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Exploring Possibilities for DBA Research

EUROPE 2133 students

ASIA 760 students

NORTH AND CENTRAL AMERICA 2177 students

MIDDLE EAST 1205 students

SOUTH AMERICA 210 students

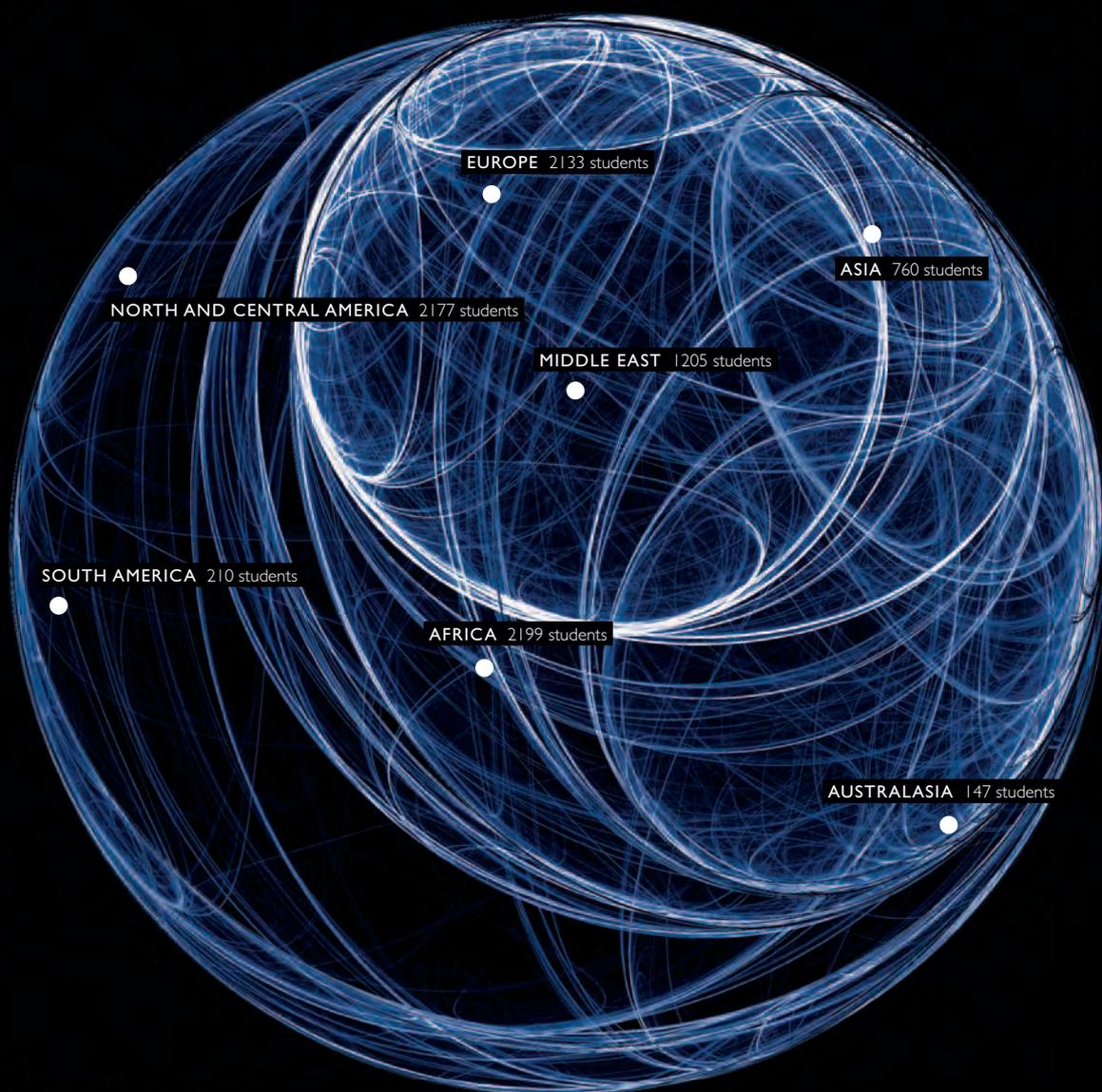AFRICA 2199 students

AUSTRALASIA 147 students

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About the author

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What we want to do in this short Briefing Note is suggest some initial ideas and techniques that might be useful for those thinking of a possible topic for an EBS DBA degree. We shall try to show how the process of finding a topic can work in practice and will use actual examples, in many cases based on EBS DBA students at the mentoring stage.

In the Introduction section we shall start with "what everyone knows" and show how it can raise a number of issues of relevance to finding and pursuing a thesis topic. In Section 2, we shall set out some basic principles in terms of what is important in finding a good topic for DBA research purposes. Section 3 explores some search tools that can help flesh out some initial ideas, Section 4 discusses one of the most important new resources for UK digital theses, the online availability of UK doctoral theses. Section 5 looks at how you might collect and collate material to help frame your research question and feed into your literature review.. In section 6 we look at the important (but not as scary as it sounds) issue of what constitutes "originality" for the DBA. In Section 7 we try to tie some principles together, and in Section 8 we show how the "Anna Karenina principle" can work here. We do a short note on the research outline you will be asked to do before starting mentoring in Section 9. In Section 10 we give examples of some research that EBS doctoral candidates have been carrying out at the supervised stage.

1. Introduction: "What everyone knows"

<div align="center">"What's good for General Motors is good for America"</div>

The statement above attributed to a former president of General Motors in the early Fifties (Charles E. Wilson) has often been cited as a prime example of corporate arrogance and insensitivity. With the collapse of General Motors (GM) in the 2009 global financial crisis and its subsequent multi-billion dollar rescue by the US taxpayer, it is a statement that has also been revisited by critics of both GM and government policy in this area.

The problem is that Wilson never actually said that. Both the context and content of what he actually said was very different from what is commonly attributed to him. He was being quizzed in the Senate during his confirmation hearing to become Secretary of Defense and was asked if he could make a decision in that capacity which was extremely adverse to the interests of his shares in the company, and General Motors itself. Wilson replied:

> *"Yes, sir, I could. I cannot conceive of (a conflict) because for years I thought what was good for our country was good for General Motors and vice versa"* [1]

One could quibble as to whether Wilson really answered the question asked of him, but the reality is that what was a "vice versa" (and was probably an afterthought in the main thrust of his answer) was taken out of context - and the rest is (distorted) history. A sentence which was

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[1] See Barabba (1995) p.1. The source quoted here is a good one, published by Harvard Business School. However, if we wished to pursue this issue and make our analysis as authoritative as possible we would probably cross-check with other sources, preferably peer-reviewed journals. Incidentally, this footnote illustrates the main roles of footnotes and endnotes in academic work like DBAs, which is to give sources and make additional points of interest and relevance without disturbing the flow of the narrative in the main text.

intended to communicate public-spiritedness was translated and distorted into completely the opposite, a slogan for corporate power and greed.

