

Sense-Making Library 2.0: A User's Perspective

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【摘要】

Web 2.0 概念於圖書館的應用日益普及。圖書館和圖書館員在面對各式網路科技所帶來的衝擊與挑戰之時，逐漸體認到現有的圖書資訊服務可以藉由 Web 2.0 的概念導入於服務設計、開發、供應、和傳遞，來提升其品質與服務效率，一新名詞 Library 2.0 也由此而生。然而從圖資界以 Library 2.0 為研究對象的文獻中可以發現大多數的研究採技術導向，著重介紹性質的描述 Library 2.0 之概念及廣泛探討 Library 2.0 科技在圖書館的應用，和實驗性質的評估某項 Library 2.0 工具並從使用者的角度歸納出優缺點，提供服務改善建議。本文所描述之研究，希望能跳脫過去技術觀點與泛論的型式，借鏡科技的社會建構理論(Social Construction of Technology)之角度與現象學之哲學思維，視圖書館採用 Library 2.0 概念與技術為一創新發明歷程，透過詮釋之彈性(interpretive flexibility)與技術之框架與視野(technological frame)，分析 Library 2.0 在圖書館裡的各種社會角色、意義、及其生命循環周期。本研究將分為兩個部分，分別為(一)使用者如何詮釋 Web 2.0 的意義及功能，以及其 Web 2.0 經驗；(二)使用者如何評估 Web 2.0 圖資服務的品質(quality)與成效(success)，以及 Web 2.0 之於圖書館和使用的影響(impact)。希望透過宏觀的實證研究，了解 Web 2.0 在圖書館場域裡多面向的複雜度和豐富性，並提供圖書館在日後進行科技研發及導入時的參考依據。

【關鍵字】

Web 2.0, library 2.0, 科技的社會建構理論

【Keywords】

Web 2.0, library 2.0, Social construction of technology, evaluation

Background

The concept of Web 2.0 began to receive much attention after the O'Reilly Media Web Conference in 2004 and Tim O'Reilly's paper "What is Web 2.0" was published in 2005 (O'Reilly, 2005). With the flexible and open nature of the above Web 2.0 principles, new and innovative Web 2.0 technologies and applications are being created. Libraries and librarians in facing the challenges from the Internet and the Web have to offer, recognize how existing library services might be enhanced by incorporating Web 2.0 concepts in service design, development, provision, and delivery. Up to date, numerous Web 2.0 applications and Web 2.0-inspired features have been created and widely implemented on the library websites to extend and expand existing services. Level of Web 2.0 implementation and integration on the library websites ranges from a simple blog space for announcement and communication and RSS subscription, to a highly-integrated OPAC with full-featured Web 2.0 applications. Libraries and librarians are in a situation where they have to constantly assess the Web 2.0 opportunities and develop services. On the other hand, library users are now facing a very complex online environment in which so many options are available, yet so little guidance can be obtained.

Recent literature on Web 2.0 in the library context tends to have a very descriptive and technology-centric focus. So far, we've seen numerous enthusiastic discussions of product-based projects that deal with design and development of Web 2.0-inspired OPAC features and applications (see Casey, 2006; Maness, 2006; Miller, 2005). Also, research into the alternative application of Web 2.0 in other disciplines, such as higher education and e-learning (Alexander, 2006; Kamel Boulos & Wheeler, 2007; Lemley & Burnham, 2009; Sigala, 2008), and investigation of phenomena underlying Web 2.0 framework, such as social networking (Fiehn, 2008; Chu & Nalani Meulemans, 2008) are widely conducted. However, very limited research efforts are undertaken in investigating the environment and institutional structure in which an innovation, in this case, Web 2.0,

is created within the library context. Research on user studies with special regard to usability evaluation and analysis of Web 2.0 tools and features such as blogs or social tagging is always very popular among Library and Information Science (LIS) community (see Chalon et al, 2008). Also, acknowledging the variability in users' perspectives about the use and interpretation of Web 2.0 features on the library websites is of great importance, but still short of adequate understanding.

