Introduction to Business Research 2

The Literature Review

Dr William Wallace
This course text is part of the learning content for this Edinburgh Business School course.

In addition to this printed course text, you should also have access to the course website in this subject, which will provide you with more learning content, the Profiler software and past examination questions and answers.

The content of this course text is updated from time to time, and all changes are reflected in the version of the text that appears on the accompanying website at http://coursewebsites.ebsglobal.net/.

Most updates are minor, and examination questions will avoid any new or significantly altered material for two years following publication of the relevant material on the website.

You can check the version of the course text via the version release number to be found on the front page of the text, and compare this to the version number of the latest PDF version of the text on the website.

If you are studying this course as part of a tutored programme, you should contact your Centre for further information on any changes.

Full terms and conditions that apply to students on any of the Edinburgh Business School courses are available on the website www.ebsglobal.net, and should have been notified to you either by Edinburgh Business School or by the centre or regional partner through whom you purchased your course. If this is not the case, please contact Edinburgh Business School at the address below:

Edinburgh Business School
Heriot-Watt University
Edinburgh
EH14 4AS
United Kingdom

Tel + 44 (0) 131 451 3090
Fax + 44 (0) 131 451 3002
Email enquiries@ebs.hw.ac.uk
Website www.ebsglobal.net
Dr William Wallace BSc (Hons), MSc, PhD.
DBA Programme Director and Senior Teaching Fellow, Edinburgh Business School (EBS), the Graduate School of Business at Heriot-Watt University.
Dr William Wallace holds degrees from Leeds Metropolitan University (1981), Loughborough University (1983) and Heriot-Watt University (1987). He joined Edinburgh Business School in 2000 after 10 years’ project management experience in the UK public and private sectors. Dr Wallace is author of the EBS DBA texts Project Management and Alliances and Partnerships. He is joint author of Strategic Risk Management and Mergers and Acquisitions. He is also either author or joint author of the EBS DBA texts Introduction to Business Research 1–3. He is Chair of the EBS DBA Research Committee and has successfully mentored and supervised numerous EBS DBA students.
## Contents

**Module 1**  
Introduction

1.1 **Introduction** ................................................................. 1/1  
1.2 **Ten Questions on the Literature Review Submission Stage of the DBA Programme** .................................................. 1/2  
1.3 **The Process Model** .......................................................... 1/5  
1.4 **What Has To Be Submitted?** ............................................. 1/8  
1.5 **The Aims and Objectives of the Literature Review** ............... 1/10  
1.6 **The Aims and Objectives of the Basic Theory** .................. 1/16  
1.7 **The Aims and Objectives of the Pilot Study** ....................... 1/19  
1.8 **The Aims and Objectives of the Formal Theory** ................ 1/22  
1.9 **The Supervisor** .............................................................. 1/25  
1.10 **Some Important Issues to Remember When Developing the Literature Review Submission** ........................................ 1/26  

Learning Summary ...................................................................................................... 1/28  

Review Questions......................................................................................................... 1/33

**Module 2**  
The Literature Review and Synthesis

2.1 **Introduction** ........................................................................ 2/1  
2.2 **The Literature Review** .......................................................... 2/2  
2.3 **Sources of Literature** ............................................................ 2/11  
2.4 **Planning the Literature Review** ................................................. 2/16  
2.5 **Referencing** .......................................................................... 2/20  
2.6 **Maintaining Focus** ............................................................... 2/28  
2.7 **The Literature Synthesis** ........................................................ 2/31  
2.8 **Example of a Literature Review and Critique** ......................... 2/35  

Learning Summary ...................................................................................................... 2/49  

Review Questions......................................................................................................... 2/52

**Module 3**  
The Pilot Study and the Formal Theory

3.1 **Introduction** ........................................................................ 3/1  
3.2 **Pilot Study Design** .............................................................. 3/2  
3.3 **Pilot Study Design Example** .................................................. 3/15  
3.4 **Pilot Study Report** .............................................................. 3/26  
3.5 **Synthesis of the Pilot Study and the Literature Synthesis** ........ 3/35  
3.6 **Developing the Final Theory and Hypotheses** ..................... 3/37  

Learning Summary ...................................................................................................... 3/38
Contents

Review Questions ......................................................................................................... 3/42

Module 4

Working with the Supervisor 4/1

4.1 Introduction ........................................................................................................ 4/1
4.2 The Concept of Doctoral Supervision .............................................................. 4/2
4.3 The Supervisor–Candidate Relationship .......................................................... 4/3
4.4 Questions for the Supervisor ........................................................................... 4/11
4.5 Possible Problem Areas ................................................................................... 4/15
4.6 Formal Quarterly Progress Reports ................................................................... 4/22
Learning Summary ....................................................................................................... 4/26
Review Questions ......................................................................................................... 4/29

Module 5

Literature Review Submission Orientation 5/1

5.1 Introduction ........................................................................................................ 5/1
5.2 The Hypothesis-Based Approach ...................................................................... 5/3
5.3 The Exploratory-Based Approach ..................................................................... 5/3
5.4 The Research Orientation Matrix ..................................................................... 5/9
5.5 Research Orientation and Risk ......................................................................... 5/17
5.6 Research Orientation and Phasing .................................................................. 5/22
Learning Summary ....................................................................................................... 5/25
Review Questions ......................................................................................................... 5/30

Module 6

Type A (Hypothesis-Based) Literature Review Submission Example 6/1

6.1 Introduction ........................................................................................................ 6/2
6.2 The Context of the Development of the Formal Theory ............................... 6/3
6.3 The Literature Review ....................................................................................... 6/4
6.4 Literature Synthesis and Development of a Basic Theory ........................... 6/20
6.5 Report on the Pilot Study ................................................................................ 6/28
6.6 Synthesis of the Pilot Study Outcomes, the Literature Synthesis and the Development of a Formal Theory ............................................................... 6/37
Learning Summary ....................................................................................................... 6/42
Review Questions ......................................................................................................... 6/42

Module 7

Type D (Exploratory-Based) Literature Review Submission Example 7/1

7.1 Introduction ........................................................................................................ 7/1
7.2 The Context of the Development of the Literature Review Submission ....... 7/3
7.3 The Extended Literature Review ....................................................................... 7/4
7.4 The Issue of a Pilot Study ................................................................................ 7/28
Module 1

Introduction

Contents

1.1 Introduction........................................................................................................ 1/1
1.2 Ten Questions on the Literature Review Submission Stage of the DBA Programme ......................................................... 1/2
1.3 The Process Model......................................................................................... 1/5
1.4 What Has To Be Submitted? ....................................................................... 1/8
1.5 The Aims and Objectives of the Literature Review .................................. 1/10
1.6 The Aims and Objectives of the Basic Theory .......................................... 1/16
1.7 The Aims and Objectives of the Pilot Study ............................................. 1/19
1.8 The Aims and Objectives of the Formal Theory ...................................... 1/22
1.9 The Supervisor ......................................................................................... 1/25
1.10 Some Important Issues to Remember When Developing the Literature Review Submission ..................................................... 1/26
Learning Summary ............................................................................................. 1/28
Review Questions .............................................................................................. 1/33

Learning Objectives

By the time the candidate has completed this module, he or she should understand:

- how the subprocess model for the literature review fits into the overall process model;
- exactly what has to be submitted for assessment;
- the difference between the terms literature review and literature review submission;
- the primary aims and objectives of the literature review;
- the primary aims and objectives of the pilot study.

1.1 Introduction

This is the second in the suite of three EBS distance learning texts that collectively form the Introduction to Business Research courses. The first text, Introduction to Business Research 1: The Research Proposal, focused on developing the necessary knowledge and understanding to enable the candidate to progress from an assumed zero knowledge of research to a level where he or she could produce and submit a research proposal for consideration by the EBS Research Committee.

Introduction to Business Research 2: The Literature Review is concerned with developing a sufficient understanding of how to design, conduct and prepare a literature review that demonstrates a thorough and detailed understanding of the relevant knowledge base.
In the EBS DBA programme the literature review is combined with several other sections of the final thesis and is submitted as a literature review submission for review by the DBA Research Committee.

The literature review submission is a formal document that usually comprises a series of draft chapters (including literature review chapters) that will eventually go on to form part of the final draft thesis. A typical literature review submission comprises an introduction chapter, a series of literature review chapters, a literature review synthesis, some kind of statement of research aims and objectives and a section on methodology. The literature review submission is considered by the DBA Research Committee, and the candidate can only proceed to the final stages of the research when the Committee is convinced of the continued viability of the research. It is a kind of final check on the continued viability of the research before the candidate goes on to do the main study and write up the final thesis.

The distinction between the literature review and the literature review submission is reiterated and developed in more detail in Section 1.3 below.

1.2 Ten Questions on the Literature Review Submission
Stage of the DBA Programme

1.2.1 Introduction

A good way to achieve an overview of the DBA research stage is to consider 10 frequently asked questions. The various terms and processes discussed in the questions and answers are all developed in more detail later in this module.

1.2.2 Ten Questions

What Is Meant by Literature?

