Introduction to Business Research 2

The Literature Review

Dr William Wallace
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Introduction to Business Research 2

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Introduction

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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](image-url)
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.

- **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.
Figure 1.2  The Introduction to Business Research process model

- 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 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 candidate 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.

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.
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 completed 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**

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 alignment 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.

In other words, the gravitational force between two objects acts in a straight line and is a function of both mass and separation. The distance or separation is ‘more important’ than mass because it acts as an inverse square driver of gravitational field. For example, if the mass of one object is doubled, the gravitational force is doubled. If the distance between the object and another object is doubled, the gravitational force is not halved; it is in fact quartered.

Newton’s law of gravitation is a clear example of a formal theory. It is stated in the form of a paragraph of text, where the relationship between a number of variables is described. The same theory can also be expressed as a mathematical formula, as shown below.

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

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).
Figure 1.8  The development of a formal theory

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

The candidate should now 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.

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 filed.
- 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.
Module 2

The Literature Review and Synthesis

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

- the basic structure and content of a doctoral literature review;
- the relationship between the literature review and literature synthesis;
- the linkages between the literature review and the rest of the research;
- the basic sources of literature review material;
- how to use references collectively;
- how to maintain focus during the execution of the literature review.

2.1 Introduction

This module attempts to develop an understanding of the critical literature element of the thesis. The literature review is central to the entire research programme. It acts as the foundation for the research design, it forms a central element in the thesis, and it is a key area for examination in the *viva voce*. The literature review and any synthesis developed from it illustrate the candidate's knowledge and understanding of the existing literature in the chosen field. The candidate has to be able to show that he or she is fully familiar with the literature in order to be able to justify his or her own work. For example, with an incomplete knowledge of the literature, the candidate could design a very good research methodology but could be inadvertently duplicating research that has already been carried out. In the case of a direct duplication it is not possible to contribute to the knowledge base, a fundamental requirement of doctoral research. One function of the literature review is to allow a kind of research ‘due diligence’. The critical literature review will include all
relevant research, so, provided it is done correctly, there should be no possibility of
the duplication of existing research.

In order to develop a literature review the candidate has to study a wide range of
different types of literature, from classic textbooks to online journals. The candidate
has to be able to read and understand these materials and also be able to evaluate
them critically as a means of arriving at an approximation of the current level of
knowledge in areas where researchers have put forward different theories to explain
observed phenomena.

This module goes through some of the most important sources of literature and
develops an understanding of how literature should be studied and critically
evaluated. It develops an understanding of the literature synthesis, where the
literature relevant to a particular research area is studied and critically evaluated and
the net or end result is produced as a formal synthesis, which represents the best
approximation of the knowledge base at any one time. The module also considers
some specific issues relevant to the production of a literature review and synthesis,
for example the issue of maintaining focus.

2.2 The Literature Review

2.2.1 Introduction

This section develops the concept of the critical literature review in more detail and
describes the purpose and structure of the review. Candidates should always be
aware of the importance of the literature review. In many cases the literature review
forms 50 per cent or more of the final volume of the work, and the content acts as
the foundation for the development of the rest of the research programme. It is
essential that the literature review is conducted properly and that the final chapter is
written correctly to form an integral part of the final thesis.

The literature review is particularly important in the EBS DBA programme as it
is submitted ahead of the main thesis for approval by the EBS Research Committee.
The literature review is used as evidence that the candidate’s research shows
sufficient promise and potential to proceed to the data collection and analysis stage.
It is, therefore, important for the candidate to produce a good and reliable literature
review at a relatively early stage in what ultimately becomes a long writing-up
process.

Candidates should also realise that the literature review submitted to the Research
Committee is not necessarily the same literature review that will appear in the final
thesis. There could be a significant period between the submission of the literature
review to the EBS Research Committee and the submission of the final thesis for
examination. The literature base could change significantly in that time, and the final
thesis must reflect the updated knowledge base.
2.2.2 The Purpose of the Literature Review

The critical literature review is a major part of the final thesis. It serves several important functions or purposes, some of which are considered below.

- **Understanding of the knowledge base.** It allows the candidate to demonstrate that he or she has read all the relevant publications in the area and is familiar with the limits of the knowledge base. A good supervisor and/or good examiner can very quickly develop an accurate appreciation of how much the candidate knows about the knowledge base simply by reading the literature review. The supervisor or examiner will be looking to see that the main researchers have been identified and that the main knowledge boundaries are established. He or she will also be looking at how well the candidate has communicated his or her understanding of the knowledge base by critically evaluating the various important publications in the knowledge base.

- **Demonstrating a viable literature base.** As discussed in earlier sections, the literature review must show beyond all doubt (and in much more detail than demonstrated in the research proposal) that there is a viable literature base in the chosen research area.

- **Strengthening the argument.** The literature review allows the candidate to cite other researchers as a means of strengthening the current research. For example, the candidate might cite ten other researchers who have used the same basic methodology in similar research and with similar samples. This acts to strengthen or support the candidate’s choice of methodology, making the choice easier to defend in the case of an attack by an examiner.

- **Research justification.** The candidate can also use the literature review to demonstrate that the proposed current research is well placed relative to the knowledge base. For example the candidate could use the literature review to demonstrate that the current research is located in a gap in the knowledge base previously identified by other researchers. The candidate could also use the literature review to show that the research is not duplicating earlier existing research.

- **Balanced view.** The candidate can also use the literature review to develop a balanced view of the existing knowledge field. In some disciplines there may be conflicting schools of thought or alternative theories that are contradictory. The candidate does not know which theory is correct, but at least by reading the literature and by reviewing it the candidate will develop a balanced view of what different authors are saying.

- **Research trends.** Research in specific disciplines tends to go through stages. Subject areas may be highlighted by one researcher and these become very popular, possibly because they explain previous observations that have been inexplicable or because they allow people to grasp a concept that was previously too complex. Sometimes these popular areas can go on being popular for years, and there is a general trend for researchers to concentrate in those areas.

- **Aims and objectives.** Another primary purpose of the literature review is the generation of aims and objectives. The candidate may have a whole series of ideas on possible research areas that could be developed into a full research programme. The overall measure by which a particular set of aims and objectives
can be evaluated in terms of suitability is the literature review itself. The candidate should use the knowledge base and, by critically evaluating the work of others, arrive at a set of workable aims and objectives for the current research.

- **Theory development.** Most forms of research use some kind of central theory. This theory could be tested to evaluate its reliability, or the theory could be the end result of the research programme. It is important that the theory is properly developed and designed.

The application of the outcome of the literature review varies, depending on the approach adopted. If a deductive approach is adopted, the literature review is used primarily to allow the identification of the full range of different theories and explanations that exist in relation to some kind of observed phenomena. In a deductive approach, the theories and explanations identified in the literature are used for the formulation of a research theory, perhaps in the form of a research hypothesis, which is then tested using a scientific methodology that is based usually on developing some kind of data from empirical observation or experimentation. If an inductive approach is adopted, the literature review will be used primarily to develop some kind of grounded theory that explains the outcome of the literature. The grounded theory is then adjusted and modified as more facts become available as the overall reliability of the theory increases as a function of time.