Just about every MBA and DBA knows the quote about General Motors that we started with here, but not many know the quote is wrong. So why is this important in a pre-mentoring guide to doing a DBA? Essentially because the DBA is about developing researching professionals and one aspect of the skills you will develop is that you should avoid making such a mistake. One core aspect of the skills developed and demonstrated in doing the degree is evidence-based critical reasoning.

Suppose, for example, you wanted to reproduce the quote we started with in your thesis. If you did so, you would be expected to find the original source for the quote, and with the tools we shall discuss later it would not be difficult to do exactly that, with the result that if you did use it, your interpretation of its intent and meaning would be very different than if you had just been satisfied with reproducing "what everyone knows".

Obviously getting history right here has some implications for evidence of views on public/private relations and the reputation of Charles E. Wilson. However, beyond that, this exercise might be thought of as interesting but hardly earth shattering. So here is another example of why it can really matter to have a healthy scepticism, solid evidence, and a respect for original sources wherever possible.

One of the most important principles in social science of potential relevance to management studies is called "the Hawthorne Effect". When researchers conducted some experiments in the Hawthorne Plant near Chicago in 1924, they intended to see how changes in factory illumination affected the productivity of the workers. What they found was in fact very puzzling at first. No matter what the experimenters did, whether they increased or dimmed the lighting, it seemed to increase productivity.

The explanation that eventually because generally accepted was that it was the act of being observed and experimented on that led to the change in behaviour and the increase in productivity measured by the experimenters, not the physical changes in the lighting itself – this became labelled the Hawthorne Effect. One interpretation of this was that the researchers appreciated the attention being paid to them and the result was to boost their morale – and their productivity - no matter what the experimenters did.

The "Hawthorne Effect" soon became embedded as "what everyone knows" and a major textbook from the Sixties noted that;

> "the tendency of experimentally chosen groups to show heightened morale and productivity has come to be referred to as the Hawthorne effect and is certainly one of the best known findings of social science" (Katz and Kahn, 1966, p. 325)

If it is true, the Hawthorne Effect has enormous implications, not just for academic work, but for any businesses, consultants (and indeed, DBA students) who want to study the effects of changing the environmental conditions of groups and individuals on performance. Google Scholar (of which more later) now lists over 150 articles with "Hawthorne Effect" in the title and over 13,000 in which "Hawthorne Effect" is mentioned in the text of the article. However, despite the fact that the Effect was almost taken for granted for many years, more puzzles began to appear, including the fact that some studies did not find the Effect where it would have been expected to have occurred (some of these puzzles are reflected in the fact that many of the articles about the Hawthorne Effect in recent years have question marks in the titles).

Then in May 2009, 75 years after the original experiments, two economists published findings which caused intense interest inside and outside academic circles. Levitt and List (2009) reported how they had found the original data that had been used in the Hawthorne experiments and had been presumed lost, and re-analysed the data. What they found was reported around the world, many academic blogs (nowadays often a leading indicator of academically important findings) seized on the findings and dissected them[2]   The findings were also widely reported in the business press; "the Economist" magazine summarised Levitt and Lists' findings as follows:

> *"It turns out that idiosyncrasies in the way the experiments were conducted may have led to misleading interpretations of what happened. For example, lighting was always changed on a Sunday, when the plant was closed. When it reopened on Monday, output duly rose compared with Saturday, the last working day before the change, and continued to rise for the next couple of days. But a comparison with data for weeks when there was no experimentation showed that output always went up on Mondays. Workers tended to beaver away for the first few days of the working week in any case, before hitting a plateau and then slackening off. Another of the original observations was that output fell when the trials ceased, suggesting that the act of experimentation caused increased productivity. But experimentation stopped in the summer, and it turns out from the records of production after the experiments that output tended to fall in the summer anyway. Perhaps workers were just hot".[3]*

Leviit and Lists' central finding was that there was no systematic evidence that productivity in the Hawthorne factory increased as a consequence of variation in lighting[4]. In short, in the words of the title of their paper: "Was there really a Hawthorne Effect at the Hawthorne Plant?" A natural conclusion from Levitt and List's study is that the Hawthorne Effect in the Hawthorne study was largely fictional and almost certainly would not have been discovered (or invented) in the original experiments had the researchers analysed the background conditions and data from their experiments properly.

At this point, it would also be natural to ask; if it turns out there is little evidence of a Hawthorne Effect where it was originally discovered (or invented), why should we have faith in the idea of a

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[2] You can pick up a number of these by Googling: levitt +list +"Hawthorne effect". This search produced nearly 3,000 hits in September 2009 within 4 months of the paper being published.
[3] See http://www.economist.com/businessfinance/PrinterFriendly.cfm?story_id=13788427
[4] They did report some weak evidence that there could be some signs of a Hawthorne Effect depending on whether the lighting change was due to artificial or natural light

Hawthorne Effect at all? With Levitt and List's work also having a question mark in its title, clearly this is issue which still has some way to go to before it is resolved, if it ever will be resolved.

For our purposes, the Hawthorne story has a number of implications for anyone searching for or pursuing a topic for DBA research.

First, as we saw with the quote we started this guide with, Levitt and List did exactly the right thing in going back to original sources. It certainly seems to be the case that all or much of the original case that was made for the Hawthorne Effect was fallacious and the original story may indeed have been a myth. Lesson; always go back to original sources if you can, this may help you avoid mistakes and possibly make new discoveries, "what everyone knows" may be wrong.

In your case, this might mean going back to an original publication rather than relying on second-hand accounts of what textbooks or other articles have said an author said. Remember how Charles E. Wilson has been misquoted down the years due to the chain effect of people reporting what people reported that Wilson said.

Second, we have to be cautious about interpreting Levitt and Lists' paper. Even though it has caused great interest world wide, and even though it was published by a very reputable economic research organisation (the US's National Bureau of Economic Research or NBER) it is still only a Working Paper. Working Papers are typically, as the label suggests, work in progress and have not gone through the rigorous peer review process that article published in major academic journals have gone through. At this stage, the status of the paper is a bit like a drug that has gone though some initial trials with promising results, but final judgment is still to be deferred until after fuller clinical trials conducted – which in the case of academic articles means peer review. Indeed some academic blogs are already even claiming that this is not a new discovery[5]. We shall have more to say about the status of journal articles later in this guide

Third, consider the question we raised above: if Levitt and List's evidence and interpretation turns out to be soundly based, why should we have faith in the idea of a Hawthorne Effect if there was little evidence of a Hawthorne Effect where it was claimed to be discovered? The answer is: look at the evidence. Just because there might have been no Hawthorne Effect at Hawthorne Plant (this still subject to checking) may be thought ironic and surprising, but does not necessarily mean that the Hawthorne Effect does not exist. The approach that a doctoral researcher would take to this question if it was something that was part of their research would be to review the peer-reviewed academic articles in this field, and summarise and report their conclusions on this issue in their literature review.