In this context the term literature refers to the published work on any given subject area. For example, there is a bank of published work on climate change. The literature comprises a wide variety of different types of published work on climate change, ranging from newspaper articles to journal articles and from government research papers to textbooks. There are also thousands of Internet-based literature items ranging from official government websites to wiki articles. The whole bank of published work represents ‘the literature’ on climate change. Anybody who is interested in climate change can consult this literature to learn about the subject.

What Is a Literature Review?

A literature review is a critical evaluation (see below) of the literature. The idea is that the candidate reads the literature base and critically evaluates it to produce a balanced review. In doing so, the candidate looks at the various arguments and schools of thought in the literature and reviews them to produce a balanced overview. The point of this is to develop a knowledge and understanding of what has been published in the chosen research area. The candidate does not just read the literature. The candidate must read it and critically evaluate it (see below) to form a balanced view.
**Where Do I Get Literature?**

Literature is all around. Everyday examples include newspapers, magazines and Internet pages. More detailed and subject-specific literature may be found in public libraries. Higher-standard research literature may be found in university libraries in both traditional paper-based and electronic online versions. As far as DBA research is concerned, the most likely sources will probably be the university online library.

**What Is the Point of a Literature Review?**

The literature review develops a knowledge and understanding of the current literature base in the chosen research area. It acts as a foundation for the rest of the research. The starting point of any research programme is for the researcher to understand what is already known about the chosen research area. At doctoral level the research has to contribute to the knowledge base in the chosen research area. The only way to demonstrate that the current work contributes to the knowledge base is by defining what the knowledge base is and demonstrating the contribution to that base. The candidate defines the knowledge by reading and reviewing it.

The literature review also demonstrates in full that there is a viable literature base in the chosen area of research. As stressed in *Introduction to Business Research 1*, the size of the knowledge or literature base in the chosen research area is very important. There are advantages and disadvantages associated with large and small literature bases. If the literature base is small, the candidate has plenty of scope for selecting a specific area that has not been researched before and it is easier to address the issue of originality. On the other hand, there is less literature on which to base the candidate’s proposed research. There are fewer references that can be cited in substantiation of the proposed research design. In addition, the fact that there are few publications in an area may be a clear warning that the candidate should be wary of that area. In the case of a subject with a large literature base, the candidate may have more of a problem in defining an area where an original contribution can be made, but a large literature base means there is plenty of existing research upon which the proposed research can be based and is also indicative of the area itself being viable for research.

The initial research proposal will already have demonstrated there is a viable literature base in the chosen area. A candidate at the literature review submission stage has to reinforce this at thesis level. The DBA Research Committee is likely to accept a literature review submission only if it reinforces the original demonstration of viability and gives systematic and comprehensive proof that there is a literature base. The DBA Research Committee is likely to accept a literature review submission for an area of research with a non-viable literature base only if the candidate is able to make a sufficiently strong and convincing case in support.

**How Do I Critically Evaluate the Literature?**

The idea is that the candidate reads about the chosen research area and builds up a balanced understanding based on the current literature. In some cases, researchers may have published articles that contradict each other. There are several schools of thought regarding the issue of climate change, for example. At the simplest level there are two basic branches of thought: there are those who accept that human activity is contributing to climate change and those who do not. Each school of thought contains eminent scientists and researchers, but at least one school is wrong. Human activity either is or is not contributing to climate
change. As a researcher it is the candidate’s task to read both sides of the argument and base his or her research on a balanced and reasonable viewpoint.

**How Do I Present a Literature Review?**

Once the candidate has obtained the various sources of literature and critically evaluated them, he or she must prepare a literature review, which usually comprises a series of chapters. It is common for the literature review to be structured in a format that matches the title of the research. For example, if the research is entitled ‘The Impact of Power Generation on Climate Change’, the candidate might do three literature review chapters: one on power generation, one on climate change and one that combines and summarises both subject areas. This third, combined chapter is referred to as a *literature synthesis*.

**How Do I Use the Literature Review in My Research?**

Once the candidate has developed an understanding of the literature base and a clear picture of the current knowledge base, he or she then designs their own research so that it contributes to that knowledge base. The research could do so in several different ways, but the candidate has to know what the knowledge base is before he or she can design research that adds to it.

**What Is a Literature Review Submission?**

In the EBS DBA students are required to complete a literature review submission and submit it for review by the DBA Research Committee before the student moves on to the final phase of the research. The literature review submission comprises the literature review and synthesis (see above) and also (usually) a chapter on the development of the final research aims and objectives and a methodology chapter. In other words, the literature review submission is a series of chapters including a literature review, a literature synthesis and the research methodology.

**How Is the Literature Review Submission Evaluated?**

The DBA Research Committee critically evaluates the literature review submission and decides whether or not it is of an acceptable standard to justify progression to the final stage. The Committee looks for evidence that all current relevant literature has been identified, read, critically reviewed and synthesised to act as a basis for the development of the research aims and objectives. The Committee also looks for evidence that the proposed research methodology has been developed directly from this synthesis. The literature review submission must demonstrate a clear progression from literature base to current research. The student has to use the literature review submission to demonstrate that the current research a) has been logically and systematically developed from the existing knowledge (literature) base and b) will contribute directly to that knowledge base.

**Is the Literature Review Submission Used in the Final Thesis?**

Yes. The literature review submission should take the form of fully developed chapters that will eventually make up the majority of the final thesis. The only chapters still to be assessed will be those on data collection and analysis, results and conclusions, etc. The literature base is, of course, dynamic, and new literature is constantly added. The student must, therefore,
constantly update the literature review submission, right up to the time that the final thesis is produced. The literature review submission should, therefore, be considered as a significant section of the final thesis subject to subsequent update and modification right up to final submission for examination.

1.3 The Process Model

It is important that candidates appreciate that the individual Introduction to Business Research texts are individual elements within a larger suite of research courses. The full process model for the research process, as introduced in Introduction to Business Research 1, is reproduced in Figure 1.2. The process models show the entire range of research actions necessary to complete the research programme. The elements relevant to Introduction to Business Research 2 appear in the middle of the overall process model. The subprocess model relevant to Introduction to Business Research 2 is shown in Figure 1.1, where it displays the sequence of activities.

![Diagram of the subprocess model relevant to Introduction to Business Research 2]

The subprocess model relevant to Introduction to Business Research 2

The diagram represents the parts of the overall research model relating to the contents of this second text in the Introduction to Business Research suite of courses. The full process model, as originally described in Introduction to Business Research 1, is shown in Figure 1.2.

In Introduction to Business Research 2, the candidate is provided with the information required to allow the generation of a formal literature review submission. The process comprises five primary subprocesses.

- **The literature review** forms the first subprocess. The candidate should thoroughly search the literature relevant to the chosen research field, ensuring that all important literature is identified, obtained and reviewed. A formal literature review is built up by writing a summary of the value that each important piece of research has added to the knowledge base. The candidate is expected to review the literature critically. The fact that a piece of work has been published does not necessarily mean that it is correct. Publications are made in the research community so that other researchers can read them and discuss the validity, or otherwise, of the findings. The result of this phase is the literature review.
Figure 1.2 The Introduction to Business Research process model
• The literature synthesis and basic theory formulation forms the next subphase. The objective of this phase is to generate a testable theory that can be used as the basis for the analytical section of the thesis. The theory must be developed from the literature rather than being, for example, just an idea that springs into the candidate’s mind. It is therefore important that the candidate summarises the literature in the literature summary and then synthesises it in the literature synthesis. Synthesis means mixing known ideas or concepts to make something new. It is closely related to the concept of synergy. The candidate should bring together the various literature review chapter summaries and generate a new idea or concept from the published works. The outcome is summarised in the literature summary. This is then used as the basis for the foundation of an initial theory or testable proposal. The result of this phase is the initial or basic theory. It should be noted that, in the context of the EBS DBA, the term ‘theory’ can mean anything from a simple postulation to a proposed direct application, or from an outline testable idea to a complex new theory. It is not necessary to produce a research theory in the more usual sense of the word. A DBA researcher could, for example, take an existing model and apply it to his or her own company or sector. The theory or postulation could be that the model is applicable to that new application. The term ‘theory’ does not suggest or imply the formulation of a complex scientific theory like Einstein’s Theory of Relativity!

Candidates should understand that they are not required to develop any kind of complex new theory from the existing literature base. It is appreciated that the generation of such a theory can be extremely difficult, even for the most accomplished of researchers. As stressed in Introduction to Business Research 1, the requirements for the DBA can be evidenced by the discovery of new facts or by high-level critical reasoning. The latter could include the application of existing models or theories into new areas or by taking an existing model or theory and adding to it.

• The pilot study and theory development. In this subphase the candidate must demonstrate that the theory or testable proposal is, in fact, workable. There are numerous reasons why a theory developed purely from the literature may be suspect. For example, the candidate may have misunderstood the literature or inadvertently omitted to review and allow for a particularly important piece of recently published research. In any case, it is advisable to make an initial analysis of the theory before committing to the main research methodology. This is normally achieved by the use of a pilot study. The initial development of the pilot study takes place in pilot study design. The study itself is executed during the pilot study subphase and the results are evaluated during pilot study evaluation. The candidate must then review the pilot study during business alignment to ensure that the theory and proposed methodology are sufficiently applied and business-relevant. In theory development the theory is modified and/or amended as required. The result of this phase is the initial theory development.

