

Research Needs in Librarianship*

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ABSTRACT

Library and information research is often directed towards either the management of resources (e.g., the economics of resource management), their storage and retrieval (e.g., much information retrieval research), and the users of these resources (the whole area of information behaviour). However, the question that is less often asked is, "What research do librarians want to have carried out to help them in their work?" Clearly, some of the topics just mentioned will fall into the priority areas, but what do librarians actually perceive will be of use to them. There is a notion that a research-practice gap exists in the field and perhaps the reason for that is that researchers do not ask the practitioners what research will be of value to them. To find an answer to this question on a global basis would, of course, be impossible - at least impossible without the level of funding that would be difficult to obtain from any source. However, it is possible to carry out research on a national level that could prove useful both to practitioners and to the library and information research community. This was the aim of a project, supported by the Svensk Biblioteksforening (Swedish Library Association), which was carried out in 2008/2009. Ideas on potential research projects were collected from librarians themselves, from discussion group archives and from the professional journals in a number of countries. These ideas were then grouped thematically and formed the basis of two rounds of a Delphi process to solicit the opinions of a panel of librarians in different sectors, recommended by their peers as 'expert' in their field. The Delphi process was concluded with a workshop involving a subset of the panel. This paper will report on the results of the investigation, which attracted a great deal of interest within the profession in Sweden, and will also reflect on issues that were ranked lowly in the investigation. For example, not a great deal of priority was given to topics relating to the development and use of technology: why was this? And would the same result be found in other countries? One major area of research interest was into the future of libraries and a topic of relevance here, especially for academic and research libraries, is the changing information behaviour of researchers: what, now, do researchers want of libraries? Clearly, technology is playing a role here, but digitized resources and the World Wide Web may not be the answer to every researcher's need. Research into libraries and research for libraries ought to figure largely in the profession's view of its aims, objectives and visions of the future: but for it to do so requires a recognition that the work will not be done unless researchers and practitioners come together to determine how to approach the future.

Keywords: Delphi Method, Research Needs, Librarians, Sweden, Research Behavior

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1. Introduction

Library and information research is often directed towards either the management of resources (e.g., the economics of resource management), their storage and retrieval (e.g., information retrieval research), and the users of these resources (the whole area of information behaviour). However, the question that is less often asked is, "What research do librarians *want* to have carried out to help them in their work?" Clearly, some of the topics just mentioned will fall into the priority areas, but what do librarians actually perceive will be of use to them? There is a notion that a research-practice gap exists in the field and perhaps the reason for that is that researchers do not ask the practitioners what research will be of value to them.

This notion of the research-practice gap is not peculiar to librarianship (see, for example, Blick, 1984; Haddow & Klobas, 2004): it exists in a number of professional disciplines, such as education and social work. Many teachers regard educational research as of limited value to them in the classroom, and social workers and nurses have a similar view of the relevance of research for their work in their fields (see, for example, Carnine, 1997; Robinson, 1998; Thomson, 2003).

Possibly the problem exists in all professional fields, since the practitioners are concerned with resolving problems and implementing innovations on a more or less continuous basis, whereas the academic researcher is likely to be concerned with more theoretical issues, which may take some time to feed into the processes of change that affect the practitioner.

To discover what kinds of research are likely to be of direct relevance to the professional librarian on a global basis would, of course, be impossible - at least impossible without the level of funding that would be difficult to obtain from any source. However, it is possible to carry out research on a national level that could prove useful both to practitioners and to the library and information research community.

2. The Swedish Library Association project

This was the aim of a project, supported by the Svensk Biblioteksförning (Swedish Library Association), which was carried out in 2008/2009 (Maceviciute et al., 2009) The specific objectives of the project were to:

- solicit expert opinion on the kinds of research projects that will be of value to practice;

- establish opinions on the research needs over the next three to five years;
- determine the priorities among the identified research problems; and
- develop, as a result, an agenda for library research in Sweden.

