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Action-Research application in Evidence-Based practice for libraries

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Abstract

Evidence Based Librarianship (EBL) seeks for and promotes the improvement of the librarian practice through the use of the best available evidence. Strongly used in medical contexts, Evidence Based Practice can be an important tool for the development of LIS, if practice is carefully thought and wisely combined with research and theoretical reflection. In order to achieve a state of equilibrium between theories and empirical studies, a qualitative method –action research- may be applied, as a dialogue between abstract ideas and the facts and signs provided by concrete experiences.
Through action research, librarians can collect the evidence –using a series of qualitative tools- and use it for building theoretical knowledge in order to improve their work and their profession. From this viewpoint, after putting something into practice they will be able to know whether it worked as expected or not, make any change if it is necessary, and test the whole process again, searching more and new evidence. The method becomes a progressive helix that leads librarians to continuously evaluate their activities and services and improve them according of their final users' needs.
Fitting these ideas in the general context of "Library 2.0" new LIS model and in the particular situation of Social Sciences libraries, the conference briefly introduces some basic ideas on how action research should be employed for collecting and using evidence in LIS.

Keywords

Evidence-Based Librarianship - Action-Research methodology

An approach to EBR (Evidence-Based Research)

EBR (Evidence-Based Research) started a few decades ago, in the field of medicine and health care (EBM, Evidence-based Medicine). In an excellent overview, Eldredge (2000) introduces a sort of itinerary through the history of the movement, its reasons and its meanings within the framework of bio-medical sciences. One of the supporters of this practice was Archie Cochrane, whose work has been honored by naming after him a network of EB medical centers (Cochrane Centers) and an international organization (Cochrane Collaboration). The methodologies for finding, evaluating and determining "evidence" were established mainly by a research team at McMaster University leaded by David Sackett and Gordon Guyatt. The term "evidence-based medicine" appeared for the first time in medical literature in 1992, in a paper by Guyatt *et al.*[1] (Eldredge, *op.cit.*).

Even if EBR practices emerged as a support for (usually complicated) health-care professionals' activities, they have slowly expanded to other scholar spaces.

Basically, EBR allows professionals to take decisions upon a review of the best available evidences, making it possible to answer questions by using direct practice as the main resource. Through this process, it is likely to define future steps and to assure predictions by using the presently available variables.

The main core of EBR work consists of elaborating a systematic revision of scientific literature concerning a determined question or problem, searching for the best studies, practices and experiences published. This can be done by human means (through the so-called "journal clubs") or, since the advent of the modern information technologies, through specialized digital searches (data mining). In this way, and through the use of evaluation strategies previously defined in detail, huge volumes of information can be turn into working and action guidelines for professionals of different contexts.

Librarians have played a chief role within this process, since libraries are a basic information source, and since its workers own and manage the necessary skills for searching, recovering, filtering, organizing and delivering information to final users, departing from an initial need or question.

The link between EBR and LIS is, therefore, very tight. It seems natural that LIS, as scholar discipline, had also valuated the possibilities of adapting this method to their own professional practices.

Evidence-Based Librarianship (EBL)

There is an interesting amount of available material on EBL: papers, conferences, discussions, reviews, journals (especially EBLIP, "Evidence Based Library and Information Practice", in open access[2]) and a website (EBLib, "Evidence Based Librarianship"[3]) where background, webography and continuously improved tools are provided. Some of the best articles on this issue (especially Booth *et al.*, 2005) have been used for this brief paper and have been quoted, therefore, in the final bibliography, which should be consulted as an initiation step in the subject. In this text, concrete and focused aspects of the matter will be discussed, avoiding the description of general methods and concepts, which may be found in the quoted bibliography.

[1] Guyatt G, Cairns J, Churchill D, *et al.* (1992) "Evidence-based medicine. A new approach to teaching the practice of medicine." In *JAMA*, n.268, pp. 2420-5

[2] http://ejournals.library.ualberta.ca/index.php/EBLip.

[3] http://www.shef.ac.uk/scharr/eblib/ebl.htm.

It was not until recently that LIS research methodologies -when necessary- were mainly based upon those coming from philosophy, history, and social and management sciences. At present, EBL has added to the former the medicine methods (on which it is almost exclusively based), which offer powerful research designs and an excellent framework for decision-making. Hence, it is a valuable example of inter-disciplinary development. EBL includes the framework for decision-making, the basic working process and many of the research tools, setting them in its own context. In this way, the available evidence of the best librarian practices is used to solve professional problems and to improve activities and services.
An EBL definition is provided by Booth & Brice (2004):

> "Evidence based librarianship is an approach to information practice that promotes the collection, interpretation, and integration of valid, important and applicable user-reported, librarian-observed and research-derived evidence. The best available evidence moderated by user needs and preferences, is applied to improve the quality of professional judgments".

