



USE OF WEB 2.0 FOR CREATING SCHOLARLY COMMUNICATION BY LIBRARY PROFESSIONALS IN INDIA

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ABSTRACT

Purpose - *How researchers communicate their work and their findings vary in different subjects or disciplines, and in different institutional settings. Such differences have a strong influence on how library professionals, as researchers approach the adoption of new information and communications technologies. This article explores how library professionals as researchers, making use of various web 2.0 tools in the course of their research work, the factors that encourage or inhibit adoption and researchers' attitudes towards web 2.0 and other forms of communication.*

Methodology - *The study began with an online as well as offline survey, which collected information about library professional's information gathering and dissemination habits as researchers and their attitudes towards web 2.0. The study was conducted among 47 college librarians from India through a questionnaire.*

Findings - *The survey demonstrate that majority of the library professionals are not aware and user-friendly with the use of web 2.0 tools. Researchers are broadly supportive in their attitudes towards web 2.0: even non-users are more likely to define themselves as enthusiastic, than as skeptical or uninterested. But while there are some variations between disciplines, web 2.0 tools are for the most part not considered to be particularly important. This is unlikely to change until significant numbers of researchers see clear benefits from the use of web 2.0.*

Practical Implications - *The findings of the study will certainly help the library professionals to explore and use new web 2.0 tools to the optimum level for the research work as well as to provide the web-based services effectively to library users. The findings of this study will be a guidance tool for workshop and training organizers to provide essential skills to the library professionals for the successful adoption of Web 2.0 in college libraries.*

Originality/Value – *This is the original study conducted on the adoption and use of Web 2.0 technologies by library professionals in research and creating scholarly communication through using the questionnaire as a tool of data collection.*

Keywords

Web 2.0, Library professionals, Scholarly Communication

Introduction

‘Despite an increasing interest in web 2.0 as a platform and enabler for e-research, we have limited understanding of the factors influencing adoption.’ Research Information Network Report. Web 2.0 tools and resources encourage collaboration and re-purposing of content, as well as supporting users to develop innovative ways to interact with and use these web-based platforms. There are many benefits of using these resources for educational and research purposes, like Web 2.0 will enable researchers to create, annotate, review, reuse and repurpose information/data. It is also believed that Web 2.0 will promote new forms of scholarly communications and drive innovation. Currently, however, there is little evidence as to the extent to which researchers are using or intend to use these resources. In addition, there is little understanding of the factors influencing the adoption of Web 2.0 tools and resources. This paper sets out to examine, in detail, the extent to which librarians use Web 2.0 tools and resources, for generation and distribution of scholarly communication and the factors which influence adoption.

Web 2.0

While web 2.0 is often identified with particular technical forms, it may be more accurately characterised as the coupling of particular technologies and social practices: ‘Web 2.0 encompasses a variety of different meanings that include an increased emphasis on user-generated content, data and content sharing and collaborative effort, together with the use of various kinds of social software, new ways of interacting with web-based applications, and

the use of the web as a platform for generating, re-purposing and consuming content.’ (Anderson, 2007)

Web 2.0 and scholarly communication

Researchers use a wide variety of tools and services that could be termed web 2.0. Deciding which services conform to the kind of definition outlined above is not easy. The study includes common forms such as blogs and wikis, widely adopted generic services such as video sharing, bookmarking or reference-sharing, and social networking systems offered by commercial providers.

The term scholarly communications are often considered to refer primarily to the process of publishing peer-reviewed research. We take a broader view, building on Thorin (2003), and Research Information Network Report treats scholarly communications as covering all the activities involved in:

- conducting research, developing ideas and informal communications;
- preparing, shaping and communicating what will become formal research outputs;
- disseminating formal outputs;
- managing personal careers, and research teams and programs;
- communicating scholarly ideas to broader communities.

Research question

The study design based on the following research question:

How are web 2.0 technologies being used by the library professionals for creating and sharing scholarly communication?

