Supporting Community-Building in Digital Libraries: A Pilot Study of LibraryThing

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ABSTRACT

Digital libraries should improve their support of social interactions, especially the building of communities around and within themselves, to integrate better with social groups and communities across boundaries. This poster reports on ongoing work that has developed an online survey instrument to measure support for community-building activities in digital libraries. In a small pilot sample of users of LibraryThing, the level of support for community-building was low and the social networks of participants with regard to LibraryThing and its users were not wide-ranging or dense. Community-building activity occurred, but without the support of LibraryThing as a boundary object. Continuing research will survey larger samples from a broader population, add open-ended questions to the instrument, and incorporate qualitative methods, improving validity and generalizability. This research into community-building in LibraryThing and other digital libraries will contribute to the important tasks of learning more about and improving support for the social contexts of digital libraries.

Keywords

Digital libraries, communities, boundary objects, social network analysis, social informatics

INTRODUCTION

Digital libraries are often considered as digital content systems *or* institutions and services (Borgman, 1999), but many library and information science (LIS) researchers and practitioners have argued they are inherently social organizations and environments that must support and build the communities that use them through both content *and* services (Bearman, 2007; Gazan, 2008; Levy & Marshall, 1995; Lynch, 2005; Van House, 2003). However, many digital libraries were and are not designed or developed with social contexts in mind, and often do not support these

well (Adams & Blandford, 2004; Pomerantz, 2008). They should improve this support of social interactions to integrate better with, cross the boundaries of, and build the communities that use them (Lynch, 2005).

This poster reports on ongoing research on this important problem. An online survey instrument was developed and piloted that measures the support, as judged by users, for community-building in digital libraries, using LibraryThing (librarything.com) as a test case. The instrument answers the following research question: What level of support for community-building does LibraryThing provide, as judged by the users and communities that use its content and services?

COMMUNITIES, NETWORKS, AND BOUNDARIES

Numerous conceptions of communities are found in the literature; these include online or virtual communities (see e.g. Burnett, Dickey, Kazmer, & Chudoba, 2003; Preece & Maloney-Krichmar, 2003), distance learning communities (see e.g. Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000; Kazmer, 2005), social worlds (Strauss, 1978), and information worlds (Burnett & Jaeger, 2008). This study adopts Lave and Wenger's concept of *communities of practice* (Wenger, 2006): groups who share a particular practice, profession, or task, as well as related concerns. It also borrows Brown and Duguid's (2002) idea of *networks of practice*: broader groups or social networks (Garton, Haythornthwaite, & Wellman, 1997) that still have a common practice, but work less closely together across organizational boundaries. In addition, communities and networks may instead revolve around common interests or learning needs, rather than strictly a practice.

When such communities intersect, they use *boundary objects* (Star & Griesemer, 1989)—that cross between multiple worlds and adapt to many of them—to support translation between communities. Digital libraries should act as successful boundary objects, translating between and building the social worlds and communities that use them (Star, Bowker, & Neumann, 2003; Van House, 2003).

LIBRARYTHING

LibraryThing (librarything.com) is a social digital library which allows users to catalog and tag books, mark their favorites, and share collections of books with others. Other features include groups, forums, and user profile pages, as

well as book ratings, reviews, and suggestions. While research has examined LibraryThing's tagging features and community-built folksonomy, there is no known research into its users' community-building activities.

METHOD

Based on the literature, the author crafted multiple survey questions from the following six dimensions to measure community-building activity: (a) interaction frequency, (b) discussion frequency, (c) closeness of ties, (d) method(s) of interaction, (e) how relationships started, and (f) perception of support. The first five are based on social network analysis (Garton et al., 1997), particularly its concepts of range and density; this method has rarely been used in digital library research, but has high face validity for this problem. The last dimension, added to help better answer the "judgment" part of the research question, draws from communities of practice (Wenger, 2006).

The author obtained a convenience sample for the pilot test by requesting volunteers via an e-mail list for LIS doctoral students at a large southeastern U.S. research university; the e-mail list served as the sampling frame. Eight students who had used LibraryThing within the past year volunteered and received a link to the anonymous Web-based survey; one had already graduated and thus was determined ineligible. Five complete responses were received within three weeks.

RESULTS AND DISCUSSION

Preliminary findings indicated that the level of support provided by LibraryThing for community-building activities was relatively low. There was a low frequency of interaction and discussion, a relative lack of close ties of participants, low usage of most methods of interaction, and a lack of relationships started via LibraryThing. The range and density of the participants' social networks with relation to LibraryThing were also low. Participants' communities and networks did not include LibraryThing to a great extent. These findings, although limited by the small sample size, parallel previous literature on communities and interaction (Haythornthwaite, 2007; Haythornthwaite et al., 2000; Hara, Shachaf, & Stoerger, 2009).

Closeness of Ties

One participant indicated they had known a close friend for many years, but rarely interacted with them. This calls into question the validity of the instrument's measure of close ties. However, Marsden and Campbell (1984, p. 482) noted that tie strength relies not just on "depth" but also "time spent in [a] relationship." The closeness indicated was thus likely due to the friendship's length rather than its depth. The participant did not perceive high community-building support, and the literature also implies frequency is more important than length (Hara et al., 2009; Haythornthwaite, 2007; Preece & Maloney-Krichmar, 2003). Adding open-ended questions, content analysis, and follow-up qualitative interviews in future research should help to further explore the role of this aspect in community-building support.

Community-Building, But Without Support

Findings also implied at least two participants had engaged in community-building activities, but that LibraryThing and its social features did not support or cause such activity directly. They interacted more frequently with others than with LibraryThing users, they had built strong community connections via other media but did not heavily discuss LibraryThing or its content with those contacts, and LibraryThing and its users were not part of their networks.

This is a failure on the part of LibraryThing to serve as a boundary object between individuals and communities. It did not successfully assist in creating and maintaining connections, interactions, and integration within and between users' social networks (see Haythornthwaite, 2007) Instead, other means likely supported such interactions. Future research should draw larger samples from broader populations and employ qualitative interviews and content analysis to explore this troubling finding on the degree of success of digital libraries as boundary objects.

CONCLUSION AND FUTURE RESEARCH

The survey instrument succeeded in validly measuring, within a small pilot sample, a low level of community-building in LibraryThing. Future research will address limitations of this study and explore its interesting findings by adding open-ended survey questions, follow-up interviews, and content analysis to obtain richer, qualitative data on community-building activities and further improve validity. Mixed methods research that draws larger samples from a broader population will also help to confirm whether the dimensions of community-building used are valid, reliable, and generalizable across different settings and larger populations. This research into how successfully LibraryThing and other digital libraries act as boundary objects, connecting users to each other and to other communities and networks, will help the field learn more about and improve their support for social contexts.

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