The application of the outcome also depends on the basic methodological approach adopted. In a largely quantitative research programme the literature review may produce largely quantitative outcomes. For example, the results of six different quantitative-based research programmes into conductivity and temperature may indicate that a standard copper wire can carry sufficient transmission information to rival a fibre optic cable if the temperature of the copper is reduced to 10 degrees Celsius. The current research might (a) attempt to replicate these findings or (b) explain them by further research. In a largely qualitative-based programme the outcome could be used differently. For example, ten different sociological research programmes may indicate different outcomes when reporting on motivation in construction workers. The current researcher might use this information to develop a completely new theory on motivation that can then specifically be applied to the construction industry.

*Note:* The candidate should always remember that the primary objective of the research programme is to make a contribution to the knowledge base. This could be evidenced by the discovery of new facts or by the exercise of independent critical power. In the case of independent critical power, a considerable element of the analysis comes from the critical evaluation of the literature in forming the literature review.

### 2.2.3 The Structure of the Literature Review

Literature reviews adopt different structures and adopt a range of different forms. There is no single standard format that can be recommended to candidates. Experience of research supervision and, to a lesser extent, the literature on business research suggest that the literature review should try to achieve the following.

- It should be written in a readable, flowing manner, where each section flows smoothly into the next section. Ideally, where there are several chapters each
chapter should start with a link to the previous chapter and finish with a link to the following chapter.

- It should follow a logical and coherent format where the main theme or outcome of the literature review is developed and exposed in a logical and meticulous manner. Citations should be used to support the development of the central theme at each stage.

- It should focus especially on key publications that are most relevant to the current research. It should also provide a brief but integrated overview of these key ideas and how they shape the knowledge base.

- It should focus on the work of key researchers. In many research fields there are limited numbers of key researchers who drive the main research thrusts in the field at any one time. The literature review should focus on the work of these key researchers. Their work should be subject to critical scrutiny, and the outcomes should be used in the development of the current research.

- Ideally, it should highlight any important schools of thought or concentrations of opinion within the literature. Where there are opposing schools of thought the literature review should critically consider each school of thought and then use the chosen and supported school of thought as the basis for the current research.

- Ideally, it should summarise the areas within the knowledge base that are most relevant to the current research, and it should be used to suggest where and how the current research will contribute to the knowledge base.

In trying to achieve these outcomes, the candidate should develop the literature in a logical and reasoned manner. The achievement of each objective should lead on to the development of the next objective. This concept is shown diagrammatically in Figure 2.1.
Figure 2.1 Filtering the research

The starting point (1) is the general literature including all publications and information sources in the discipline concerned. Irrelevant material is then disregarded, leaving the area relevant to the chosen research aims and objectives (2) of the candidate. In many cases this initial sort could remove 99 per cent of the discipline literature. The candidate then considers the research publications that are relevant to the current research and identifies the key researchers in the area (3). The candidate studies these works in detail and assembles a detailed review and account of the most relevant areas in the work of these key researchers (4). The candidate then studies this material in detail and arrives at a summary of those parts of the key literature most relevant to the current research (5) and those areas where the current research will be able to add to the knowledge base or create new insights (6). The candidate has, in effect, filtered the literature to find the most relevant material.

It is perhaps useful to consider the filtering effect in terms of an analogy. Early gold miners used to ‘pan’ for gold. This process involved the miner in selecting (hopefully) gold-rich ore, placing the ore in a shallow pan with water, and then swilling the ore around the pan. The idea was that gold is more dense, and therefore heavier, than most of the other material in the ore. Any gold would therefore tend to remain in the pan as the lighter material was swept over the edge of the pan by the water circulation generated by the ‘panning’ motion. As the proportion of gold to remaining ore increased, the probability of the miner being able to identify the gold within the pan increased. Most of the gold found in this way was fine, dust-like...
particles, although occasionally a nugget was found. The process of finding the best and most relevant research articles is effectively the same. Most of the published work has little applied value. Occasionally, the candidate, through a process of filtering, may find a highly valuable piece of applied research (a nugget) that is directly relevant to the current research.

In Figure 2.1 the areas or zones shown in black represent areas where the current research will (or, more correctly, may) provide new insights. This type of approach is, again, a work breakdown structure approach to solving a problem. The overall literature is broken down into successive areas of relevance and usefulness until the candidate arrives at the areas suggested by the literature as having real potential.

This structure implies that the candidate will have some idea of the key research questions and objectives before embarking upon the review, thereby setting limits on the scope of the work. The objectives, however, may be modified as a consequence of the review; indeed minor refining of objectives is an aim of the review. It should, however, be remembered that any modifications to the research aims and objectives must be restricted within limits acceptable to the EBS Research Committee.

The candidate states the research aims and objectives as part of the research proposal. Based on its content, which includes the aims and objectives, the research proposal is then accepted by the EBS Research Committee. Any significant modification of aims and objectives after the research proposal has been accepted could cause problems with the acceptance of the literature review submission. In addition, any late-stage modifications are likely to result in the generation of abortive and additional literature review work requirements.

Different researchers use different starting points for the filtering process. If starting from scratch, the most common starting point is to sort the articles and papers in chronological order, ending close to the current date. In other cases the candidate may be able to take advantage of the filtering process already conducted by other researchers (provided they are correctly referenced). High-quality and recent research articles often contain high-quality and reliable filtering of the relevant research base.

There is no hard-and-fast rule on age limitations for references, although most supervisors would raise an issue if the candidate is using a large number of references that are, for example, over 10 years old. This, of course, depends very much on the nature of the literature base. In some cases a predominance of older references may be entirely appropriate. It is very important for the candidate to demonstrate the research is current and up to date, and the best way of showing this is by including as many recent high-quality references as possible in the literature review.

2.2.4 The Critical Element

The importance of the critical element in the literature review cannot be over-emphasised. A good supervisor or examiner can see at once the extent to which a candidate has made a critical analysis of the literature when assembling the review. It
is very common at draft stage for the candidate to produce a draft review that simply summarises the main findings and outcomes of a series of researchers. To some extent such reviews are useful for demonstrating an awareness of the knowledge base, but there has to be some form of critical analysis if the candidate wishes to demonstrate that he or she understands the literature base as well. The candidate should not be afraid to evaluate the literature critically. Researchers do this all the time, and it is one of the interactive elements necessary for a reliable and coherent knowledge base to develop.

The fact that a paper has been published does not mean that aspects of its design, methodology, interpretation of data and results cannot be challenged. It simply means that the editors of the journal, review panel or review peers who considered the paper prior to publication were satisfied with it at that time. In the case of a refereed journal, the draft paper will have been studied by several peer reviewers. In many cases a simple majority assent is required for the paper to be published. Two readers might approve the paper while another, who may be eminent in the field, may oppose publication, but the 2 to 1 review majority may be sufficient for the paper to go ahead for publication.