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[5] See the comments by a Cornell academic in this blog
http://organizationsandmarkets.com/2009/06/02/the-hawthorne-effect-revisited/

Fourth, the proliferation of studies that have been done on this topic is itself evidence of a basic feature of management research; there is almost always room for a new twist that will enable an original contribution to be made on an old story. The Hawthorne Effect can be explained in a single sentence, but scores of articles have been written on whether it exists, and if it exists what form it takes and how it is influenced, amongst other things. At one level it is may be thought depressing that it is so difficult to get unambiguous results in social science research in general and business-related research in particular. Part of the problem is that, unlike many of the natural sciences, it is difficult to replicate studies that are specific to one social place and time. But what it does mean is that there are many opportunities to add to knowledge in terms of research on management topics and make an original contribution in terms of DBA research itself. We shall look at what could constitute an "original contribution" later in this guide. If there is one theme we shall be arguing in this context, it is that "original contribution" in the DBA can largely be reduced to questions of technique rather than questions of creativity. That is good and reassuring – it is easier to teach and learn technique than it is to teach and learn creativity.

Fifth, the history of the Hawthorne Effect is of wide interest, and it may well be to you especially if you are going to undertake or impose any actions on organisation(s) or individuals with a view to observing the possible effect on performance – you may have to consider whether the Hawthorne effect is likely to be a factor here. It can make the problem more complicated and more interesting that might seem to be the case at first sight.

Sixth, a topic like the Hawthorne Effect shows with so many articles and so many interpretations that it can still be possible to make clear and original contributions for an old topic. Many areas of management research are similar to the Hawthorne Effect case in having volumes of articles published – we shall discuss ways that you can make the volume manageable.

Seventh, and finally, a word of caution, the case of the Hawthorne Effect raises a general issue that we shall look at in a bit more detail later. What the Hawthorne Effect studies are about is effect on productivity that is one measure of performance, in this case for a group. But as the Hawthorne Effect studies demonstrate, while "performance" (whether of the firm, the group, or an individual) is a major issue for firms, it can be very difficult to measure given the large number of variables that can influence it – and that holds for cases in which group output can be measured by simple measures of physical output. Imagine how more difficult measuring determinants of "performance" can be for cases where output is not so easily measured – such as for a marketing or an R&D department. We shall look at this later, there are solutions - such as finding an interesting DBA topic which does not involve measuring "performance" and identifying what determines it.

Also as we shall also discuss, your DBA will be imperfect, it will inevitably finish up with loose ends, unanswered questions, things you might have approached with the wisdom of hindsight, data problems, and so. If you do not encounter these problems then perhaps you should have got out more, because that is part of the package deal that comes with doing research. Theses often contain (and if they do not, they should) a section or sections dealing with problems and unresolved difficulties. Examiners will be sympathetic as long as you are being honest; they have been in similar situations themselves and probably still are with their current research. What they will be looking for is, after recognising any the difficulties you have had, is have you made a

genuine contribution – and again, what constitutes a genuine or original contribution at DBA level is something we shall be looking at later here. That means being prepared from the beginning and setting things up to anticipate problems and eliminate them or reduce problems to manageable proportions – for example by being wary of embarking on a research programme that is dependent on the whim and goodwill of just one person that could be withdrawn at any time.

What we can say at this point is that the crucial rule in doing doctoral research is to make sure as far as possible at the <u>beginning</u> that you will get answers at the <u>end</u> that will be interesting and a positive contribution to business research. The answers you get will depend on the questions you ask, which mean that finding the right topic is a central issue.

What is also worth appreciating is that not only can doing the research be reduced largely to matters of technique, so also can searching for and finding a suitable topic. And that is what we shall be mostly concerned with for the remainder of this guide. Let's start the process with you.

2. Where are you coming from?

What makes a good topic depends in part on who you are and where you are coming from. There are no set rules but an interesting paper on technological innovation and complexity theory by Koen Frenken[6] carries a number of good tips on how to select research questions, and while they are intended for those doing computer simulations in complexity theory they could hold equally for students considering DBA research. One principle Frenken summarises as KISS, which could be paraphrased as "Keep It Simple, Student". Another principle he summarises as TAPAS – or "Take A Proven model and Add Something".

These two principles can help reduce the risk of DBA research. Students may pursue KISS and TAPAS principles without being aware of them. For example, one student who is a college lecturer has just proceeded into the supervised stage of the Edinburgh Business School DBA and she plans to see if models of brand valuation which have been mostly tested out so far on Western consumers also hold for consumers in a Middle-eastern culture. Another student at the mentoring stage who works for an non-European government also plans to see if the barriers to growth that have been found in studies for small Western firms are the same for small firms in his country, or whether the types of barriers that are encountered there are different in type or degree.

Both research plans build on TAPAS – whatever they find will "Add Something" (whether it reinforces, modifies, or negates what has been leant from Western studies) and will be of academic interest. They may also be potentially of commercial interest in the case of the brand valuation study and of potential policy interest to the Non-European government in the case of the

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[6] http://www.urenio.org/metaforesight/library/10.pdf

study of barriers to growth. TAPAS here can help reduce the risks and length of time that can be involved in such research, and essentially they are KISS as well, they are not starting off with any new theories (though these may come out of the research), the originality here will lie in extending research in the respective fields into new areas and adding to knowledge that way. More generally KISS feeds into research in the form of the principle that "less is more" - you should make your theory as simple and general as possible. For example, $E=mc^2$ would have been simple and general enough to satisfy most people, but not for Einstein who spent much of the latter part of his life in trying to develop a unified field theory, essentially a simple theoretical framework that could account for the fundamental forces of nature

The main elements that should be attended to in a good DBA research proposal could be summarised as LID, or Literature – Individual - Data.

- *Literature* – what is known about this area of research, in terms of theories, models (and especially empirical evidence)?

- *Individual* – what are your own interests, capabilities, experience and limitations?

- *Data* – what kind of information and evidence could I reasonably expect to obtain given my present situation and what would I need for this study?

> **Tip**
> Don't think you have to start looking at LID in any particular order. You can start with any of these three bases, L, I or D and work out from there. Essentially it is an iterative process and only stops when you are satisfied that you have a combination of L, I and D that are all compatible and mutually supportive

The first question to ask revolves around the Individual part of this triad: why do you want to do a DBA? There are number of possible answers to this question (in no particular order) that include:

- Career

- Money

- Intellectual curiosity

- Prestige

- Personal satisfaction

- My mum always wanted me to be a doctor

Some of these reasons might be regarded as more legitimate than others, equally some might be more readily vocalised than others, but whatever the reasons they have to be sufficient to carry you through the hard work and personal sacrifice involved.

One question you can begin to ask yourself is; do I have (or can I reasonably expect to obtain) the resources (e.g. personal skills; access to data; organizational co-operation) required to pursue a possible project in this area to satisfactory conclusion? For example, there is no point in planning research that requires advanced econometric skills if you are not fully confident of your skills and ability in statistics and quantitative methods. There is more than one way to skin a cat

and there is more than one way to do research; the IBR texts in conjunction with the (possibly different) methods used in the background literature here should suggest possibilities.