This paper, in responding to such research gap and in advancing the understanding of the role of Web 2.0 in the library context, is divided into two parts: (1) Use: an exploration of users experience of Web 2.0 services and the impact of Web 2.0 on patrons; and (2) Evaluation: a construction of framework for evaluation of success and impact. Through the dual lenses of social construction of technology (SCOT) and phenomenology, this study aims to develop a framework of Web 2.0 life cycle in the library context, and reconstruct and evaluate the user experience of those services. Part of the theoretical approach underlying this research is inspired by the works of Dalbello (2004; 2005a; 2005b), in which an innovation is examined socially and culturally, and made sense through the interpretation of its relevant social groups.

Research Objectives

This study aims to achieve two objectives. Each has a distinctive focus and well-defined research boundary:

- Use Focus: To understand the use of Web 2.0 services from a socio-technical perspective
 - Awareness and impression of Web 2.0 services
 - Users' experience and interaction with Web 2.0 services
 - Novel uses of Web 2.0 services
- Evaluation Focus: Impacts of Web 2.0 services to library users

Literature Review

Recent literature on Web 2.0 in the library context tends to take a technology-centric perspective in that Web 2.0 is often viewed as an innovative concept, and libraries in responding to the changing information needs and behavior, are considering the benefits of Web 2.0 approach for the design and development of library services. Linh (2008) when organizing a review article for Web 2.0 literature and its relation to academic libraries, finds that early literature of Web 2.0 tends to focus on the nature and meaning of Web 2.0 and its potential applications, and more recent publications are the “how-to” guides that help librarians to implement Web 2.0 applications, while the most recent one tends to focus on only one Web 2.0 technologies or several of those in relation to the library. This review of literature will focus on the evaluation issues of the Web 2.0-based library services.

Research on evaluation of Web 2.0-based library services takes two primary focuses, one on the technical side, another on the consideration of problems and issues of Web 2.0 applications.

Researchers and librarians who are interested in the technical aspect of Web 2.0 evaluation, usually conduct functional usability evaluation. Those studies tend to discuss the user behavior of interacting with a single or more Web 2.0 applications on the library Websites, and evaluation is made based on the application's usability, functionality, compatibility with the library Website design and architecture, and general user satisfaction. For example, Clyde (2004a; 2004b) investigates library Weblogs in a number of aspects such as the appearance, purposes, and ways to find blogs, and discusses the essential question “why so few” libraries are using weblogs effectively. Bar-Ilan (2007) studies the use of blogs by libraries and librarians, specifically about the characteristics of posting of library blogs, and finds that blogs are a novel information channel for transforming and disseminating information both to the

information professionals and to the users. Evaluation studies of instant messaging found that it can be used as a communication medium for virtual reference services (Foley, 2001; Ruppel & Fagan, 2002; Stoffel & Tucker, 2004). The main criticism to social tagging or folksonomy, is relativism, and especially about the question “relative to what?” (Petersen, 2006). Besides these, there are some pieces of research that point to the general evaluation of the usage, usability and the utilities of library Websites (Mankelow, 2004; Duong, 2005).

Another area of research focuses on discovering the impacts of Web 2.0 on library users, as well as the problems and issues associated with the implementation and use of Web 2.0 services. Privacy considerations have recently become a central focus of discussion. In the paper titled “Online social networking sites and privacy: Revisiting ethical considerations for a new generation of technology,” Fernandez (2009) argues that social networking sites and similar technologies are not neutral in nature, so libraries and librarians should stay informed about how these technologies affect the privacy of their patrons. Similar privacy concerns can be found in other studies as follow (Chu & Meulemans, 2008; Charingo & Barnett-Ellis, 2007). Another issue is concerned with the methodology of evaluation. Libraries and librarians need to conduct evaluation in order to improve the user satisfaction of library services. However, there are obstacles to evaluating the library services that derive from emerging Web 2.0 technologies. For virtual reference, Ronan, Reakes, and Cornwell (2003) claims that “the standards and guidelines for the reference profession are lagging behind the rapidly evolving world of online synchronous reference” (p. 227). Booth (2007) also proposes that when evaluating Web 2.0 services, a wider evaluation framework than we typically use is required; and that is a framework that includes the evaluation of social aspects and impact of adoption and use.