Objectives of the study

The main objectives of the study are the following

1. To understand the current web-based services used by library professionals

2. To know the frequency of use of web-based services by library professionals for research work
3. To understand the difficulty faced by the researchers while using web information
4. To know the view of library professionals towards web 2.0 as a platform for research

Method

The study was mainly based on primary data. In order to achieve the objectives of the study, a structured questionnaire was constructed to collect data. The study was conducted among 47 librarians randomly selected from different college libraries in India. In the present study, the main purpose of the questionnaire was to collect the data on the use of web information services by library professionals as research scholars. The data were analyzed using percentage method. The study was designed not only to capture current attitudes and patterns of adoption but also to identify researchers' needs and aspirations, and problems they encounter. The study began with a survey, which collected information about researchers' information gathering and dissemination habits and their attitudes towards web 2.0.

Analysis and Findings

The Motive behind creating scholarly information:

Table 1 presents respondents motive behind creating scholarly information.

For Ph. D.	For writing research articles	For Major/Minor Research	Other (Please Specify)
23	35	15	0

The data in Table 1 indicates that majority of librarians create scholarly information for writing research articles.

Use of Web 2.0 for research purpose

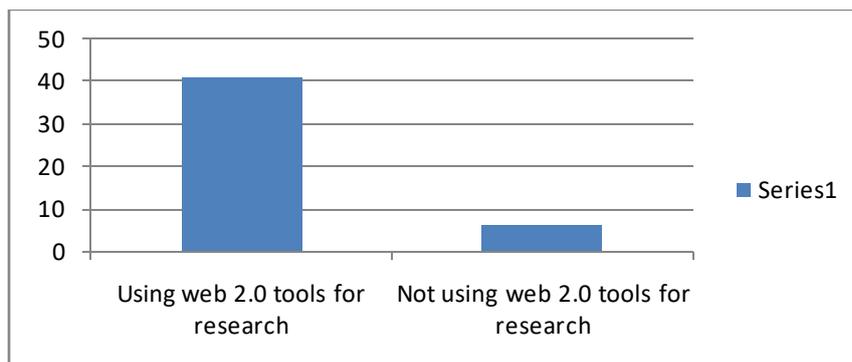


Figure: 1 Use of web 2.0 for research purpose

Figure 1 shows that 87% librarians use web 2.0 for research purpose. The survey data highlights that researchers continue to place considerable emphasis on traditional forms of scholarly communication.

Use of different web 2.0 tools by librarians

It is true that social media tools like Facebook, Twitter, LinkedIn, etc. are gaining momentum in all sectors. In view of the above, it was assessed to know the level of awareness of the social media tools among the respondents.

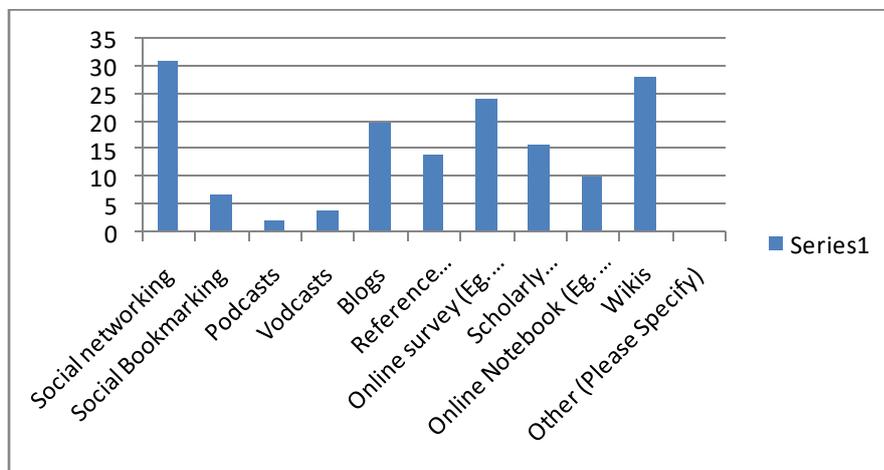


Figure 2: Use of different web 2.0 tools

It is clear from Figure 2 that social networking sites are the most familiar tool among librarians. 66% respondents are using social networking sites for sharing their opinions with other professionals, followed by Wiki (60%), online surveys (51%), blogs (43%), scholarly communities (34%), Reference Manager software (30%), online notebook (21%), Social