It should be stressed that the pilot study alone is unlikely to illustrate where the candidate may have misunderstood the literature and/or missed a particularly important publication in his or her review. These weaknesses would generally have to be identified by other means.

It should also be remembered that the literature might already contain the theory that is to be tested or applied. The literature review and pilot study might reinforce the theory and provide insights into likely difficulties in applying and testing the model or theory.

• The formal theory, hypotheses or testable proposal. In this phase, the theory is broken down during theory disintegration into its separate components to be devel-
developed to form a series of testable hypotheses. The first stage is usually to develop high-level hypotheses during the research hypotheses subphase and lower level hypotheses during the operational hypotheses subphase. The research hypotheses are then checked for business alignment and relevance during business calibration. The result of this phase is a set of operational hypotheses that will be addressed by the subsequent research methodology in the analysis stages of the research.

- **An outline research methodology.** The outline research methodology is a statement of the proposed methods of data collection and analysis, including details on the proposed sample, sample size, methods of data collection (such as interviews, questionnaires, company documents and records etc.), processing and analysis methods and an indication of how the results will be used to generate research conclusions. In terms of the literature review submission, the information provided on the research methodology need only be outlined. It has to contain sufficient detail so that the DBA Research Committee can see exactly what the student intends to do and how he or she intends to do it. The level of detail provided has to be sufficient to allow the Research Committee to fully appraise the proposed methodology and then make an informed decision on the viability or otherwise of what is proposed.

It should be noted that the full research methodology is not developed and implemented until the next stage, when the student conducts the main study data collection and analysis and writes up a final thesis for examination. In terms of the literature review submission stage, the level of methodological detail required has to be sufficient to allow the Research Committee to make an informed judgement. It does not have to be complete and fully finalised in every detail.

### 1.4 What Has To Be Submitted?

#### 1.4.1 Introduction

This section summarises the elements that the candidate must include in the literature review submission. The actual literature review forms a part of the submission, but other important elements must be included. This section examines each element of the submission. Candidates should note that any submission failing to address one or more of the elements included in this section is likely to be rejected by the EBS Research Committee.

#### 1.4.2 The Literature Review Submission

Before moving on to the data analysis and collection phase of the research stage, the candidate must:

- develop a literature review;
- develop a literature synthesis and formulate a basic research theory;
- design and execute a pilot study;*
- formulate a formal research theory and/or question and/or hypotheses;
- formulate an outline research methodology.

*A pilot study may not always be necessary.

The literature review is the candidate’s own critical review of all or most of the published research relevant to his or her own research. A sufficient understanding of the
literature must be demonstrated to show that the candidate’s research findings contribute to the knowledge base.

The candidate must also use the literature to develop a basic research theory. The development of research questions, theories and hypotheses is introduced in Introduction to Business Research 1. The theory should be directly applied and should be analysable at doctoral level. It is very important that the basic theory is shown to have been developed from the literature rather than from the candidate’s own ideas and perceptions. The supervisor will provide assistance and advice in formulating a suitable basic theory.

In most cases, the basic theory should be tested using a pilot study. A pilot study is simply a small-scale trial where the basic theory is tested for suitability. The pilot study has its own research methodology, which may or may not be the same as that used for the main research studies. A pilot study is not always necessary. In many cases the pilot is used as a precaution to identify any major defects or shortcomings in the initial methodological approach or basic theory. In some cases there may be a second pilot study where any corrections or amendments made following the first pilot are tested. The supervisor will give advice on the need for one or more pilot study.

The penultimate requirement is the statement of a formal theory and/or research question and/or a set of operational and research hypotheses. All of these elements were introduced in Introduction to Business Research 1. The supervisor will, again, offer advice on the development and formulation of these elements.

In formulating the theory the candidate should ensure that each of these elements is considered both individually and collectively. No single element can be regarded in isolation. The candidate must demonstrate a logical and reasoned chain of thought, where the literature leads directly to the theory. The research committee will specifically look for evidence that the candidate has:

- a thorough understanding of all/most of the relevant literature;
- conducted a critical review of this literature;
- identified the strengths and weaknesses of individual publications within the literature;
- identified any gaps within the existing literature;
- addressed the issue of any potential duplication associated with the proposed research;
- developed his or her own proposed research area using the critical evaluation of the literature;
- synthesised the literature to develop any areas of agreement and literature triangulation;
- developed a basic substantiated theory from the critical analysis;
- designed (where necessary) a suitable pilot study to analyse the basic theory;
- executed (where necessary) the suitable pilot study;
- correctly interpreted (where necessary) the pilot study results and amended the theory accordingly;
- developed a final theory and/or research question and/or research and operational hypotheses.

The final requirement is an outline research methodology. The literature review submission must contain a detailed outline of how the research will be conducted. This should include detail on the proposed source(s) of data, the type of data to be obtained, the proposed methods of analysing the data, how the analysis is to be used to generate results, etc. By the time the reader has finished reading the outline research methodology section, he
or she should have a clear understanding of exactly how the candidate proposes to execute the research. The level of detail should be sufficient for the DBA Research Committee to be able to assess the proposed methodology and make a fully informed judgement on the viability or otherwise of what is proposed.

Failure to address each of these areas could result in the literature review being rejected by the EBS Research Committee.

Candidates should note that the term *literature review* means the *critical review of the literature relevant to the proposed research*. In contrast, the term *literature review submission* means the literature review itself plus:

- the literature synthesis and formulation of a basic research theory;
- the design and execution of a pilot study (where necessary);
- the formulation of a formal research theory and/or question and/or hypotheses;
- the formulation of an outline research methodology.

The term *literature review submission*, therefore, means the document submitted to the EBS Research Committee, which includes the literature review, the basic theory, the pilot study element (where appropriate) and the formal research theory and/or question and/or hypotheses. This is a very important distinction. Candidates should ensure that they understand it fully before proceeding.

The EBS Research Committee requires all of this information to be able to make a decision on whether the submission contains sufficient promise and potential for the research to be carried on to stage 3: *data collection, analysis and results*. To make this decision the research committee must be satisfied that not only the literature review but also the research theories and/or hypotheses are correctly formulated and grounded and, where necessary, tested.

### 1.5 The Aims and Objectives of the Literature Review

#### 1.5.1 Introduction

This section outlines the main aims and objectives of the literature review. The candidate should appreciate that the literature review is central to the thesis as it acts as the basis for the development of the research methodology and analysis. The research committee will consider the literature review in great detail, and it must meet the required standard.

#### 1.5.2 The Aims and Objectives of the Literature Review

The literature review is a crucial part of the dissertation. It forms the foundation on which the research methodology and subsequent analysis are developed. The basic structure of the literature review is shown in Figure 1.3.
The literature review acts as the foundation for the research and is central to all of the work that follows on from it. Once the research proposal has been completed, the research programme comprises three top-level work breakdown sections. These are:

- the literature review and theory formulation and development;
- the research methodology;
- the analysis and generation of results and conclusions.

These three stages are essential for the completion of the research. In some ways the research methodology acts as a bridge between the literature review, the formulation of the research theory and the analytical sections of the research. To construct this bridge, the literature review and theory have to be well defined and firmly established.
If the research methodology or analysis sections are subsequently modified, the literature review may also have to be modified to address the existing literature in the new areas.

Candidates should consider carefully a number of important objectives of the literature review. These are considered below.

- **The literature review must demonstrate an adequate literature base.**
  When choosing a research area, candidates are faced with a wide range of different considerations. The size of the existing literature base is a very important factor for consideration. If there is a great deal of literature in the chosen area, this suggests that the area has been thoroughly researched and the knowledge base is extensive. From the candidate’s point of view this is good, because there is a lot of published work upon which the candidate can base his or her research. The very fact that there is a lot of published work suggests the area is research viable. A large existing literature base is, however, bad in that there may be fewer opportunities for developing an original area or for identifying a gap.

  If there is little or no literature in the chosen research area, this suggests that the area is either new or (perhaps) not viable as a practical research area. This is good in that the candidate has a ‘clean sheet’ and can easily identify an area where an original contribution can be made. A small literature base is, however, bad in that there is little or no existing work on which the candidate can found his or her own research. Research in this area may be difficult or impossible, as evidenced by the fact that there is little or no existing published research.

  In other words, if the candidate chooses an area where there is little or no published research, this choice has to be considered as high risk. It is very difficult to justify a research choice where the candidate cannot cite any relevant published work as the basis for his or her own research. In most cases the viability or otherwise of the existing research base will have been demonstrated during the mentored stage in the assembly of the research proposal. The full viability of the literature base, however, has to be demonstrated in the supervised stage in the assembly of the literature review.