In summary, libraries and librarians are fully aware of the potential and possibility of Web 2.0 technologies being applied to the existing library services. However, as synthesized above in the literature review, there are quite a lot of

general and introductory publications on Web 2.0 in the library context, and these publications fall into a number of categories: position papers that discuss the nature of Web 2.0, general discussion that focuses on Web 2.0 implications for the library Web services, technical evaluation of one or more Web 2.0 services in the libraries, and consideration of problems and issues of Web 2.0 applications. We also found that there are more publications that fall under the former two categories, while there's little research-based empirical literature that focuses on the evaluation of applications of Web 2.0 from librarians and users' perspectives.

Study Design and Methods

Theoretical Framework

This study employs the Social Construction of Technology (SCOT) model of innovation adoption and its applications to Web 2.0 in the library context. The SCOT model was first developed by European researchers within the discipline of history of science and technology during the 1980's, and proposed that technology and innovation is embedded in social systems (Bijker, 1995). This theoretical framework is chosen because it encompasses a diversified perspective that enables research focus to move beyond the control and technological speculation based on the technical functions and capabilities to focus on how people adopt, design, deploy, and appropriate the technology in actual social setting (Dutton, Cheong, Park, 2004). According to Pinch and Bijker (1986), SCOT is used to understand four dimensions surrounding the innovation: (1) interpretive flexibility; (2) relevant social groups; (3) closure and stabilization; and (4) technological frame.

Data Collection

Data collection will be conducted using in-depth interview. During the interview, 10-15 students who have been using the Library 2.0 services will be asked to comment on two aspects: (1) Use: an exploration of users experience of Web 2.0 services and the impact of Web 2.0 on patrons; and (2) Evaluation: a construction of framework for evaluation of success and impact. The interview will last 60-90

minutes long. Interview data will be recorded and analyzed qualitatively.

Preliminary Findings

Technological Frames

Interpretation 1: Nature of Technology

Nature of technology deals with the impression of the functionalities and capabilities of an innovation. Students expressed both their positive as well as negative comments toward Library 2.0 services. Positive comments include more available to choose from, more direct interaction with library services, more interesting library experiences. Negative comments include no up-to-date information, unstable system, not useful services.

Interpretation 2: Technology Strategy

Students' understandings of the adoption of Library 2.0 services are two-fold: one is for declarative purpose, another is for operational purpose. Declarative purpose is understood through students' belief that Library 2.0 services have become a publicity tool for the libraries to demonstrate to their customers and other libraries that they are on the Library 2.0 bandwagon. Operational purpose is based on the belief that Library 2.0 services are created to enhance users' experience with the libraries.

Interpretation 3: Technology-In-Use

Library 2.0 services are being used for several novel purposes. Library Facebook, Twitter, and Plurk sites were used to search for their friends. Tag clouds and popular search terms were used to navigate popular interests. Blogs were used to engage in conversation with library staff.

Evaluation of Impact

Students concluded that Library 2.0 services have impacted them intellectually and socially; however, more socially than intellectually. Intellectually they become more attached to what libraries have to offer, either online or in the libraries. In addition, they see Library 2.0 services as a medium to translate theory of library user experience to practice. Socially, users felt more engaged with the campus life, and more empowered to have a direct interaction with the greater campus context. It is only through the Library 2.0 services that the users felt that they are a part of the library community.

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