

Panel: Evidence Based Information Systems: Bridging the Gap Between Research and Practice

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Abstract

This session will consider the application of evidence based ideas to Information Systems (IS). In the medical and healthcare community, where many of these ideas were formalised, they have been used successfully, both to inform the practitioner community of the best evidence produced by academic research, and to counter the difficulties posed by the growing information overload which threatens to overwhelm researchers and practitioners alike. While the panellists do not necessarily agree on the feasibility of evidence based Information Systems (EBIS) or on its benefits, nevertheless they see it as offering a new perspective on long-standing problems, which is worth investigating and debating.

Keywords

IS Research, knowledge management, research methods

INTRODUCTION

Two perennial issues have continued to challenge the IS community; the need to establish a body of research that is both academically rigorous and relevant, and the need to foster a productive synergy between IS researchers and practitioners. Indeed, it has been argued that research knowledge in IS is only of value if it contributes to more effective use of IT in practice (Moody and Buist, 1999). These challenges are becoming increasingly taxing as the volume of both empirical research findings and practitioner reports grows steadily and Internet technology ensures that such information becomes increasingly accessible (Atkins and Louw, 2000). The inclusion of two panel sessions on these issues at the European Conference on Information Systems (ECIS 2000) attests to their continuing importance. In response to similar challenges, the medical and healthcare community has, over the last ten years, developed a culture of 'evidence based' practice, which rests largely on formal and systematic reviews of primary research pertinent to a tightly focused clinical question. The results of these 'systematic reviews' are used to provide clinicians with both a summary of the 'best evidence' produced by primary research and with guidelines for clinical practice that are based on this evidence.

EVIDENCE BASED INFORMATION SYSTEMS

The EBIS Collaboration was formed in July 2000, to investigate the application of evidence based ideas to Information Systems. Four of the panellists are members of the Collaboration and we suggest that the creation of a framework in which an evidence based culture could flourish would bring benefits to both IS researchers and practitioners. The creation of a suitable framework, for example, requires, among other things, a formal and visible methodology for the systematic review of primary research, the creation or adoption of a taxonomy within which IS research questions can be matched to appropriate research methods, and sets of guidelines for the critical appraisal of different types of IS research; all activities which may well be beneficial to the wider IS research community, regardless of the adoption of evidence based ideas.

There are clearly a number of differences between IS and medicine, not the least of which are the fact that almost all medical researchers are themselves practitioners and that the nature of much empirical medical research, often randomised controlled trials, lends itself more readily to meta-analysis and useful synthesis. However, other disciplines, such as education and social policy, are also beginning to apply evidence based ideas and are seeking to solve some of the problems that IS also faces, such as the means of evaluating the rigour of qualitative research. Evidence based decision making may also be resisted by some sections of the practitioner community, for whom innovation, risk taking and entrepreneurship may be more appropriate to creating competitive advantage.

THE PANEL SESSION

The EBIS initiative is still in its formative stages and there are many issues that are unclear or controversial. The panel members are by no means agreed on the form or the direction that EBIS might take. However, they do share a concern that the issues outlined above are important and that EBIS is an approach worth investigating. Each panellist will make a short presentation outlining some aspect of EBIS and will highlight some of the more provocative questions that need debating. Dr Louw will briefly outline the basic concepts of evidence based practice in Healthcare focusing mainly on the creation of systematic reviews, critical appraisal guidelines and guidelines for clinical effectiveness. Gabby Fennessy will discuss how these concepts could be applied to IS and some of the benefits they might bring while Graeme Shanks will provide an IS researcher's perspective on EBIS. Daniel Moody will provide some thoughts

on whether or not EBIS might draw IS research and practice closer and Clare Atkins will outline some of the EBIS work currently underway.

THE PANELISTS

Clare Atkins (chair): Dr Clare Atkins is a Senior Lecturer in the Department of Information Systems at Massey University in New Zealand, which is where she gained her PhD in Information Systems. Her interest in the application of evidence based thinking to IS came from collaborative work with Dr Louw and resulted in the presentation of a joint paper at ECIS2000 (Atkins and Louw, 2000), in response to which the EBIS Collaboration was formed.

Gabby Fennessy: Gabby Fennessy is a PhD Candidate in the School of Information Management and Systems at Monash University. Her research looks at knowledge management in the area of evidence based health care, particularly at how knowledge is generated in providing knowledge about good practice in health care decision making (Fennessy and Bernstein, 2000). Gabby has a background in education and research in evidence based health care, and teaches health practitioners about searching, appraising and applying the evidence to clinical practice. Her interest in EBIS stems from this background, and also from working with health librarians who are questioning the evidence base of their own practice in the UK and the USA.

Gail Louw: Dr Gail Louw is a Senior Lecturer at the Institute of Nursing and Midwifery at Brighton University, UK. Her PhD was in the field of organisational informatics, particularly looking at using complex information in the NHS. After developing an interest in evidence based practice, she received a one year training fellowship at the Institute of Child Health in London and spent the following year working on two systematic reviews. The first was a systematic review of RCTs and is now in the Cochrane Library while the second was a systematic review of other study designs including case studies. Gail spent the following year producing national clinical guidelines on recognising and assessing pain in children with the Royal College of Nursing Institute. She now teaches health service management and research.

Daniel Moody: Daniel holds a joint position as Senior Consultant with Simsion Bowles & Associates in Melbourne and Research Fellow in the Department of Information Systems at the University of Melbourne. Well known in both the academic and practitioner communities for his contribution in bridging the gap between the two, Daniel highlighted a number of the lessons that IS could learn from the medical profession (Moody and Buist, 1999) and the ways in which technology could support evidence-based practice (Moody and Shanks, 1999) at ACIS '99. Daniel has published more than 50 papers in academic and practitioner conferences and journals. He is the Australian President of the Data Management Association (DAMA) and Australian World-Wide Representative for IRMA (Information Resource Management Association).

Graeme Shanks: Dr. Graeme Shanks is Associate Professor in the Department of Information Systems at The University of Melbourne. He holds a PhD in Information Systems from Monash University. Before becoming an academic, Graeme worked for a number of private and government organizations as a programmer, systems analysts and project leader. His research interests include information quality, implementation and impact of enterprise systems, and conceptual modelling. He has published his research in Information Systems Journal, Journal of Strategic Information Systems, Journal of Information Technology, Information and Management, Requirements Engineering, Australian Computer Journal, and Australian Journal of Information Systems.

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