There are a number of ways that actual ideas for a DBA research idea may be found and pursued. However, once a potential topic is found, fleshing it out into a fuller research proposal can involve deepening and developing the three components of LID on an iterative basis. After that, moves towards developing a full research proposal can be helped by bearing in mind KISS and TAPAS.

The key to finding a viable and promising topic can lie in your particular circumstances which can have advantages and disadvantages and may both limit and provide opportunities, particularly in terms of the quality and quantity of the kind of Data you can expect to find. For example, suppose you work in an institution and are interested in how it formulates and implements its strategy. Some questions here could be

- Is the institution experiencing severe expansion or contraction?

- Is it undergoing reorganisation or a switch in strategy?

- Is it expanding overseas, is it diversifying, acquiring, divesting, and/or is it pursuing co-operative agreements with other institutions?

- Does it have an outsourcing strategy, if so how is that determined, if it does not have an outsourcing strategy how are outsourcing decisions taken and could they be improved?

- Is it planning relocation?

- Is it introducing major innovations?

- Are there particular major new strategies that management has announced that are intended to add significant value to the institution?

These are only a small sample of the kind of questions that might be asked from a strategy perspective, which are in turn only a small sample of the kinds of question that might in some cases be framed from a managerial perspective and potentially be the subject of a DBA, including HR/OB. marketing, project management etc. Obviously some or many of the questions will probably not apply to the institution you work in, but some will (e.g. it will either have or not have an outsourcing strategy). If there are these issues arising, one option would be for you to take advantage of them Each of the topics above could be termed potentially low risk because in each case there is an established literature that could be built on and applied (crucial word) to the case in hand.

These are some first thoughts about you as an Individual and what might be needed in terms of the Data you might have to seek. Now what about the Literature part? We shall start looking at that in the next section.

3. Exploring the idea

The university contains a number of databases and sources some of which you should find useful, and there are search engines often using Boolean operators (Google "Boolean search") to help you find material. However, it can be a bit daunting at first to find your way around; perseverance and familiarisation will make things easier.

Most of you will be familiar with doing Boolean searches using Google (if not, just Google "Boolean searches"). "). However, it is also worth noting that Google now offers a very useful additional search engine, "Google Scholar".

On the Google screen you find it by clicking "more" on the top line (if that does not work just type in "Scholar".

Click "Scholar" and then click "advanced scholar search" (or just click the drop down menu on the search line to find it)

What you now see in front of you is a very user-friendly Boolean search process.

There are other useful aspects of Google Scholar for example on the "Author" section it invites "return articles written by".

Now suppose we want to start using Google Scholar for possibilities for DBA research. Suppose, for example, you are interested in human resource management issues for women in the medical profession in Saudi Arabia

To pursue this,

- go into Google on your PC

- Click "more" on top bar

- Click "scholar"

- Click "advanced scholar search"

- Enter "Saudi" and "women" where it says "with all of the words" and enter "medical profession" where it says "with the exact phrase"

- Click "search scholar"

> **Tip**
> Use Google Scholar for a quick or initial search, use Discovery for a more systematic and thorough search if you want to get serious about a topic

This brings up 103,000 hits at time of writing. There are two in the top ten which look particularly relevant

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Tip

If you are doing a review of literature, it can be best to start with the most recent journal articles Good recent surveys, including literature reviews at the start of academic articles can give a balance and perspective and context that could be missing from earlier results. This should both give you an overview of the state of the art as it stands here, highlight what has turned out to be the really important contributions here, and also could suggest particular lines of research worth exploring. And it cuts out a lot of noise and dead ends.

(a) a 2006 article "Historical, cultural and contemporary influences on the status of women in nursing in Saudi Arabia"

(b) a 2004 article: "Saudi women doctors: gender and careers within Wahhabic Islam and a 'westernised' work culture".

In turn it was possible to immediately download these articles from the right hand column and indeed usefully most of the other articles on the first page of hits were also immediately downloadable (it may be possible to access the ones that were not from Heriot-Watt university library online, or if there is a good public university library near you that you can access) . .

Also, these two articles have an abundance of references in their bibliography many of which look relevant to the topic. If you triangulate with different articles, you quickly build up a picture of what are the important articles here. You can also crosscheck using different search keywords.

Tip

Use sources like Google Scholar to identify articles that may be of interest to you then use online access through Heriot-Watt University and local university libraries to access them. Only purchase articles through Google Scholar as a last resort

4. Digitisation and on-line access to UK doctoral theses

An emerging issue which creates more opportunities for Edinburgh Business School DBA students and in which Heriot-Watt University is a participating member is the digitisation and on-line access to UK doctoral theses through the British Library (http://ethos.bl.uk/Home.do see especially the "About" and FAQ sections). Many theses are available for immediate free download.

Tip

As well as giving useful content on specific subjects, EThOS can provide thousands of theses, including DBAs, already available on immediate download which can serve as useful examples of how to go about doctoral research, including theses structure and use of methodologies in practice - but bear in mind that many are PhD and not DBA theses

EThOS is open access to all across the world, one-stop central access through EThOS. It is not-for-profit, with the principle that UK theses are available free in digital form (this contrasts with many other countries such as US and Canada where the handling of this is given over to private companies and potential users have to more typically pay for access to theses, including those available digitally).. Latest news suggests they are pressures on digitization requests are reducing, if a thesis has not already been digitized then users can expect a 30 day waiting time.

Comment from one Edinburgh Business School DBA student about this site: "That site is excellent …mind blowing"

5. Collecting and analysing the literature for your searches

So suppose you feel you have done sufficient background work to have the basis for a fairly clear idea of the issues you want to do research on. How do you take your work to the next level, which will be to develop the research question and finding and synthesising the literature necessary to help support and frame your research question? Here are some suggestions.

- The literature review has to be selective for the purposes of the research proposal , this means it has to focus on major and/or indicative research, usually (mostly) articles

- Use keyword searches in Google Scholar and EThos to find most relevant research

- Identify most recent articles in this area which have good literature reviews as part of the article, this can signpost relevant work. You can do this by restricting the search in Google Scholar to the more recent years (e.g. 2011-2013); check the left hand column in Scholar for this.

- Google Scholar also gives how frequently an article has been cited under each entry, this can be useful indicator of importance (but note that all other things being equal, the more recent the study the less chance it will have had to build up citations).

- Some areas are more heavily researched than others, but look at the (say) 20-40 major studies you have identified. Pay particular attention to the literature reviews in each article in each case so you can get a feel for what are the important themes in this area (and this also helps give a cross check on important works as a form of triangulation).

- If you think a cited study is relevant but cannot access it at the moment, just put in "cited by…" at this point and report what the source you have read says it contributes, hopefully you will be able to access it later.

- Most beginning researchers report what a study says, then the next study, and so on (such as "Abel 2009 says …." then "Beta 2003 says …." and so on.