3. The method

The Delphi process consists of two or more stages of data collection activities (such as questionnaire surveys), in which authoritative panel members are asked to indicate the significance of listed items. The first stage results in a ranking, based on the average responses of all panel members. The ranked topics are then re-circulated to panel members so that they now have information on the perceived value of the topics and they are asked to re-evaluate the significance of the items. This process results in a gradual consensus about the most significant research topics.

The Delphi method had its origins in work at the RAND Corporation during the 1950s and 1960s as a forecasting technique (Dalkey, 1969). The original intention was to attempt to forecast the effect of new technologies on the conduct of war, but the method was quickly adapted to other areas and to assist decision making of all kinds.

The list of potential research topics was compiled by scanning: discussion lists on library and information matters (in Sweden, the USA and the UK); Swedish and other professional journals; and the library research literature (through a Web of Knowledge search). The main approach to the formulation of research topics, however, was to call for ideas from the field through a message to discussion lists used by Swedish professionals. They responded by producing approximately 140 research issues and, in total, a list of more than 200 topics was produced.

This was too large a number of topics to use in the study and the topics were categorised (using Wilson's analysis of the field, 2001). The result was to group the topics into eight broad areas:

- Library policy and legislation issues
- Research issues relating to the acquisition, organization, digitization, etc., of library and information resources and collections
- Users
- Technology and tools for library resource management

- Library management I - strategy and co-operation
- Library management II - management of library work
- The changing profession
- Service delivery and development

Within these broad areas, the individual topics were further grouped to create a total of seventy potential research areas. For example, topic 7.2 was presented as follows:

7.2 Libraries, learning and education: studying the impact of library and information services. [For example: Role of the primary school library in education. Impact of school libraries on study results of school children. Public library's role for schools without libraries. School library as a learning environment. Library function in blended learning and e-learning. Library's role in adult education. Library integration with virtual learning environments, etc.]

In this way, the seventy topics actually represented many more, related research themes.

Simultaneously, we needed to identify the expert panel. Sweden is a large country (over 450,000 square kilometres - almost five times bigger than S. Korea) with a relatively small population (about 9.5 million - about five times less than S. Korea's 50 million). It would have been difficult to bring people together for regular sessions in evaluating research ideas, hence the use of a survey. In determining who would be a member of the panel, we sought the advice of the professionals themselves, using discussion lists, and suggestions from the SBF and from knowledgeable staff members in the SSLIS.

Initially, 125 librarians were invited to participate and ultimately a panel of ninety-seven members who had accepted the invitation was formed, distributed over the different sectors as follows:

- County and regional librarians 18
- Public librarians 15
- Academic and research librarians 24
- School librarians 23
- Special librarians 18

In the first round, the survey instrument was sent to all members of the panel. At this point,

six members withdrew from the exercise because of either illness or pressure of work, leaving ninety-one members. Seventy-eight responses were received by the final due date, giving a response rate of 86%.

In the second round, following an initial analysis, the survey instrument was amended to provide information on how topics had been ranked in the first round:

Item 1.5: The economic significance of libraries and library services in academia, organisations, local community, and society.
This was ranked in the first round.

Acad	County	Public	School	Special
9	35	8	24	3

Please indicate how important you believe research on this topic to be at present:

Not at all important Highly important

Now, indicate how important you believe research on this topic will be in five years time:

Not at all important Highly important

This instrument was sent to the panel and resulted in a 74% response rate: given the amount of work involved in this second round, the reduction in the response rate was hardly surprising.

4. Findings

Because of the time constraints, I shall focus on the final survey round. Following the re-evaluation by the panel, the top ten research areas of current interest are shown in <Table 1>:

The cells coloured blue show the top items in the different sectors, from which it will be seen that in some cases there was considerable sectoral variation. In other words, needs vary by sector. We cannot test this statement statistically because the panel was not randomly selected, but as the panel members were judged to be expert in their fields by their peers, I think we can take the data at face value.

