# EDUCATING THE EVIDENCE- BASED MANAGER: THE EXECUTIVE DOCTORATE AND ITS IMPACT ON MANAGEMENT PRACTICE

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## ABSTRACT

This paper presents empirical work on the impact of the executive doctorate (DBA) on managerial decision-making and practice. We examine the extent to which DBA graduates can be viewed as evidence-based managers who, through doctorate level study become more critical in thought and action, and successfully '*develop into experts who make organizational decisions informed by social science and organizational research*' (Rousseau, 2006; 256). The findings show that the executive doctorate has a profound impact on participants' work practice. In most instances the programme has made them into critical thinkers who require rigorous analysis before decision-making. However, although they are now more critical and their perception of what constitutes 'evidence' has developed, there are challenges to moving beyond what can be labelled as '*internal evidence*', a robust and rigorous approach to decision-making, to a perspective in which business strategy and decision-making are underpinned by '*external evidence*', evidence that is informed by academic theory and research. We consider implications for the evidence-based practice movement.

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## INTRODUCTION

This paper presents empirical work in progress on the impact of the executive doctorate on managerial decision-making and practice and examines the extent to which DBA students can be viewed as evidence-based managers who through doctorate level study become more critical in thought and action and successfully 'develop into experts who make organizational decisions informed by social science and organizational research' (Rousseau, 2006:256).

Other academic fields have found an evidence-based approach to be demonstrably worthwhile as a means of engaging with practice. Many authors (Tranfield, Denyer and Smart, 2003) have argued that management and organisation studies have a significant opportunity critically to evaluate and potentially to learn from many other fields that have developed an evidence-based approach. However, EBM is still in its infancy and there are few examples of evidence-based management in practice, raising a number of questions. Is evidence-based management possible? What would an evidence-based manager look like? What forms of evidence would they draw on and how would evidence inform decision making?

One potential group of evidence-based managers are graduates of executive doctorate (DBA) programmes. Through their course of study they turn practical real world problems into researchable questions, systematically engage with the relevant literature, critically evaluate existing research, design and operationalise an empirical project and communicate the results to both the academic and practitioner communities.

This paper provides the results of an evaluation of an executive doctorate programme, reports on how the programme had a profound impact on participants and their practice and discusses the implications for evidence-based management.

## EVIDENCE-BASED MANAGEMENT

Evidence based practice (EBP) can be traced to the early 1970s (Cochrane, 1972) and can be defined as the conscientious, explicit, judicious use of current best evidence in the decision making process (Sackett et al., 1996). This approach has taken hold in many disciplines including public health, social care, criminal justice and education. Over recent years there have been a number of papers advocating an evidence-based approach to management (Tranfield, Denyer and Smart, 2003). Pfeffer and Sutton (2006) published similar ideas and in the same year Rousseau (2006) used her presidential address to the American Academy of Management to discuss this subject.

Drawing on Sackett's (1986) definition of evidence-based practice, evidence-based management (EBM) can be construed as making better decisions by integrating managerial expertise with the conscientious, explicit and judicious use of best evidence in making decisions whilst taking into account the perspectives of those people who might be affected by them. While all decisions are based to some extent on evidence, EBM differs in two important respects.

First, in order to be useful, the external evidence from research needs to be reviewed and summarized in a systematic way that allows reasonably clear conclusions to be reached about what we know and do not know. Second, research evidence is integrated into the decision-making process in an explicit way such that its relevance and usefulness to the decision is made clear. Evidence based management (EBM) takes place when decisions that affect management and organisation are taken with due consideration of all valid, relevant information.