- **The literature review must be dynamic.**
  Candidates often make the mistake of thinking of the literature review as a static document. As the research programme progresses, the candidate may choose or be forced to modify the research field and/or the scope of the research. In other cases, the candidate may choose or be forced to modify some of the objectives of the research. Where such cases do occur, the candidate will almost certainly be required to carry out additional reading to ensure that the literature review continues to cover the full research area.

  Even where no major modifications in research aims or scope are required, the candidate should realise that the literature itself is dynamic. New publications are constantly being added to the knowledge base in any particular research area. Some of these publications address existing research, whereas others introduce new findings and theories. The candidate must remain fully conversant with the changing literature right up to the point where he or she attends the *viva voce* examination at the end of the research process.

  Candidates should therefore appreciate that the literature review is not simply written and submitted for consideration by the EBS Research Committee and then left until the final thesis is written up. The literature review should be constantly modified and updated throughout all the various stages of the research. The internal and external examiners have to be satisfied that the literature review submitted as part of the thesis is fully up to date.
• **The literature review must be exhaustive.**
  The candidate must ensure that the literature review covers all the important research published in the appropriate research area. The review must reveal the current knowledge on a topic, and its limitations, by evaluating and synthesising the work of others. The literature not only provides factual information from previous research but will also assist in setting the problem in context. With this knowledge, the candidate will form a reasoned and critical perspective of the work of others in relation to his or her proposed research. It is clear that all researchers depend upon the theories, methodologies and results of their predecessors. It is important to be aware of the present knowledge and the specific developments, disagreements and advances currently engaging the leading scholars. Reading and critically reviewing this literature can light the spark of creativity in the candidate, leading to new concepts and ideas to be tested.

• **The literature review must include an acceptable level of sources.**
  Initially, it is advisable to read widely including textbooks, research papers in journals, professional magazines and conference papers. Useful material can also be found on the Internet, in newspapers and in trade magazines. These sources are valuable during the early stages of the research, such as during the preparation of the research proposal, when the candidate is still determining the final research field.

As a clearly defined research topic becomes more evident, the emphasis of the literature review should be increasingly placed on papers published in academically refereed journals and refereed conference papers and proceedings. Papers reviewing literature on the proposed topic are particularly useful, and all valuable references should be noted. A wide range of literature informs business and management research. Apart from specific business disciplines such as finance, marketing or corporate strategy, it is also likely, depending upon the topic chosen, that the candidate may make use of the economics, psychology and sociology literature.

It may also be worthwhile to read past PhD and DBA theses from a range of different universities. Completed theses, as a source of reading, can be useful as they may contain a large number of references that can be used by the candidate. This can apply particularly where the candidate can identify a good-quality PhD in an area closely related to his or her own research. The use of completed theses also has a number of negative aspects. Doctoral theses are usually very highly specific, and it is unlikely that one will be found in exactly the same area as that chosen by the candidate. Additionally, doctoral theses can be highly complex, and it may take a considerable amount of time before the candidate can command a sufficient understanding of the work to be able to use it properly.

• **The literature review should be multi-functional.**
  In addition to acting as a foundation for the research the literature has also to be able to provide an evaluative function much later in the research programme. It is advisable to include a literature reappraisal and theory redevelopment section towards the end of the thesis. The idea here is that the candidate's knowledge is expanding all the time. Having conducted the analytical element the candidate knows more than when he or she finished the initial literature review, which could be anything from six months to years previously. The candidate, therefore, is now in a better position to read and understand the literature and appreciate fully the work of other researchers.

In other words, the literature review is used both as the foundation for the research and for evaluating the findings of the research. This is an important distinction, these two roles being entirely different. The research findings may ‘shed new light’ on the reports of other researchers. In addition, new publications may have appeared since the candi-
date initiated the literature review. It is very important to revisit the updated literature and make use of it in developing the final conclusions of the research.

- **The literature review must be used to justify significant aspects of the research.**
  The literature review is an important justification tool. In the research proposal, when making a case for conducting the research, the candidate has to be able to show that he or she is fully aware of the existing knowledge base in the chosen area and that there is no duplication of this knowledge. In other cases, the literature may be used to demonstrate that there is a gap in the knowledge base. The candidate may then decide to focus the research in this area to address the gap.

  Literature gaps are attractive to researchers as they clearly identify areas where research can contribute to the knowledge base. If there is a gap in the knowledge, the candidate can easily demonstrate a contribution to the knowledge base by filling the gap. This may sound fairly straightforward. The most obvious point to consider is why a gap exists. There are plenty of other good doctoral researchers out there, and there may be a good analytical or methodological reason why the gap has not been filled before. In some cases, especially in relatively new research areas, gaps may exist simply because the field is still in its initial development phase and the sum total of all the research carried out is not sufficient to address emergent knowledge gaps. In other cases, new research generates new gaps. There is still an underlying danger, however, that a gap is there because other researchers have tried to address it and have been unable to do so satisfactorily.

- **The literature review must be focused.**
  Candidates often make the mistake of attempting to ‘pad out’ the literature review by including references that are either not relevant or not entirely relevant. Candidates should be aware that the external examiner is normally an expert in the relevant field. He or she is usually research active and may have considerable practitioner experience. The external examiner will almost certainly be familiar with the relevant literature and with most of the references cited in the literature review. External examiners are adept at identifying:
  - superfluous references;
  - contradictory references (without due critique);
  - duplicate references (without critique);
  - obvious references that are missing;
  - triangulation references that are not properly identified.

  Candidates should avoid the temptation to add unnecessary references to make the literature review look larger! It is also important to realise that a research field that has a small literature base may be a sign that the associated research is largely original.

- **The literature review must be synthesised.**
  The literature review normally covers several different subject areas. In some cases there may be references overlapping the different subject areas, whereas in others references may be specific to the given subject area. In the literature synthesis the candidate brings the various subject areas together and summarises them collectively to generate a basic theory. This process is a reflection of the natural process of human cognition. In making a deduction, the human brain draws together all the known facts about the problem. In some cases these facts may be related, whereas in others they may not. The brain frames the problem, eliminating any unnecessary information and setting the scope of the reasoning process. In an attempt to solve the problem, the brain then considers all the
separate pieces of information and attempts to link these areas together in a process of deduction.

Synthesis uses the known information to deduce new ideas and/or new facts based on the known ones. The process is one of extrapolation from known information into unknown information. A classic example is of a detective police officer investigating a serious crime. To work out who committed the crime (the unknown) the officer first gathers as much information as possible about the crime. Typical examples include:

- forensic analysis and reports;
- eye-witness testimonies;
- door-to-door enquiries;
- suspect database records;
- photo-fit identification information;
- historical patterns and trends;
- historical information on the victim or victims;
- closed-circuit television (CCTV) information.

Some of the information gathered by these processes may be irrelevant. There may, however, be useful information under some or all of the various source headings. The officer, often with the help of a back-up research team, goes through all the information and eradicates any information that is not relevant. For example, a suspect may come forward with a reliable alibi. Once the alibi has been fully investigated and verified, it may be possible to eliminate that particular suspect from the enquiry.

When the officer has been able to eliminate all known irrelevant information, he or she then considers the remaining material in detail and attempts to synthesise it. In effect, he or she attempts to generate new information (knowledge) by bringing together a large amount of existing information (knowledge). The officer attempts to combine, for example, information from CCTV recordings and eye-witness accounts. These two information sources are entirely different, unless the eye-witness is also the CCTV operator, and the information provided by each source is generated separately. If the CCTV and eye-witness accounts agree, there is then evidence that the eye-witness account is in fact accurate, and the officer may decide to study the account in more detail, perhaps including further interviews and discussions with the eye-witness.

By synthesising the various sources of information available, the officer is able to utilise the collective information to produce new ideas. These can then be developed into investigation theories to be researched in more detail. For example, by comparing CCTV and eye-witness accounts the officer might decide that suspect B is in fact the prime suspect and should be questioned in more detail. The officer may then compare the detailed statement made by the prime suspect with other information from the investigation that was not apparently relevant earlier in the investigation. The officer therefore develops a theory that suspect B is in fact the offender, and again reviews all investigation information. The process is refined until a sufficient case has been developed for suspect B to be charged with the crime.

The candidate follows exactly the same process in developing a basic theory from the literature. The synthesis is the process by which the various literature review subject areas are drawn together and used as the basis for the developing theory. The concept is shown in Figure 1.4.
1.6 The Aims and Objectives of the Basic Theory

1.6.1 Introduction

This section aims to show how to develop the basic theory and to illustrate its importance in the development of the formal theory and/or research question and/or hypotheses. In many cases the basic theory is different from the formal theory used to design the main research.

It should be remembered that the term *theory* is used loosely. In this context it does not mean or imply the development of a complex scientific theory that will form the basis of a new school of scientific thought. In this context, it could mean any of the following:

- a detailed investigation of a data set to produce an interpretation;
- an evaluation of if/how well an existing theory or model can be applied to a new case study;
- the modification of an existing model or theory to make it applicable to a new use or application;
- an entirely new speculative original thought;
- a postulation to explain a set of observed phenomena.