bookmarking (15%), Vodcasts (9%), Podcasts (4%). Therefore it is clear that majority of respondents are aware of social media tools which can be used for knowledge sharing. On the other hand, only a meager percentage of respondents are not aware of only a few tools like vodcasts and podcasts.

Online social media serve as excellent information searching and browsing platforms that enable the sharing and communication of ideas, linking to professional groups of interest and creating online communities of practice. Online social communication/networking websites such as Facebook, Twitter, and LinkedIn are getting more popularity among library professionals.

A small subset of researchers is using blogs enthusiastically in order to engage with their colleagues, raise their profiles and extend their networks. And we found broad support for the use of social networking tools to widen collaborations. There are also signs that some researchers – frequent users of web 2.0 services in particular – are using them to learn about research communities beyond their personal networks or to help them filter the explosion of information with which they are often faced.

Use of Google utilities for research:

We all know that Google is an internet powerhouse. It's not only a search engine but it also offers several services useful for researchers.

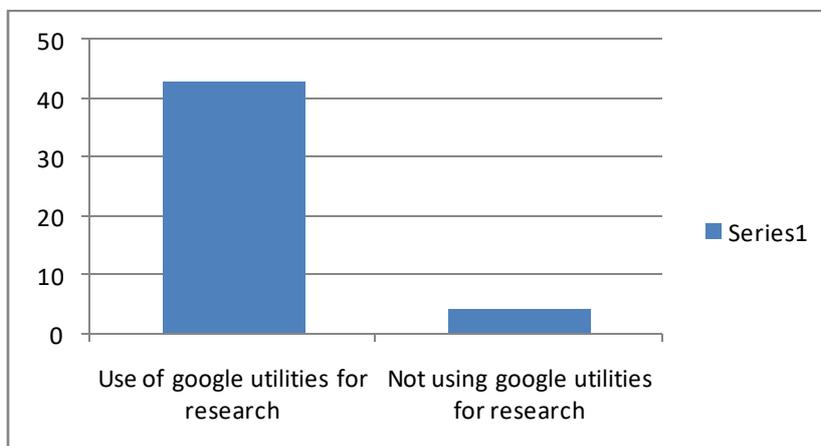


Figure 3: Use of Google utilities for research

Figure 3 shows that 91% library professionals use Google utilities for research purpose. Use of Google as a search engine is one of the most popular search approaches to Web information seeking by library professionals also.

Use of different Google utilities/services for research by library professionals:

Librarians differ in their professional assessments and personal opinions of Google, but most agree that Google has become a staple for research work. Many librarians as researchers rely on Google Web Search, and a growing number also use other Google tools, including Google Scholar, Google Book Search, Google forms, Google Docs, Google Reader, Google Scholar citations, Google News, etc.