〈Table 1〉 Second survey - top ten topics

Topic	Ranks based on present significance					
	All rank	County rank	Public rank	Acad. rank	School rank	Special rank
3-7 Impact of the library programmes on learning	1	3	2	3	2	14
1-4 Changing roles of libraries	2	1	6	18	5	7
7-2 Libraries in education	3	10	9	6.5	4	5
3-9 Children and libraries	4	2	1	27	3	32
5-12 Evaluation of library work	5	11	4	9	13	21
6-5 Librarian and education	6	22	21	4	1	35
3-4 Reference service in the digital age	7	21	12	13	18	6
3-5 Impact of the reading promotion	8	4	3	33	6	31
3-3 Marketing library and information services	9	14	5	24	17	12
7-4 Web 2.0 application in libraries	10	16	7	16	23	20

Some of the differences are self-evident: we might expect, for example, that special librarians in business, industry and the public sector would not rank libraries and learning very highly and that academic and school librarians would rank the two topics in this area very highly. Similarly, we would not expect academic and special librarians to rank 'reading promotion' highly, since this is not one of their functions.

When we consider the results for the future significance of research topics we find that eight of the ten topics re-appear in this list and the top three themes are unchanged.

The new entrants to the top ten are shown in blue: they have replaced *Web 2.0 applications in libraries* and *Reference service in the digital age*, presumably on the grounds that by 2015, any issues with regard to these topics will have been resolved.

The new topics and the slight re-ordering of themes are interesting, however: they seem to suggest that librarians are concerned about how to evaluate their services, presumably because of the power of the electronic media, how to continue to attract children to reading, in which marketing would presumably play a role, and how to engage more with users and evaluate the impact of digitisation projects.

〈Table 2〉 Second survey - future significance

Topic	Ranks based on future significance					
	All	County	Public	Acad	School	Special
3-7 Impact of the library programmes on learning	1	3,5	5	3	1,5	14,5
1-4 Changing roles of libraries	2	1	1	19	1,5	12,5
7-2 Libraries in education	3	9,5	10	11,5	4	11
5-12 Evaluation of library work	4	13,5	5	7	12	17
3-9 Children and libraries	5	2	2	34	5	25,5
3-3 Marketing library and information services	6	11,5	3	26	12	7
3-5 Impact of the promotion of reading	7	5,5	5	25	6	33
3-1 Implication of user studies	8	7,5	7,5	15	33	12,5
6-5 Librarian and education	9	20,5	21,5	4	3	35,5
7-6 Impact of digitisation projects	10	24,5	16,5	5	24	3,5

Again, we find the same kind of sectoral differences: in particular, the results do not reflect the specific interests of either academic or special libraries very well. Thus, when we look at the top ten topics for now and for the future in the opinion of special libraries, we get the following result:

〈Table 3〉 Second survey - top ten topics for special libraries

Topic	Special library ranking	
	Present	Future
2,4 Digital resources management	1	1
1,8 Scholarly communication	2	10
2,6 Conservation/preservation of resources	3	2
2,3 Digital media in research	4	5
7,2 Libraries in education	5	11
3,4 Reference service in the digital age	6	21
1,4 Changing role of libraries	7	12,5
1,5 Economic significance of libraries	8	16
7,6 Impact of digitisation programmes	9	3,5
7,7 Business and industry information needs	10	3,5
3,5 Marketing library and information services	12	7
5,2 Strategic planning in libraries	18	7
7,8 Impact of digital services	11	7
4,1 Developing search/retrieval systems	13	9

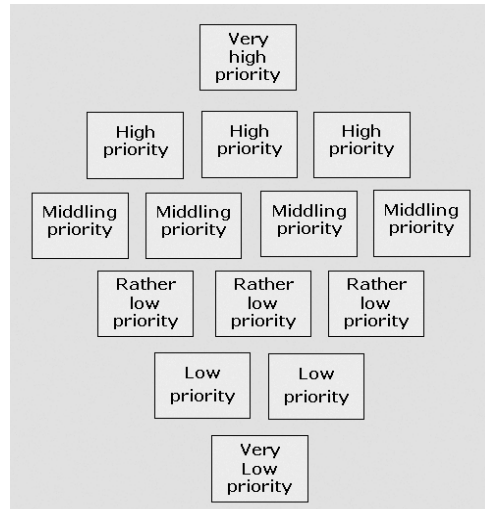
You may see from the table that special librarians were more concerned than others with what we might broadly call, technology issues, and with aspects affecting strategic planning, but for current research and, even for so, for the future. Four topics of current concern dropped out of the top ten of future significance, to be replaced by those shown at the bottom of the table. The shift here seems, again, to be influenced by strategic, rather than day-to-day concerns.