1.6.2 The Basic Theory

The basic theory is developed from the literature synthesis. The basic theory represents the candidate’s initial thinking, based on what has already been published. The theory should address the existing literature and should be correctly positioned, where appropriate, in relation to any obvious gaps or overlaps in the knowledge base. The basic theory is a direct product of the literature synthesis, as shown in Figure 1.5.

The basic theory is subject to subsequent modification and change in response to the findings generated by the pilot study. In some stages the final formal theory is considerably different from the initial basic theory.
The basic theory should:

- be consistent with the chosen research field;
- be developed directly from the literature;
- contain sufficient promise and potential for development at doctoral level;
- be compatible with the available data sample;
- go beyond the literature by the achievement of synergies;
- have the potential to lead to the development of a contribution to the knowledge base.

Candidates should note that the basic theory is not the same as the final theory. The basic theory evolves into the final theory as it is evaluated, usually by carrying out a pilot study.

Here are two examples of simple basic theories:

*There is a positive functional relationship between the use of collaborative progress planning tools and the degree of collaboration in construction projects in Germany.*

In this case the student theory is centred on showing the relationship between the two variables stated. The theory has been developed from the synthesis of the literature review and will act as the foundation for the subsequent research design.

*There are six primary drivers that dominate the transition process for organisations that must meet SOA-equivalent transparency compliance in France.*

In this case the student theory is based on an evaluation of the six main drivers that determine the transition process for companies that are trying to meet the equivalent requirements of the Sarbanes–Oxley Act in Europe.

In both cases the theory is simply a statement of what the student is trying to achieve.

It is important to stress that the theory may already exist in the literature and the candidate is seeking to apply this theory to a new data set such as his or her own country, sector or company. In other words the theory does not have to be developed from scratch by the candidate. It is equally acceptable to apply an existing theory, provided the application adds to the knowledge base in some way.
In some cases the basic theory may prove to be unsuitable for the development of a final theory. Typical reasons for this include the following.

- **The candidate may have made incorrect assumptions.**
  In interpreting the literature, the candidate is required to make certain assumptions. For example, a new theory that appears in the literature may seem to be sound because it has not been falsified. The candidate might choose to develop a research area based on this theory only to find, perhaps three months later, that new research acts to falsify the theory. This type of development can be particularly frustrating for candidates, as significant amounts of abortive time can be involved.
  It should be stressed that direct falsification is more likely in the natural sciences than in the social sciences. In most social science applications it is unlikely that a researcher would be able to prove irrevocable falsification. Moreover, the discovery of any new facts or associations that suggest falsification might themselves act as the basis for encouraging the research. The research could be adapted to focus on the acceptance or rejection of the suggested falsification. In other words the apparent falsification could actually encourage the research and provide a basis for continuing with it rather than acting to discourage or invalidate the research.

- **The basic theory may prove to be a dead end.**
  In some cases the literature can suggest a very promising research area. When the candidate attempts to develop the area, however, it may transpire that the suggested area is unsuitable for development. The basic theory may prove to be a paradox, or there may be insufficient data sources in the area to provide enough research data for collection and analysis.

- **Another researcher may publish.**
  This is another potentially very frustrating event. The candidate may develop a very interesting new theory, and may progress down the line of developing it into a final theory, only to learn that another researcher has suddenly published results in exactly the same area. It can be very difficult to identify other researchers who are active in the same area unless they publish. Most experienced researchers publish on a regular basis in their known areas of specific interest. There is, however, always a possibility that the candidate may be taken by surprise.
  It is important to stress that publication by another researcher does not necessarily result in the research focus becoming invalid. It should be remembered that corroboration of a new theory or finding can act as a direct contribution to the knowledge base in its own right. In other cases, for example where the research is based on the application of an existing theory to a new data set, publication by another researcher may simply add to the knowledge base used as the basis for the research. In other words it may strengthen the existing theory and, by default, enhance the research.

- **The proposed methodology may be unsuitable.**
  In many cases the student may be able to use an existing methodology ‘off the shelf’, as it were. Provided the existing methodology is compatible with the proposed research design, there should be no problem. Alternatively, the student might take an existing methodology and adapt it for use in this particular piece of research. The problem arises where there are no existing compatible methodologies and the student is faced with the prospect of designing a new methodology for this specific application. In such cases the basic theory may be acceptable, but there may be problems in developing a suitable methodology. The supervisor may point out weaknesses, perhaps in terms of reliability
and/or validity, in a proposed methodology. The candidate may search for published methodologies in the area of the basic theory only to find that no established methodology exists. The candidate is then faced with the high-risk option of designing an entirely new research method with no literature basis, or the lower risk of redefining the basic theory.

- **The basic theory may be unsustainable.**
  The basic theory may be acceptable in itself but either the candidate or the supervisor may realise that it is unsustainable because, for example, it cannot act as the basis for a research programme that will generate results that are sufficiently applied or significant. In such cases the supervisor may advise modifying the basic theory.

- **The basic theory may be misaligned.**
  It is common for candidates to develop a research outcome field (see *Introduction to Business Research 1*), go on to conduct a wide-ranging literature review, and then develop a basic theory including elements that fall outside the scope of the research. This problem often arises where the candidate has read extensively along the borders of the research field and has become distracted by interesting results that are only partially relevant. The research field can be changed although, as a result, this may involve the development of new research aims and objectives and potentially abortive work.

- **The basic theory should be capable of supporting a formal theory and research question.**
  It will be recalled from *Introduction to Business Research 1* that the research should ideally be focused on a formal theory that addresses a set of clear aims and objectives. These are developed directly from the research question which in turn evolves from the formal and basic theories. The basic theory developed from the literature could be as shown below.

  \[
  \text{Organisations should try to engineer the greatest possible degree of strategic fit when considering potential target organisations for acquisitions.}
  \]

  The candidate may carry out a pilot study, the outcomes of which can be synthesised with the literature synthesis. This process allows the candidate to generate a formal theory, provided the initial basic theory is sufficiently reliable and robust. The formal theory developed from the basic theory given above might be as shown below.

  \[
  \text{Organisations that make acquisitions on the basis of increasing their degree of strategic alignment, increase their likelihood of achieving long-term strategic acquisition success.}
  \]

  In this case the formal theory has evolved from the basic theory. In doing so it has become more focused. The focusing in this case is (presumably) enabled by the results of the pilot study.

### 1.7 The Aims and Objectives of the Pilot Study

#### 1.7.1 Introduction

This section aims to develop an outline understanding of the pilot study and to illustrate its importance in the development of the basic theory. Candidates should appreciate that a pilot study is not always necessary. In some cases the candidate may be using an established
methodology on a fully reliable sample. In all cases the candidate should seek advice from
the supervisor before making a decision on whether a pilot study is required and, if so, what
the scale and objectives of the pilot study should be.

1.7.2 The Literature Review and the Pilot Study

The pilot study is a self-contained and small-scale piece of research designed to test the basic
theory and evaluate the basic methodology used in the pilot study. Pilot studies can be
carried out in various ways. In some cases the pilot study may be a longitudinal study where
the pilot sample is analysed over several weeks or months, whereas in others it may comprise
one or more short-term cross-sectional studies. It may be the case that the pilot study is
executed when the literature review is largely complete, or it could be designed and executed
as the literature review progresses. Invariably, the pilot study, if required, has to be complet-
ed before the formal theory can be developed.

The thesis should contain a report on the pilot study in a dedicated section. The size of
the report will depend on the scale and scope of the pilot study and on the range of issues
addressed by it. The position of the pilot study, in relation to the literature review and
literature synthesis, is shown below in Figure 1.6.

![Figure 1.6 The development of the pilot study](image)

A typical pilot study report might contain the sections listed below.

- **Introduction.** This section highlights the aims and objectives of the pilot study and
  establishes the study in the context of the main work. The most obvious reason for
  conducting the pilot study is to test the basic theory using data generated in an applied
  environment.

- **Subject details.** This section provides sufficient detail on the pilot study subject or
  subjects. In the case of a single-company pilot, typical information provided includes the
  company size, number of employees, core business activities, degree of strategic align-
  ment and so on.

- **Methodology.** The research methodology in the pilot study is usually related to the
  methodology used in the main study. In many cases the pilot study allows both the basic
theory and the proposed main study methodology to be assessed simultaneously. The choice of methodology is usually supported by references, which should cite other researchers who have carried out compatible research in related areas. In some cases the methodology used for the pilot study is adapted as the pilot study progresses, and becomes the foundation for the main research methodology.

- **Results.** The results generated by the pilot study are presented in a logical sequence reflecting the order and delivery of the literature synthesis.

- **Pilot study summary.** The summary highlights the main results and conclusions generated by the pilot study.

- **Synthesis of the literature and pilot study results.** In many ways this is the most important single element in the pilot study report. There should be a clear distinction between the ‘results’ generated by the literature synthesis and those generated by the pilot study. In some cases these two sets of results will agree, whereas in others they will differ. The process of bringing the various subject areas of the literature review together is sometimes referred to as integrating the literature.

- **Section summary.** The section summary highlights the main points to emerge from the synthesis of the literature review and the pilot study. This is another very important element as it establishes the framework for the development of the formal theory and/or research question and/or hypotheses.