Within management and organisation studies (MOS) the notion of evidence-based management is contested (Learmonth and Harding, 2006). They argue that EBM attempts to provide answers, facts and prescriptions for practice which at odds with the ontological and epistemological foundations of the field. Learmonth (2006) challenges EBM for being overtly managerialist and Morrell (2008) argues that it does not take into account ethics and situated Judgement. This is a legitimate concern, particularly when some promoters of EBM suggest that the evidence-based manager should avoid '…succumbing to using belief or ideology over evidence' (Pfeffer and Sutton, 2006:12). Other advocates of evidence-based management (Tranfield, Denyer and Smart, 2003) express a more sympathetic and considered approach to EBM suggesting that the medical model of evidence-based practice, with its positivistic orientation, should not be adopted indiscriminately in management and organisation studies. They argue for the development of a new model of evidence-based management that takes into account the methodological pluralism evident in the management and organisation studies rather than privileging certain forms of evidence.

Regarding the evidence and its utility in informing decision making, Rousseau (2007) presents a helpful perspective, suggesting that evidence can take two forms. It can be particular to one person's experience or observations of a company's performance. She refers to this as 'little e' evidence, these 'non-scientific', individual or local interpretations are the basis of routine decision making. Another form of evidence referred to as 'big E' evidence is gathered through research and is more systematic and general and is usually produced through scholarly research. Although not implied in her writing, some people feel uneasy about Rousseau's big 'E' and little 'e' evidence as this could imply that big 'E' evidence is of greater consequence. Therefore, we prefer to use the terms 'internal' and 'external' evidence.

Internal evidence is gathered within the manager's organisation or immediate network. Internal evidence resides in people and the organization and other groups that have a shared knowledge base. Internal evidence can be explicit or tacit (Polanyi, 1966). Tacit evidence may be located in a host of sources such as documents and reports, finance statements and performance measurement. Tacit evidence is gained from experience, recommendations, ideas, advice and feedback. Most management decisions are based on internal evidence. External evidence can also be acquired from numerous sources outside the organisation or the manager's immediate network. External evidence includes market research, benchmarking, management consultancy, books, the internet and academic research. When faced with a decision managers are likely to use a combination of internal and external evidence. Many factors are likely to influence the type of evidence used. For example, if an immediate decision needs to be made that has limited consequences it may be based on experience or even intuition. If the consequences of the decision are significant, such as in the redesign of the structure of the organisation, implementing a new strategy or rewards system and the timescale is longer then it is likely that external sources, such as management consultants, would be used. The evidence-based manager will collect, appraise and integrate both internal and external evidence to ensure that ‘decision making is based on as good evidence as can sensibly be obtained within the time and cost constraints’ (Stewart, 2002:93).

Advocates of evidence-based practice recognise that decision-making and action should never be based solely on external evidence, particularly academic research, as all judgments entail a careful consideration of the circumstances and ethical concerns (Bero and Rennie, 1995; Rosenberg and Donald, 1995). However, there is also recognition that research in management and organisation is a form of external evidence that is, at present, underutilised by firms. This is surprising given that over the last 40 years management and organisation studies has witnessed an enormous acceleration in the amount of new information produced. In management research, the science base on dozens of topics has grown and continues to grow at an exponential rate.

We suggest that the evidence-based manager requires two core skills. Firstly, the evidence-based manager will have a ‘questioning state of mind’ by constantly asking ‘What? When? Why? Where? How, and what assumptions are we making’ (Stewart, 2002:157) of internal evidence. Secondly, the evidence-based manager must be able determine for themselves whether external evidence, including academic research, is good enough to be used in decision making. Unlike medicine, where evidence-based practice has arguably has the greatest impact, management is not a profession where it is mandatory to hold an appropriate qualification to practice. Arguably, management education, in the form of degrees in Business Studies or the MBA, is divorced from the latest management and organisational research (Pfeffer and Fong, 2004). One form of management education that closely unites research and practice is the executive doctorate.

## THE RESEARCH CONTEXT

The Executive Doctorate (DBA) is one of a number of professional doctorates that have become international popular over the last two decades. Professional doctorates have been developed in diverse fields such as education engineering, law, health, and business. The growth of this type of degree has been well documented (e.g. Evans, 1997, Bareham, Bourner and Ruggeri-Stevens, 2000; Lester, 2004; Neumann, 2005). As professional doctorates are not identical we explore key features and assumptions regarding the programme that are relevant to this paper.