- This aggregative approach can lead to unnecessarily lengthy literature reviews and unnecessarily duplicated work. Instead, the literature review should be based around themes and be an integrative approach to themes in the literature. Take the simplified four study / four themes below where ("X" in the matrix indicates that a study found a certain problem: imagine this review is surveying problems found in R&D projects. Instead of reporting what each study found in turn, the literature survey could say something like "problems encountered in R&D projects include severe uncertainty (Abel, 2009; Cable, 2004); rapidly escalating costs (Abel, 2009; Dante, 2013); asset specificity (Beta, 2003; Cable, 2004; Dante, 2013); and long delays (Cable, 2004). So this can replace numerous sentences with just one – and without serious loss of information.

Study	Severe uncertainty	Rapidly escalating costs	Asset specificity	Long delays
Abel (2009)	X	X		
Beta (2003)			X	
Cable (2004)	X		X	X
Dante (2013)		X	X	

Do you have to do this? No you don't, not everyone works the same way, and it might not be useful in every case, for example if the X's all were arrayed in just a single column – or a single row. But it can sometimes be a useful tool in that it can make explicit what is often implicit in the minds of those writing a literature review

If the matrix is used there can be different ways of preparing for this, for example you might use a table or an Excel sheet to help you organise the material to help you then write your review as in the above example, but doing it that way might need more than one table with each table organised around a major theme (and subsection in the proposal). A scoping exercise just identifying the major themes might help give an overall organising framework by theme, and you can always tweak this later if it needs adjusting.   One other thing is to note the research methods used as you go through the various studies, given these are tried and tested methods they may give useful signposts for your own research.   And of course all this is in addition to the advice in the IBR texts and in the guides that have been made available through EBS DBA. .

6. Originality in the DBA

A common type of question from DBA students, and potential DBA students, relates directly or indirectly to what is necessary and sufficient to demonstrate that their thesis can be regarded as an "original contribution". The two questions below are indicative of such queries and are adapted from questions asked by recent DBA students. The content has been altered to some extent to disguise the sources.

The first question below was from a mentee

> *"I believe that the personality of the most senior IT executive in a firm has an effect on the firm's performance. As far as I can see, no-one has studied this before and I believe I have an opportunity to make an original contribution here."*

The second question is from a student in the supervised stage doing his literature review.

Tip
If you have a choice between researching an area that many people have looked at and one which seems to have been neglected, all other things being equal it is usually better to choose the former – it is rather like deciding to between a shop that is popular and one that is empty, you are more likely to find something that suits your circumstances in a place that is in demand

> *"I have just discovered that a doctoral student in another university has been studying the effect that cluster formation has on internationalisation strategies in country X. This is the same topic I am studying in country Y and I am worried that if she publishes before me that will affect my DBA chances because I may no longer be seen to be making an original contribution."*

We shall come back to these two questions later. To begin with, it is perhaps easier to identify what would obviously not count as originality in the DBA. Clearly effort that just duplicates what others have done and plagiarism would not count as original contributions. But that still leaves the question; what constitutes "originality" in a DBA?

When you are trying to find a topic, it can be useful to bear in mind that there are four characteristics that DBA research could usually be said to have:

(a) Originality is incremental

What we mean by saying "originality is incremental" is that science typically proceeds by inching forward rather than through giant leaps. Isaac Newton is reported[7] to have said: "if I have seen further than others it is because I stood on the shoulders of giants". If that is good enough for Newton, then it should be good enough for the rest of us. Scientific research typically progresses through increments rather than revolutions, what Thomas Kuhn called "normal science"[8]. Be modest and realistic – you with (presumably) little research experience may indeed at the start of your research be able to envision and formulate a completely novel theory that no-one (including much more experienced researchers) had conceived of and promises to turn what everyone knows on its head. But think, how realistic is that possibility, and do you want to bet your DBA degree on it? Just as pertinent, would you be able to get someone experienced and knowledgeable in the field willing to supervise such a high risk venture? Supervisors are recognised experts in their fields with reputations to protect, they will only usually be willing to supervise research they expect to succeed (always assuming the student works hard and competently on it), they would not want their reputations to be associated with research project that fail, and whose failure was thought a real possibility from the beginning

DBA outputs and contributions can be in the form of the testing of existing theories and generation of new facts, and while it is certainly the case that they may be the gestation ground for new theories, this is more likely to be the case where the facts generated at the end of the research do not fit existing theories. Even then, every effort should be made to see if the facts are consistent with existing theories, and new theories only developed if there is no obvious alternative. Those not familiar with research often see its purpose as generating new theories and concepts and by implication adding to their number. In fact, good research typically seeks to

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[7] But did he really say that? Think back to our opening section. Sherlock Holmes never actually said "Elementary, my dear Watson" and Captain Kirk never actually said "Beam me up, Scotty" in Star Trek, so if these more recent (albeit fictional) characters can be misquoted then there is a good chance that the same thing can happen to real people. If you were quoting this in a thesis you should make an effort to check the authenticity (and accuracy) of this quote attributed to Newton. Again, always go back to original sources whenever you can. Stories get distorted in the telling and retelling – the technical name for this is "serial reproduction"

[8] Use your search techniques here if you need to.

reduce the number of theories and concepts needed to produce explanations of phenomena, in technical terms scientists prefer parsimony to complexity.

A good example of the incremental approach to doctoral business research was one of the early (and still one of the most successful) business school research programmes in strategic management. In the 1960s, Harvard Business School set up a doctoral research programme to study the relationship between the strategies and structure of large corporations and in particular how the M-form (multidivisional form) organisational innovation diffused in large industrial countries. Five students took one country each to study, the countries were the US (Rumelt), UK (Channon) France (Dyas) Germany (Thanheiser) and Italy (Pavan). The samples in each case were the 100 largest industrial firms by sales in the respective countries, the research in each case used classification of strategy and organisational form that were standardised across the studies, and they examined the same years in each case.

Each resulting thesis produced original analysis that told us useful facts about how the M-form innovation had diffused across the country in question, how this compared with other patterns of M-form diffusion studied by their Harvard peers, and also whether and how the patterns observed were consistent with or refuted existing theories of M-form diffusion based on Alfred Chandler's (1962) earlier work. The theses also resulted in publications in the form of academic articles, and in some cases, books – which you should be able to identify using the search techniques in the guide on "Search Techniques". The whole was also greater than the sum of the parts since they could cross-reference and compare each others results.

However, that was not the end of the story, the output from the original Harvard research programme stimulated further research into the evolution and diffusion of the M-form (including one UK doctoral thesis that the author of this guide examined in the Nineties). Each thesis made a further contribution to the overall picture of how, when, why, and to what extent, the M-form innovation diffused across the world.

These pieces of doctoral work were all business school PhDs not DBAs, but the basic principle underlying them holds for DBAs as well as PhDs – originality here lies in adding another piece in the jigsaw, not in designing a completely new picture.

