

Community informatics and knowledge mobilization: New roles for communities, governments, and universities

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Abstract: Knowledge mobilization refers to the processes and practices of making knowledge accessible to broad audiences – and thereby useful to individuals and groups in society. Knowledge mobilization involves developing ways for groups to work together to produce and share knowledge. The term has been in use for some decades, often in counterposition to knowledge management, which involves developing systems for managing the organization and transfer of expert and strategic knowledge by corporate and governmental institutions. Regional and national programs of broadband connectivity for community networks are providing both practitioners and researchers with an opportunity to examine the role of community members and others in shaping the social and organizational uses of ICTs. This paper will address the question of the relationship of community informatics to knowledge mobilization. Knowledge mobilization can problematize the question of what counts as knowledge in the first place, thereby opening up the possibility of validating a variety of non-normative realms of expertise, including for example, Aboriginal ways of knowing. Similarly, knowledge mobilization raises the questions of how different spheres of knowledge can be communicated across different spheres of discourse and of how researchers can and should involve themselves in the emergence of the community network. The presenters will describe their experience in major national research and development projects in Canada, examining the Alberta SuperNet and its relationship to the development of community networks. The authors will encourage interaction and discussion with and among session participants.

Keywords: knowledge mobilization, knowledge management, Alberta SuperNet, diaspora

Knowledge mobilization as praxis in the community network

Regional and national programs of broadband connectivity for community networks are providing both practitioners and researchers with an opportunity to examine the role of community members and others in shaping the social and organizational uses of ICTs. Individuals and groups are applying these technologies in adaptive ways, seeking to strengthen community cohesiveness and to increase the inclusive reach of the community network. Community networks are therefore deeply involved in facilitating learning by community members – learning about what is sometimes called ‘best practices’ for using technologies in support of community aspirations. Knowledge mobilization is a form of learning that should be of interest to the community network because it is concerned with processes and practices for making knowledge about ICT use (among other areas of knowledge) accessible to broad audiences – and thereby useful to individuals and groups.

The term *knowledge mobilization* has been in use for some decades, often in counterposition to knowledge management, which involves developing systems for managing the organization and transfer of expert and strategic knowledge by corporate and governmental institutions (Davenport 2005; Fischer 2006). There are many strands of knowledge mobilization, with varying degrees of relevance and usefulness to the culture and values of community informatics. Some knowledge-mobilization efforts, for example, are concerned with encouraging the dissemination of the outcomes of scientific and social-scientific research more widely within

society (The knowledge broker model 2008). This approach may be useful to community networks in at least two ways. It may provide insights and applications for using ICTs in support of the community network. Or it may be useful if a community network has a stake in seeking potential solutions or responses to scientific issues, as in the case of risk-assessment in relation to an environmental question the community may be addressing. In other instances, the emphasis in a knowledge-management initiative is on using plain language to allow non-specialists to read and understand research reports (About knowledge mobilization 2008). http://www.publicknowledge.ca/knowledge_mobilization_e.htm.

This paper will deal with two heuristic questions related to knowledge mobilization for community informatics that are somewhat broader in scope than these last two examples. The first question is, *What is it about the 'knowledge' in knowledge mobilization that is likely to be of particular interest to community informatics?* Knowledge mobilization raises the question of how particular knowledge domains can be communicated across different spheres of discourse. A description of what that domain can or should be is an important first step in considering the use of knowledge mobilization in community informatics. The second question to be considered is *What will be left behind once knowledge is 'mobilized'?* If knowledge mobilization represents a shift in how a community network views its basic processes of learning, there will presumably be a movement not simply *towards* some desirable processes and practices, but also *away* from other practices and processes. Again, an initial consideration of the character and nature of the 'gains and losses' of knowledge mobilization would be a valuable activity for community networks.

Considering these two heuristic questions will allow us to see that knowledge mobilization has much deeper and more significant implications for community networks and the area of community informatics than simply identifying and implementing 'best practices.' Knowledge mobilization can lead to a broader process of revisiting the community network's culture, assumptions, and values.

