Evidence Based Library and Information Practice

The Call for Evidence Based Practice: Speaking Louder than Words

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"When *I* use a word," Humpty Dumpty said, in rather a scornful tone, "it means just what I choose it to mean – neither more nor less."
"The question is," said Alice, "whether you *can* make words mean so many different things." (Carroll Through the Looking Glass 99)

The appearance of evidence based medicine and practice has been heralded as a new paradigm for professional practice in health care, social work, human resources, and other fields. Since Thomas Kuhn's monumental book *The Structure of Scientific Revolutions* brought attention to the word "paradigm", the term has taken on a range of meanings, from the latest management fad to a moderately different viewpoint to a profoundly new scientific model. Kuhn's main thesis is that science does not advance by a "process in which more accurate conceptions gradually replace less accurate ones under the impetus of experiment" (Buchwald and Smith 365). Rather, other processes are at play that lead (usually reluctant) scientists to abandon current theories and adopt completely new ones. Yet, it is not these processes that are

most pertinent to the development of evidence based practice (EBP). Instead, I suggest that what happens *between* paradigm shifts - what might be called "scientific business as usual" - is a more fruitful aspect of Kuhn's work for any discussion of evidence-based practice. In the sciences, business as usual consists of continued experimentation and measurement.

In its essence, experimentation is reality testing. Most familiar to us as the notion of trial and error, the core idea of experimentation is the systematic and objective confirmation of theories in the real world. Based on the scientific method, experimentation and related observation techniques seek to produce evidence in the form of data that is empirical (objectively measurable) and verifiable (can be replicated by others).

For more than a century, valid data has been central to the function of managerial control in business and public administration. Its importance can be traced from data collection techniques devised by railroad managers in the 19th century to the appearance of scientific management and later incarnations as decision-support and data-driven decision

making. The need for verifiable data is also expressed in the modern business ideal of due diligence, in accepted standards of auditing practice, and in the requirement for transparency in public management accountability. In its most sophisticated form, the idea of using data to adjust or refine operations or conditions appeared as the concept of "feedback" in general systems theory in the 1950's.

These two ideas - verifiable data and feedback mechanisms for decision and control processes - are central to all business improvement domains including operations research, systems analysis, total quality management, business excellence, performance management, process re-engineering, program evaluation, project management, organizational learning, and evidence-based management. Thus, in the field of business management there has been widespread acceptance of the ideas that valid data ought to be part of any decision making process, and that consequences of decisions should be examined, for the greater part of the previous century and perhaps even longer.

For this reason it is difficult to conceive how the core ideas in EBP could be considered to be radical or revolutionary. Granted, by some definitions, "paradigm shift" can refer to the acceptance of new theories and principles by a profession, rather than to the principles and theories themselves. Among the helping professions the ideology of EBP might well entail enough change to warrant the designation "new paradigm" (although I suppose we would need evidence to confirm this). Still, the main innovation promoted by EBP remains the application of established procedures, namely, conducting incremental experimentation and refining knowledge based on results.

More broadly, these procedures are components of a standard problem solving process that has been taught for decades to students in management, engineering, systems analysis, and operations research. The process can be summarized as follows:

1. Define the problem and identify possible contributing factors.
2. Specify a desired state of affairs.
3. Identify and evaluate alternative solutions for reaching the desired state of affairs.
4. Assess the feasibility and suitability in terms of costs, benefits, and constraints, of each alternative solution.
5. Select the most desirable solution and confirm that its specification is complete and well-understood.
6. Prepare a plan to implement the solution, and then implement it.
7. Collect valid data to monitor results, comparing both the implementation and the results to the specifications in step 2 and step 5.
8. If needed, adjust the implementation plan and repeat steps 6 to 8.

For several decades, a similar problem solving process has been embraced by most helping professions, including medicine, nursing, social work, psychotherapy, counseling, and rehabilitation. Standard professional practice in these fields has required that each client's presenting problems be assessed and diagnosed, that a suitable, professionally informed treatment plan be developed prior to treatment, that treatment be meticulously applied, that client progress be monitored closely, and that appropriate adjustments to the delivery of treatment be made based on the results that are observed.

Evidence based medicine (EBM) was developed to improve treatment planning by remedying a perceived gap between scientific knowledge and professional practice (Gambrill 339).[1] The distinctive aspect of both EBM and EBP is therefore the objective that evidence in the form of accurate, valid, relevant, complete, and balanced representations of clinical research findings be used to inform decisions about diagnostics and treatment planning.[2]

Arguably, the call for evidence, particularly the conviction that assuring the welfare of

clients requires clinicians to use "the current best evidence", is the source of authority for the evidence based movements. Because of this directive, use of biased information in clinical care decisions is considered risky and professionally irresponsible. To avoid bias, EBM and EBP have developed rigorous procedures to assure that systematic reviews are complete, balanced, and impartial (Trinder 9-10).