(b) Originality is about outputs, not inputs

Originality here lies not in what you put into a thesis but what you get out of it. One obvious (but often overlooked) issue about doing research is that you should not know for sure what the outcomes are going to be. If you did, there would be no point in doing it, it would be trivial, a waste of time and resources. For example, after all that has been done on the diffusion of the M-form innovation amongst large UK firms, research along those lines has run into diminishing returns; a thesis whose main hypothesis was that most large UK firms had adopted the M-form structure would be unlikely to be regarded as on track to make an original contribution. We know pretty well now that most large UK firms have done exactly that.

That does not necessarily mean that there is no doctoral life left in this topic. For example, there could still be work to be done on how the M-form diffuses in emergent economies, there could be some mileage in looking at the organisational processes by which the M-form is adopted in particular companies, there could possibilities for research into the evolution of hybrid forms in which M-form characteristics are fused with characteristics associated with other forms. Whether or not these opportunities exist could be first of all explored with an initial search using standard techniques.

The crucial issue here is what an "original contribution" is; it is contribution that is the critical term. You can be original without making a contribution – for example finding that the colour of socks worn by CEOs makes no discernible difference to their performance would be original but would hardly be counted as a contribution. On the other hand, any genuine contribution you make with your DBA would embody originality in some respects.

(c) Originality is combinative

Wheeled luggage with extendable handles is a ubiquitous (but surprisingly recent) travel accessory. If you are interested, you can use standard search techniques to find out more about how this was developed[9] but the inventor(s) and innovators of this extremely useful device obviously did not invent the wheel, did not invent luggage, and indeed did not even invent the extendable handle. There was nothing really original about the components of this innovation. Where the originality lay was in putting together these components in an imaginative, creative (and for some, highly profitable) way.

Much the same could be said to apply to much good doctoral research. The students in the Harvard research group discussed above used standard methodologies, the classification schemes they used were also standard across the various theses, the years they studied were the same, even the core theory they were testing[10] was the same. There were elements of originality in the literature review in each thesis (otherwise this would be plagiarism) but given they were all drawing from the same well, these literature reviews in themselves would hardly count as major contributions. The empirical work did of course lie at the heart of the contribution in each thesis, but in the absence of the core theory and a sound methodology competently applied this would just have been a collection of facts in each case. What raised each piece of work up to doctoral level in each case and shaped their individual contributions was the unique combination of theory, methodology and context (in this case, the country). In each thesis they made an original contribution that added to our understanding of how, why, when, and to what extent, the M-form diffused in advanced economies

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[9] The story of this invention is itself interesting and there are different versions of it. If you Google "wheels on luggage" you quickly find pages giving more than one person being given credit for this. If you were doing research on the source of this invention you would have to dig further and get more authoritative sources than is available from just Googling.
[10] Based on Alfred Chandler's (1962) work.

(d) Originality is imperfect

When we say "Originality is imperfect" as we noted earlier we mean that even if you do make a significant contribution with your DBA there will be inevitably parts which will flawed or incomplete. As long you can be otherwise deemed to have made a genuine contribution to the subject, and as long as they took due and appropriate care to deal with these limitations or problems, this should not be a problem – such confession is not just good for the soul, it is an integral part of doing research. Research is intrinsically imperfect and incomplete, like a glass that is half full / half empty. It is human to concentrate on parts that are half full but for a proper perspective on your research you also need to explain why the glass is half empty. Your supervisor will help you in anticipating such problems and providing you are open and honest about them you can expect the examiners to be sympathetic – they were once sitting where you are, probably also facing annoying and insuperable problems of data or analysis – and indeed they are probably still facing such problems today in their present research.

In the case of the doctoral theses on the diffusion of the M-form innovation, if the original Harvard team had posted the last word on this subject in their research, there would have been no point in other researchers going back and doing more work in the same area, often in the same country studied by one of the original researchers.

In short, do not get hung up and misled about what "original" means here. There is in fact redundancy – one too many terms - in the phrase "original contribution". Forget the adjective "original", and you will be more likely be able to focus on what your DBA is likely to add to knowledge – its contribution in other words. When we say above "Originality is incremental"; "Originality is combinative"; "Originality is about outputs, not inputs"; and "Originality is imperfect" just replace "Originality" in each case with "Your contribution" and you begin to get a more realistic picture of what "Originality" in the DBA means.

So to finish this part, what about the two questions we started with?

The mentee's question regarding her intentions to look at the impact of the personality of the most senior IT executive on firm' performance poses a number of problems. The list could start with possible problems of getting senior executives to answer questions about their personality, the fact that even if this could be thought to be a factor in firm performance that many other things could affect firm performance, and so on. But the most crucial thing here could be that it appears no-one else has studied this. Given that there are a lot of very bright knowledgeable and experienced researchers in this field, one would expect that if this was a promising research track, someone would have travelled some distance along it already (we shall discuss this further at the end of Section 6).

> **Tip**
> Many university libraries around the world will give privileged access to doctoral researchers who are with an internationally recognized university like Heriot Watt. Arrangements and conventions can vary from country to country and university to university, so make sure you are making the best use of facilities accessible to you.

And what about the DBA student above in the supervised stage concerned about whether the fact that another doctoral student in another university is doing a similar topic threatens to make his own work useless? This student was immediately told by his supervisor to relax. Rather than being potentially threats to each other, the fact they are working in parallel areas is much more likely to be of mutual benefit. First, it is extremely unlikely that even though one would expect the two students to be working off much the same prior literature base, both their literature reviews and resulting hypotheses are likely to be very different. Second, even if the literature reviews and resulting hypotheses are very similar (with appropriate caveats to avoid plagiarism) then there would still be original contributions (and new facts) generated from the different contexts (countries) in which the studies are being carried out. In fact, the Edinburgh Business School student in this case was encouraged to contact and cooperate with the other student and share information about relevant references and findings to their mutual benefit (and to give due acknowledgment to each other's contribution where appropriate). And indeed, as we saw above in the case of the Harvard Business School doctoral programme, sometimes doctoral research topics can be set up to deliberately parallel one another as part of a wider programme.

The (nearly) bottom line here is that it is contribution that matters, if you are making a genuine contribution originality is a natural part of that process, and that originality is typically incremental, output oriented, combinative, and imperfect.

7. One set of principles

So where has we got to in this story so far? In Section 2, we talked about the need to integrate L (Literature), I (Individual) and D (Data) components in a well designed thesis topics. Much of which we discussed could in fact be summarised in the form of a standard template for most (not necessarily all) DBA theses.

"The application/relevance of topic X in the context of Y"

The DBA then becomes a matter of exploring X and Y and how they relate to each other.

The principles below are based on the assumption that most DBAs can be expressed in that form. If you can set up your topic so that it is consistent with the following principles, you are well on the way to a well-designed DBA topic.