Knowledge mobilization as epistemological reflection

The first heuristic question implied in relation to knowledge mobilization and its use in community networks is concerned with the 'knowledge' that is of interest to community networks. To begin to address this question, we should first note that knowledge mobilization, like any activity that implies epistemological assumptions, directs our attention to theoretical foundations and in particular the unconscious use of a particular communication model (Bakardjieva & Feenberg 2004; Adria 2008). Knowledge mobilization is a concept devised in the context of formal organizational transactions and processes. In the 1980s, organizations began to use online and database technologies to support the work of groups within the organization. The task was especially important for large organizations, which were looking for ways to reduce the number of people working on a long-term basis without the losing organization's core knowledge held by individuals. At the same time, Wenger (1998) and others studied organizational and other kinds of learning that could take place within a social context. Rather than learning in classrooms or in other relatively pristine contexts, Wenger wanted to encourage learning that was engaged and whose subjects were the messy situations and relationships in the same places and times in which people experienced them. This sort of learning has been called situated learning.

Social software in its early stages was therefore created for the purpose of increasing organizational effectiveness. Online tools, including some of the systems now used by community networks, were intended to provide opportunities for gathering information, engaging in conversations, and expressing acquired knowledge at the time and place that these opportunities would best support learning, with learning devoted to articulating and expressing knowledge that otherwise might remain tacit. Because these times and places were not likely to

coincide with the schedules and locations of formal classrooms in schools and universities, social software (or *groupware*, as it was called in business) would be used on a continuous basis for supporting learning whenever and wherever individuals and groups would choose. Learning was viewed as occurring *episodically* and would be made available as a service on an as-needed, when-needed basis. Communications technologies have been increasing the extent to which such *episodic* service encounters can be arranged.

The design principle of 'service on demand' has therefore been part of the online cultural milieu for some time, giving rise to what has been described as characterizing the 'consumption' model of the virtual community, which may be contrasted with the 'community' model (Feenberg & Bakardjieva 2004). The consumption model involves searching for and retrieving information, which is made available for a price. In the consumption model, users rarely talk with one another:

Privacy, anonymity, reliability, speed, and visual appeal are desired properties of this virtual space, mobilizing armies of designers in search of competitive technical solutions (1).

By contrast, the community model represents 'relatively stable, long-term online group associations mediated by the Internet' (2). These associations are largely uneconomic, providing returns that are connected to the community's values, norms, and meanings (Etzioni & Etzioni 1999). The community model of knowledge mobilization, which is associated with such developments as information commons paradigm, provides in important respects an alternative to the consumption model. The beliefs, values, and mores associated with the community model are connected to the belief that knowledge is a collective process, rather than an individual accomplishment. Rather than viewing knowledge as private property, intellectual rights are protected through institutional arrangements such as Creative Commons.

An important example of the community model with which some key dimensions may be considered is the online diaspora community. Describing the diasporic community networks in Canada and elsewhere, Karim (2003) states that diasporic migrations of the last few centuries 'were largely influenced by colonisation and trading connections well as by the steady improvements in transport and communications' (3). Broadcasting media have been used for the development of intra-diasporic communications, but Karim points out that the Internet offers a means of bypassing the hierarchy of broadcast media:

The extensive use by diasporic groups of online services like the Internet Relay Chat, e-mail, Usenet, Listserv and the World Wide Web is allowing for relatively easy connections for members of communities residing in various continents. As opposed to the broadcast model of communications, which, apart from offering little access to minority groups, is linear, hierarchical and capital-intensive, online media allow easier access and are non-linear, largely non-hierarchical and relatively cheaper (2003, 13).