At Cranfield the DBA is open to senior managers, directors and recognised professional experts. As a part time doctorate studies are concurrent with work roles. This professional doctorate is not primarily a personal development programme. Entry to the programme requires a proposal based on a key business issue, relevant to the ‘real’ business context. The organization issue must be one which is a significant challenge to the sector or organization and about which there is agreement between the candidate and the academic faculty that a gap in knowledge exists and it is likely to yield a researchable question of interest to the academic and practitioner communities on completion.

Consistent with the objectives of most professional doctorates, although the DBA research draws on and contributes to existing literatures, the expected contribution is to knowledge about practice which is relevant and of value to the wider academic and practitioner communities, not just to their own organization. In this professional doctorate the organizational issues are frequently thematic rather than disciplinary or functionally specific. By grounding the research in an organization issue the research is oriented to a Mode 2 process in which the knowledge to be developed is generated in the context in which it is applicable (Gibbons et al, 1994; Starkey and Madan, 2001).

The DBA is a research degree and the threshold for the award of this doctorate is the same as the PhD; the student has to make a contribution to knowledge (which may be about practice), to understand research philosophy and methodology and gain scholarship in their field. In order to achieve this, students need to develop personal as well as research skills and engage in the learning required to undertake the doctorate may engender new ways of thinking. The expectation is that the student will need to have developed their capacity for thinking about their issue from a variety of perspectives, being able to theorize organization issues, identifying and capturing relevant evidence from the literature, evaluating evidence, synthesizing evidence and applying this to their research.

Students have a lead supervisor and a faculty panel contributing to their supervision. This provides offers a unique opportunity for a partnership between university-based researchers and management practitioners to develop knowledge about practice that is both rigorous and relevant. Although maintaining the rigour of standards expected of a doctoral qualification, the programme can be seen to be thematic and trans-disciplinary rather than functional and solely relevant to academic theory. It could therefore be expected that DBA students will become practicing managers who, through doctorate level study, '*develop into experts who make organizational decisions informed by social science and organizational research*' (Rousseau, 2006; 256). In this regard DBA candidates are engaged in Mode 2 research (Gibbons et al, 1994; Starkey and Madan, 2001) that has '*end user focus'* rather than '*general ideas*', and the output has *tangible product*' in addition to academic output (Burgoyne and James, 2006).

Successful candidates should therefore have been examined on their capability for working with evidence in the development of their doctorate. In this programme students are given a clear opportunity to learn the skills and capabilities which would enable their management practice to be evidence informed and provides a suitable research case.

At Cranfield School of Management this mode of doctoral study began in 1999. Since then there has been an annual cohort intake to the programme. By March 2008 there had been twenty-two graduates.

## METHODS

### Participants and Data Collection

The participants were fourteen DBA students who, at the time of their interview, had either recently graduated or were approaching graduation from the programme (within six months of defence). These individuals were able to draw on at least three years of progress through the programme and therefore deemed to be in a position to reflect on the overall impact of their DBA on their work practice.

Participants were recruited by individually targeted email or telephone conversation. The rationale for selection was that they should personify a sufficient representation of the overall cohort of graduates, across a number of years. The selected participants were those with whom there was continued personal contact; some graduates were not available as contact had been lost. The participants represent approx 63 percent of overall graduates. Interviews, which lasted between 35 and 70 minutes, were conducted either face to face or by telephone. With participants permission interviews were recorded; they were later transcribed.

The focus of the interviews centred on participants' perceptions of the outcome of undertaking a DBA for both themselves and their organization. As a warm up, and by way of eliciting background information, we firstly asked participants to reflect on, and describe, their original motivation for starting the DBA programme. Although not the primary purpose of the study, responses provided data that contributed to contextually relevant further questions. The principal question asked:

- How has the DBA had an impact on your management practice?
- Responses were explored through probes to elicit richer detail and real examples. Further questions explored the following:
- What has been their experience of being on the programme
- What has been the personal learning outcomes of the research process and research output?