The first two principles are based around the "L" part of our LID triad, the third part deals with "D" while the fourth and last part deals with "I"

The principles are left deliberately broad and undefined, partly to be as encompassing as possible, partly because to begin with you want to stand back and take an overview of what is known and what you want to contribute. Does this cover all the possible forms that DBA theses can take? No, this is essentially a template for low risk DBA research where it is set up as far as possible to ensure that the research will produce acceptable results in DBA terms.

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Principles

(1) There is a body of accumulated knowledge on a topic "X"

(2) The consensus (or part of the consensus) surrounding this body of accumulated knowledge can be expressed in terms of:

(a) A model
(b) a theory
(c) a set of empirical findings

The "consensus" is likely to be articulated and discussed at textbook level, in a literature review article, and/or in the introductory review sections of research articles.

(3) The objective of the DBA is to find out whether or not the expression of this consensus is: (a) supported (b) not supported (c) partly supported (d) should be modified, in the context "Y" you are looking at. "Finding out" can be through implementation (e.g. of a new project or programme) or observation. "Context" could be your organization(s), other organisations, a market and/or country.

(4) You have, or can reasonably expect to obtain, the resources (e.g. personal skills; access to data; organizational co-operation) required to pursue a possible project in this area to satisfactory conclusion.

You might be interested in what the Introduction to Business Research texts describe as high risk research. You will have to produce your own template for that, it is likely to breach one or more of the four principles set out above. The overriding motivation underlying the Edinburgh Business School DBA programme is to produce good DBA research and graduates and ensure as far as possible that that you will achieve that. If you do wish to pursue high risk research then you must be prepared to accept the consequences, which includes a high risk of failure. And talking of failure brings us to one last principle the "Anna Karenina" principle which we shall discuss in the next section.

However, before we do, one last warning flag might be worth waving at this point. As we noted earlier it is not unknown for students to become excited by the absence of background literature relating to their idea or theory and see this as signalling the opportunity to make a real and original (there's that word again) contribution. However, even if (and indeed especially if) this looks like an interesting idea or theory, experienced researchers are more likely to see the absence (or thinness) of "L" as signifying probable difficulties or problems in obtaining "D", or data. If it does seem like a good idea or theory, it is highly unlikely that you are the first to think of it, good ideas have the habit of being rediscovered time and time again, and the fact that evidence may be lacking could signify threat rather than opportunity. It may be less exciting to swim where everybody else is swimming, but it can be much safer.

8. The "Anna Karenina" Principle

Jared Diamond, Professor of Geography of UCLA introduced the "Anna Karenina" Principle in his influential treatise on the development of human societies (Diamond, 1999). Diamond starts with….

> '…the famous first sentence of `Tolstoy's great novel Anna Karenina: "Happy families are all alike; every unhappy family is unhappy in its own way.' By that sentence, Tolstoy meant that in order to be happy, a marriage must succeed in many different respects: sexual attraction, agreement about money, child discipline, religion, in-laws, and other vital issues. Failure in any one of these essential respects can doom a marriage, even if it has all the other ingredients needed for happiness' (Diamond, 1999, p. 157)

Diamond then goes on to apply the Anna Karenina Principle to the domestification of animals "Domesticable animals are all alike; every undomesticable animal is undomesticable in its own right" (Diamond, 1999, p.157). Since then it has begun to be applied in growing list of studies and research. Google Scholar currently lists 113 academic articles and books in which the "Anna Karenina" Principle is discussed.

You may be relieved to know that we are not going to pursue either happy families or the domesticability of wild animals here. But instead the "Anna Karenina" Principle can be applied usefully to the question of what makes a successful DBA project: one could say that "successful DBA project are all alike; every unsuccessful DBA project is unsuccessful in its own way.'

By this is meant that DBA projects may be unsuccessful for a variety of reasons; work or family pressures may prove too burdensome; the individual may lose interest in doing a DBA; it may be that they cannot cope with the particular research method they have chosen; it may be that there is no literature in the field that can be built on; it may be that the data required to test the theory cannot be obtained, or cannot be obtained at reasonable cost; and so on.

By contrast, all successful DBAs could be said to be alike in that the individuals have demonstrated the ability and the drive to deliver a significant research programme by accessing and analysing a body of data couched in a systemic and coherent literature review.

The idea that it may only take one count (say weak L, poor I, or missing D) to fail sounds worrying, but the solution is to sort out potential problems at the Research Proposal stage as far as possible. Of course there may be accidents or unexpected events that impede progress, but if you have established with your mentor that there is an "L", you have the "I" and that you have every reasonable chance to get the "D" you need, then you may reasonable confidence in the line of research you are considering. The trick with research is to deal with the risks as far as possible beforehand and not allow them to throw you further down the line when some forethought could have saved much wasted time and energy.

The ideal way to approach this is with a mix of confidence in your own ability but a dash of humility. Unless you are a very unusual mentee, even having done the Introduction to Business Research courses you will still know far less about the actual practice of doing research than your mentor, who is a very experienced researcher. No matter how senior you are in your organisation or your profession, as a researcher it is best to see yourself as an apprentice – albeit with the DBA being one of the most advanced and sophisticated apprenticeship schemes in the world. It is fair to say that where problems are encountered in the DBA, a disproportionate number are caused by a minority who thought they knew better than the mentor, or who failed to follow the mentor's advice.

9. The Research Outline

The first opportunity you will have to try out these techniques (including search techniques and if appropriate the matrix approach in Section 5 above) will be the 3-4 pages Research Outline you send the Senior Mentor before starting mentoring. This will contain a tentative research question supported by some sample and/or seminal literature and some evidence of thinking about likely research methods and data sources, all informed by the LID principles set out in Section 2 above. If appropriate, the senior mentor will suggest ways that your research outline might be refocused so that when you actually start mentoring you will be able to make the best and most efficient use of your time in that stage and help develop a credible research proposal.

10. Examples of topics DBA students in EBS have been pursuing

Finally, some of specific topics that EBS doctoral students have been researching at the supervised stage include;

- *The influence of culture on national competitive advantage (Af)*

- *Strategic decision-making in an extractive industry (E)*

- *The role of value driver tools in strategy implementation for a mining company (Af)*

- *The adoption of environmentally sustainable management practices in an agricultural industry (NA)*

- *Designing and using a risk management model (E)*

- *Price setting in grocery retailing (NA and E)*

- *Environmental uncertainty and strategic orientations in a telecommunications sector (Af)*

- *Strategic planning in a service sector (E)*

- *Modeling risk in capital investment decisions for a mining company (Af)*

- *The effect of financial liberalization on the competiveness and efficiency of an Asian banking industry (As)*

- *Sources of competitive advantage in a manufacturing industry (ME).*

- *Pursuit of local objectives for a non-profit organisation and its relation to organizational objectives (E)*

- *Designing and using a risk management model (E)*

- *Effect of performance incentives on the alignment between activities and strategy (As)*

- *The effect of culture on the conduct of management education (General)*

    Af = African country, sector or organisation
    As = Asian country, sector, or organisation
    E = European country, sector or organisation
    ME – Middle-east country, sector or organisation
    NA – North American country, sector, or organisation

11. Last words

Finally, is there anything else that can be added that should be borne in mind in terms of finding a topic? Yes, there is an Individual characteristic that is central here and implied in our previous discussion and should certainly be included under the L-I-D criteria discussed above and that is flexibility. An essential characteristic of a good researcher is the ability to adjust their targets and objectives to what is realistic and possible in the face of emerging information (and especially possible data limitations).