In making a critical assessment the candidate has to act a bit like a judge in a court case. In a particular case the argument might revolve around a payment for services rendered. There are all kinds of different permutations regarding the honesty or otherwise of the plaintiff and the defendant. For example:

- The plaintiff might be knowingly lying.
- The defendant might be knowingly lying.
- They might both be knowingly lying.
- The plaintiff might be lying but believes he or she is telling the truth.
- The defendant might be lying but believes he or she is telling the truth.
- They both might be lying but believe each is telling the truth.

The case made to the judge may take on a different feel depending on which conditions apply. It is sometimes possible to tell right away if a person is knowingly lying because his or her body language gives them away. In other cases, for example where a person is lying but honestly believes he or she is telling the truth, perhaps because of a bad memory, it can be much more difficult to appraise who is telling the truth and who is not.

In assessing the literature, the candidate has to act like the judge. The candidate has to read the literature, and where there are opposing views, read the arguments put forward by both sides and make a note of the strengths and weaknesses of each argument. Strengths could include such factors as:

- references to other published works;
- reinforcement by the use of established facts;
- full literature support;
- reference to supporting empirical research.

Weaknesses in an argument could include such factors as:

- unsupported assertions;
• self-contradictions;
• statements made that contradict known facts;
• lack of literature support;
• lack of empirical evidence.

It is unlikely, of course, that researchers will be lying in their publications, but they could, in good faith, be reporting outcomes and conclusions that are not properly justified by their research. The candidate has to be able to read a large number of papers by other people, look at the balance of the arguments, and come to a conclusion on which school of thought or research focus is likely to be correct. This dilemma is very common in some disciplines. An obvious example is research into a disease where the cause is not known, as in the case of autism. There is one school of thought that autism is linked to the combined measles, mumps and rubella (MMR) injection given to young children. There is another school of thought, which includes the UK government, that there is no link between the MMR injection and autism. One of these schools of thought is wrong. Autism either is or is not linked to the MMR injection. Adherents of each school of thought in good faith believe they are correct and push their argument. It was not possible at the time of writing to say which group is correct. A researcher entering the debate had to look at each side and make an informed decision based on a critical analysis of the arguments put forward.

The candidate should also ask a number of other questions when trying to critically evaluate a publication. Some typical examples are given below.

• **How well has the research been thought out?** The article should fully describe all aspects of the research and should illustrate that the research programme has been carefully and thoroughly carried out.

• **How realistic are any assumptions?** Most research makes some use of assumptions. These should be clearly stated, and the candidate should evaluate them in terms of their fairness and reasonableness.

• **How focused is the research?** The research may be well focused on the specific stated research aims and objectives. Alternatively it may consider a number of different areas with no clear focus on the central aims. Generally, the more focused the research, the higher is the value of the outcomes.

• **How reliable is the methodology?** The research methodology should be carefully designed, and there should be evidence that it is fully reliable. Ideally, there should be a pilot study and some kind of validation study with results included in the publication.

• **How well is the research linked to the literature?** The research should be clearly based on and linked to the literature and current knowledge base. The only exceptions should be fully exploratory approaches where there is no significant existing literature.

• **Does the research contribute anything?** This is often the most demanding question, and there is no doubt that a significant proportion of publications in some disciplines do not contribute to the knowledge base to any significant ex-
In many cases the value of the research can be expressed in terms of the contribution it makes.

- **How reliable is the analysis?** The writer should have carefully built up his or her argument and eventual outcomes through a systematic and logical progression. Each stage of the development should be appropriate and reliable, with each element supporting other elements before and after it.

**Time Out**

**Think about it: seeing both sides of the fence.**

This type of approach is often used in the appraisal of medical opinion. In the UK, the government appoints its own medical officers, who advise on the steps and actions to take in relation to specific diseases. Every so often a significant new disease comes along, and the government has to decide what action to take to balance the well-being and health of the population against the economic cost of introducing national treatment programmes.

Immediately after the new disease is identified, the government may take no action. Alternatively, it may commission research into the disease in an attempt to find out more about it so it can identify the level of threat posed by the disease to the population in general. The government is unlikely to commit itself to implementing, for example, nationwide screening or inoculations until it knows more about the specific nature of the threat. It is also unlikely to commit to long-term and expensive research and development to find a cure if the new disease poses only a small threat.

An example is the risk generated by the evolution of bovine spongiform encephalopathy (BSE) in cattle in the late 1980s.

In the early 1980s some cattle began to develop strange behavioural symptoms, including irrational behaviour, loss of balance and confusion. As the symptoms spread through a number of herds, scientists quickly realised that the symptoms were caused by a new disease in cattle that generated similar symptoms to the well-known disease scrapie, which affects only sheep. By 1983 there was a real concern that a bovine form of scrapie had developed in some way. A number of relatively small-scale research programmes were initiated, and BSE was positively identified in 1985. This announcement caused real alarm among scientists, because it implied that the disease might have crossed the species divide between sheep and cattle. Very few diseases can do this, and the obvious extension of the link was that the disease might be able to cross another species barrier, that between cattle and humans.

Historical research indicated that a change in regulations affecting the preparation of cattle feed might have been one possible source of the problem. For many years it had been legally permissible for farmers to provide cattle with feed (especially bonemeal) containing the remains of both sheep and cow carcasses. Changes in legislation in the 1970s meant that such animal feed products could be manufactured at lower ‘cooking’ temperatures than had previously been allowed. One possible explanation was that whatever caused
the disease in cattle had somehow survived the bonemeal cooking process and had established itself in cows. The disease was then either ingested by more cows or spread from animal to animal.

The government was concerned at this stage, but there was still no evidence that the disease could be passed to humans. In 1988, however, scientists discovered that BSE could easily be passed to mice by injecting infected brain tissue. In the same year, BSE was designated as a disease that could indeed be passed to humans. In 1989, as a precaution, the use of bovine offal in cattle feed was banned in the UK.

This announcement caused concern among the general population. In 1990 the UK government chief medical officer issued a statement reassuring the public that British beef was safe to eat. At this stage the government had no direct evidence of BSE passing from cattle to humans, and had to consider the potential impact of any ban on the sale of beef on the beef farming industry and on exports.

By 1992 the number of positively identified BSE cases in UK cattle rose to almost 40,000. This implied that large numbers of infected carcasses were entering the human food chain and probably had been for several years. In 1993 the chief medical officer again reassured the public that British beef was safe to eat. In 1994, as a precautionary measure, the use of any animal protein in the preparation of cattle feed was banned throughout the EU.

In 1995 a person died in the UK from a new disease called new variant Creutzfeldt–Jakob disease (vCJD). This disease was similar to the well-established CJD, but it was different enough to be titled ‘new variant’. There was an immediate concern that vCJD was linked to BSE. Perhaps the disease could indeed cross the species barrier from animals to humans (such a disease is known as a zoonosis).

In 1996 the government announced a possible link between BSE and CJD. The EU immediately banned all exports of British beef. The government now introduced a whole series of control procedures in an effort to reduce the spread of the disease and restrict the likelihood of contaminated meat entering the human food chain.