Although these questions are not explicitly examined here, participants' responses contributed and enriched their answers to the primary question.

In addition to individual interviews we recorded two focus group discussions conducted in cohort groups (on basis of the year of entry to the programme). The themes mirrored those of the interviews.

### Data Analysis

A thematic content analysis of the transcripts was carried out. The analysis involved the identification of concepts which, through coding of text extracts, permitted the development of a coding framework to emerge from the data. In this respect a general grounded approach was employed. The transcripts were single coded by the same researcher (co author). The reports of the participants were discussed between all the authors who, through their previous conversations with DBA cohort members, found the themes to be credible. Second coding was therefore considered not to be necessary to the rigour of analysis.

## FINDINGS

### The Workplace Issue

As we have outlined above the research focus of the DBA is on a workplace or organizational issue or problem. In other words, although consistent with the objectives of any doctorate the DBA must make a contribution to knowledge; the origins of the research are centred on the real problems faced at what might be considered the coalface of the organization rather than a singular contribution to management theory. This places the focus of the research, and the output, squarely in the territory of relevance that can impact practice. However, it should also be recognised that from the outset the DBA doctoral candidates also perceive the programme as providing personal development. Here, for example the students talk of their personal desire to learn and develop as individuals. Indeed this aspect of the DBA is recognised by the Economic and Social Research Council (ESRC) in their DBA recognition guidelines. Less recognised by individuals at the outset of the programme is the extent of the research skills relevant to both the academic and business context that are developed during the programme.

However, a key finding of this study indicate that although the doctoral process begins with the workplace issue as the main concern, this is frequently secondary in terms of individual's reports of how the DBA has had an impact on their organization or workplace. This is explored in greater detail below.

## Taking a Critical Approach

As a major impact all participants describe how, through the DBA, they have become far more critical in their workplace practice. There are different aspects to this critical approach; these principally concern the manner of the way they undertake their own work, and the way they believe that their colleagues, at all levels, should approach work.

This critical approach is perhaps best captured by the term '*challenging assumptions*'; a term explicitly used by many of the participants. For example, participants describe how, in comparison to the way they previously worked, when considering strategic decisions, they require engagement in a greater degree of critical analysis. This includes the explicit expression of underlying assumptions in an effort ensure that decisions are supported by a robust analysis of evaluated data. They place these demands both on themselves and on their colleagues. As one participant stated:

> …the way in which I think and the way I approach problems is much more critical than before… I have a deeper spin on what I do, I am more critical, every time I draw conclusions they are based on things that are more solid that what I did in the past.
>
> One of the slogans for positioning my company is that we are evidenced based consulting. And you know, if I pick up a presentation randomly I would say that in 80 percent of the cases the evidence is not worth what, what from a DBA point of view is what you would call evidence. One opinion is not evidence – hard data is not in itself evidence, you know, 'who said that?' for example. So I think that in that respect I became very critical.

As might be expected this demand for robust analysis is expressed in different ways by the participants; some talk of rigour, others express the same concept by describing critical scrutiny. But, as indicated by the quotation above, it is not unreasonable to state that what the participants demand, of themselves and others, is that decisions are based on a robust analysis of *evidence*.

This serves to ask the question: 'what, in the view of the participants, is evidence?' Although we did not explicitly ask this question, through interview probes we sought to explore participants' views of the nature of the kind of robust analysis required to support decision making. Participants' responses reflect that the nature of evidence can be conceptualised in two ways. Firstly an approach to work in which assumptions are explicitly sets out, rather than ignored and which includes a critical assessment of options. Secondly, that this process is supported by academic research and/or theory. For reasons described below, the former we conceptualise as 'the manager as critical evaluator' the latter we conceptualise as 'the manager as translator / organizational consultant'.

