Community Inquiry Labs as Effective Community Informatics Tools

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Introduction

Today there are organizations, conferences, websites, listservs, books, and graduate programs devoted to community informatics: the idea that it is imperative to develop better means of employing information and communication technologies (ICTs) to help communities achieve their social, economic, and cultural goals (Bieber, et al., 2002). Primary challenges we face in the field of community informatics are the:

- Construction of *theory* that is adequate to address the complexity of the processes involved in creating and using ICTs to achieve a

> The proposed UI Institute for Community Informatics is devoted to research, learning, and public engagement programs that unite people across and beyond the University, and from all walks of life, in identifying, investigating, and taking action—enabled by information and communication technologies—on conditions that affect the well-being of residents in towns, cities, and rural areas.

  community's goals.

- Creation of community informatics *tools* that are both powerful and accessible to diverse users;

- Development of an *open process* for developing shared capacity in the form of knowledge, skills, and tools; and

- Generation of *reflective action* with a wide range of actual communities, organizations, and individuals, especially in terms of creating appropriate university/community partnerships.

Meeting these challenges is crucial as we work to address community aspirations, capabilities, and problems. We are contributing to this effort through our current research and development on Community Inquiry Labs (CILs). A CIL is most importantly a concept, although we are developing web-based tools that are freely available to anyone wishing to support community inquiry online (http://inquiry.uiuc.edu/cil). Our ultimate aim is to empower communities by supporting the development of the next generation of creative ICT ideas, people, tools, and designs.

Theory

Our work is rooted in community of inquiry theory (derived from the philosophy of American Pragmatism), which views knowledge as emergent, communally constructed, and a melding of creativity and critical thinking. Turgeon (1998) defines a community of inquiry as "a group (a social setting) of individuals who use dialogue (interaction among participants) to search out the problematic borders of a puzzling concept…"

Creating a community of inquiry signifies bringing people from all walks of life together to develop shared capacity and work on common problems. We use he word "Community" to emphasize support for collaborative activity and for creating knowledge that is connected to people's values, history, and lived experiences. "Inquiry" points to support for open-ended, democratic, participatory engagement; and "Laboratory" points to learning that brings theory and action together in an experimental and critical manner. Underlying community inquiry theory is a long tradition of scholarship and social action by Jane Addams, John Dewey, Paolo Freire, and others. As Glassman (2001) notes, the "disturbed equilibrium" that occurs when knowledge held by diverse individuals comes into contact--and conflicts--is the necessary grounding for true learning and change in a democratic society.

In fostering shared inquiry that tears down traditional boundaries of race, class, gender, economic privilege, and institutional bases, Community Inquiry Labs provide us with the opportunity to pursue new questions about community informatics. For example, how can we craft ICTs that promote the establishment and maintenance of vibrant inquiry around a community's assets and problems? How can ICTs help build relationships based on

equitable participation and trust among all members of a community? How can we support collaborative research on community informatics that will lead to more accurate findings and theories because they are inclusive of the situations, experiences, and perspectives of the full range of society? How can we provide for two-way knowledge transfer in the realm of community informatics, giving researchers the opportunity to inform their work by collaborating with people from all walks of life in developing theories and experimenting with practice? How can inquiry form a conceptual and practical framework for the design and evaluation of ICTs to achieve a community's goals?

Tools

A Community Inquiry Lab (CIL) is a web-based suite of Open Source software tools that together form an interactive website, the type of "community, content, and collaboration management system" described by Schneider, Frété, and Synteta (2002). People create CILs on their own, to support their activities within and among groups. A CIL is created by filling out a simple web form that includes checking off which CIL bricks or tools you want to include in your website. Currently available CIL bricks include:

- Bulletin Board (based on phpBB software);

- Document Center, for uploading and sharing files;

- Bookmark tool, to build and display a set of useful web links;

- Syllabus;

- List tool (which can be used as a blog, a project management tool, an address book, a glossary, etc.); and

- Inquiry tool (for creating and displaying digital "inquiry units," which people have created in a host of genres, such as lesson plans, action plans, meeting minutes, research reports, recipes, journal entries, and policy statements).

Other bricks are under development, including a calendar, a lab notebook, and a catalog tool. We are also devising a mechanism for users to create new bricks to add to CILs.

Open Process

Community Inquiry Labs are themselves developed through a process of participative inquiry and peer production, in which users collaborate with developers in an iterative cycle of design and evaluation. Instead of the more traditional sequence of design, then build, then use, we reverse the process. While it sounds counterintuitive, we have found the "use, build, design" approach to be highly effective. People are welcome to use whatever versions of whatever bricks are currently available. Through *utilizing* CILs in the context of their actual communities and situations, users are then able to provide well-grounded *design* insights that are employed to *build* new versions of bricks and brand new bricks. Also crucial to the open process is that users and designers are not really separated into two distinct classes; rather, all are participants in an active community of inquiry around the creation of ICTs to support community, collaboration, and content management. Each participant has unique perspectives to contribute; each participant also learns and benefits in a unique way.