Following the completion of the survey stages, a workshop was held to bring together a number of panel members in a face-to-face discussion of the issues. To provide the workshop participants with a reasonable list of topics to work with, we began by selecting those topics that appeared in the top ten topics of at least two sectors in the rankings of both current significance and future significance. This resulted in 13 topics and a 14th was added by the inclusion of *Selling the library*, which was the only other topic to occur in the top ten of both sets of ranks. The fourteen topics are shown in <Table 4>.

<Table 4> Topics presented to the workshop

Research area
1.4 The changing roles of libraries in their communities
1.8 Developments in scholarly communication
2.3 The role of new digital media in scholarship and research
2.4 Digital resources and their management
3.2 Developing the library as a creative space
3.3 'Selling the library': marketing library and information services to different user groups
3.5 The impact on library users of activities for the promotion of reading and literature
3.7 The impact of the library programmes on learning and transferable skills
3.8 Guidelines for the development of information literacy programmes in libraries of all types
3.9 Children and libraries in the digital age
5.12 Evaluation of library work effectiveness and impact
6.5 The librarian and education: the library's role in the educational process and its implications for collaboration between teachers and librarians
7.1 Factors affecting strategic development
7.2 Libraries, learning and education: studying the impact of library and information

The workshop participants were divided into four groups and asked to use the Diamond Nine technique (General Teaching..., 2004) (adapted to deal with fourteen topics) to rank the topics in priority order. The four groups were then combined into two and asked to take their results and arrive at a consensus on the priorities.



<Figure 1> Ranking the fourteen items

The final result of the ranking process is shown in <Table 5>, which presents the top ten items, showing the scores assigned by each group and ranking according to the total score:

<Table 5>

Potential research area	Group scores	Total score
7.1 Factors affecting strategic development	5 & 4	9
3.7 The impact of the library programmes on learning and transferable skills.	4 & 3	7
3.9 Children and libraries in the digital age.	3 & 4	7
1.4 The changing roles of libraries in their communities	2 & 5	7
3.5 The impact on library users of activities for the promotion of reading and literature	3 & 3	6
5.12 Evaluation of library work effectiveness and impact	3 & 3	6
1.8 Developments in scholarly communication	3 & 2	5
3.2 Developing the library as a creative space	4 & 1	5
7.2 Libraries, learning and education: studying the impact of library and information services	2 & 2	4
2.3 The role of new digital media in scholarship and research	1 & 3	4

Again, we can see how ideas of change and strategy dominate the list. Clearly, the turbulent environment within which libraries exist is the focus of interest and concern.

5. Researcher behaviour

The final outcome of the workshop, as the culmination of the study, pointed to an area of research that academic and special librarians, in particular, will readily understand. Developments in scholarly communication and, particularly, new digital media, affect the researcher and his or her use of research resources. As a researcher myself, it is probably fifteen years or more since I needed to visit a library to carry out a literature search and to review research materials. So how are these developments affecting researchers in general and how can the library respond to these changes?

Clearly, researcher behaviour is related to the nature of the discipline. For example, historical researchers still need to examine original source materials and most of these are not yet digitised. Indeed, much archival material is not yet organized and, often, a researcher happens upon a body of material quite by chance. Modern literary research, for example, often depends upon the willingness of an author's family to make materials available to the researcher. In these circumstances the researcher is still using print and/or manuscript materials.