### The Manager as Critical Evaluator of Internal Evidence

As we have described above all participants report that a major impact of the DBA is that they are far more critical in their management practice and this applies to both their own work and that of their colleagues. They require that presentations and reports that contribute to decisions making provide a good analysis of evidence. In this context 'evidence' is the outcome of a rigorous and robust analysis in which assumptions are explicitly set out and challenged. As one participant stated:

> I think it is about rigour, and more aware of methods, and the need to apply those in people's ideas or arguments. That applies in the education, the classroom role, but the management role too.

### The Manager as Translator of External Evidence

Most participants make a direct, unprompted, reference to the sort of evidence that could support robust decision making as that emerging from academic research or theory. Those, minority participants who did not make a spontaneous reference to academic research or theory were asked whether they sought this form of knowledge to inform their decisions. Whether unprompted or prompted, participants talked of the nature of academic evidence in considerable detail; this included the benefits of such an approach, and the challenges and barriers of including this sort of evidence. Three themes can be identified:

- Reference to academic articles and research makes an important contribution
- I refer to academic articles and research, <u>but</u>…
- It would be good to refer to academic articles and research, <u>but</u> in the real world context…

The first theme reflects support for the inclusion of academic theory and research in business decision making or strategy. The second and third themes reflect that there are considerable barriers to such an approach. A key finding is that the expressed barriers are a dominant force and that this makes the inclusion of evidence from academia a difficult challenge.

In the following section we firstly set out the barriers and then outline the views of those minority participants describe how they attempt to overcome this challenge.

### The Relevance Barrier

Some participants report that, in their view, most contributions from the academic community, particularly the kind of scholarly articles found in academic journals are highly theoretical and frequently impractical to real business problems. Furthermore the research and publication process takes such a long time that it is frequently out of date. A frequent comment is that academics are interested in dissemination to the academic community - journals and conferences- but poor at dissemination to the real world. As one of the interviews remarked:

> ‘Publish or perish’ pushes you into the world of writing academic articles, that’s your priority because you have to - and you’re measured by it. But in my experience it’s not then disseminated to the real world, you don’t get points for that. …instead of the generalisable offerings that the journal want, there needs to be research that business people can see is relevant to them.
> By the way, it takes so long to get stuff in to a journal, I’m not so sure that some of it is still relevant by the time it gets out there; it’s of historical interest, not a possible solution.

Related to relevance is the concern that academic research is required to be overly rigorous; that too much evidence is required to support findings. This requires considerable effort and time which the practitioner world cannot hardly afford, and means that findings are unduly delayed

> The key words are practical and pragmatic; what I am experiencing in the DBA is …I am forced to show that it is strong enough for the academic point of view, and I think it is too much effort, but I need to do it. We are now working in the wrong place of the Pareto curve in the academic world – we are looking for too much evidence to achieve too little. It is not practical – and it takes time, then the output is irrelevant.

In a further reference to relevance participants talked of how the practitioner and academic communities frequently perceive relevancy in different ways. For practitioners relevance requires that ideas can be shown to have been applied in the business context. For academics relevance is situated in a perception that the idea has applicability, but this might not yet have been demonstrated in a business setting. This suggests a disjoint between theory and practice. As one of the interviewees explained:

> …relevancy to an academic is different to relevancy in the practitioner world. The same word to all, but different meaning; to an academic relevancy means has <u>pertinence</u> [stressed] to a business situation. To a practitioner relevance means delivers high utility.

> …if you take stakeholder classification theory, it’s very informative but it never got operationalized in practice; academics will see it as relevant, but practitioners cannot see how it has been applied in a business context.