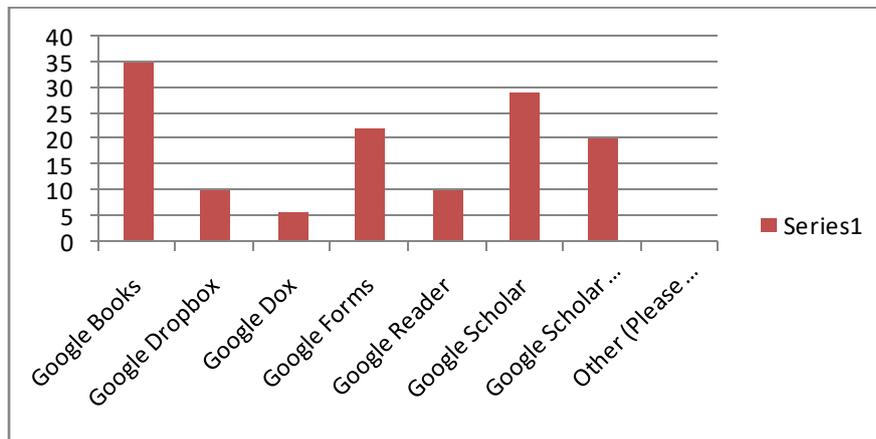


Figure 4: Use of various Google services

Figure 4 Highlights that librarians use Google Books and Google Scholar frequently. While seeking information, researchers value services such as Google Scholar which increase the visibility of information. Dropbox is a good cloud storage service. Few librarians are using Dropbox facilities. Although there are plenty of web polling services available on web majority of librarians prefer Google Forms to create online polls and surveys.

Use of other search engines excluding Google:

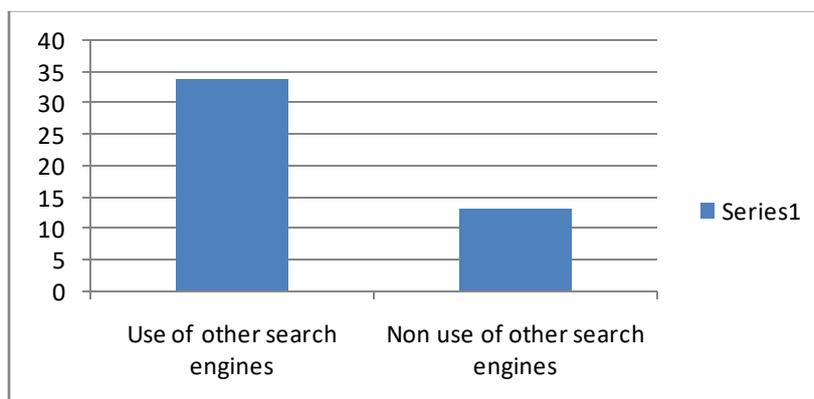


Figure 5: Use and non-use of other search engines

Figure 5 Highlights that majority of librarians use other search engines also excluding Google. The reason behind this is search engines like Google can be a quick and easy way of finding information. However, they have their limitations, especially if researcher aiming to do a systematic search of the literature of a subject.

Use of diverse search engines excluding Google

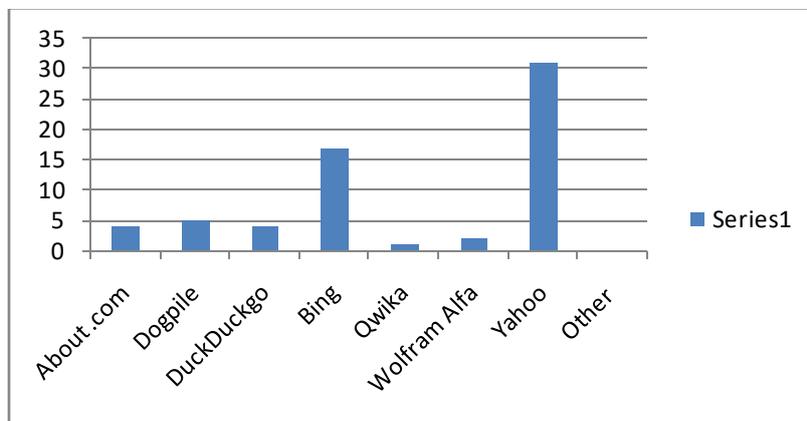


Figure 6: Use of various search engines excluding Google

Figure 6 highlights use of other search engines by library professionals for research. Going beyond Google means not only relying solely on search engines to find books, journals, cases, and maps but searching into other advanced search engines.

