

EVIDENCE BASED PUBLIC MANAGEMENT: An Informed Evolution

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ABSTRACT

This entry defines evidence based management and its evolution as an approach in public management. Major approaches to producing evidence are examined and assessed and there is a discussion of current prospects and limitations of evidence based management. The entry concludes recommendations to improve the uptake and practice of evidence based management

INTRODUCTION

Evidence based management (EBMgt) seeks to improve public management by informing it with tested, proven, supported, reasoned, or demonstrated principles, facts or analysis, in short, *evidence* (1). Doing so moves public management away from uninformed, ill-informed, unfounded and biased practices; or away from what Nobel Laureate Herbert Simon calls the *proverbs* or conventional wisdom of management which may be incorrect (2). By most expectations (3), EBMgt has potential to improve the quality of public administration and decision making. But, EBMgt is a complement to professional judgment and experience, not a substitute. Tensions between the two approaches—evidence and experience—makes EBMgt difficult to implement. EBMgt's success ultimately depends on the availability of good, relevant evidence. Evidence, in this context, is produced by an array of qualitative and quantitative methodologies common in the social sciences. Many believe that research fails to rise, and may never rise, to the standards necessary to inform public managers. While others believe that EBMgt can be greatly improved—and hence much more relevant and useful—through a concerted effort by practitioners, researchers and educators.

WHAT IS EVIDENCE BASED MANAGEMENT?

EBMgt is the practice of improving management and decision making through careful analyses and evaluations of reasons and research underlying or guiding practice (4). Rousseau (1) simply defines EBMgt as “translating principles based on evidence into

organisational practices.” In the policy analysis field, this approach is equivalent in part to *critical thinking* (5).

HOW DID EBMgt EVOLVE?

Applications of rigorous research to management problems and practices has a long tradition, particularly in organization theory—Max Weber’s (1922) “bureaucracy,” Frederick Taylor’s (1911) “scientific management,” Henri Fayol’s (1916) “general management,” Mary Parker Follett’s (1926), Elton Mayo’s (1933) and Fritz Roethlisberger’s (1939) “human relations,” Herbert Simon’s (1947) “administrative behaviour,” Dwight Waldo’s (1948) “administrative state,” Kurt Lewin’s (1951) and Rensis Likert’s (1961) “participative management,” Douglas McGregor’s (1957) and Chris Argyris’s (1957) “human resources,” James March’s (1965) “handbook on organizations,” Irving Janis’s (1971) “group think,” Edward Demings (1986) “quality management”—where numerous studies have been conducted (6).

Interestingly, organizational studies over a millennium have relied on the same array of qualitative and quantitative methodologies as espoused by EBMgt advocates, yet this has not been widely acknowledged in the EBMgt field itself. As such, public management, from the EBMgt perspective, appears to be in its infancy (4).

Rather, medicine is considered by many to be the inspiration for EBMgt. Proponents generally see Ignaz Semmelweis’s studies of maternity clinics in Vienna in the 1840’s—where he found that mortality rates were lower if physicians and nurses washed their hands in chlorinated lime before seeing each patient—as the foundation for health care EBMgt (7). The medical profession has established the value of evidence based practices, integrating them in the education of future clinicians (8).

Other fields at least tangentially related to public management, including education (9), child protection (10), policing (11), and crime prevention (12) have made advances in the medical model tradition and could be exemplars for public management. UK government, for example, appears to be leading the implementation of evidence-based practice across a range of disciplines, with the establishment of the Department for Education and Skills, Centre for Evidence Informed Policy and Practice in Education (13) and Department of the Environment, Transport and the Regions’ commissioning of a systematic review of relevant evidence base for regenerative policy development (14).

Evidence based public policy is much more advanced than its cousin EBMgt in the field of public management (15). Reasons for policy analysis’ ascendancy are many, the main one is that critical thinking is central to policy analysis training and practice, not something alien that is to be resisted and imposed from outside.

EBMgt EVIDENCE

Generally, EBMgt evidence relies on the same methodologies used in all social science research—either qualitative or quantitative (see **Figure 1**) (5). As a consequence, EBMgt as an approach has been drawn into perennial debates about the qualitative and quantitative methodologies—generalizability, quality,

rigorousness, validity and the like. As a consequence, EBMgt is drawn into methodological and philosophical debates about the relationships between theory, research and practice. These issues are not likely to be resolved, but the uncertainty and confusion the debates and approaches engender, likely cause many managers to eschew research and theory in favour of practice: if social scientists cannot agree, how can managers decide what is good and bad information.