**The Access Barrier**

A further explanation of why participants do not draw on published academic work to inform their decision making was a problem of access. Some participants report that since they graduated from the programme their access to journals and databases had expired and therefore this avenue to academic literature was closed. Although this explanation is credible, we asked whether, through established (or new) relationships with the academic community they might be able to continue to access academic publishing. Here the response was mixed. Some participants stated that they had unambiguously chosen to maintain and build relationships with the academic community in order that they could keep up to date with latest ideas. One of the interviewees admitted that this was because he wanted to keep the door open to an academic career; otherwise he would not do so. Others also made reference to their career path. In these cases they stated that as they were not interested in pursuing an academic career - and writing their findings for an academic publication - their relationship with the academic community was eroding; there was little professional incentive to maintain this relationship.

### The Time Barrier

Following the access theme, a related issue was that the continuance of engaging with the latest academic thought and writing is a time consuming exercise; the challenges of their work role prohibit spending time reading academic journals to learn about the latest ideas emerging from the academic community. As one of the participants remarked:

> I sometimes look at what academia has to say, but I have little time to do this; so there is less of this now than when I was reading for the DBA; I mean articles in journals. Sometimes I read because I want to learn, a personal interest, but it's so long and so much effort to read and some is pretty useless, not practical – it's not really worth it. So that's a challenge.

As evidenced from the quote above, the concern with the time barrier is associated with the issue of the relevance of academic publications to the real business context; it takes time to *'separate the wheat from the chaff'*. Some participants describe how good quality practitioner publications can help overcome these problems. They consider that magazines associated with their particular profession, or more generic but well known management reviews, offer an avenue into the latest views emerging from academic thought and research.

### The Language Barrier

For many participants the barriers of access and time are compounded by a perception that the language of academia can be difficult for the practitioner to understand; it is *'exclusive rather than inclusive'*.

This reference to language is not purely a concern about technical labelling, although this is an issue, but rather it refers to the whole style of academic writing that frequently fails to capture the interest of a non-academic audience. This leads some of the participants, particularly those who are engaged in a consultancy role to describe themselves as 'translator', 'broker', or 'bridge'. As one of the participants remarked:

> One of the things that I do is to translate the academic language into something those organizations can understand.
>
> So there is a tension between academic research and real-life applicability. [As] a consultant, I think I am able to join up these disparate perspectives. What I try to do is to seek evidence from the academic world, but I need to find a way of explaining a complex situation.
>
> It's because the academic world couldn't get close enough the practitioner world and the practitioner world just didn't have the patience or the understanding to allow that process to happen

Although the notion of translator was made with reference to participants working with their workplace colleagues it was more particularly made by the participants who are engaged in a consultancy role. Their concept of translator or broker was that of acting as a bridge between *'worlds apart, the real world and the academic world'* or spanning the 'wall' between academia and the business world. In this regard participants describe that although they believe that academic research and theory is important and can contribute to the business world, academic output in terms of articles for publication are written in a style that the business world '*usually finds incomprehensible*'. As one of the participants stated:

> *…'rather than inform it is likely to scare them off, but if I can translate this into a language they can understand they are confident that leading thought is contributing to their decision process.'*

For a number of participants the role of translator is not solely that of overcoming the language barrier; it includes acting as a filter, in other words ensuring that the academic evidence that may underpin or contribute to decisions is contextually relevant. The participant who talked of their role to *'separate the wheat from the chaff'* captures the idea of filtering the plethora of academic publications to identify academic evidence that is contextually relevant to the particular business case.

A caution here is that by acting as a filter it is possible that consultants select those academic ideas that support their case and ignore those which offer an alternative perspective. This concern is recognised by interviewees who state that this is an issue of personal integrity. A professional consultant should be confident to put forward a full range of ideas rather than ignore those that fail to support their argument.

An interesting rhetorical question posed by some of the participants engaged in consultancy is that relating to their clients' knowledge of what constitutes good or rigorous evidence. As one of the participants remarked:

> Policy makers don't know what rigour or evidence really is. They want evidence but often accept poorly conceived and non-rigorous studies that some consultancies, even some of the big names, provide. They think they're getting leading edge thinking, but often that's just not true.