Candidates should note that the pilot study report contains two levels of synthesis. These are:

- the synthesis of the literature;
- the synthesis of the pilot study results and the literature synthesis.

Both levels of synthesis are required for the development of a formal theory. This double-synthesis approach generates a larger number of new potential research concepts and factors for consideration than a single-synthesis approach. This concept is shown diagrammatically in Figure 1.7.

In general terms, the pilot study should:

- be compatible with the basic theory;
- generate results that can be used to assess and evaluate the basic theory;
- be compatible with the main research methodology;
- generate results that can be used to assess and evaluate the main research methodology;
- use a sample size sufficiently large for the results to be statistically meaningful;
- generate results that are both valid and reliable.

The pilot study itself could centre on empirical research or could be theory based. Researchers in the social sciences often use a short-term longitudinal study for the pilot while using a much longer-term longitudinal study for the main research methodology. It is advisable to adopt a similar research method for the pilot and for the main research programme. The closer the similarities in research methods and sample characteristics, the greater the extent to which the pilot and main study findings will be compatible and directly comparable.
1.8 The Aims and Objectives of the Formal Theory

1.8.1 Introduction

This section aims to develop an outline understanding of the pilot study and to illustrate its importance in the development of the basic theory.

1.8.2 The Formal Theory

The formal theory is developed from a combination of the literature synthesis and the results of the pilot study. The basic theory is modified as necessary and is then put forward as the formal research theory. The formal theory acts as the basis for the subsequent analytical element of the research.

The formal theory acts as the basis for the research question and research and operational hypotheses. The formal theory can take many forms, including that of:

- a single sentence;
- a paragraph;
- a mathematical formula;
- a series of mathematical formulae;
- a diagram (with explanation);
- a process model (with explanation);
- a model.
For example, Sir Isaac Newton’s law of universal gravitation states that:

*Every object in the universe attracts every other object with a force directed along the line of centres of the two objects that is proportional to the products of their masses and inversely proportional to the square of the distance between the two objects.*

\[
F = G \frac{m_1 m_2}{R^2}
\]

where:
\[ F = the \ gravitational \ force \ (in \ Newtons), \]
\[ G = the \ gravitational \ force \ constant, \]
\[ M = the \ masses \ (m_1 \ and \ m_2) \ of \ the \ two \ objects \ (in \ kilograms), \]
\[ R = the \ distance \ between \ the \ two \ objects \ (in \ metres). \]

The mathematical formula says exactly the same as the text version of the formal theory. It simply expresses the same variables in a mathematical relationship. Newton was able to link mass, distance and resultant gravitational force by using a constant (non-variable) element. In this case the constant is the gravitational force constant \((G)\).

The theory could also be illustrated using a model. Newton’s law is often represented by the famous example of a cannonball being fired from a cannon on top of a very high mountain. The cannon is high relative to the ground, so when it is fired, the cannonball moves horizontally and also vertically because of the force of gravity. The cannonball will take longer to hit the ground when fired from a mountain, simply because the ground is further away. Newton had already realised, when watching the apple fall from the tree, that gravity acted as a force on an object, and that force on the earth is directed downwards. Newton also knew that the earth is round. As a result of gravitational force the cannonball, if fired fast enough, will travel a long way from the cannon before it eventually hits the ground, and will fall towards the earth at the same rate as the earth curves away from the cannonball.

In this scenario the cannonball will never reach the earth because it is falling at the same rate that the earth is curving away from it. In other words, the cannonball is in orbit around the earth. The cannonball will eventually hit the ground at some point because it will gradually slow down. As it slows down, the rate of vertical descent will increase as a function of horizontal distance travelled, and the cannonball will fall to the ground.

The cannonball example says exactly the same as the initial theory and the mathematical formula but in this case it is applied to a specific example. This application can make the theory more readily understandable to the reader.

An example of a corresponding theory in the economic and social sciences would be Maslow’s Hierarchy of Needs. Most readers will be familiar with Maslow’s work, as it contributed greatly to the development of the literature base on motivation and motivational theory. The Hierarchy of Needs is essentially a theory in psychology. Maslow’s theory puts forward a motivational hierarchy, ranging from the high-level self-actualisation and esteem, through love and belonging to the more fundamental safety and physiological factors. Most people will recognise something of their own motivational profile in Maslow’s work, but it does remain a theory.

Unlike Newton’s law discussed above, it is much easier to find examples of research that act in support of and against Maslow’s hierarchy. This is typical of the essential differences between theories in the physical sciences and theories in the economic and social sciences. Maslow’s hierarchy could be used by a DBA student as a theory to be applied to his or her own chosen field of research and/or for the development of an associated theory.
1.9 The Supervisor

1.9.1 Introduction

In the preparation of the literature review submission the candidate, for the first time, becomes involved in working directly with a supervisor. For most candidates, developing a research programme itself is a new idea, and the concept of working with an expert in the chosen field can be very daunting. This section attempts to give an insight into what the candidate should expect from the supervisor and, indeed, what the supervisor expects from the candidate. Module 4 goes into much more detail on the actual mechanics of working with the supervisor, and includes a detailed summary of the progress reporting system required by the EBS Research Committee.

Candidates are reminded that the term literature review submission means the document submitted to the DBA Research Committee, which includes the literature review, the basic theory, the pilot study element (where appropriate) and the formal research theory and/or question and/or hypotheses.

1.9.2 The Role of the Supervisor

As discussed in Introduction to Business Research 1, all supervisors involved in the EBS DBA hold either a relevant PhD or DBA. The supervisor will have supervised doctoral research programmes to successful completion, and most will be research active in the appropriate field. Candidates should note that ‘research active’ means regularly publishing work at a medium to high level in the appropriate literature. It is reasonable to assume, therefore, that the supervisor has a thorough and detailed understanding of what is involved in successfully completing doctoral-level research and also a clear understanding of the standard of research required. In completing his or her own doctoral research, the supervisor will also have gained experience of the supervisor/candidate relationship. Supervision is a very important responsibility, and a good supervisor can make an enormous difference to the motivation and commitment of the candidate.

The supervisor is introduced to the candidate at a point when the candidate:

- has completed the course element of the programme;
- has completed a research proposal that has been accepted by the EBS Research Committee.

There are some exceptions to this general rule. For example, suitably qualified candidates who already hold a doctorate may be allowed to progress directly to either the mentored stage or the supervised stage without having to complete one or more of the Introduction to Business Research texts and examinations.

In other words, by the time the candidate meets the supervisor, he or she will usually have:

- completed and passed examinations in the three advanced integrative research courses;
- completed a research proposal that has been accepted by the EBS Research Committee.

The candidate will usually therefore have completed a series of very demanding examinations and developed a research proposal of such a standard that it has been accepted by the DBA Research Committee. The candidate should not feel in any way unqualified to work...
with the supervisor. Having attained the first level of achievement within the research phase of the programme, the supervisor is now available to assist the candidate in achieving the next level (the literature review submission) and the final level (data collection and analysis).

Candidates often make the mistake initially of relying too much on the supervisor. The supervisor is responsible only for giving advice, which the candidate may choose to reject, on the development of the research programme. It is the candidate’s responsibility to carry out the research. The supervisor will offer advice but is not responsible for close direction of the candidate’s work. It should be stressed, however, that the student is strongly advised to take the advice and guidance offered by the supervisor. If the student chooses to disregard strongly worded and clear advice from the supervisor, then the results may be undesirable. It should also be remembered that supervisors are highly qualified and experienced researchers. They are carefully selected by EBS to ensure they are fully competent to offer doctoral supervision. In other words, the supervisors really do know what they are talking about, and it would be very risky and unwise for a student to disregard the advice offered by the supervisor.

There is also the issue of professional compromise. The supervisor will offer his or her advice in good faith. If this advice is disregarded, the supervisor may feel that his or her ability to contribute to the redevelopment of the research has been compromised and that he or she is unable to continue in the working relationship. For example, if the supervisor advises that a proposed methodology is not reliable but the student insists on using it anyway, the supervisor may feel there is no point in continuing to offer supervision since the research is now fundamentally and intrinsically flawed.

EBS recommends that the candidate and the supervisor meet at least once (if possible) during the course of the research programme. Thereafter, communication is primarily via the interactive supervised student faculty boards. Limited communication can occur by other media such as telephone or email as required or preferred by the candidate, provided the supervisor and student both maintain detailed and accurate records of all communications on the supervised student web boards. The supervisor is the first level of control over the progress reports to be submitted by the candidate every three months. The candidate completes the report, and the supervisor will read it carefully before issuing a feedback report.

The candidate is responsible for completing the report and posting it on the appropriate faculty board. The supervisor, in his or her feedback report, will advise the candidate of any amendments or modifications that may be appropriate. The final decision on all aspects of the report lies with the candidate.

1.10 Some Important Issues to Remember When Developing the Literature Review Submission

1.10.1 Introduction

This section summarises some important issues to remember while developing the literature review submission. These issues have become apparent during the first few years of operation of the EBS DBA programme. They are listed here so new candidates are aware of them and are able to allow for them as they develop their own research ideas.
1.10.2 Issues

The following issues should be understood and remembered as the literature review is developed. They are not the only issues the candidate needs to be aware of, but they have been found to be particularly important over the first few years of operation of the programme.