By March 2003 94 people had died of confirmed vCJD, and the suspected total number of deaths was over 130. There was still considerable scientific debate over whether the disease had already peaked or was likely to continue to expand. The worst predictions suggested that thousands of people could be infected but that, because of the long incubation period of the disease (in fact a prion is a type of protein), the main infection incidence might still lie in the future.

In the case of BSE vCJD the government acted on the information it was receiving from its scientists. As usual there were several schools of thought. Some research suggested that there was no link, whereas other research suggested that there was indeed a link. The government’s medical advisors
considered both sides of the argument (the scientific literature) and went along with the no-link school of thought until the research findings clearly indicated otherwise. Once the government accepted that the link did indeed exist, it introduced a series of expensive control measures. By that time it was too late, and the government was faced with the fact that the lucrative British beef export trade was in ruins, and there was the potential for a national epidemic of what was (and remains) an incurable degenerative brain disease.

Candidates should remember that, in the UK, a significant stream of departmental funding is based on the research rating of the individual departments. The rating itself is a function of both the quality and the quantity of published research. Academic staff are therefore expected to publish as frequently and to as high a standard as possible. In the UK there has also been a proliferation of ‘new’ universities since legislation changes in 1992. These new universities are now also chasing the research money available from the central funding and research bodies. The net result has been an explosion in the number of publications each year while, in many cases, the level of actual research (as opposed to publication) has remained static or has actually fallen. As a result, the candidate is faced with an ever-growing literature base, much of which could be designated as ‘questionable’ in terms of its direct contribution and value to commerce and industry.

It is very important, therefore, that the candidate is able to appraise the mass of literature available and to identify the quality material. In most cases it is safer and more reliable to select the research leaders in a particular field as a starting point and work back from there. The candidate must be able to differentiate between quality material and material that has been produced to meet a departmental publication quota.

When critically evaluating a publication, it is sometimes useful to check for published responses either within the same journal or within the same research community. Most journal articles do not elicit any direct response from other researchers, unless they are written as a direct attack or challenge to an earlier publication. Sometimes, however, a researcher might publish a particularly controversial or important piece of work where there are widespread implications across the discipline and perhaps outside the discipline as well. An example is a research article linking a disease with a cause where there is dispute over the most likely cause and there are two or more schools of thought. The latest publication might cause considerable discussion in the literature, and this discussion could assist greatly in the critical evaluation of the article.

### 2.3 Sources of Literature

#### 2.3.1 Introduction

There are various sources of literature, ranging from traditional textbooks to the latest online journals. This section considers some of the most popular sources of literature and examines the advantages and disadvantages of the various literature
communication media. It is important that the candidate is familiar with the most common sources of literature. It is also important to appreciate that a good literature review will generally include a range of different literature types, and the candidate should make every effort to extend the range of types of literature and link these together as effectively as possible.

### Sources

The various literature sources were introduced in *Introduction to Business Research 1*. As discussed earlier in this module, the candidate should start with a general literature base including a wide range of sources such as textbooks, general articles, newspapers, the Internet and so on. As the literature review progresses, the candidate should work towards the higher-quality sources such as refereed research journals and conference proceedings. It will be recalled that refereed sources are those subject to peer review before being published. Such sources are more reliable in that they have been assessed by other academics who are generally, but not always, research-active in the research area concerned.

To attain a publication in a refereed research journal the researcher must convince a number of other academics that the research is reliable and valid. In the peer assessment, one or more reviewers may highlight deficiencies or areas of concern in the draft publication. The reviewers read the draft publication and complete a pro-forma report that is returned to the editorial panel. The journal editors will review these peer comments and make a decision on whether or not to publish. Generally, if the majority of the reviewers are in favour of publication, the editors will place the publication in line for printing in the next available edition. In most cases the reviewers, even if generally in favour of publication, may recommend that the author amend the draft.

The reviewers may suggest major amendments or modifications to the draft before it is considered ready for publication. In some cases, some or all of the reviewers may recommend that the draft paper is unsuitable for publication.

Irrespective of the quality of material available, the most obvious classification in relation to type of source is **online** and **offline**.

Online sources are those that can be accessed electronically, either internally within an organisation or over the Internet. Offline sources include all other forms of literature that cannot be accessed in this way. Online sources are obviously only relatively recent. There was virtually no national or international online searching or information accessing before 1980. Today there are large numbers of sources of online materials and these are widely used by researchers in all disciplines.

There are some rather obvious advantages and disadvantages associated with online searching and information access. Some advantages are given below.

- Searches are fast and reliable.
- Large numbers of search engine results can be analysed quickly.
- Numerous specialist literature databases exist.
- Searches can be easily modified and refined.
- Searches within documents are possible.
Online searching and information access also has some disadvantages. Some examples are considered below.

- Information flow may be interrupted by hardware failure.
- Information flow may be interrupted by software failure.
- The system may be compromised by external hackers.
- Users may waste valuable time in excessive browsing.
- Electronic database access may be very expensive.

The following sections consider a range of different online and offline sources.

### 2.3.3 Online Sources

Online sources are covered in detail in the appropriate briefing guide. This section provides a quick overview only.

#### 2.3.3.1 Internet Search Engines

There are numerous Internet search engines that offer searches for material containing keywords or phrases supplied by the operator. In their simplest form, Internet search engines are non-specific and will throw up large amounts of material that may or may not be relevant. These search engines become much more useful as the operator gains experience and is able to make use of the advanced search facilities. The most widely known Internet search engine is probably Google. Most readers will be familiar with Google and will understand what it does and how it works. It is generic and accesses both academic and non-academic material.

Many students may be less familiar with Google Scholar. This is a specialist element of the more general Google search engine. It allows users to enter keywords, and it will then search a wide range of more academic sources. Google Scholar can be a very useful source of research literature. Users can access it simply by entering ‘Google Scholar’ into a Google search and then adding the Google Scholar homepage to their favourites.

#### 2.3.3.2 Online Journals

There are now numerous online journal databases. Some of these are freely accessible, whereas others are restricted and are available only to approved people/subscribers. Some examples are given below.