Reflecting on this issue the participant questioned whether the principal problem was a general lack of understanding of what constitutes robust evidence, whether academic or otherwise, or whether this was the deliberate turning of a blind eye. The interviewee continued:

> I'm not sure if they know what they're getting is not the robust and well conceived research. I think they should know, but policy makers are good at hearing and receiving the messages that support their ideas, and consultants can be good at sussing out what their clients want to hear. This can push robust and rigorous, unbiased work on to the back burner.

The participant who talked about this issue conceded that, on balance, it was likely that a general ignorance in the business (and political) world about the nature of robust evidence -supported by rigorous research or theory - and that ignorance prevails.

## DISCUSSION AND CONCLUSION

Overall, the study demonstrates that the executive doctorate has a profound impact on participants and their practice. In most instances the programme has made them into critical thinkers who require rigorous analysis before decision-making. What is interesting is that prior to undertaking the doctorate participants did not consider their perception of rigour to be underdeveloped - this has come about during the programme. The developing critical thinker has been a key topic in pedagogical theory. This process of examining ones assumptions requires ‘reflective thinking’, which involves,

> active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of the grounds which support it and the further conclusions to which it tends. (Dewey, 1909:9).

Glaser (1941:5) builds on this arguing that critical thinking is,

> (1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one’s experience; and (2) some skill in applying those methods. Critical thinking calls for a persistent effort to examine a belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends.

For most managers the development of these critical thinking skills requires considerable personal change and development. As Homa (1998) argues,

> At the centre of evidence-based management is an obligation and truism. The managerial obligation is to take the appropriate action arising from the evidence… The truism is that evidence-based management is not self implementing. It requires considerable effort, including, perhaps, change to one’s own managerial behaviour.

DBA students learn that a doctorate is not a directive programme about a wide understanding of management principles. They find themselves in an environment in which their work is robustly critiqued and challenged ontologically and epistemologically; challenges, which they can find uncomfortable and potential perceptions of inadequacy, lowered motivation and confidence. This is difficult and painful for individuals who are otherwise considered as successful and highly motivated, holding senior positions in their organisations.

Participants go on to describe how, over time, there is a realisation that the principal aim of academics is to support doctoral candidates through what is a rigorous process; the same rigour that is required to both complete and defend a PhD. They develop a critical perspective of both their own doctoral work and that of their doctoral colleagues. It is this critical and challenging approach that they take back to their workplace practice.

Our research also demonstrates that developing an awareness of academic research and the development of skills required to evaluate does not mean that they necessarily draw on academic theory or research, or engaging with the academic community, to ensure that they employ evidence based decision-making, rather they view this approach –and the barriers that it poses, with scepticism. In other words although they are now more critical, and their perception of what constitutes evidence has developed, there are challenges to moving beyond what can be labelled as internal evidence to ensuring that business strategy and decision-making are underpinned by external evidence from academic research.

It would appear that DBA graduates return to an environment in which they are practising managers rather than management researchers. This supports a perspective that places these groups in different worlds; a view that although practising managers and management researchers share a concern for the same subjects, these managers and academic researchers '*remain two distinct audiences'* (MacLean and Macintosh, 2002: 283). Although participants' accounts show this to be a dominant perspective, those who are engaged in consultancy work do endeavour to bridge these somewhat disparate worlds.

These findings have implications for the evidence-based practice movement. Rather than increasing certainty by providing answers, facts or solutions, an evidence-based approach may actually lead to less surety about a course of action. However, our research suggests that external evidence from research may play a crucial role in providing alternatives perspectives, different lenses and critical evaluation of established models.

## REFERENCES


Bareham, J., Bourner, T. and Ruggeri-Stevens, G. (2000), 'The DBA: What is it For?' Career Development, International vol. 5 no. 7, pp. 394-403.

Bero, L. and Rennie, D. (1995), 'The Cochrane Collaboration: Preparing, Maintaining and Disseminating Systematic Reviews of the Effects of Health Care', Journal of the American Medical Association, vol. 274 no. 1, pp. 1935-1938.

