected food and clothing and coordinated volunteers for distribution to homes or other locations. Some provided space to emergency response agencies. At Empedrado the librarian engaged in extensive outreach to recruit community members to use the library. When the disaster hit, the library was a trusted social space for new and old users alike. The functions of libraries evolved in the months following the disaster.

Emergency communications were established even in some locations where infrastructure was damaged. To provide emergency communications services, libraries that suffered severe structural damage relocated equipment to unused buildings or emergency tents, or even to staff members' homes.

Social media — Facebook and Twitter — were essential communication tools. Facebook and Twitter enabled library staff to connect, coordinate efforts, and share experiences. Social media was also used to help individuals locate family and friends in distant areas, as well as to find essential information and resources. Using web services, with servers located outside the disaster zone, also improved the effectiveness of communication efforts.

Library services in the aftermath of the 2010 Chilean earthquake shifted people's perceptions of these venues from "places where kids go to do homework" to "invaluable community assets". Libraries were valued prior to 2010, but more as places where children could go to do their homework, get on Facebook, or play computer games. No one imagined them as key actors in emergency situations. Their post-disaster initiative and actions, however, were so valuable that people's perceptions shifted — they are now understood to be invaluable community assets.

Recommendations

Governments at all levels should engage libraries for emergency planning. Libraries need a seat at the table. The Chilean experience shows that libraries play an important role in disaster management

and prevention. They are physically and socially embedded in communities, and well-positioned in terms of infrastructure and expertise to fulfill information and communication needs of various actors in an emergency — households, emergency teams, public agencies, and humanitarian organizations. Governments at all levels should include them in the design and delivery of their emergency planning and response efforts.

Create tools and provide training to organize and communicate in emergency situations. Governments and libraries should work together to develop basic tools and training programs that improve emergency preparedness and response. These might include staff workshops, content that can be added to existing communication materials, online games targeting youth, or platforms that use social media and mobile devices to crowdsource and make sense of crisis information.

Library networks should develop coordinated response plans and engage government planners. Libraries responded to the 2010 disaster in an isolated, piecemeal fashion. They communicated within their own networks, but too infrequently reached beyond the library community. To better respond to crises, efforts should be made to create alliances and coordinate activities and information flows across institutions. Similarly, the library community should organize with similar information actors, such as telecenters, to advocate for inclusion in the development and delivery of government emergency preparedness and response programs.

Technology & Social Change Group
The Technology & Social Change Group (TASCHA) at the University of Washington Information School explores the design, use, and effects of information and communication technologies in communities facing social and economic challenges. With experience in 50 countries, TASCHA brings together a multidisciplinary network of social scientists, engineers, and development practitioners to conduct research, advance knowledge, create public resources, and improve policy and program design. Our purpose? To spark innovation and opportunities for those who need it most. Learn more at **tascha.uw.edu**.

*This research was conducted in partnership with **ATACH** (Asociación de Telecentros Activos de Chile), a network of telecenters, libraries, and civil society organizations that works to bridge the digital divide and promote social inclusion.*

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