The creation of virtual communities by diaspora communities is occurring at a rapid rate, and national communities in North America and Europe will continue to experience the influence of this cultural churn (Laguerre 2002). Using the Internet, the prospects for a new life are described for migrants, the excitement of moving to a land in which opportunities seem to be available. The arrival is documented as a period of adjustments, disappointments, and changed expectations. The Internet allows individuals to anticipate the prospects for their assimilation into a new society, to make sense of the immersive experience of landing in and adapting to the new society, and then to reflect these experiences back to prospective immigrants. The final stage is that of the immigrant looking back to the old country, providing a view of what prospective immigrants, as well as those who have recently arrived, can expect

to find in their new home. The online diaspora may also convey the character of the migrant experience to the next wave of prospective immigrants (Karim 2003; Ogan 2001; Portes 1999; Portes et al. 1999). An immigrant's experience is provided as a life-story, indicating the stages by which the immigration and acculturation are accomplished. The immigrant story may be shared within the diasporic community but also across diasporic communities, to become a common narrative that supports the validity and meaning of the experience across cultures and ethnicities.

Using the diasporic community network as an example, what might we conclude about the potential uses of knowledge mobilization to enhance the group's capacities? Let us consider three aspects of the relationship between the community network, its technology, and the potential use of knowledge mobilization: the reliance of the diaspora community on technology, the extent to which ICTs impose limitations on the group's aspirations, and the potential for knowledge mobilization to ameliorate such limitations. If we consider the diaspora community's degree of reliance on ICTs, it is high because members are widely dispersed in space and the life-cycle of membership (from migrant to mentor) is relatively long in time, to be measured in years. In terms of the limits that ICTs impose, the stories and narratives that are characteristic of the community network's core activities are captured largely through text – the postings that individuals create over a period of years in order to 'tell the story' of becoming a citizen of another country as a retrospective narrative (something that happened in the past) but also the narrative as it is unfolding for those now experiencing the process of migrating. Text is a limit imposed by the technology. If ICTs impose certain limits on the community network, knowledge mobilization may result in reducing some of the community network's limits and perhaps eliminating other limits. In addition to the limitation of text, we have changing technology standards and capabilities, differing levels of skills and expertise on the part of community members, and a diverse range of community activities. As a consequence, the use of knowledge mobilization could be considerable. For example, community videoconferencing pilot projects could be of interest to the community network, because they could offer the possibility of removing the limit of textuality. In this example, the use of videoconferencing, videoclips, and images would raise the question of anonymity and the emotional tone of contributions. Perhaps mentors would be less likely to be willing to contribute video and voice images of themselves. The character of the community network's knowledge of one of its potentially defining characteristics, the possibility for anonymity, could come to the surface in ways that were unanticipated by members of the community.

Knowledge mobilization as unlearning

The second question to be considered in relation to the use of knowledge mobilization in community informatics is, *What is left behind once knowledge is 'mobilized'*? If knowledge mobilization represents a change in how a community network views its basic processes of learning, there will be some things the community network is doing now that it will not be doing in the future. Dede (1994) argues that a knowledge-mobilization initiative in relation to the use of ICTs in education must (a) contribute to creating, sharing, and mastering knowledge, rather than the transmission model of information; and (b) it must also include all the information that is required for successfully implementing an exemplary practice. Then he states that a knowledge-mobilization effort must help practitioners not only learn about an innovative practice, which is covered by the first two points, but also 'unlearn' the beliefs, assumptions, and culture associated with existing and previous practice.

The use of podcasting within a teachers' community of practice provides a possible example. Podcasting is an innovation that represents potential application within teaching using

the computer to produce and present sound recordings to students. The topics for the recordings are likely to be relatively specialized to the extent that they support a learning community. Teachers using podcasts may record weekly commentaries for students to listen to for review purposes. Podcasts may be used to introduce topics that bear repetition, perhaps a difficult concept or definition.

Teachers using podcasting become part of a new community of practice, one in which the creative use of technology becomes the central area of interest. The teacher now manages membership in the larger community of teachers, for whom an elaborate set of professional, legal, and even personal norms. If the norms of the new community of practice conflict with those of the larger community of practice, the teacher may decide to disregard or at least refine or revisit these older norms. For example, the teacher using podcasting may feel that posting some interactions with students on the web, rather than keeping them all within the confines of the classroom, may be desirable. The teacher may begin to ‘unlearn’ a previously held professional value, replacing or refining it according to the norms of the new community of practice. If such ‘unlearning’ were never to take place, it could be asked whether podcasting as an innovation in teaching has truly had any deep or lasting significance.