This call for evidence can also be heard in evidence based library and information practice (EBLIP), especially as it has been applied to school librarianship, where the call has been amplified into a "manifesto" (Todd, "Evidence-Based Manifesto"). Amid the clamour, however, school librarianship has forsaken two central tenets of EBP. First, it has neglected the requirement for impartiality in the collection and interpretation of data. Second, it has diverted the focus of the evidence based analysis away from client needs. The result is a topsy-turvy practice of collecting evidence for the express purpose of promoting school libraries as an effective educational intervention.

Todd writes, "Evidence based advocacy is clearly an intent of such [school library impact study] documents, seeking to establish a strong argument for the support and continuous improvement for school libraries … as well as to draw attention to current issues facing school libraries" ("School Librarianship" 85).[3] This is akin to saying that "Evidence based medical advocacy seeks to establish a strong argument for the support and continuous improvement of the medical profession … as well as to draw attention to the difficulties the profession faces."

Advocacy has no place in EBP and EBM. In fact, avoiding bias and prejudiced agendas is the main reason these practices developed in the first place. Even so, school librarianship has resorted to "evidence" from a plethora of advocacy research studies as a way to attempt to rescue its libraries. Referring to a promotional publication by publisher and distributor Scholastic, Todd writes, "the

research studies articulate the range of dimensions that underpin this [positive] impact [of school libraries on student learning], specifying an evidence based framework for decision making about school libraries and their continuous improvement" ("School Librarianship" 86).[4]

Rather than the impartial systematic reviews that EBM and EBP insist upon, we are presented with evidence compiled by a school library vendor! This alone should serve as a signal that EBLIP as practiced in the realm of school librarianship is straying far from the foundational ideas of EBM. Further, Todd's statement reveals the actual agenda of EBLIP in school librarianship to be the decision about the survival of the libraries themselves, not about any survey of alternative interventions on behalf of students. This misplaced focus is obvious in Todd's contention that the central question for evidence based school librarianship is, "Why do school libraries matter today?" ("Evidence-Based Manifesto" 41).

Neither formulating a biased question that aims to confirm the relevance and efficacy of an intervention nor compiling impact studies or other campaigns in answer to this question is evidence based practice. These efforts are pure advocacy and promotion. They are neither impartial nor client centered. EBP requires that the effectiveness of school libraries in meeting specific student needs be evaluated in comparison with relevant alternative educational interventions. Unfortunately, the importance of this type of comprehensive evaluation is missing from the "evidence based framework" which school librarianship has adopted (Todd "School Librarianship" 86).

Since I happen to believe that reading books is beneficial to students, I view efforts to support school libraries as vital. Nevertheless, using research findings to promote this singular cause is properly labeled "advocacy research" or "action research", not evidence based practice. Our profession's misappropriation of this new buzzword makes us appear careless

and uninformed. Misuse of the term has already transferred into mainstream librarianship, for example in WebJunction's new model of "library management competencies" which urges librarians to "use evidence-based management to demonstrate the value of the library" (Gutshe 2). In this era of slogans, factoids, and fads librarianship ought to be especially aware of the potential for oversimplification and distortion of information like this.

Naturally, EBP is struggling with how its key principles are operationalized and how they might properly evolve. Some founding doctrines may well change or disappear in this process. Nonetheless, I believe EBLIP is too quick to abandon core EBP principles in favor of grander, if fuzzier, views of this approach. Booth recommends that librarianship not allow "the ideal [core tenets of EBP] … to be the enemy of the good" (54). He therefore advocates more lenient definitions of evidence and downplays the need for systematic reviews of empirical research. He favours expanded methods of data collection and collation to "gain a broader understanding of the issues and options involved [in a problem]" (53). If we want to devise the dioramic data collection systems that Booth envisions, we might turn to the field of operations research to explore mind maps, rich picture diagrams, and other problem modeling tools (53-54). We might also call on experts in information architecture and knowledge management to learn how to organize the information we collect. However, I do not think that these activities would rightly fall under the rubric of EBLIP, nor should they use that label.

Certainly, librarianship should experiment with any tools and methods that are reasonably likely to help accomplish its objectives. Whatever our choices, when we expand our bag of evidence based decision making tricks, I suggest that the tools we assemble retain their original names, so that we do not misunderstand their functions and capabilities. In the long run, we might decide

that it is our bag itself that needs to be renamed.

Notes

[1] A few years earlier a similar deficiency had surfaced in the field of program evaluation: the need for clearer understanding of "program theory," that is, the specific rationale for designed program interventions, precisely what programs should be composed of, to which specific client populations they were intended, and so on. See Rossi, Lipsey, and Freeman (165).

[2] Besides the "emerging giant of research information" in EBP, the movement has also underscored the importance of professional judgment and client needs and characteristics (Kitson 1). See also Haynes, Devereaux and Guyett.

[3] I suspect that the phrase "continuous improvement" appears in Todd's statement for its positive connotations. The phrase is otherwise unnecessary because no "strong argument" is needed. Continuous improvement is already part of EBP, as continued experimentation carried out to build up a research base and as outcome monitoring conducted in order to refine how interventions are applied.

[4] As the previous note indicates, a decision about whether school libraries need continuous improvement is not under consideration. Nevertheless, this is an interesting research question since it is possible that these libraries are maximally effective and efficient as they currently operate. Changes might actually diminish their efficacy, for all we know.

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