Specific mechanisms that support participative inquiry in system design and development include: weekly meetings that are open to all and can be attended via a voice conference call or video conferencing; and, on the other hand, activities and situations of use (such as classroom teaching, neighborhood activism, and research projects) that are open to participation from other CIL developers. Through creating CILs as Open Source software products, we also invite worldwide collaboration in their development.

Reflective Action

Community Inquiry Lab development is supported by the National Science Foundation Center for Advanced Materials for the Purification of Water with Systems (CAMPWS). CILs offer the online "collaboratory" CAMPWS needs to link researchers, teachers, students, community members, policy makers, and industry in learning about the science, technology, and impact of water purification. Thus, we have a particular motive for supporting the

adoption of CILs in as many different settings of use as possible, and then reflecting on how to design most effectively to meet different needs. At present there are around 100 CILs adapted for different kinds of use settings, including: neighborhood activism, university courses, policy initiatives, university and community-based research projects, committee work, K-12 education, conference presentations, international professional associations, and art projects (for the complete list, see http://inquiry.uiuc.edu/cil).

We also seek out collaborations with groups that themselves have a strong tradition of action and critical reflection; this shared ethos provides an especially fertile ground for CIL development. For example, SisterNet is a network of African American women based in Champaign-Urbana , IL that is committed to nurturing healthy lifestyles and community activism. SisterNet women, led by Imani Bazzell, have envisioned a new model for Black women's organizing in which action, learning, and support circles are dedicated to creating wholeness and balance through physical, emotional, spiritual, and intellectual health. SisterNet also sees its efforts as an essential part of a political strategy to resist oppression and shape livable communities. For the past several years, SisterNet has been a key participant in the collaborative effort to build Community Inquiry Labs software. Through the Afya project (Bishop, et al., 2001; 2003), SisterNet members were responsible for co-designing the very first Community Inquiry Lab, which helped them, in turn, increase their ability to harness ICTs for their local learning and action projects.

Guided by a philosophy of self-actualization and critical thought, self-determination, and self-reliance, The Puerto Rican Cultural Center (PRCC) in Chicago's Humboldt Park has spent 30 years as a galvanizing force in this low-resource neighborhood, supporting residents' action around local issues such as cultural preservation, economic development, gang violence, AIDS, teen pregnancy, racism, and lack of educational opportunities. In 2003, faculty and students from the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign joined forces with neighborhood activists in the PRCC to create the Paseo Boricua Community Library Project. The project represents an active community of inquiry that has:

- Operated a "street academy" where at-risk youth are learning librarianship, including how to catalog the PRCC's collections of books, art and artifacts, and human rights network archives, in order to make them available to the public for the first time;
- Collaboratively developed a free, Open Source online catalog that will be added to the suite of Community Inquiry Lab tools for others to use, including the NSF CAMPWS project, which needed an online catalog to disseminate information about its affiliates' scientific instruments and engineering equipment; and
- Contributed to community inquiry and informatics theory and practice by providing new understandings of how people from all walks of life can work together across distance, time, and radically different institutions to learn together and achieve shared goals.

CILs and Community Networking

The Community Inquiry Lab Collaborative has a strong working relationship with Prairienet (http://www.prairienet.org), the ten-year old community network serving Central Illinois. We have begun planning for ways to integrate our theory, tools, and ways of working related to community informatics. Specifically, we are working toward further expanding, refining, and documenting CIL software so that it can be used more easily by people interested in starting a community network. We envision CILs as providing a free, robust, Open Source application package for building a community network in a bottom up, grassroots fashion. One of the biggest challenges is scaling up: How can the CILs created by individual community groups and organizations be aggregated and displayed in such a way that the entire community is represented online in a coherent manner.

References

Bieber, M., Civille, R., Gurstein, M., & White, N. (Nov. 2002). A white paper exploring research trends and issues in the emerging field of community informatics.
[http://www.communityinformatics.org/content/CI_whitepaper.pdf]

Bishop, A. P., Bazzell, I., Mehra, B., & Smith, C. (2001). Afya: Social and digital technologies that reach across the digital divide. *First Monday, 6*(4). [http://www.firstmonday.org/issues/issue6_4/]

Bishop, A. P., Mehra, B., Bazzell, I., & Smith, C. (2003). Reframing digital library evaluation as participatory action research. In Bishop, A. P., Van House, N. A., & Buttenfield, B. (eds.). *Digital library use: Social practice in design and evaluation*. Cambridge: MIT Press.

Glassman, M. (2001). Dewey and Vygotsky: Society, experience, and inquiry in educational practice. Educational Researcher, 30 (4), 3-14.

Schneider, D., Frété, C., Synteta, V. (2002). Community, content and collaboration management systems: Socio-constructivist scenarios for the masses? (Short Paper presented at Ed Media 2002). [http://tecfa.unige.ch/proj/seed/catalog/docs/edmedia2002.pdf]

Turgeon, W. (1998). Metaphysical horizons of philosophy for children. Twentieth World Congress of Philosophy, Boston, MA August 10-15. [http://www.bu.edu/wcp/Papers/Chil/ChilTurg.htm]

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