The Public Library Catalogue as a Social Space: Transaction Log Analysis of User Interaction with Social Discovery Systems

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Keywords: library catalogues; social catalogues; social discovery systems; metadata; social tagging

1. Objectives

The public library catalogue has long acted as an important and fundamental medium between users and their information needs. The traditional goals and objectives of the library catalogue are to enable users to search a library's collection to find items pertaining to specific titles, authors, or subjects. Today's library catalogues are competing against powerful alternatives for information discovery. If the public library catalogue is to continue to have relevance to its users, it needs to move beyond its current inventory model, where all content is designed and controlled by library staff, and client interaction with catalogue content is limited, to a social catalogue, where users can contribute to, and interact with information and with each other. The social catalogue can offer several benefits to public library patrons and staff:

- Users can establish a social space where they share and discuss common reading, listening, and viewing interests;
- Users without easy access to a library branch (e.g., due to illness, limitations of physical mobility, lack of local branch, etc.) can connect to other members of the library and library staff via the catalogue;
- Users can provide a grassroots, democratic "readers' advisory" service, whereby they make recommendations for future reading, for example, based upon shared interests;
- Users can classify items in the catalogue with their own terms (or tags), which may be more reflective of their language and needs than the formal subject headings that are traditionally assigned by library staff;
- Library staff can compile recommended reading/listening/viewing lists based on the discussion and recommendations made by users in the catalogue; and
- Library staff can use the discussions and recommendations provided by the users to inform their purchasing decisions for new items to add to the library collection.

Although social discovery systems have been used by commercial services such as Amazon (http://www.amazon.com) for several years, their use in public libraries in Canada has thus far been very limited and there have been no comprehensive studies to evaluate their usability amongst library users and staff. Most recent usability studies have focused on either the more traditional online catalogue, where most content is controlled by library staff, or on library web portals (e.g., Antell & Huang 2008; Battleson, Booth, & Weintrop, 2001; Brantley, Armstrong, & Lewis, 2006; Cockrell & Jayne, 2002; Moulaison, 2008). The specific goal of this study is to examine and compare how library users access, use, and interact with two social discovery systems used in two Canadian public library systems. Transaction log analysis will be conducted to answer the following research questions:

1. How do public library users interact with social discovery systems? Specifically, which enhanced catalogue features do they use, e.g., faceted navigation, user-contributed content such as tagging, reviews, and ratings, sorting features, etc., and with which frequency?

https://doi.org/10.23106/dcmi.952109745

2. How does usage between the two social discovery systems compare? Specifically, are there commonalities or differences between how public library users use different social discovery systems?
3. Does the use of social discovery systems change over time? Specifically, is the use of the features in social discovery systems consistent over time?

2. Data collection and analysis methods

The social discovery systems provided by AquaBrowser and BiblioCommons will be examined, commencing March 1, 2010. These two systems were chosen because they are presently the only ones used in public libraries in Canada. The target population of the study will be library users in the Halifax and Edmonton public libraries. Daily transaction logs of the social discovery systems will be compiled over a four-month period; measures logged and examined include:

- Number of queries
- Duration of queries
- Use of relevance ranking features
- Use of sorting features
- Type of search used (e.g., basic or advanced)
- Use of tagging feature
- Use of posted reviews
- Use of ratings features
- Use of faceted navigation
- Use of corrected spelling features

An ethogram will be designed to categorize and define the behavioural patterns of the users, such as:

- Search process (Type of search used, e.g., keyword, subject)
- View results (How user chooses to have the system display the results)
- Viewer assistance (Did you mean? Automatic spell check)
- Navigation (Use of faceted navigation)
- User-contributed content (Tagging, ratings, reviews)

The TLA results will be compared between the two social discovery systems to determine patterns in user behaviour, and whether this behaviour is consistent over the four-month period of data collection. Since TLA does not explain the reasons for users' interaction with the systems, nor the extent to which they are satisfied with the systems, future research will focus on usability studies, consisting of structured observations, questionnaires and focus groups with users and library staff.

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https://doi.org/10.23106/dcmi.952109745