1.10.2.1 The Size of the Literature Review Submission

The idea of the literature review submission is to demonstrate that the candidate has developed an acceptable understanding of the relevant literature base and has synthesised the literature and developed research aims and objectives and a suitable research method. There is no typical or standard chapter size or number of words for each of these components or for the literature review submission as a whole.

The size of the literature review section depends largely on the relevant literature base. As a general rule the larger the literature base the larger the corresponding literature review, simply because there is likely to be more relevant literature to review to demonstrate an understanding of the knowledge base. The actual amount of review required, however, also depends on the scope of the research itself. It is, therefore, difficult to say exactly how large the literature review submission should be for any given thesis.

As a very general and rough guide the literature review submission might be expected to make up perhaps 60 per cent of the volume of the final thesis. In other words, for a typical DBA thesis of 45,000 to 50,000 words the literature review submission might be expected to contain around 27,000 to 30,000 words. Of this total, the literature review and synthesis, excluding the research methodology, pilot study, etc., might be expected to be in the region of 10,000 to 15,000 words.

It should be remembered that these are general figures and are provided for indicative purposes only. The size of each individual literature review submission and the individual components depends on numerous factors, and there is no single general target at which to aim.

1.10.2.2 Plagiarism

As with the research in general, plagiarism during the literature review submission stage is a major issue.

It will be recalled from Introduction to Business Research 1 that plagiarism is the act of taking the work of a third party and presenting it as one’s own work without attribution. This is a particularly important issue during the literature review submission stage, as the candidate will be reading large numbers of literature sources and assembling his or her own literature review based largely on the work of others.

It is imperative that candidates remain aware of, and comply with, all current University regulations regarding plagiarism. A copy of the latest guidelines can be found at the following University URL: www.hw.ac.uk/registry/resources/PlagiarismGuide.pdf

1.10.2.3 Change Control

As discussed in Section 1.5.2 of Introduction to Business Research 1 the literature review submission and final draft thesis are all subject to formal review by the DBA research
committee. The idea of this reviewing system is to ensure, as far as possible, that the research is progressing satisfactorily at each review stage in the collective opinion of the Research Committee.

The research proposal, once accepted by the DBA Research Committee, acts as a permanent foundation and term of reference for the rest of the research programme. As the literature review develops, it must remain aligned to the research proposal. As discussed in *Introduction to Business Research 1*, individual supervisors have their own views on research design and implementation and, if not controlled, these ideas and preferences can sometimes influence the subsequent development of the literature review and consequent development of the final thesis.

Candidates are reminded that once the Committee has reviewed and approved the research proposal, the approach and focus detailed in the research proposal should not be changed significantly without the approval of the Committee. Where the supervisor and candidate agree a change would be desirable, this change must be referred to the Committee and Committee approval must be forthcoming before the change can be implemented.

In other words the literature review, research methodology, pilot study and other sections that collectively make up the literature review submission must be developed in line with the research proposal. The DBA Research Committee must approve any significant changes.

1.10.2.4 Maximum number of resubmissions

As detailed in *Introduction to Business Research 1* Section 1.5.4 a literature review submission that is not accepted after the initial submission and two resubmissions cannot be resubmitted a third time and the candidate is required to withdraw from the programme. It is important, therefore, that the literature review submission is not made until the candidate and supervisor are satisfied that it is of an acceptable standard.

**Learning Summary**

**Introduction**

- In *Introduction to Business Research 2* the candidate is provided with the information necessary to allow the generation of a formal literature review.
- The term *literature review submission* means the document submitted to the EBS Research Committee. It includes the literature review, the basic theory, the pilot study element (where appropriate) and the formal research theory and/or question and/or hypotheses.
- In the literature review the candidate thoroughly searches the literature relevant to the chosen research field.
- The candidate must ensure that all important literature in the chosen field is identified, obtained and reviewed.
- The candidate builds up a formal literature review by writing a summary of the value that each important piece of research has added to the knowledge base. The candidate is expected to review the literature critically, as the fact that a piece of work has been published does not necessarily mean that it is correct.
- In the literature synthesis and basic theory formulation the candidate generates a testable theory to be used as the basis for the analytical section of the thesis.
• It is important that the theory is developed from the literature, rather than being, for example, just an idea that springs into the candidate's mind.
• It is important that the candidate summarises the literature in the literature summary and then synthesises it in the literature synthesis.
• In the pilot study and theory development section the candidate has to show that the theory or testable proposal is in fact workable.
• The initial development of the pilot study takes place in the pilot study design subphase. The study itself is executed during the pilot study subphase, and the results are evaluated during the pilot study evaluation subphase.
• The candidate then has to review the pilot study during business alignment to ensure that the theory and proposed methodology are sufficiently applied and business-relevant.
• In the theory development subphase the theory is modified and/or amended as required. The result of this phase is the initial theory development.
• In the formal theory, hypotheses or testable proposal section the candidate generates a formal theory and breaks it down, during the theory disintegration subphase, into a series of components that can be developed to form a series of testable hypotheses.
• The first stage is usually to develop high-level hypotheses during the research hypotheses subphase and lower-level hypotheses during the operational hypotheses subphase.
• The research hypotheses are then checked for business alignment and relevance during business calibration. The result of this phase is a set of operational hypotheses that will be addressed by the subsequent research methodology in the analysis stages of the research.

What Has To Be Submitted?
• To complete the requirements of the research proposal the candidate must:
  – develop a literature review;
  – develop a literature synthesis and formulate a basic research theory;
  – design and execute a pilot study;
  – formulate a formal research theory and/or question and/or hypotheses;
  – formulate an outline research methodology.
• It is not always necessary to design and execute a pilot study.
• The literature review is the candidate's own critical review of all or most of the relevant published research.
• The candidate has to be able to demonstrate a sufficient understanding of this literature to show that his or her research findings contribute to the knowledge base.
• The candidate must use the literature to develop a basic research theory.
• The theory should be directly applied and should be analysable at doctoral level.
• In most cases, the basic theory should be tested using a pilot study.
• A pilot study is simply a small-scale test where the basic theory is tested for suitability.
• The candidate may or may not choose to generate a research and operational hypotheses. In some areas, the aim of the research could be adequately defined in a simple research question.
• In considering the literature review the EBS Research Committee will be looking for evidence that the candidate has:
  – a thorough understanding of all/most of the relevant literature;
  – conducted a critical review of the literature;
  – identified the strengths and weaknesses of individual publications within the literature;
  – identified any gaps within the existing literature;
  – addressed the issue of any potential duplication associated with the proposed research;
  – developed his or her own proposed research area using the critical evaluation of the literature;
  – synthesised the literature to develop any areas of agreement and literature triangulation;
  – developed a basic substantiated theory from the critical analysis;
  – designed (where necessary) a suitable pilot study to analyse the basic theory;
  – executed (where necessary) the suitable pilot study;
  – correctly interpreted (where necessary) the pilot study results and amended the theory accordingly;
  – developed a final theory and/or research question and/or research and operational hypotheses;
  – developed a viable outline research methodology.

The Aims and Objectives of the Literature Review

• The literature review is a crucial part of the dissertation. It forms the foundation on which the research methodology and subsequent analysis is developed.
• The literature review should provide clear evidence that the candidate is fully aware of the literature bases in the relevant research subject areas and also that he or she is fully aware of and familiar with the existing knowledge base.
• As the literature base is constantly changing, the literature review must constantly change accordingly.
• The literature review is a dynamic document. It is constantly modified throughout the research programme.
• The literature review should be as near exhaustive as possible.
• The literature review should be used in part to justify the research.
• Where appropriate, the literature review should be used to identify gaps in the knowledge base.
• The literature review is an important justification tool. In the research proposal, when making a case for conducting the research, the candidate has to be able to demonstrate that he or she is fully aware of the existing knowledge base in the chosen area.
• Literature gaps are attractive to researchers in that they clearly identify areas where research can contribute to the knowledge base.
• The literature review must be strongly focused.
• The candidate should avoid using:
  – superfluous references;
  – contradictory references (without due critique);
  – duplicate references (without critique);
Triangulation references that are not properly identified.

- Candidates should avoid the temptation to add unnecessary references to make the literature review look larger!
- The literature review must be synthesised. The various subject areas should be drawn together and summarised to form the basis for the basic theory.

**The Aims and Objectives of the Basic Theory**

- The basic theory is developed from the literature synthesis.
- The basic theory represents the candidate’s initial thinking based on what has already been published.
- The basic theory should address the existing literature and should be correctly positioned in relation to any obvious gaps or overlaps in the knowledge base. The basic theory is a direct product of the literature synthesis.
- In some cases the basic theory may prove to be unsuitable for the development of a final theory. Typical reasons for the basic theory proving to be unsuitable include the following:
  - The candidate may have made incorrect assumptions.
  - The basic theory may prove to be a dead end.
  - Another researcher may publish.
  - The proposed methodology may be unsuitable.
  - The basic theory may be unsustainable.
  - The basic theory may be misaligned.