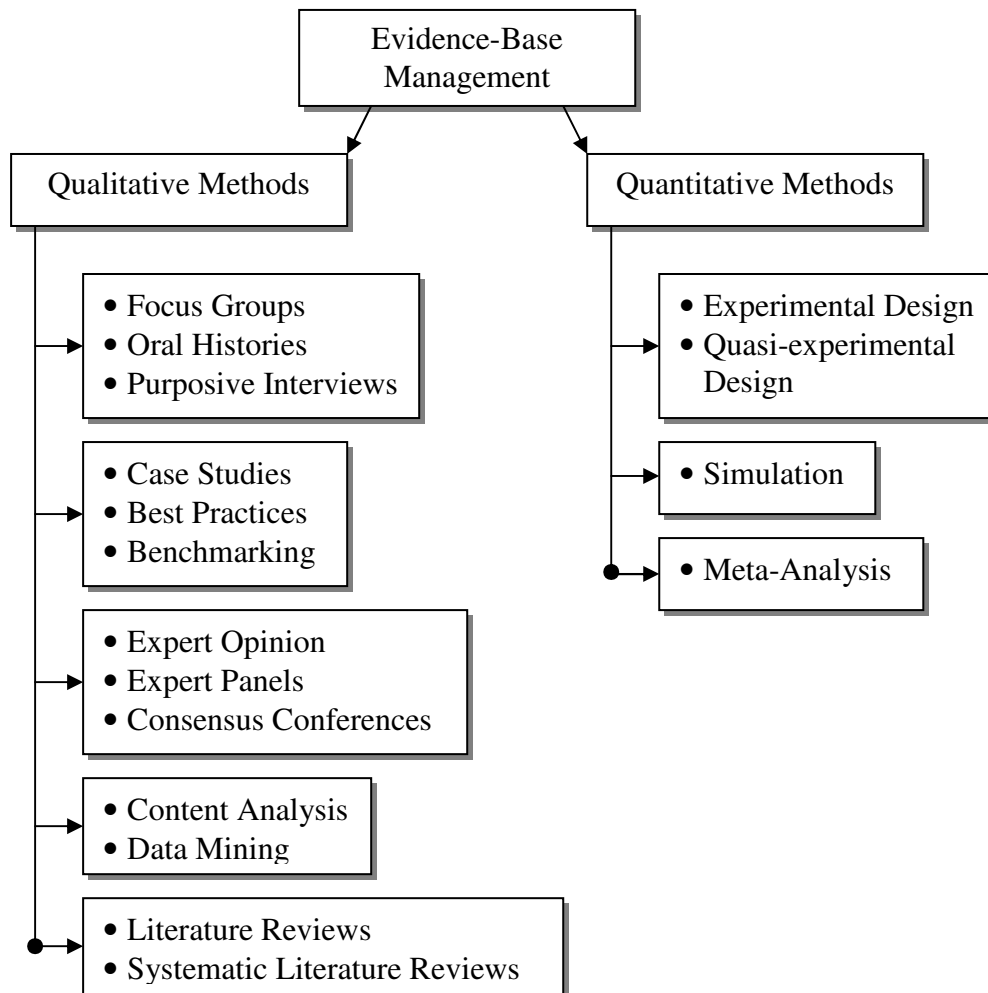


Figure 1: Methods Supporting Evidence-Based Management

We briefly review four methods—case studies, literature reviews, systematic reviews, and meta-analysis—representing those most widely used in EBMgt.

- **Case Studies.** Case studies are likely the most common direct data gathering methodologies used in public management EBMgt (16). The weakness of case study methodologies are their lack of generalizability and potential for bias. But they are powerful in developing the richness and complexity of management practices.
- **Literature Reviews.** Literature reviews are the most prevalent EBMgt field methodology. Analysts gather up all the literature they can find, including unpublished, “fugitive” or working papers, and assess whether certain management practices can be supported by literature. Many criticize literature reviews because the approach does not generally require looking closely at the

underlying methodologies of the studies reviewed. Many studies are simply not good enough to inform practice. Some question the inclusion of unpublished works or government reports because they lack the peer review process of journals, which is intended to identify and exclude poor quality research. Nevertheless, literature reviews show the breadth and depth of knowledge on a management issue, so that managers can make up their own minds about its usefulness.

