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METHODOLOGICAL DIVERSITY: COMMUNITY-DRIVEN DEVELOPMENT OF A DIGITAL LIBRARY FOR NORTHERN COMMUNITIES (Paper)

Abstract: The objective of this paper is to report on a community-driven methodological framework developed for the exploration and development of a digital library for northern communities. More specifically, this paper addresses methodological approaches and techniques for studying the communities in the Inuvialuit Settlement Region in Canada's north.

Résumé:

1. Introduction

The Digital Library North (DLN) project is an example of a research and development project with a particular focus on the understanding of northern communities, collaboration with those communities and developing an evidence-based digital library infrastructure to support the organization of and equal access to information. This project has built upon community engagement through involving community leaders, members and organizations from the beginning of the inception of the idea. The key objectives of the project include the identification

of information needs and information seeking behaviours of Inuvialuit Settlement Region communities, development of a digital library platform, creation of a culturally appropriate metadata framework, development of requirements for multilingual user interfaces and conducting a user-centred evaluation of the digital library. This paper presents a community-driven methodological framework for the development of a digital library for northern communities. The paper places a particular emphasis on the importance of and the necessity for adopting a multi-method research framework to identify, engage with and study northern communities as a critical success factor for developing culturally appropriate and relevant digital libraries.

2. Prior Research

A number of studies have adopted ethnography as a method for investigating communities and their information needs in order to design information systems. Crabtree et al. (2000, p. 667) define ethnography as "a naturalistic method in that it relies upon material drawn from the firsthand experience of a fieldworker in some setting and seeks to present a portrait of life as seen and understood by those who live and work within the domain concerned. This objective elucidates the rationale behind the method's insistence on the development of an 'appreciative stance; through the direct involvement of the researcher in the setting under investigation." More specifically, Srinivasan (2004, 2007) elaborates on the notion of ethnographic process of engaging communities to develop information systems, architectures and ontologies. He argues that "acknowledging the cultural practices and belief systems of a set of users may allow systems to be more effectively created and deployed into particular contexts." (Srinivasan, 2007, p. 723). Further, he notes that when the researcher can also serve as a community ethnographer, he or she can begin to identify community-specific behaviors and realities (Srinivasan, 2005, 2006; Srinivasan & Huang, 2005). Involving the leaders of different sub-communities and persuading them to join and to lead the project is part of his methodology (Srinivasan, 2007, p. 723). Crabtree et al. (2000) further note that ethnography, with its stress on the situational observation of interactions within their natural settings would lend itself to gaining a social perspective on how to design systems.

Given the focus of the DLN project, we believe it is critical to investigate the information needs and information-seeking behaviour of communities and users to inform the design and development of metadata frameworks, search user interfaces and digital libraries. Understanding information needs and seeking is only part of the project's broader community engagement in that it allows for closer collaboration with individuals and organizations. However, it should be emphasized that standard and formal data gathering techniques and methodologies may not serve the purpose well. We are proposing a more holistic and inclusive approach to study and understand communities and their characteristics.

When conducting community-driven and community-based research, it is critically important to be aware of and to use culturally appropriate methods. Lee (2011) reports that it can be difficult to find indigenous research participants due to a long history in which they have not benefitted from research results. Balanoff et al. (2006) stress the need to decolonize methodologies by collaborating with community members (including those fluent in the local language), at all stages of a research project—from planning, through to research studies and dissemination (Bushnell 2009; Hollowell 2009). It is imperative that elders and community participants understand the purpose and application of the research, be remunerated for their work, be given

credit for their input and the opportunity to review and approve work before it is disseminated (Tyson 1999; Hollowell 2009).

Our theoretical framework draws upon multiple approaches and methodologies. Specific research tools include qualitative, phenomenological studies involving interviews or conversations (Walts 2011; Bushnell 2009; Thorpe et al. 2001) and surveys (Lee 2011). Ethnographic studies (focus groups, oral histories, participant observation, archival research, site visits) are also valuable in understanding complex cultural information and issues (Fielding, 1993; Hollowell 2009), and are particularly relevant and suitable for this study, as they allow us to conduct observation and interviews, review documentation, and immerse in the community's culture and the worldviews of its members (Bates 2005). We diversified and expanded our methodologies and data gathering techniques to develop a more inclusive and holistic framework for our research, including the active involvement of community leaders and organizations, information audits, information tables and environmental scanning. The next section provides a tabular presentation of our research methodology framework.

3. Proposed Methodological Framework

The detailed methodological framework should take into account information seeking and use, digital library design, metadata design, language as well as how community engagement and partnership should be conceptualized and operationalized in a research project. The methodology should provide a holistic perspective of three key facets, namely people, organizations and information resources.

[Insert Table 1 here]

4. Conclusion

Community identification, engagement and partnership is an important component of and a critical success factor for conducting research on northern communities. The cultural, social and political nuances of understanding northern communities call for the use of a broad range of methodologies and data gathering techniques. Our methodological framework allows researchers to gain a deeper and a more accurate perspective of how to design and develop community-focused digital libraries for northern communities. This paper will also provide detailed examples of the gathered and analyzed data to demonstrate its effectiveness, applicability and transferability. The paper connects to the overall conference theme on Community and to a number of sub-themes such as "Community research and methods" and "Community benefit and engagement".

Acknowledgements

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Method	Techniques	Output
Environmental scan	• Information collections • Libraries • Community organizations • Government organizations • Physical collections • Digital collections • Websites, digital libraries, databases, publications	- A model of environmental scan for Inuvialuit Settlement Region with cultural, social, political, technological and economic factors - Directory of organizations and websites with relevant content
Ethnography	• Observation • Interviews • Focus groups • Field visits	- Field notes - Summary notes - Observation notes
Information tables at community centres and events	• Informal and casual interaction with members of community • Story telling (e.g. Inuvialuit Day)	- Observation notes - Stories
Participation in community workshops	• Mitt making • Bannock making	- Observation notes
Survey	• In-person questionnaire • Online questionnaire	- Quantitative data about the information needs and seeking behaviour of various community members
Information audit (review of documents and collections) to support the development of metadata framework	• Cultural heritage collections • Language materials • Historical documents • Archives • Close examination of information collections	- Field notes - Typology of digital and physical collections *Inventory of collections:* - Type of material - Format - Subject area - Location
Community leader engagement (project collaborator)	*Identifying and connecting with:* • Community organizations • Key people • Identification of various user communities and stakeholders	- Directory of community organizations - Typology of potential and actual users - Forging connection with relevant organizations and media outlets
Visual approach and photography	• Capturing images by researchers and research assistants	*Images of:* - Organizations - Community centres - Stores - Libraries - Geographic entities (streets, lakes, rivers, etc.) - Cultural objects

Table1. Research and data gathering methods