Ritchie (1999), putting an emphasis on the role of librarians in the EBR field, states that…

> "As a profession which has the ability to manage the literature of research, librarianship is uniquely placed to model the principles of evidence-based practice, not only as they apply to other disciplines which we serve, but also as they apply to our own professional practice".

Eldredge (*op.cit.*) proposes a conceptual frame of seven points for supporting EBL's practices:

- EBL seeks to improve library practice by utilizing the best-available evidence combined with a pragmatic perspective developed from working experiences in librarianship;
- EBL applies the best-available evidence, whether based upon either quantitative or qualitative research methods;
- EBL encourages the pursuit of increasingly rigorous research strategies to support decisions affecting library practice;
- EBL values research in all its diverse forms and encourages its communication, preferably through peer-reviewed or other forms of authoritative dissemination;
- EBL represents a global approach to information seeking and knowledge development, involving research but not restricted to research alone;
- EBL supports the adoption of practice guidelines and standards developed by expert committees based upon the best-available evidence, but not as an endorsement of adhering to rigid protocols; and
- In the absence of compelling reasons to pursue another course, EBL adheres to the hierarchy (or levels) of a pre-determined table for using the best-available evidence, lending priority to higher levels of evidence from the research.

EBL working process (detailed by Eldredge, *op.cit.*, and pretty well illustrated by Booth *et al.*, *op.cit.* in a particular case provided with a wide range of bibliography) consists of the following steps:

- Define the problem or question
- Find the best evidence to answer the question
- Appraise the evidence
- Apply results
- Evaluate change
- Redefine the problem -if necessary- and re-start the process

LIS are strongly based in questions and information requirements, and in translating them from abstract forms into concrete terms; such questions can be referred to the profession itself, to libraries as action spaces, to every specialized field or to the problems exposed by users. Thus, the first step of EBR process is not something strange to Librarianship.

The effective formulation of questions leads to an efficient search. In this sense, it is necessary to consider the accuracy of the terms used, in order to avoid information results with "noise" or "silences".

Information search -manually or electronically- is a clearly intellectual process, where the librarian's recovering skills are highlighted. But, at the same time, it heavily depends on the access availability to information resources. And, due to such barriers as the so-called "digital divide", or to the economic impossibility to subscribe to specialized journals, this factor may become limiting for EBL (and for the entire EBR). At this point, it becomes noticeable the natural connection between EBL/EBR and Open Access (Morrison, 2006), since full access to evidence is necessary if a significant collection is meant. Access restrictions to knowledge can make every evidence-based practice considerably difficult, especially in those areas like the global South, where such restrictions use to be frequent.

Available evidence may also be restrained because academic journals do not publish experiences coming to a wrong end (which makes knowledge building difficult), or because the literature is not qualified or representative enough, or because the studies vary their initial conditions… Fortunately, policy changes in scholar publications, a greater research conscience and a wider practice of self-archiving in open-access archives are slowly modifying these conditions.

The evaluation of the collected information resources are carried out by using tables (like the ones provided by Eldredge in the quoted paper) where the quality of evidence is valuated in several levels. The highest levels of evidence would supposedly provide the most accurate and sound research basis for decision-making. When evaluating, librarians should consider the quality of the knowledge found, the human biases and mistakes included in it and the conceptual framework where it was produced. At this point, information professionals should put aside their "scholar" and "scientific" pre-concepts and prejudices, and take into account the pertinence of both quantitative and qualitative methods and concepts, even if the latter have been often regarded as "not reliable".

It is worthy to note that this task may lead librarians to realize the absence of theoretical work and empirical implementations developed within their own discipline, especially in those fields related to social sciences. The scarcity of categories, working methods and pragmatic applications is remarkable within LIS. In this sense, as far as EBL activity may find the best evidence, it may also detect where it does not exist, and so, it may encourage the production of experiences in order to fill these holes.

Finally, EBR method allows to re-define the initial problem using the evidence found; this step would re-start the process again, once the starting question has been re-

formulated. At this point, EBL may be linked to a methodology with several years of life within social sciences field: action-research.

A dialogue between knowledge and action

According to the definition provided by Reason & Bradbury (2001), action-research…

> "…is an iterative inquiry process that balances problem solving actions implemented in a collaborative context with data-driven collaborative analysis or research to understand underlying causes enabling future predictions about personal and organizational change".