- **Academy of Management Journal.** The publishers claim that this journal presents cutting-edge management research. All articles are required to make a strong empirical or theoretical contribution to the knowledge base. Full text versions are available. Candidates can access the *Academy of Management Journal* at: http://uk.jstor.org/journals/00014273.html

- **British Journal of Management.** This journal again looks for an applied or theoretical leaning. Full text versions are available. The *British Journal of Management* can be accessed at: http://www.ingenta.com/journals/browse/bpl/bjom
• **Brookings Papers on Economic Activity.** This journal concerns itself only with the workings of and changes in the economy. Candidates can access the *Brookings Papers on Economic Activity* at:
  http://uk.jstor.org/journals/10578641.html

  Candidates should note that the Heriot-Watt University library has access to a large number of electronic journals. A complete A–Z listing can be viewed at:
  http://www.hw.ac.uk/library

### 2.3.3.3 Databases

There are numerous online databases. These are basically repositories of information on research articles. One of the most well-known academic databases is **Bath Information and Data Services (BIDS).** It covers everything from science and engineering to pure management and psychological subjects. Most universities access BIDS through a site licensing agreement where they buy a site licence allowing a specified level of access at any one time. Candidates can access BIDS at:
  http://www.bids.ac.uk/info/fs_aboutbids.htm

  Candidates should note that the Heriot-Watt library has access to a large number of online databases covering a wide range of different subjects and disciplines. The complete list of these databases can be viewed at:
  http://www.hw.ac.uk/is/find.html

### 2.3.3.4 Index of Theses

Theses are an important source of reference material for researchers. A good relevant thesis in a closely related area can provide a wealth of reference information for the researcher. There are, of course, large numbers of past theses stored in the British Library and in various universities around the UK. The index to theses lists almost 500 000 UK theses. The index of theses can be found at:
  http://www.theses.com/

### 2.3.3.5 The British Library

The British Library is a very useful source of reference material. It produces a wide range of database and catalogue services, some of which are free to researchers. A brief summary of some of the more popular British Library services to researchers is shown below. Please note that many of these services are summarised at:
  http://www.bl.uk/index.shtml#

1. **The British Library newspapers catalogue.** The newspapers catalogue contains more than 50 000 newspaper and periodical titles from all over the world and in a range of different languages. Records exist for most UK newspapers as far back as 1801. The British Library newspaper catalogue can be viewed at:
  http://www.bl.uk/welcome/newspapers.html

2. **The British Library Index to Conference Proceedings.** This index currently holds almost half a million conference proceedings from all over the world. Until recently the index was updated monthly but because of the proliferation in con-
ferences over the last 10 years or so this has been suspended. The index can be viewed by accessing the British Library Integrated Catalogue, which can be found at:
http://www.bl.uk/reshelp/findhelprestype/confproc/

3. **The British National Bibliography.** This is the national bibliography of the UK. It records the entire publications of the UK in all forms. It currently holds over 2 million entries covering the entire publishing output of the UK since 1951. At the time of writing the national bibliography was not available as an Internet link and had to be accessed either as a hard copy or in CD format by subscription. Further details are available from:
http://bnb.bl.uk/

4. **British Library Current Serials.** The library also maintains a catalogue of current serial publications. At present this catalogue recognises over 60,000 separate serials, and a total of over 250,000 serials are filed, including a significant number of serials that are no longer available. The current serials catalogue has its own website, which can be found at:
http://www.bl.uk/catalogues/serials.html

5. **The British Thesis Service.** In addition to the index to theses as discussed above, the British Library offers its own search and supply service for UK (and non-UK) theses. Full details of the service are available at:
http://www.bl.uk/reshelp/findhelprestype/theses/
The library also offers limited thesis search facilities by contacting dsc-british-thesis-service@bl.uk.

6. **EThOS.** This is the British Library Electronic Theses Online Service. It can be accessed at:
http://ethos.bl.uk
EThOS is a database of UK doctoral theses. It contains a search engine, and it is possible to access more or less any recent PhD, DBA or other form of doctoral thesis. Most can be viewed online, and a growing number are available for immediate download. Students who successfully complete the DBA will see their theses appearing on EThOS within a year or so of graduation.

### 2.3.3.6 Other Online Sources

1. **The Heriot-Watt University library.** The Heriot-Watt University library offers a full distance learning service to matriculated distance learning students and doctoral candidates. At the time of writing matriculated distance learning doctoral candidates could access the library distance learning services main site at:
http://www.hw.ac.uk/is/
At the time of writing this service offered access to the library catalogue, networked databases and electronic journals from any location off-campus. Candidates simply require a user identifier and password. At the time of writing some services were offered on a dial-in basis. Further details were available at the above web address.
Candidates should note that the web address given above may have changed since the section was written. It should, however, still be possible to access the library distance-learning services at the current web address.
2. **Other university libraries.** Most good university libraries subscribe to a wide range of research journals. The universities tend to subscribe to the journals most related to their own areas of specialism. For example, a technological university specialising in the pure sciences, science and engineering will tend to subscribe to those journals most likely to meet the needs of its students. An EBS DBA candidate might have difficulty in accessing economic and social science journals at such an institution.

Candidates should note that at the time of writing the Heriot-Watt University library was a member of the **UK libraries plus scheme.** Under this scheme matriculated distance learning students and doctoral candidates of Heriot-Watt University could make use of library services at over 100 other UK libraries. At the time of writing further details of this service could be accessed at:

http://www.librariesplus.ac.uk/

The Heriot-Watt library also offered a letter of introduction service for distance learning students and doctoral candidates. This letter could be used at libraries around the world, inviting them to allow the student or doctoral candidate to use their services.

3. **Interlibrary loans.** Most Western university libraries and many university libraries across the world are subscribers to the interlibrary loans scheme. Under this system, libraries holding certain source materials agree to copy them, subject to copyright restrictions, and send them to other academic libraries. At the time of writing further details on the Heriot-Watt University distance learning service were available from:

http://www.hw.ac.uk/is/library-essentials/borrowing/libraries-outwith-edinburgh.htm

The Heriot-Watt library will source a reference and obtain a copy of it, provided the material is not available in the Heriot-Watt library. There is a charge for this service, and students must first obtain the required number of interlibrary loans vouchers from EBS. Most university libraries in the West and many around the world offer a similar service to matriculated students. The material itself is usually sourced from other libraries. In most Western countries there are national libraries acting as repositories for virtually everything published in that country. The national library in the UK, for example, retains copies of all UK doctoral theses.

4. **Alerts.** These are online facilities that notify the user when something happens, in this case when new relevant publications appear in a database. Ingenta allows users to enter keywords or table of contents words/entries. An email alert is then sent directly to the user as and when new journals are registered containing the key words of table of contents entries. This facility can be very useful as a means of ensuring that a researcher remains up to date on the latest publications. Ingenta can be accessed at:

http://www.ingenta.com/

### 2.3.4 Offline Sources

The main source of suitable offline material is libraries. Most large cities have central public libraries. These libraries may have limited amounts of material relevant to the
doctoral researcher. In most countries there is also a national library carrying a much wider range of literature sources than a city library. It may be possible to access the national library through an interlibrary loans system.

University libraries usually still carry large amounts of offline materials such as text books and theses. Theses are currently not available online and have to be accessed as paper copy documents or, increasingly, in microfiche form. Microfiche was once widely used for the storage of archive records. Examples include the archival of banking transaction records and local authority maintenance records. Microfiche has the advantage of being quick and easy to produce, and it can be easily physically transported. The main disadvantage associated with microfiche is that the user needs to have access to a microfiche reader, which is often rather cumbersome and may be difficult to use. The quality of the reading image is also often poor.

