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Wikis and Knowledge Management in Complex Emergencies

A Rapid Guide



The Communication and Complex Emergencies Project

The Communication and Complex Emergencies Project is a multi-phase collaboration between the University of Adelaide's Applied Communication Collaborative Research Unit (ACCRU) and the Australian Civil-Military Centre (ACMC). The current phase of the project focuses on a range of new information and communication technologies (ICTs) and digital platforms and their role in supporting emergency and humanitarian relief and assistance processes during complex emergencies.

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1. Introduction

1.1 This guidance paper examines the use of wikis for enhanced knowledge management, lesson learning, situational awareness and communication during complex emergencies. Access to wiki software platforms facilitated by Internet connectivity or network access is helping collaborators and co-workers to generate, manage and disseminate knowledge in new ways. Collaborative tools such as wikis help emergency and humanitarian responders to better understand the situation that they face. They also help to reduce duplication in situational knowledge creation work and in aid response efforts. Wikis provide emergency and humanitarian organisations a level of access to collaborative opportunities, often when emergency response teams are geographically dispersed, that has previously not existed. Because of this, they will make an increasingly important contribution to future emergency and humanitarian aid delivery and practice.

This guidance paper:

- Examines the use of wikis in complex emergencies;
- Addresses the strengths and weaknesses of wikis as a tool for collaboration, knowledge creation, knowledge management and enhanced situational awareness;
- Provides a series of ‘top-tips’ of relevance to humanitarian and emergency practitioners; and
- Offers advice on best practice for knowledge management in emergencies.

1.2 While wikis are an effective tool for knowledge creation and management, more broadly it is critical that all emergency and humanitarian organisations manage knowledge effectively. This is because knowledge management can help them to:

- Avoid repeating mistakes and identify challenges;
- Highlight good practice;
- Increase relevance and effectiveness;
- Influence policy and strategic thinking;
- Make lesson-learning a sustainable process within partnerships or clusters; and
- Develop stronger networks.¹

2. Using Wikis for Knowledge Management in Complex Emergencies: strengths and weaknesses

2.1 Wikis are websites or ‘pages’ that allow users to contribute material to and adapt in real time. Derived from a Hawaiian term meaning ‘quick’, wikis have become synonymous with everyday

Internet use through popular resources such as Wikipedia. A wiki is a tool that allows its users to contribute, collaborate by contributing information or analysis to a common site that is accessed by users to collate, collect and comment on content, therein creating knowledge. Some wikis can be freely accessed, used and adapted by the general public, while others are limited in their access to particular groups with specific thematic or technical interests. In essence, wikis are simple collaborative spaces for writing and reading. Ramos and Piper note that wikis allow:

‘... a process of bottom up editing, where the expertise is not in the hands of the few, but rather emerges from the combined efforts of the many. The ease with which new information can be introduced and/or challenged by a community of users can lead to the creation of authoritative, comprehensive documents, as well as rapid responses to breaking situations such as natural disasters and war-time reporting’.²

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2.2 Platforms such as Wikipedia are highly familiar to millions of people across the globe, but behind the knowledge that such sites publicly promote lay processes of sharing, verification and refinement that are geared towards building knowledge credibility, accuracy and trust. Credible and accurate knowledge can help first responders and humanitarian workers to increase their situational awareness of the emergency and ensure that support flows to those most in need in a timely manner. Wikis are tools that can help users to collectively collate flows of information, so that they can quickly determine and update the available knowledge on the kind of crisis they face.

2.3 Sitting behind the public face of wikis are various software platforms that facilitate the knowledge creation process. For example, Wikipedia is underpinned by the MediaWiki software platform, which is the world's most widely used wiki tool. Other platforms such as MoinMoin and the dedicated Emergency 2.0 Wiki perform similar functions and allow users to engage in either closed access (private) or open access (public) forms of knowledge co-creation.³ Most wiki software tools facilitate basic contributions to or editing of existing wiki 'pages'. After a dedicated 'page' has been created and given a title it is simply a case of contributing and sharing content. The community with access to the wiki 'page' can view this content and make any necessary changes. Wiki software typically allows users to compare different versions of edited text and such tools are useful in assessing the chronology of knowledge production for a given topic. Links to key wiki software tools are provided in the Key Additional Resources section below.