Here Yahoo is used by the majority of librarians even though Yahoo is a directory rather than a search engine. Even though Wolfram Alfa is an advanced dynamic computable search engine, use of smart search engines like Wolfram Alfa is very less. Even use of metasearch engines like DuckDuckgo and Dogpile is also limited.

Completion of the online course (MOOCs) related to research:

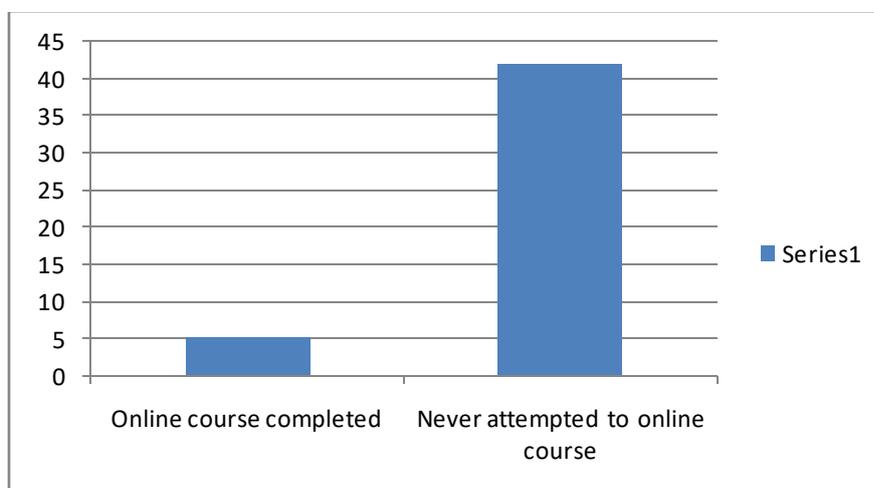


Figure 7: Completion of the online course (MOOCs) related to research

Figure 7 highlights that only 11% librarians have attempted and completed online courses related to research through the open course. MOOCs provide an opportunity to everyone who strives for the chance to receive good-quality higher education from highly ranked universities in developed countries. In MOOCs, students can take the initiative to register, choose the courses that suit their particular needs and interests, decide when and how to proceed in their selected courses and, more importantly, pursue their learning in a personalized manner. MOOCs are open and accessible to virtually anyone in the world. Consequently, innovative teaching approaches employed in MOOC can be viewed freely and instantly by students, teachers, and researchers alike – wherever they happen to be located. An important benefit of introducing pedagogical innovations into the context of MOOC is that those innovations can be tested with real students in a real online learning setting. Researchers can monitor the MOOC and upon its conclusion evaluate the effectiveness of the innovations it introduced. They can then publish the results of their research, which subsequently helps other teachers evaluate and select appropriate innovative teaching techniques to employ in their own courses. As innovations are adopted by others, the issue of research replication becomes automatic because the innovation is being used operationally in real life situations, not only in MOOCs but also in the online education of all types and in many different contexts.

Through the present survey, it is highlighted that very few librarians have completed online courses through MOOCs. Librarians need to accept and adopt the changing technology, as an academician and a disseminator of information.

Online research collaboration:

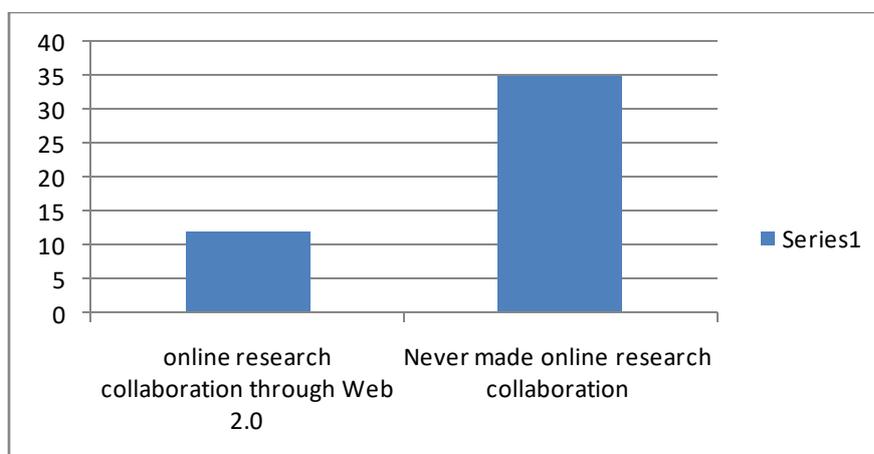


Figure 8: Online research collaboration

Figure 8 presents that only 26% library professionals are engaged in online research collaboration. Educational benefits of online collaborative group work have been confirmed in numerous research studies. Most frequently cited advantages include the development of skills of critical thinking and problem solving as well as skills of self-reflection and co-construction of knowledge and meaning. However, the establishment and maintenance of active collaboration in online study groups is a challenging task, primarily due to librarian's inability (e.g., owing to time constraints or lack of collaboration skills) or reluctance (e.g., due to the lack of or low participation of other group members) to participate actively in the group work. Further, it was explored that those who are using web 2.0 tools for online research collaboration were using the same to search scholarly ongoing projects and to communicate with other researchers to know the advancements in the field of study.

Reasons behind the non-use of web 2.0 tools for the research:

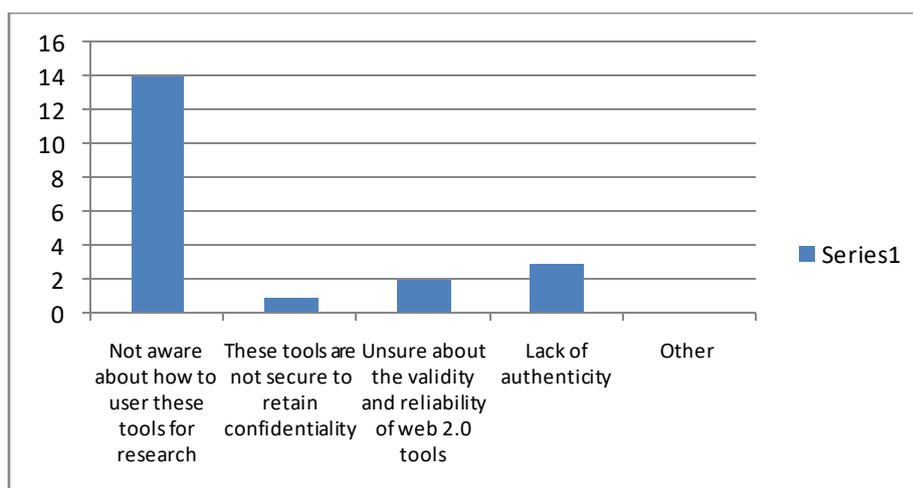


Figure 9: Reasons behind the non-use of web 2.0 tools for the research

Figure 9 shows that the major barrier to take-up of web 2.0 tools and services for research is a lack of awareness and clarity – even among some frequent users – as to how to use these tools for research. The costs of adoption are not always trivial, and unless researchers receive active support and see clear and quick benefits, they tend to keep to the tools and services that they know and trust. Researchers may well be right to defer a decision to take up a particular service until they are sure that large numbers of their colleagues have done so.

But the second set of barriers revolves around perceptions of authenticity, quality and trust. Both as producers and consumers of information, researchers seek assurances of quality; and many of them are discouraged from making use of new forms of scholarly communications

because they do not trust what has not been subject to formal peer review. Validity and reliability are also concerns for researchers who are producing, rather than consuming, information through the use of web 2.0.