Burgoyne, J., and James, K. Turnbull. (2006), 'Towards Best or Better Practice in Corporate Leadership Development: Operational Issues in Mode 2 and Design Science Research', British Journal of Management, vol. 17 no. 4, pp. 303-316.

Cochrane, A.L. (1972), *'Effectiveness and Efficiency. Random Reflections on Health Services'*, Nuffield Provincial Hospital Trust, London.

Dewey, J. (1909), *'How We Think'*, D.C. Heath and Co., Boston, MA

Evans, T. (1997), 'Flexible Doctoral Research: Emerging Issues in Professional Doctorate Programs', Studies in Continuing Education, vol. 19 no. 2, pp. 174-182

Gibbons, M.L., Limoges, C., Nowotney, H., Schwartman, S., Scott P., and Trow M. (1994), *'The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies'*, Sage, London

Glaser, E.M. (1941), *'An Experiment in the Development of Critical Thinking'*, New York: Teachers College of Columbia University, Bureau of Publication.

Homa, P. (1998), 'Chief Executive as Management Researcher - The Obligation of Evidence Based Management', Working Paper Series, Henley Management College.

Learmonth, M. and Harding, N. (2006), 'Evidence-Based Management: The Very Idea, Public Administration, vol. 84 no. 2, pp. 245-266.

Lester, S. (2004), 'Conceptualizing the Practitioner Doctorate', Studies in Higher Education, vol. 29 no. 6, pp. 757-770.

Morrell, K. (2008), 'The Narrative of "Evidence Based" Management: A Polemic', Journal of Management Studies, Forthcoming

MacLean, D., and MacIntosh, R. (2002), 'One Process, Two Audiences: On the Challenges of Management Research', European Management Journal, vol. 20 no. 4, pp. 383-392.

Neumann, R. (2005), 'Doctoral Differences: Professional Doctorates and PhDs Compared', Journal of Higher Education Policy and Management vol. 27 no. 2, pp. 173-188.

Pfeffer, J., and Fong, C.T. (2004), 'The Business School "Business": Some Lessons From The U.S. Experience, Journal of Management Studies, vol. 41, pp. 1501-1520.

Pfeffer, J. and Sutton, R.I. (2006), '*Hard Facts, Dangerous Half-Truths, and Total Nonsense: Profiting from Evidence-Based Management'*, Harvard Business School Press, Boston, MA

Polanyi, M. (1966), *'The Tacit Dimension'*, Doubleday, Garden City, NY

Rosenberg, W., and Donald, W. (1995), 'Evidence Based Medicine: An Approach to Clinical Problem-Solving', British Medical Journal, vol. 310, pp. 1122-1126.

Rousseau, D.M. (2006), '2005 Presidential Address: Is There Such a Thing as "Evidence-Based Management?"', Academy of Management Review, vol. 31, pp. 256-269.

Rousseau, D.M., and McCarthy, S. (2007), 'Educating Managers from an Evidence-Based Perspective', Academy of Management Learning & Education, vol. 6 no. 1, pp. 84-101.

Sackett, D.L. (1986), 'Rules of Evidence and Clinical Recommendations on the Use of Antithrombotic Agents,' Chest vol. 89 no. 2, pp. 2s-3s.

Sackett, D.L., Rosenberg, W.C., Gray, J.A.M., Haynes, R.B. and Richardson, W.S. (1996), 'Evidence Based Medicine: What it is and What it isn't', British Medical Journal, vol. 312, pp. 71-72.

Starkey, K., and Madan, P. (2001), 'Bridging the Relevance Gap: Aligning Stakeholders in the Future of Management Research', British Journal of Management, vol. 12, Special issue, pp. S3-26.

Stewart, R. (2002), *'Evidence-Based Management: A Practical Guide for Health Professionals'*, Radcliffe Medical Press, Oxford.

Tranfield, D., Denyer, D. and Smart, P. (2003), 'Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review', British Journal of Management, Vol. 14 no. 3, pp. 207-222.