2.4 Emergencies place demands on both victims and responders. During emergencies information is a critical commodity for those seeking guidance on where to obtain humanitarian aid and those trying to deliver it. Traditional approaches to knowledge creation and management in emergencies have relied on organizational partnerships or clusters, as well as desk or liaison officers who collect and collate data as a discrete activity for subsequent sharing:

'In the past, responders have relied on information systems that manage knowledge in silos with the rationale that consolidating unique disaster circumstances, reconciling it with existing organizational knowledge, and presenting a useful summary for decision makers required specific expertise'.⁴

2.5 Tools such as wikis present new opportunities, but they also create a unique set of problems for humanitarian and emergency-focused organizations. Such organisations face significant challenges and risks associated with 'information overload' if knowledge co-creation and management practices become too open and too public. In turn, this may have damaging consequences, including organizations and partnerships being overwhelmed with in-flows of unverified information that may distort situational awareness, i.e. too open a network may lead to inaccurate or biased information being collated into knowledge that then affects service delivery. Another clear risk is that certain perspectives, such as those of low-income populations, the elderly and women and minority groups without access to new ICTs are either lost in the informational deluge or are not included because their marginality creates barriers that restrict their ability to engage with wiki platforms. This places a clear onus on the parallel need for localised face-to-face data collection mechanisms that can help to address issues of social exclusion, while also enhancing overall accuracy and veracity.

2.6 While using wikis may help to democratize and decentralize collaborative knowledge generation beyond the constraints associated with traditional knowledge management in emergencies, like all practical tools there are both strengths and weaknesses associated with their use in emergencies:

Strengths:

- Can be used in contexts with access to Internet or location-specific networks;
- Can be accessed remotely and support collaboration that would otherwise be impossible;

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- Can be private and ‘closed’ or ‘open’ and public;
- The software that supports wiki creation is free or low cost;
- Wiki software is accessible, stable and easy to use;
- Multiple co-workers can work on a common wiki ‘page’ or issue at the same time in ‘real time’, i.e. knowledge contributions and editing are collaborative;
- Can be updated and corrected continually, i.e. they are a ‘living’ knowledge resource;
- Wikis are easy to search, use and are very familiar to regular users of the Internet;
- Can help to build communities of practice in both specific and broad thematic areas, i.e. wikis on a broad emergency such as a cyclone versus specific pages relating to issues arising from specific disease outbreaks;
- Enhances ownership over and transparency of knowledge; and
- Works best when integrated into robust and reliable local data collection mechanisms.

Weaknesses:

- Wikis requires literacy and a reasonable degree of e-literacy of software tools;
- Requires connection to an Internet service provider or context specific network, i.e. an office network;
- May not be an effective or manageable knowledge creation tool if open to too many users;
- May be subject to abuse if not carefully monitored;
- Maintaining the technology necessary to facilitate wiki-based knowledge contribution may be difficult in certain contexts, especially where communications infrastructure has been affected; and
- Do not work well if not supported effectively by local data collection mechanisms.

3. ‘Top tips’ for using Wikis in Emergencies

3.1 If considering using wikis to enhance knowledge generation, management and situational awareness during an emergency the following ‘top tips’ will help identify some of the most important things to consider to ensure success:

Before the Emergency

1. Humanitarian and emergency-focused organizations need to routinely assess knowledge creation and management practices as part of their routine work in order to understand whether they are appropriate, geared towards supporting partnerships, efficient and timely. Wikis support existing knowledge creation and management efforts; they do not replace them.
2. Wiki-enabled knowledge management systems help to span organisational boundaries by allowing knowledge to be translated, consolidated and transferred from one organisation to another. Engaging key partners through wikis helps support existing partnerships or clusters, face-to-face dialogues and enhances decision-making.
3. Organisations utilising wikis need to decide whether all emergency workers can contribute to knowledge co-creation or whether access should be limited to certain groups, contributors or occupation types (i.e. emergency responders). Limiting access may help focus knowledge co-creation efforts and any subsequent dissemination of the knowledge generated will help to increase wider situational awareness of the emergency for partners.
4. Wikis are produced via specific software platforms and more highly skilled workers who are familiar with such tools have a key role to play in ensuring that co-workers become familiar with any wiki knowledge creation tools to be used.
5. Organisations utilising wikis should ensure that staff understand very clearly how to contribute to the knowledge co-creation

processes, what constitutes good information and bad information and that any information contributed to a wiki needs to be accurate, verified and supplied in a timely manner if it is to be useful during emergencies.

6. In order for wikis to be effective, clear organisational knowledge management strategies and objectives need to be set concerning the purpose of the collaborations, the type of knowledge being sought, who should be involved in creating it and how it will be accessed and used by co-workers.