Need for the training in using web 2.0 tools for research purpose

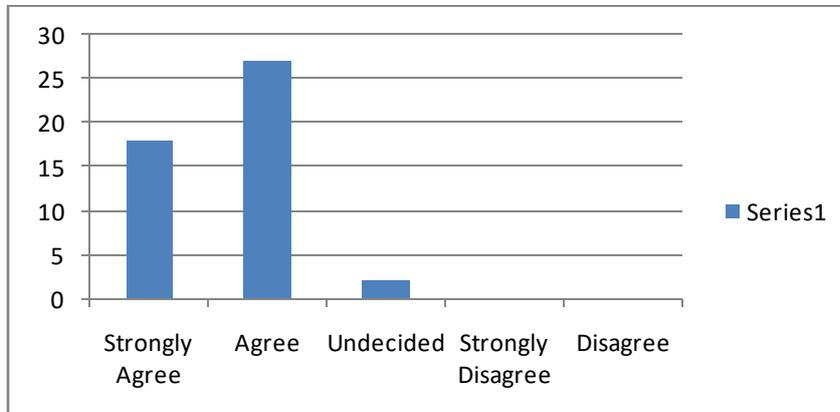


Figure 10: Opinion regarding Need for the training in using web 2.0 tools for research purpose

In Figure 10, views of librarians are presented regarding the need of training of web 2.0 tools. 38% librarians are strongly agreed and 57 % are agreed that there is need of training regarding the application of web 2.0 tools for its optimum utilization and best application.

Type of continuing education program preferred for the training of web 2.0 resources:

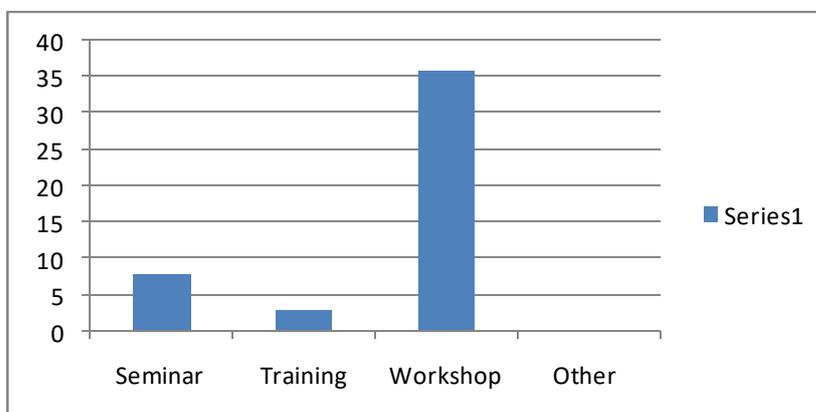


Figure 11: Type of preferred continuing education program for the training of web 2.0

Considering the opinion of librarians about need of training the feedback was collected about the type of continuing education programme or training they require regarding web 2.0. Figure 11 shows 77% of librarians are of opinion, that workshop is desirable for the same.

Conclusion

The study indicates that a majority of researchers are making at least occasional use of one or more web 2.0 tools or services for purposes related to their research: for communicating their work; for developing and sustaining networks and collaborations; or for finding out about what others are doing. But the frequent or intensive use of all web 2.0 tools is rare.

Widespread adoption of web 2.0 services by librarians as researchers depends on their being intuitive and easy to use, and incremental in building on existing practices. Those who promote the use of web 2.0 by researchers point to the benefits that can come from relatively unconstrained and rapid dissemination and discussion of ideas and findings. Researcher's who spoke of how using web 2.0 tools and services have increased their profile and awareness of their work among people who might otherwise not have heard of it. Many also pointed to how web 2.0 facilitates and promotes collaborations across the globe.

To summarize, Web 2.0 offer an intriguing and unparalleled wealth of functionality at a very high level. The exploitation of this functionality offers a high potential for the future of technology-enhanced learning, research, and creation of scholarly communication.

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