**The Aims and Objectives of the Pilot Study**

- The pilot study is a self-contained and small-scale piece of research designed to test the basic theory and evaluate the basic methodology used in the pilot study.
- The thesis should contain a report on the pilot study in a dedicated section.
- A typical pilot study report might contain the sections listed below.
  - Introduction.
  - Subject details.
  - Methodology.
  - Results.
  - Pilot study summary.
  - Synthesis of the literature and pilot study results.
  - Section summary.
- The pilot study report contains two levels of synthesis. These are:
  - the synthesis of the literature;
  - the synthesis of the pilot study results and the literature synthesis.
- Both levels of synthesis are required for the development of a formal theory.
- In general terms, the pilot study should:
  - be compatible with the basic theory;
  - generate results to be used to assess and evaluate the basic theory;
  - be compatible with the main research methodology;
  - generate results that can be used to assess and evaluate the main research methodology;
  - use a sample size sufficiently large for the results to be statistically meaningful;
  - generate results that are both valid and reliable.
- The pilot study itself could centre on empirical research or could be theory based.
The Aims and Objectives of the Formal Theory

- The formal theory is developed from the synthesis of the literature synthesis and the results of the pilot study. The basic theory is modified as necessary and is then put forward as the formal research theory. The formal theory acts as the basis for the subsequent analytical element of the research.
- The formal theory could take the form of a:
  - single sentence;
  - paragraph;
  - mathematical formula;
  - series of mathematical formulae;
  - diagram (with explanation);
  - process model (with explanation);
  - model.

The Supervisor

- All supervisors involved in the EBS DBA research supervision hold either a relevant PhD or DBA. The supervisor has supervised other doctoral research programmes to successful completion, and most are research active in the appropriate field.
- The supervisor is introduced to the candidate at a point when the candidate:
  - has completed the ‘taught’ element of the course;
  - has completed a research proposal that has been accepted by the EBS Research Committee.
- Candidates often make the mistake initially of relying too much on the supervisor. The supervisor is responsible only for giving advice on the development of the research programme.
- The supervisor is not responsible for the content of the candidate's progress reports.
- The senior supervisor acts as a moderator.
- This moderation process is important. Supervisors can sometimes become involved with the development of the research to such an extent that they no longer have a detached view and they may lose sight of the initial aims and objectives of the research.

The EBS Research Committee

- The EBS Research Committee considers:
  - applications and offers;
  - the research proposal;
  - the literature review;
  - the final thesis;
  - all progress reports.
- The EBS Research Committee considers the literature review submission and issues one of two rulings:
  - The literature review submission is accepted.
  - The literature review submission is rejected.
- In the case of a rejection, the DBA Research Committee will provide a summary of those areas still to be addressed, and the research proposal or literature review submission will be returned to the candidate for further development.
Review Questions

True/False Questions

These questions are designed to allow an evaluation of the general level of understanding of the subject areas. The questions should be read and answered as quickly as possible. Having read the preceding module, it should be possible to answer the majority of the questions correctly provided that reasonable level of understanding in each subject area has been developed.

What Has To Be Submitted?

1.1 The literature review submission is the same as the literature review. T or F?
1.2 The literature review submission contains the literature review plus additional material. T or F?
1.3 A pilot study is always necessary. T or F?
1.4 The literature review should be a critical review. T or F?
1.5 The literature review should address all the main subject areas included within the research. T or F?
1.6 The literature review submission contains the literature review itself. T or F?

The Aims and Objectives of the Literature Review

1.7 The literature review should show that the candidate really understands the material that has been written in the relevant subject area. T or F?
1.8 The literature review is central to the development of a basic research theory. T or F?
1.9 The literature review should be written, start to finish, in one single write-up. T or F?
1.10 The literature review should be constantly updated. T or F?
1.11 Most literature reviews never go out of date. T or F?
1.12 The literature review does not require to be particularly focused. T or F?
1.13 The literature review should include a synthesis. T or F?

The Aims and Objectives of the Basic Theory

1.14 The basic theory is not related in any way to the formal theory. T or F?
1.15 The basic theory is not important as it is subsequently superseded by the formal theory. T or F?
The Aims and Objectives of the Pilot Study

1.16 The pilot study can be used for evaluating both the theory and the proposed main study methodology. T or F?

1.17 The pilot study develops, to some extent, from the literature review. T or F?

1.18 The pilot study should be synthesised with the literature synthesis. T or F?

1.19 Ideally, the pilot study should use a methodology compatible with the proposed main study methodology. T or F?

The Aims and Objectives of the Formal Theory

1.20 The formal thesis is developed purely from the literature review. T or F?

1.21 The nature of the formal theory will have a profound impact on the development of the analysis section of the research. T or F?

1.22 Formal theories are usually broken down into research aims and objectives before being analysed. T or F?

The Supervisor

1.23 The candidate works closely with both the supervisor and the senior supervisor. T or F?

1.24 The supervisor and senior supervisor may give the candidate conflicting advice. T or F?

1.25 The EBS Research Committee is staffed largely by members of faculty. T or F?

Multiple-Choice Questions

These questions are designed to allow an evaluation of the general level of understanding of the subject areas. The questions should be read and answered as quickly as possible. Having read the preceding module it should be possible to answer the majority of the questions correctly provided that a reasonable level of understanding in each subject area has been developed.

What Has To Be Submitted?

1.26 The literature review submission should contain:
   I. the literature review.
   II. a literature synthesis and formulation of a basic research theory.
   III. a report on the pilot study.
   IV. the formal research theory and/or question and/or hypotheses.
Which of the above are true?
A. I and II.
B. I, II, III and IV.
C. II, III and IV.
D. III and IV.

1.27 The EBS Research Committee will specifically look for evidence that the candidate has:
I. developed a thorough understanding of all/most of the relevant literature.
II. conducted a critical review of this literature.
III. identified the strengths and weaknesses of individual publications within the literature.
IV. completed a satisfactory validation study.
Which of the above are true?
A. I, II and III.
B. I, III and IV.
C. III and IV.
D. IV only.

The Aims and Objectives of the Literature Review

1.28 The literature review should be:
I. dynamic.
II. static.
III. exhaustive.
IV. multi-functional.
Which of the above are true?
A. I, III and IV.
B. II, III and IV.
C. II and IV.
D. III and IV.

1.29 The literature synthesis is a:
A. rudimentary research methodology.
B. research paradigm.
C. research philosophy.
D. form of literature review collective summary.

The Aims and Objectives of the Basic Theory

1.30 The basic theory is developed initially from the:
A. pilot study.
B. literature review.
C. literature synthesis.
D. formal theory.
1.31 The basic theory should:
   I. contain sufficient promise and potential for development at doctoral level.
   II. be compatible with the available data sample.
   III. go beyond the literature by the achievement of synergies.
   IV. have the potential to lead to the development of a contribution to the knowledge base.
Which of the above are true?
A. I and II.
B. I, II and III.
C. I, II, III and IV.
D. II, III and IV.

The Aims and Objectives of the Pilot Study

1.32 The pilot study should be conducted immediately:
A. after the initial synthesis of the literature.
B. after the development of the formal theory.
C. before the literature review.
D. after the research proposal.

1.33 A typical pilot study might include the following sections:
   I. introduction.
   II. subject details.
   III. methodology.
   IV. literature review.
Which of the above are true?
A. I and II.
B. I, II and III.
C. II and III.
D. II, III and IV.

1.34 The formal theory is developed from the:
   I. literature synthesis.
   II. basic theory.
   III. research methodology.
   IV. validation study.
Which of the above are true?
A. I only.
B. I and II.
C. II, III and IV.
D. III and IV.
The Aims and Objectives of the Basic Theory

1.35 The formal theory should act as the basis of the:
I. basic theory.
II. literature review.
III. generation of research and operational hypotheses.
IV. pilot study.
Which of the above are true?
A. I only.
B. I and II.
C. II, III and IV.
D. III only.

1.36 The formal theory could take the form of a:
I. text statement.
II. mathematical formula or formulae.
III. model.
IV. literature review.
Which of the above are true?
A. I only.
B. I and II.
C. I, III and IV.
D. II, III and IV.

The Supervisor

1.37 The supervisor will generally be:
I. an expert in the relevant field
II. unrelated to the relevant field.
III. research active.
IV. retired.
Which of the above are true?
A. I and III.
B. II and III.
C. II and IV.
D. II, III and IV.

1.38 The senior supervisor is responsible for:
I. supervising the research.
II. providing direct guidance to the candidate.
III. suggesting references and sources of information.
IV. monitoring supervision, generally with no direct student contact.
Which of the above are true?
A. I and II.
B. II only.
C. II, III and IV.
D. IV only.
1.39 The EBS Research Committee may:
I. reject a research proposal.
II. accept a research proposal.
III. require minor or major amendments to a research proposal.
IV. refuse to consider a research proposal.
Which of the above are true?
A. I only.
B. I and II.
C. I, II and III.
D. I, II, III and IV.