After six decades of action-research (A-R) development, there is nowadays a wide range of advanced methodologies, handbooks and papers, practices (especially in the area of education) and literature. Besides, it has a good number of sub-currents, like Action Science (Argyris, Putnam y Smith, 1985; Argyris, 1994), Cooperative / Collaborative Inquiry (Heron, 1996; Reason, 1995), Participatory Action Research (*cf.* Freire, 1970), Developmental Action Inquiry (Torbert, 1991) and the A-R Living Theory (Whitehead & McNiff, 2006).
A number of useful, general sources of information on action-research are the *Center for Collaborative Action Research*[4] and its wiki[5], and journals like *Action Research*[6] and *Action Research International*[7].
Action-research states that every inquiry should go beyond the elaboration of reflective, theoretical knowledge, and be linked with real, direct action. Besides, it points out that this kind of inquiry should have a close relationship with its addresses. A-R way of working recalls the basic line of scientific method, and expands it towards the social action arena: from a given question, research and reflection starts, aimed at becoming empirical action. When this stage is reached, the outcomes return to the theoretical board, allowing the re-formulation of the original statement, and the development of new theory; the latter will allow the implementation a new action connected with real situations. Therefore, a dialogue takes place between theory and reality, based on real experiences and taking into account the addresses' opinion. That way, researcher's unilateral views and excessive concentration on theoretical, abstracts aspects are avoided. At the same time, A-R allows to learn from errors and, consequently, re-design future steps. To put it short, it generates a helix that concludes in a result, which has been obtained from different tests and trials, always on intimate terms with a concrete situation and community.
Action-research was born in the context of educational disciplines, and expanded (like EBR) into other fields, especially those with more social approaches. Regretfully, it has been scarcely applied within LIS, maybe because of a noticeable absence of librarian practices concerning direct action for social change.

EBL, A-R and libraries

EBL and A-R are, in outline, parallel processes. Both of them primarily give attention to an initial question or problem, which actually is the main start-point for every inquiry.

[4] http://cadres.pepperdine.edu/ccar/index.html.
[5] http://ccar.wikispaces.com/CCAR+WIKI.
[6] http://www.sagepub.co.uk/journalsProdDesc.nav?prodId=Journal201642.
[7] http://www.scu.edu.au/schools/gcm/ar/arhome.html.

They need time to research, to form a theory, and to collect and elaborate available knowledge. Both of them put ideas into action, though in different places and moments, and because of different reasons. They also evaluate the outcomes of such actions and, from them, re-formulate their starting question and trigger the process again.
Both processes seek to generate action: one of them well-informed action based on other practices; the other, the committed action which allows the elaboration of theory that will be applied again, in constant collaboration with the addresses and looking for concrete changes in real life.
However, we are less interested in highlighting the obvious similarities than in analyzing the existing differences. General EBR process (and particularly EBL) is mainly focused on the recovery of the best evidence, of the necessary information, and in its evaluation in order to assure its correct quality. A high percentage of the inquiries made within EBR/EBL has to do with the analysis of how to refine the evaluation methods in order to obtain the best possible evidence. Action is hardly present in them, and the practical action related to changes in the environment is even less. In the case of action-research, action and its outcomes in social changes have great importance: if the process is meant to be valid, it should be inserted inside the addresses' structures, it should have a certain degree of commitment and its aim should be action.
Combining action-research and EBL would add a high dose of active commitment to the latter and good tools for the refinement of theoretical material to the former. In the case of EBL, it would allow to shift the focus from information search to final action, and would provide a closer contact with action's addresses, including them in the decision-making process. And it would add a better frame to such a process (as well as powerful research design tools and bibliographic search) within action-research.
Libraries in general -and specialized in Social Sciences in particular- have large information reservoirs that seem strategic for certain societies, especially in the global South. Information means *power*: the power to achieve many changes supported by valid knowledge; to warrant the rights of expression and access to information; to inform population and make it possible their active and democratic participation in regional and national decisions. Libraries should be a lively part of their communities, they should make a commitment with them, they should take a position regarding the main existing problems, they should be a channel of communication and a source of long-life learning…
At the same time, libraries provide support to scholars and researchers, who are agents of reflection, change and transformation in the community. Through their research or direct action projects, they are the engine that, based on the existing knowledge -managed by libraries- allow development, growth, evolution and the overcome of barriers.
EBR/EBL allow to recover the most accurate, updated and solid information. A-R generates channels of communication with addresses and leads to action. Within library models as "Library 2.0", where a new voice and participation is given to the final users through ICTs, both working methodologies can perfectly conjugate for achieving a good combination among users' needs and opinions, the practical application of information and the management of the best available resources.

Conclusion

Librarianship is an applied science, which should seek solutions to concrete questions in a changing and problematic context, in relation with its community as well as with its own nature and functions. It cannot remain in a theoretical marble-tower: it should grow

up and evolve with its environment. According to this, it should interact with its users, give them voice, allow them to make decisions and include them within its framework. At the same time, it should use its resources to favor the change and progress of its community, getting tightly linked with all its social processes.
Evidence-Based practices make it possible to employ the best research results in the immediate practice, in order to provide efficient services. Methods like action-research allow to act in concrete situations and to learn from mistakes. With both instruments at hand, libraries may support, from different points and through diverse strategies, the changes that community claims and needs.

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