- **Systematic Reviews.** Systematic reviews apply a much more rigorous literature review approach in assessing literature on management issues (17). Analysts take each article (or other literature reviews) and evaluate methods used, including their generalizability, validity and reliability to a much greater extent than standard literature reviews (18). The most sophisticated approaches employ a panel of expert or informed reviewers who individually rate each article, then come together to reconcile their ratings. The higher the “inter-rater reliability,” the greater the confidence in the conclusions from the literature. Criticisms of this approach tend to question the lack of a theoretical basis for assessing the documents.
- **Expert Panels.** Many caution against use of experts in developing knowledge about management practices because experts tend to be wrong (19): the global financial meltdown of 2008 being one example. Pfeffer cautions that many examples of management practices strongly advocated by practicing executives or consultants often prove to be ineffective when tested against the evidence (20). Taking management books as a whole shows them to be biased, subjective, erroneous and most importantly contradictory in their prescriptions (6). Some have even questioned use of experts in the “peer review” process employed even by the best academic journals (21).
- **Meta-analysis.** Meta-analysis is a sophisticated statistical technique in which data from two or more studies are combined to determine whether the “treatment effect” or “effect size” varies among them (22). The technique is seldom used in public management EBMgt because there are insufficient numbers of comparable studies available for meta-analysis.

TRIANGULATION

Likely there is no research methodology that offers definitive, incontrovertible, valid evidence in support of a management practice. Each methodology has its shortcomings or idiosyncrasies. As such, the best EBMgt evidence derives from the *triangulation* of different methodologies (23)(24), also referred to as *critical multiplism* (25). If disparate study results all point to the same conclusions or implications for practice, then managers will be more confident in applying the results in their work.

EBMgt INFORMING PRACTICE

Denise Rousseau correctly reminds us that, “EBMgt practice is a paradigm for making decisions that integrate the best available research with decision maker expertise and client/customer preferences to guide practice toward more desirable

results” (1). Davies suggests six factors other than evidence that must be taken into account for evidence based management: [1] experience, expertise and judgement, [2] resources, [3] values, [4] habit and tradition, [5] lobbyists, pressure groups and consultants, [6] pragmatics and contingencies (26). No amount of evidence can take into account political, policy and organizational context, hence the need to bring judgment and experience to bear on evidence. Some have suggested that in the public sector, managers should look to *evidence informed* (27)(28), rather than *evidence based practice*.

PROMISES & PROSPECTS/DISAPPOINTMENTS & LIMITATIONS

Governments world-wide are pursuing performance management under the New Public Management agenda with great fervour. Accountability, transparency, effectiveness and efficiency are common watchwords of the approach. EBMgt, according to advocates, should undergird the New Public Management. But EBMgt is difficult to implement for at least four reasons.

MANAGERS

“the practicing executives is more likely to read ‘airport’ books than the most practically focused journals” (29)

Managers are perceived by many to be barriers to EBMgt implementation, for four reasons: [1] EBMgt may threaten their autonomy and power and increase accountability perhaps in unwanted ways (31); [2] depending on their training, they may have difficulty accessing and understanding evidence; [3] they face time/resource constraints—it is unfeasible for managers to keep abreast of the latest evidence: for example, Preffer and Sutton (4) report that there are 30,000 business books in print, with about 3,500 new books published each year; and [4] managers are rightly suspicious of the validity of evidence based research, and many are loath to adopt it.

ORGANISATIONS

Organisations sometimes adopt EBMgt without providing the support for managers necessary to effectively use the methodology. EBMgt requires sophisticated research support to conduct studies, gather data or information, or assemble and analyse literature. This can be expensive or resource-intensive. Because many organizational cultures operate militate against EBMgt, senior manager much invest heavily in organizational change initiatives to bring along recalcitrant managers. This also can be expensive. Finally, there are few incentives for engaging in EBMgt, while there are huge incentives in most organizations for making good decisions. So, why would effective managers undertake EBMgt if they are already being rewarded in practice?