The candidate may be able to secure temporary membership of his or her nearest university library. This is a particularly important step if it is possible. The Heriot-Watt University library provides an online service for all of its distance learning students and doctoral candidates, but it cannot loan books or theses to these students. If possible, the candidate should approach a good local university library, with the letter of introduction provided by the Heriot-Watt University library, and make every effort to secure temporary membership.

2.4 Planning the Literature Review

2.4.1 Introduction

The literature review is a major piece of work. In terms of volume the literature review can often constitute of over 50 per cent of the final thesis. The literature review also covers various subject areas to be drawn together in the synthesis and then synthesised again with the results of the pilot study. Given the size and complexity of the process involved in developing the literature review, it is strongly recommended that the candidate plan the literature review carefully before embarking upon it. This section considers some of the main issues involved in planning the literature review.

2.4.2 Approaches to Reading References and Developing Awareness

It is important to plan the literature review carefully. Most candidates find searching, reading and critically evaluating the relevant literature a time-consuming process that generally takes far longer than expected. It is unusual to complete a literature review ahead of time.

The candidate will probably already be familiar with the literature, at least to some extent, when he or she embarks on developing the critical literature review. The candidate will have accessed some of the overall literature base when he or she prepared the research proposal. It will be recalled that the background and methodology sections of the research proposal require evidence of an understanding of the
literature. The level of literature review detail in the research proposal is minor compared with that required for the main literature review, but the detail of literature required still means the candidate will have at least some familiarity with the main relevant areas of the literature.

In planning the literature review, the candidate should adopt the same basic approach as outlined for the research proposal in introduction to *Introduction to Business Research 1*. The main heading of ‘literature review’ should be broken down into its constituent components, and a basic sequence for executing the components should be developed.

The candidate should remember that the literature review is a dynamic element. It does not have a strict start and finish time. After the research proposal has been accepted by the EBS Research Committee and a supervisor has been appointed, the literature review can commence at any point. The literature review is then developed throughout the rest of the research programme. The candidate should allow specific periods for writing the research proposal (as opposed to searching for, collecting and reading individual materials).

In most cases the literature review is written chapter by chapter. Writing the chapters can be done purely sequentially, or there can be significant overlaps between chapters. It is common to encounter candidates reading for one chapter while actually writing up another.

In terms of the literature search, one of a number of different options can be adopted.

- **The collective search.** The candidate spends several weeks or months executing a major search of all the main subject areas included in the research. The search itself results in a large number of references, which should be filtered in some way to source the most useful ones. The filter could be in terms of the prominence of the author or the year of publication. The candidate then sources the selected literature, reads and classifies it, and then begins work on one or more review chapters. This approach tends to result in the rapid accumulation of potentially large numbers of references. Inexperienced researchers can soon become daunted at the prospect at having to read 50 or 100 outstanding references, and the bursts of intense reading demand that this approach generates can be unsettling. Most EBS DBA candidates find that they are more able to handle this approach once they have obtained a reasonable level of experience of finding and reading literature.

The collective search approach has the advantage that it encourages the candidate to think in interlinked terms. For example, if the candidate is researching the functional relationship between strategic alignment and medium-term success in the UK retail sector, the collective search will throw up references on both strategic alignment and medium-term success in the UK retail sector. The candidate will obtain and read these two sets of references at the same time. This in turn will encourage the candidate to see the links between the two subject areas as he or she reads. This can be more difficult and demanding, but reading about two subjects at the same time is a great way of developing an understanding of how those two subjects are related.
• The chapter search. In this approach, the candidate conducts the search in the order in which he or she intends to write the review chapters. This approach has the advantage that the candidate is able to focus directly on one particular subject area at a time. This approach also tends to be more straightforward in terms of execution, as the attention of the candidate is fixed in one area of the literature review at any one time. It has the disadvantage that the candidate may miss obvious areas of agreement between different authors and obvious associations or linkages between subject areas. These areas may be identified later as subsequent chapters are developed, but they are more readily identified if the literature is read collectively rather than in stages.

The extent to which this is a serious disadvantage depends on the subject areas considered by the research. In the case of research where the subject areas in the title are closely linked, reading each subject in isolation can be a real issue. Where the subject areas are less clearly linked, the issue may diminish.

Occasionally a candidate may prefer this approach because he or she has a particularly good memory. The knowledge acquisition process is simplified and the overall effort and concentration required are perhaps less than in the collective approach, but because the various chapters are researched and the literature reviewed in isolation, the best way of establishing links and functionalities within the knowledge base is by the use of memory backed up by written records. Candidates with particularly good memories can identify the literature for chapter 3, read it, write a draft chapter and then remember the main element of the chapter 3 knowledge base while reading the references for chapters 4 and 5.

• The top-down search. In this approach the candidate initially conducts a wide-ranging search but reads only selected areas from this search. The selected areas are those most relevant to the different subject areas within the research programme. The candidate then develops these areas in more detail, actively searching for linkages and areas of commonality between the various subject area literature threads. This approach is based on a work breakdown structure philosophy. The candidate reads only as much detail as is necessary for a reasonable understanding of the subject areas under consideration. As he or she reads more about a particular subject, functionalities at greater detail levels may be suggested. The candidate then reads around the appropriate area in more detail, going to a level where these functionalities can be considered.

This type of approach can be useful where the candidate has different experience and/or different levels of understanding about different subject areas within the research. In the strategic alignment example a candidate may have considerable experience of the UK retail sector, including how medium-term success can be measured. The candidate may have no problem reading even complex research material relating to this subject area. The same candidate, however, may know virtually nothing about the concept of strategic alignment. The candidate might, therefore, find himself or herself reading at the third level of detail on medium-term retail success while reading at level 1 on strategic alignment. This may sound clumsy, but it is generally the best way of reading material that covers a range of subject areas where the reader’s knowledge of those subject areas varies.
• **The random search.** Some researchers like to find and study literature on an intuitive basis. They develop a general feel for the literature and of the main points that emerge from a preliminary reading of the most prominent researchers and most widely accepted views. They then move outwards and collect reference material as they encounter it, chasing up threads and ideas as the notion takes them. Many ‘intuitive’ researchers favour this approach. They look at one area in detail until they have developed a sufficient level of understanding. They then move on to another area and consider that area, always looking for interrelationships between the two areas. This approach is much like that adopted by a police detective. The detective considers all the information available to him or her and looks for clues within it. Some information is relevant while some is not. Some information may provide valuable clues while other information may be misleading. The detective goes through all the information available and makes a series of decisions based on a number of subjective analyses of the information available. This approach is only really viable for experienced researchers with a considerable knowledge and understanding of the knowledge base. This experience allows the researcher to evaluate information quickly in the context of what he or she already knows about the literature.

2.4.3 **Planning the Literature Review**

Like any other project, the literature review should be planned. It is generally much easier to handle an unknown entity such as a literature review if the writer first develops a workable plan. Plans reduce risk by reducing uncertainty. A good plan that is well thought through can significantly reduce risk, provided it is adhered to and/or updated when this becomes necessary.

The broad sequence of activities involved in forming and implementing a plan is briefly considered below.