Increasingly, however, under various programmes to make the national heritage more widely available, historical resources are being digitized and it is likely that future researchers in history and politics will have much more available to them than exists at present. For example, the British Library, in association with the Joint Information Systems Committee of the Higher Education Funding Councils is digitizing much of its newspaper collection, which will result in a huge resource for students of 19th century history, politics, economics and sociology. (See the JISC Website at <http://bit.ly/dAXPFW>).

As more journal papers and conference proceedings become available online, the RIN study (Research Information Network, 2009a) shows that the extent to which books are read and cited has declined. As one researcher reported:

“it's only really summer holidays that I get the time to do that. I can read a journal article in an hour but obviously it takes a little longer to read a book.” (p.31)

Researchers also report that they are more likely to cite what they can find easily online:

“If I can't get the papers I'm interested in, I quote the papers I can ... Our practices have shifted from pulling piles of things off stacks, to sitting at your desk looking at what's there. It's

probably made our research poorer in many ways.” (p.31)

Another RIN report (2010) on the take-up of so-called Web 2.0 features for novel ways of scholarly communication suggests that such tools have so far made little impact:

“Overall, there is little evidence at present to suggest that web 2.0 will prompt in the short or medium term the kinds of radical changes in scholarly communications advocated by the open research community. Web 2.0 services are currently being used as supplements to established channels, rather than a replacement for them.” (p.8)

Given the range of tools that already exists to encourage scholarly communication - journals, conferences, workshops, etc. - it seems hardly surprising to me that the interest in Web 2.0 should be low: there are sufficient means of scholarly communication already, many of which have electronic equivalents and, in addition, academics tend to be rather conservative in these matters.

Another RIN project (Research Information Network, 2009b) reported on patterns of information use by researchers in the life sciences. The researchers were surprised to find that these researchers tended to rely upon informal advice from colleagues, but why they find this surprising is puzzling, since the majority of research into information behaviour has always demonstrated that the most common form of information seeking is to ask other people involved in the organization or the research field. So there is nothing new in this finding.

With regard to information seeking, the project reported:

Researchers in these groups discover and gain access to the information they need predominantly through direct access to web-based resources, including bibliographic search and retrieval tools, on-line scientific publications, and dedicated websites that they trust. There was little evidence to suggest widespread use of the physical library except in case study 7 (botanical curation), where the curators make extensive use of their own specialist library. (p.36)

I think that this would now be replicated across many disciplines other than the life sciences.

What we have, therefore, is a shift, discipline by discipline as resources become available, from the physical library to the digital library and we can expect this to continue into the future. What, then, should be the response of librarians in this situation. To an extent, the

response is actually out of their hands: at present, the library is generally responsible for the organization of and access to digital resources of all kinds and many are engaged in digitization programmes of their own. Many maintain the institutional open access repository and these responsibilities are likely to continue for some time into the future.

We can imagine, however, that a time may come when digital resources are organized not on an institutional basis, but on a national basis: there are already activities that point in this direction. Many countries now have national academic computer networks and there exist grid systems for groups of countries or specific disciplines. What could be more natural than to have a national body for the control of digital resources to serve research?

6. Conclusion

In the case of Sweden, we now know what kinds of research the profession believes it needs and the Svensk Biblioteksörening has followed up the study I have reported here by issuing a call for research proposals based upon the findings of the investigation. In a real sense, therefore, the study has resulted in at least the beginning of a research agenda for Swedish libraries.

High on the agenda is the role of Web-based developments in research and their effect on libraries, present and future. The Research Information Network studies provide some insights on what the future may be and they may serve as some kind of guidance for investigations of the phenomena in other countries.

Although the future is hard to predict, I believe that some things are certain - at least in Western economies. First, financial stringency in public services is likely to be applied for several years to come, with an inevitable, deleterious effect on public and academic libraries. Secondly, and simultaneously, the drift from physical libraries to digital libraries is likely to continue and to accelerate. Both of these developments, will put libraries under considerable strain and the need for well-founded research to point to appropriate strategic directions will be evident. However, academic research will be under the same financial limitations and libraries and Library Associations must commission the research they need themselves. It is only through a collaboration between research and practice that answers to the problems will be found.

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