For example, it is not uncommon for mentors to be told by a starting DBA researcher something like "I want to prove that increased (insert here as appropriate) has a direct effect on organisation performance. Lots of people have said they think this is important, but no-one has yet been able to prove this. This would be a very original piece of work".

Well, first you already should recognise the warning signs of "no-one has been able to prove this" and "originality" from what has been discussed above. Second, if by "prove" is meant "show that this affects performance" what happens if the research finds it does not? DBA research should always be set up so that the results are interesting and make a contribution, no matter what the results are. Third, as we have seen, lots of things affect organisation performance. How will the researcher sort out the myriads of things that can be important here from the particular matters they are interested in? If they are proposing pursuing a quantitative analysis then this could require extensive high quality data and sophisticated research methods that are well beyond the scope of most DBA research and researchers.

If the DBA researcher is wedded to such a research question and refuses to be flexible then they may as well pack up and try something else rather than waste their time. The answer to these problems lies first in being flexible, and if the researcher is flexible the way forward is to then to look at how research in the broad area they are interested in has produced results in the past, and to listen carefully to the advice of the mentor who invariably has years of personal experience of both doing business-related research at the highest level and advising students who are planning likewise.

In your final Research Proposal to be submitted to the DBA Research Committee you should have a clear idea of what is needed to achieve the DBA objectives you will set yourself and be confident (with reason) as to how you will produce a final thesis that will be a contribution to

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knowledge in a reasonable space of time. As in many endeavours, finding and framing the question correctly is much of the battle. In particular, in your choice, development and exposition of a topic should bear in mind two major things (a) the L-I-D essentials: obviously there are a number of issues you have to satisfy in developing a credible research proposal, but hang your proposal around these three major elements and you will be well on the way (b) the narrative: can you tell a coherent and integrated story that runs all the way from the background literature you have reviewed, through research methods to be used, to the specific hypotheses that you intend to test? Good luck – or to paraphrase the golfer Gary Player, the better prepared and flexible you are, the luckier you can expect to be in this adventure. And if there has been an overall objective of this guide, it has been to help you remove as much as possible of the luck (risk) involved in finding a good and viable DBA topic. We hope you find it helpful in these respects.

References

Barabba, V. P. (1995) *Meeting of the Minds: Creating the Market–based Enterprise*, Boston, Harvard Business School.

Chandler, A. D. (1962) *Strategy and Structure,* Cambridge, Mass. MIT Press.

Diamond, J. (1999) *Guns, Germs and Steel: the Fates of Human Societies*, New York, Norton

Katz, D. and R. L. Kahn (1966) *The Social Psychology of Organizations*, Wiley, London

Levitt, S. D. and J. A. List (2009) Was there Really a Hawthorne Effect at the Hawthorne Plant? An Analysis of the Original Illumination Experiments, *NBER Working Paper No. 15016*, Cambridge Mass. National Bureau of Economic Research

Nickell, S. J. (1996) Competition and corporate performance, *The Journal of Political Economy*, 104, 724-746

Final Tip

If you are referring to articles in any of your web-board communications with mentor (and later supervisor), get into the habit of proper formatting, spell checking, and citing author/ date in your communications (as has been done in this guide). Put the full reference(s) at the end in an accepted format as on the left here. It builds up good practice, means the mentor can concentrate on advice that matters, and makes it easier to eventually collate references (as on left) for the Research Proposal and later thesis.

Appendix: Self-assessment of Research Skills and Data Access Gaps

Some general points

- There is a well-acknowledged qualitative difference between doing a DBA and doing a PhD, though the quality of a good DBA degree such as that of EBS is equivalent to a PhD.

- For a variety of reasons there may often be qualitative differences between doing doctoral research (PhD or DBA) and corresponding research in the leading journals.

- For example, the research skills base and data access possibilities may be much more limited for a DBA researcher compared to leading research drawn on in the DBA literature review, the latter may involve teams of extremely experienced researchers with complementary skills, significant grant support, and excellent data access possibilities.

- The IBR courses are, as the titles suggest, only an introduction to business research, the DBA researcher may have to be prepared to acquire deeper skills as part of the research phase of the DBA, this may depend on the preferred topic.

Given the possibility of a gap between the resources (skills and funding) and data access open to a DBA researcher and the corresponding skills and data set opportunities exploited by leading research teams of the kind often cited in the literature review, there are different options open to the DBA researcher. These include, inter alia;

1. Choose a different topic where there are not such skills or data access gaps.

2. Narrow the skills gap by upgrading the skills of the DBA researcher.

3. Narrow the skills and data access gaps by adapting the research question to the context and opportunities faced by the researcher.

For example, in the case of the third option, if the literature and related research questions are heavily based on sophisticated statistical analyses of laboratory experiments or large scale surveys, could the proposed DBA research question which builds on this prior literature and associated research questions be adapted to a small number of case studies or even just a study based on the DBA researcher's own organization? These are questions for which there are no general answers, it depends on the topic and the researcher and his or her context.

You are the best placed person to carry out a critical assessment of whether you have the skills (and data access opportunities) needed for the research, or could easily acquire them. The following page provides a template by which you could conduct a self-assessment in these respects with a view to subsequent discussion with your mentor.

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Self-assessment Questionnaire

- **Name:**

- **Topic proposed**:

- **Usual research techniques e.g. types of mathematics, statistics, case study methods generally used in the literature on this Topic**:

- **Major journal outlets for this topic**:

- **My School Education**:

- **My University Education:**

- **My Previous research related activities (if any)**:

- **My Work Experience relevant to research skills needed**:

Questions

Comment – for the questions below, if you are not fully sure, just give what you know or think so far with indications of how you plan to explore this question further later. NOTE if you plan to explore or apply work associated with a single piece of leading or landmark research, replace "typical literature" with "leading article" (while noting the typical DBA thesis at 35-40,000 words is expected to explore issues in more breadth and depth than the typical research article at 8-10,000 words).

Question (1) Do I already understand, and am I capable of applying, the techniques associated with the typical literature in this area?

Question (2) Could I acquire the techniques associated with the typical literature in this area in a reasonable time frame within the DBA programme?

Question (3) Are there doctoral (especially DBA theses) in this area and do they suggest the possibility of using different techniques from that in the typical literature?

Question (4) Would it be possible to explore topics in my area of interest using different techniques other than those commonly employed in the typical literature in this area.

Question 4, 5 & 6: a second self-assessment exercise can then be carried out on data access for questions 2, 3 and 4, replacing "techniques" with "access to data" in each case