RESEARCH LIMITATIONS

Most management research is theoretical, not practical, speculative or experiential, and focuses on what not to do, rarely offering a solution (30), making it difficult to translate research findings into practice (1) and as with any scientific evidence there is always error or imperfections in data (32). Additionally, there are holes in the research base and insufficient evidences exits to inform all areas of public management (17). Public management research is doomed to be a spotty patchwork of studies undertaken with differing contexts, differing methodologies and differing quality.

KNOWLEDGE MANAGEMENT

Although much has been made about knowledge management advancements in information technology, much more needs to be accomplished before it adequately serves the needs of public managers. Much of the information produced is simply not accessible. That information that is accessible requires deviously complicated search strategies to extract it. And, there is an overwhelming amount of information to sift through, that in the end turns out to be irrelevant or useless.

IMPROVING UPTAKE AND PRACTICE

RESEARCHERS

Researchers in all disciplines could make several changes to the way research is conducted and communicated that would assist practitioners find, assess, and apply evidence. This is particularly true of management research due to the divergent nature of the research findings, rather than the convergent nature of medical practice research findings (33). The uptake of EBMgt will lead to increasing demands for research to produce evidence on which practical management decisions can be based. Researchers should try to predict the consequences of managerial actions, not simply understand the aspects of organisational life (34). For the progression of EBMgt in public administration, researches should involve public sector managers in the development of research questions, give balanced findings that identify benefits, risks and stress associated uncertainty, define the political, social or other contexts of the research, communicate in plain English, and work to develop and register research within a data-base of quality assessed research, such as the Cochran Collective for Evidence Based Medicine.

GOVERNMENT/MANAGERS/ORGANISATIONS

Rousseauⁱ claims that: “Through evidence based management, practicing managers develop into experts who make organisational decisions informed by social science and organisational research”. Organisations (including the Public Sector) must support evidence-based decision-making through their organisational architecture and culture. This includes a critical examination of incentives (positive and negative), the positioning of decision-making authority and implementation of meaningful performance management. There are limits to EBMgt and organisations must design systems in recognition of these. Baker, Brownson, Gillespie and Leet (32) suggest a model or key steps to adopt EBMgt for the public health system that have equal validity to other organisations:

- Assessing the quality and limit of evidence
- Intervention approaches are based on the best possible science
- Problem solving is multidisciplinary
- Theory and systemic program planning approaches are used
- Sound evaluation principles are followed
- Results are disseminated to others who need to know

Enabling this requires the development of an organisational culture that accepts the value of evidence and has the proper skill set to identify quality-appraised sources of systematic reviews and to appraise their contextual applicability. This will require the

ⁱ Rousseau, D. 2005, “Is there such a thing as “evidence based management?””, *Academy of Management Review*, Vol. 31, No. 2, pp. 256-269.

development of existing managers and the recruitment of new staff to prioritise this skill set to ensure evidence based practice is applied. The use of executive education programs and the development of core competencies should incorporate the skills and mind set required to implement evidence based practice. Managers must take on two roles when applying EBMgt: a critical evaluator of internal evidence and a translator of the external evidence (31).

EDUCATORS

Educators are critical to the long term success of EBMgt, as they develop the skill set future leaders will rely on to base their decisions and practice. It is therefore essential that educators teach management from an evidence-based perspective (31) and evaluate based on demonstrated application of finding, assessing, and determining management implications within a given context.

Three areas that educators could focus the development management education programs to better infuse EBMgt are 1) focusing on areas of existing research, 2) providing opportunities to practice, and 3) managing student expectations.(31)

Currently the majority of management programs focus on the learning of theories based on experiential studies, such as current case studies and supporting discussions. This can undermine the evidence-based requirement to developing a solution based on finding, assessing, and applying research. Students must be encouraged to do more than study lecture materials and discussing current practice. The success of EBMgt would be aided by greater emphasis on simulations, internships, and the development of evidence based frameworks and decision support systems as a component of course work. This provides practical and translatable experience to students to apply professionally upon completion.

Students of professional programs come with expectations of not only what the resulting opportunities of the program will be, but also the course content. To date management schools have met this expectation with providing current case studies and discussion. This has developed a culture amongst management students that research is for academics to produce and read amongst themselves and not required in the profession of organisational management. The culture has become it is expertise that succeeds in the business world and this is not developed by conducting or reviewing research. Universities and professors need to manage the existing expectation, while shifting the culture to one where in successful managers rely on research to stay current and maintain competitive advantage.

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