1. **Establish objectives.** The first step is to establish the main objectives of the literature review. In most cases the objectives revolve around a demonstration that the candidate is familiar with the knowledge base of a particular subject and is able to frame his or her own research within the context of the knowledge base. The literature review also needs to be compatible with the rest of the thesis, and should be produced to a style and format that meets overall university requirements.

2. **Establish any time, cost or performance limits.** The candidate may have to produce the literature review to a set timescale, and the review itself must be of an acceptable standard. The time limit could be set by the candidate’s employers and/or may be agreed with the supervisor.

3. **Establish resource availability.** The next stage is to consider what resources are available. In most cases the only resource available is the candidate. In this case it is important to calculate the likely amount of time the candidate will be able to spend on the literature review over the course of its development. The amount of time that can be realistically committed depends on a number of variables, such as work responsibilities and family commitments.
4. **Generate a work breakdown structure.** All plans are based to some extent on a basic work breakdown structure (WBS) where major elements of work are broken down into component elements. In the case of the literature review submission, the first-level elements are likely to be the literature review itself, the literature synthesis and basic theory, the pilot study where appropriate, and the final theory and statement of hypotheses. Each section may be written at a different time, and the literature review element may contain a number of different chapters. Each of these elements is then broken down into sections and subsections. Each subsection effectively represents a 'parcel' of work or work package that has to be completed.

5. **Work out the activity sequence.** The next stage is to work out the most logical sequence of work needed in order to complete the literature review submission. As discussed above, the sequence could be chronological, subject based, value driven etc.

6. **Assign activity durations and costs etc.** A rough estimate of how long each activity is likely to take should be made. This depends on a range of different variables including the time the candidate has available per week, research experience, knowledge of the subject area etc. Inexperienced researchers often underestimate the time required to complete work packages.

7. **Include for any uncertainty.** Any estimate of time requirement should also include for uncertainty. It is not advisable to assume that everything will go as planned. No matter how carefully any set of activities is planned there is always a likelihood that some unforeseen event will occur that will slow the whole process down. The plan should always include some spare time that is built in as a ‘buffer’ against unforeseen events.

8. **Develop the plan and establish milestones.** The plan should then be formalised and any important milestones should be identified. Milestones are key dates where important elements or groups of elements are completed. An obvious milestone is the date on which the literature synthesis is complete. These milestones subsequently act as performance markers as the candidate meets (or does not meet) the planned milestone completion dates.

9. **Evaluate the plan and modify as necessary.** Once a first draft is complete the entire draft should be carefully considered. It is very easy to include incorrect activity logic or incorrect activity sequences. One of the most common problems is the inaccurate estimating of activity times. Candidates often overestimate or underestimate individual packages.

10. **Implement the plan.** The final stage is implementation. The literature review plan is carried out and the various activities included in the plan are executed. Some activities may proceed more quickly than planned while others may proceed more slowly. In general terms, as long as the main milestones are achieved on time the overall plan may be considered to be progressing satisfactorily. Where milestones are missed, serious re-planning may be necessary.
2.5 Referencing

2.5.1 Introduction

Referencing is the means by which a candidate supports what he or she is saying so that what is being said carries research credibility. The idea of referencing or making citations from the literature is similar to the concept of the use of evidence in a court case. When making a case, a prosecuting barrister or advocate puts a series of suggestions to the jury. The suggestions follow on from one another, and each one contributes in sequence to the developing central argument that the accused is guilty. At each stage the barrister will seek to reinforce his or her argument with evidence. For example, the barrister may assert that the accused has indeed been at the scene of the crime. This assertion has one weight with no supporting evidence. If, however, the barrister can support the assertion with evidence (for example in the form of a fingerprint taken by police that unambiguously places the accused at the scene of the crime) then the weight of the assertion is considerably increased.

References are used in a similar way. The candidate shows that he or she is familiar with the literature by supporting each stage of his or her own research with appropriate references.

2.5.2 Referencing Systems

The candidate should appreciate the difference between a citation and a reference. Both are important for a number of reasons.

- They allow the candidate to strengthen his or her argument by using the findings of other researchers to support it.
- They demonstrate the candidate has found all relevant publication material relating to the current research and is familiar with the existing knowledge base.
- They allow the candidate to demonstrate (where appropriate) that the research is not duplicating earlier work and (again where appropriate) that the research is positioned in a suitable niche within or around the existing knowledge base.
- They allow the candidate to differentiate between his or her work and that of the knowledge base. They also allow the candidate to differentiate between assertions/opinions and statements that are supported by the literature.
- They allow the candidate to demonstrate (where appropriate) that he or she has read a range of different opinions and has established a balanced point of view based on this critique.

A citation is basically a specific naming of an individual, event or object.

A reference refers the reader to the source of information used.

‘Further details on the use of the Bogg-Dunny typology can be found in their 1992 paper (Bogg-Dunny 1992).’ This would be backed up by a detailed reference in the appropriate section showing the exact title and source of information for Bogg-Dunny’s paper. The reader can go and get a copy of this paper if necessary and see exactly how relevant their work is to the current research.
As a general rule candidates should use as many citations, backed up by full references, as possible. The greater the degree of substantiation of the work, the stronger it becomes under scrutiny. As the candidate sources and reads journal papers, articles, books, etc., it is important that he or she maintains an accurate record of what has been read. Previously, researchers used paper index cards for this purpose, but now people are increasingly using PC databases and spreadsheets to achieve the same result.

References are usually given at the end of each chapter. Typical reference details include the following:

- Author name.
- Year of publication.
- Title and edition.
- Journal/book name.
- Place of publication.
- Publisher.
- Pages.
- Any other necessary information.

There are several different referencing systems in common use. Internationally the most widely used system is the Harvard referencing system. For the purposes of this work the Harvard system is strongly recommended unless there is a very good reason for using an alternative.

### 2.5.3 The Harvard Referencing System

This section briefly introduces the main elements of the Harvard referencing system that are likely to be of value to candidates in writing the thesis. Only the primary elements of the system are considered.

#### 2.5.3.1 Citations in the Text

Authors are referred to by name, together with the appropriate year of publication. For example, where there is a single author the citation would refer to Smith (2000). The citation could take several different forms provided the author and year are clear. Two examples are given below.

- ‘Smith (2000) made a strong case for the use of the Bogg-Dunny typology.’
- ‘Several authors (Smith, 2000) have made a case for the use of the Bogg-Dunny typology.’

In the references section at the end of the chapter the full reference would appear as shown below.


Where an author has made several publications in the same year, the order of publication should be indicated by the addition of a lower-case letter after the year within the brackets, as shown below.
• ‘Smith (2000a) made a strong case for the use of the Bogg-Dunny typology.’

The same basic approach is adopted where there are two or more authors. Two authors are normally shown as both names followed by the year. Where there are more than two authors the citation may refer to all the authors. This soon becomes cumbersome, and in many cases the second and subsequent authors are referred to as *et al.* (and others). Some examples are shown below.