Knowledge mobilization in this instance would involve more than learning about and applying a technological innovation. It would involve changing or revisiting group norms. Likewise, for the community network, knowledge mobilization can be a means not simply of receiving, understanding, and applying new knowledge about potential avenues for improving processes and practices. It can also be an occasion for returning to assumptions and values underlying the cohesiveness of the group and to offer the opportunity for members to reaffirm and, if appropriate, revise those assumptions and values. In this sense, knowledge mobilization may mean ‘taking on’ some things while ‘leaving behind’ other things within the community network.

A concluding example: The Alberta SuperNet

What is one implication of the preceding discussion that could be used as an example for practitioners and researchers of community networks? We could consider the Alberta SuperNet, which is a broadly accessible broadband network in Canada completed in 2005, connecting 429 rural communities and 4200 government offices. Through a multidisciplinary research team working from 2002 to 2006, community networks were given the opportunity to consider future uses of technology, given the new access to the broadband network they now enjoyed (Mitchell et al., 2006).

The first heuristic question considered above and applied to the SuperNet is related to the ‘knowledge’ that is of interest to community networks. We stated earlier that knowledge mobilization, like any activity that implies epistemological assumptions, directs our attention to key theoretical foundations and in particular to what may be unconscious uses of a particular communication model. The SuperNet was conceived of and designed as a part of an economic strategy, which would see rural areas of the province having access to broadband services for prices that would become roughly similar to those of urban residents. As a consequence of this initial priority, much of the language and rhetoric of the SuperNet revolved around business cases for making effective use of this rebalanced economic context. In other words, the consumption model of the Internet was emphasized, perhaps to the detriment of the community model. Knowledge mobilization efforts have therefore been directed towards such goals as creating regional and local business clusters, rather than developing and mobilizing local cultural knowledge that could support such economic initiatives.

The second heuristic question that was considered earlier in the paper was related to the potential requirement of knowledge mobilization that individuals and groups must ‘unlearn’ the

beliefs, assumptions, and culture associated with existing and previous practice. In this regard, we may consider one of the 'business areas' that researchers examined within the SuperNet, which was the public library sector. Researchers assumed that decisions involving technology adoption in the public library should take into account how community members viewed technology in relation to the mandate and function of the local public library. The public library is an institution with a long and deep history involving an interplay of local cultural knowledge, government support, and organizational autonomy. Those with an interest and stake in the adoption of technology in the public library refer to this history when they consider change in the public library in ways that may unnecessarily narrow the possibilities open to them. In their responses to interview and focus-group questions, individuals' understanding of the library's historical role and function in the community influenced their views about opportunities for technology adoption within the library (Adria 2007). The future use of technology in the public library depended on how people understood the appropriate mandate and function of the public library in their community. In order to enhance efforts to encourage the community use of the SuperNet within the public library, some of the previously held assumptions and practices associated with the SuperNet would need to be 'unlearned.' Knowledge mobilization for community networks involving the public library would involve considering innovative applications of technology but would need to set these innovations in the knowledge domain of the history and culture of the public library.

In conclusion, it was noted that programs of broadband connectivity for community networks are providing opportunities for community-informatics practitioners and scholars to examine the role of the community network in shaping the social and organizational uses of ICTs. Individuals and groups are often applying and using these technologies in adaptive ways. They are seeking to strengthen community cohesiveness and to lengthen the reach of the community network. Knowledge mobilization is a form of learning that should be of interest to those associated with the development of community networks because it is concerned with making knowledge about ICTs and social networks *useful* to individuals and groups. In considering the two heuristic questions of the character of 'knowledge' as an epistemological category and the notion of 'unlearning' practices, the concept of knowledge mobilization could become a valuable and useful contribution to the praxis of the community network.

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