During the Emergency

1. Limiting access to wikis and to knowledge creation processes can help reduce large influxes of data or excessive editing. Selected contributors act as filters discarding unhelpful information and prioritising important findings. Building local networks of contributors to wikis helps to ensure that effective information filtering occurs.
2. Wiki contributors have a duty to ensure that any information provided is accurate and verified, i.e. the event is known to have occurred. If information is not accurate or verified there is a real possibility that knowledge generation will be imperfect and aid delivery potentially biased towards areas that are not in as much need as others.
3. Wiki-based collaborations are always more effective if they are supported by an experienced moderator. Moderators can help a collaboration stay focused and on track by ensuring contributions conform to the initial goals set for the exercise. 'Wiki-wars', where contributors are in conflict and edit out each other's material, can be avoided with good moderation.
4. It is useful to 'seedcorn' a wiki by having some initial text available for users to engage with and to get it going. It is more difficult for users when presented with a blank 'page'. Wikis work best when they are championed by individuals who seek inputs from a dedicated community of users.

After the Emergency

1. Learning lessons from the experience of using wikis to strengthen knowledge and situational awareness is critical. Knowledge management strategies should be assessed and their strengths and weaknesses discussed with partners and clusters. Learning lessons about how wikis supported the delivery of humanitarian and emergency aid is important to improving future practice.
2. Wikis are an effective tool for collaboration, but they are just one part of often-complex mechanisms designed to elicit information from affected communities, turn that information into knowledge and then apply it to enhance situational awareness and aid delivery. Think carefully about where and how wikis will fit into future knowledge generation and management structures.

4. Managing Knowledge in Emergencies

4.1 During emergencies the manner in which knowledge is created, managed and disseminated is critical to the success of the response:

'In any complex humanitarian emergency, there are certain questions that humanitarian aid organizations want answered. Certain background and situational information is needed by all humanitarian organizations: NGOs, UN agencies, governments and donors. Other types of information are more specifically needed by different personnel within these aid organizations. For example, humanitarian organization policy makers want 'big picture snapshot' analysis in order to understand the issues, to make decisions on providing assistance, and to be alerted to problems and obstacles. Field personnel and project and desk officers in aid organizations, on the other hand, need more detailed operational and programmatic information in order to plan and implement humanitarian assistance and reconstruction programs'.⁵

Traditional 'on-the-ground' information officer roles in which individuals are given the sole responsibility for collecting and collating

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knowledge are starting to give way to more hybrid and democratic knowledge management systems (KMS) in which new collaborative tools such as wikis are complementing and transforming existing knowledge structures.

4.2 While wikis are changing the way knowledge is created and shared, effective knowledge management is reliant upon some core principles that help to ensure that the knowledge generated through tools such as wikis is put to the best possible use. 'Top tips' for effective knowledge management include:

1. Knowledge management generation and management systems are most sustainable when developed in conjunction with key partners or clusters. Input from locally situated emergency or humanitarian workers is critical to the data collection process, increased situational awareness and ensuring the accuracy and veracity of information. Strategies for how information will be collected and what tools or processes will be applied to transform it into situational knowledge need to be put in place prior to emergencies occurring. This places a clear emphasis on partner and cluster dialogue in the preparedness phase of emergencies.
2. Establishing an advisory group across partnerships and clusters with a role to define knowledge generation and management approaches and strategies will help to ensure that knowledge concerns are not ignored, evaporate or become an ad-hoc secondary thought during emergencies. Developing clear terms of reference for such a group, including goals and approach, can help formalize the 'knowledge' work of such groups.
3. Effective knowledge generation and management structures can help humanitarian and emergency workers at the local level make more timely decisions and increase the effectiveness of aid. Effective knowledge generation and feedback systems, such as wikis, play an important role in helping local workers contribute to increased situational awareness and the prioritization of aid to areas in the greatest need.

4. The outputs from knowledge generation and management structures should be clear and concise to ensure ease of access and engagement for users. Wikis allow easy knowledge contribution and access, but may not be feasible in contexts where infrastructure has been destroyed. Whatever means of collating, managing and disseminating knowledge is utilised, timeliness, accuracy and veracity are critical criteria to be applied to knowledge processes.
5. Learning from experience is essential if knowledge generation and management structures and practices are to improve. Understanding what worked and what did not in terms of the way information was collected, how it was collated and communicated to inform situational awareness is of utmost importance. All knowledge management strategies should include provisions for learning exercises to drive future improvements. In this respect, setting goals and measurable indicators around knowledge generation and management approaches and strategies is useful for assessing effectiveness, i.e. timeframes for information provision, the number of briefs or wikis developed, the number of times the content was accessed and used. Learning lessons concerning knowledge generation and management practices requires that such lessons are communicated to partners and clusters at all levels in an appropriate manner. Establishing effective feedback mechanisms for learning can enhance wider knowledge capacity.

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