• ‘Smith and Jones (2001) made a strong case for the use of the Bogg-Dunny typology.’
• ‘Smith, Jones and Bloggs (2002) made a strong case for the use of the Bogg-Dunny typology.’
• ‘Smith *et al.* (2002) made a strong case for the use of the Bogg-Dunny typology.’

In theses it is common to encounter literature review sentences where more than one citation is made. For example, a number of researchers may have used the same methodology as is being proposed for the present research. Where multiple citations are required, the brackets around each individual year should be removed and the list of citations should appear within a single set of brackets. The citations should be arranged first by year and second alphabetically. Each citation should be separated by a semicolon. An example is shown below.

• ‘Several researchers have advocated the use of this particular methodology (Brown 2001; Black 2000; Green 2000; Silver 2000).’

Sometimes a candidate may want to include a direct quotation from a publication. Where the quotation is short, at no more than one or two lines long, it can be incorporated within the text. Where the quotation is longer, it can be shown as a separate indented section of text. Some examples are shown below.

• Smith (2000a) states: ‘Most business researchers would recommend the use of Bogg-Dunny in 90% of management and business research cases’ (p140).
• Smith (2000a) states:

  There are significant differences in opinion but in most cases business researchers support the use of Bogg-Dunny in this type of research. This is borne out by a large number of research designs over the past five years.

Note in both cases the use of full quote marks as these are direct quotations by Smith.

Candidates may also sometimes make use of secondary referencing. This occurs where the candidate does not have access to the primary source, as in the case of a textbook that is out of print, but he or she does have access to another work in which the primary source is referenced. The Harvard system recommends that secondary references should be used only where there is no alternative. An example is shown below.

• Smith (1985) as cited in Bloggs and Jones (2000) states that the primary obstacle to the execution of effective business research is the poor standard of research methodology design.
2.5.3.2 Reference Listing

There are standard approaches to listing references in the Harvard approach. Some examples of text book references involving single and multiple authors are shown below.


Sometimes a reference may refer to a particular chapter in a book where the chapter has been written by a specific author and forms part of a larger work edited by somebody else. An example is shown below.


Corporate authors are generally represented by the name of the company they represent. An example is shown below.


Journal articles should show the title of the journal together with any volume numbers as shown below.


Candidates often make reference to conference proceedings. Professional associations and research organisations often arrange conferences where practitioners and academics gather and discuss areas of relevant interest. Conferences are often based around the presentation of research papers by individual authors or groups of authors. At the end of the conference these papers are often collected together and are issued as the proceedings of the conference. An example is shown below.


Conference proceedings are often produced by named editors. These editors are often the principal academics and practitioners who organise and host the conference. An example of this type of reference is shown below.

Theses and dissertations provide another valuable and often-used source of research information. Most supervisors would agree that one of the best sources of potential reference material is in good DBA, PHD and MPhil theses in relevant and related areas. Most university libraries offer an interlibrary loans system where theses can be borrowed or printed off for use by current researchers. In some cases these may contain large numbers of relevant references, which can be of immediate use to a current researcher. An example is given below.


The text may refer to an article in a newspaper. An example is shown below.


Many newspaper articles are written by members of the editorial team and are not credited to a single named author. Examples include opinion columns where the newspaper expresses an opinion on world events. In such cases the reference should be stated as anonymous as shown below.


There are numerous other possible sources of information. For example, most governments publish large amounts of information on everything from government-funded research to Acts of Parliament and other forms of statute. A typical reference to an Act of Parliament is shown below.


In the UK, the government also publishes information on policy and policy proposals. These are known as White Papers and Green Papers respectively. For example, the government might consider imposing a total ban on cigarette smoking in public places. This would be initially published as a Green Paper for circulation and comment. Members of the public can buy copies of Green Papers at government bookshops. A typical reference to a Green Paper is shown below.


A reference to a White Paper could appear as follows.

2.5.4  Citing Online and Other Electronic Sources

Researchers are increasingly using the Internet as a source of reference information. The main problem with using Internet references is that the address may change over time. It is common to read through a set of links in a thesis listed two years earlier and find that a significant proportion of them are no longer live.

The standard layout for an Internet reference is as follows:

- Author/editor.
- Year of publication.
- Title and edition.
- Place of publication.
- Publisher.
- URL.
- Date accessed.

An example is shown below.


Numerous research journals are now available online. A typical reference of this kind is shown below.


Some journals are only available online and there is no paper-based alternative. An example reference for this type of journal is shown below.


The candidate may occasionally reference information that has been communicated using other forms of electronic transmission or media. In some cases it may be necessary to reference a statement that is made as part of a television programme. An example is shown below.


As a final example, a candidate might make use of information that has been communicated in the form of a compact disc (CD) or similar. An example is shown below.

The number of references at the end of each chapter depends very much on the subject area and the size of the existing knowledge base. There are no rules on the number of references that can be quoted, although the candidate should ensure that sufficient references are included to demonstrate that he or she has read the literature and understands who the main research authors are and what they have published. As a general guide, candidates should think of the literature review as a ‘fruit cake’. The candidate should think about the texture and structure of good fruit cakes and less good fruit cakes. Most people would agree that a good fruit cake contains plenty of different kinds of fruit evenly distributed throughout the cake. Most people could make a subjective assessment in terms of where a cake has too much fruit or too little fruit. In either case, the overall quality of the cake is compromised. The literature review should be structured in a similar way to the fruit cake. The references should support the text at all stages of the review, and should be evenly sprinkled throughout.

Using the Harvard system, the text appears as shown below. The references shown are fictitious and are for illustrative purposes only.

2.5.5 Example of a Literature Review Extract

Bloggs (1994) has shown that there is a clear link between the degree of strategic alignment engendered by an acquisition and the likelihood of long-term acquisition success. Other researchers have established a link between short-term success and the relatedness of the acquisition (Smith 1996; Jones 2000; Skeeker 2001). There is a growing field of research in the specific area of strategic alignment engineering as a function of cultural impact drivers (Johnson 1998, 1999, 2001; McIntosh 2001; Skeesome 2002, 2003; Davie 2003a). This growing level of academic interest in this area is mirrored to some extent by practitioners (Egbert plc 2000; Challenger plc 2001). There has even been a degree of interest in the UK press (Times 2002; Guardian 2002, 2003a). Professor Chips of Edinburgh Business School has commented on this trend as follows.

The recognition of a link between strategic alignment and long-term acquisition success is increasingly being reinforced by the recognition that strategic alignment engineering can bring about real changes in cultural attitude before, during and after a related acquisition has occurred. (Chips 2003a)

Some researchers have been able to develop appropriate research methodologies for strategic alignment engineering (Pikelet 2002a; John 2003; Tivity 2003b) while others have reported problems in achieving the correct calibration of the various methods (Lindsey 1998; Edith 1999a), in some cases because of the lack of an appropriate calibration benchmark (Attenburgh 1999; Jones et al. 2003; Edith 2002, cited by John 2003). There are some established methodologies that are close to being standard in business research (Bogg 2000). Smith (2000) as cited in Keen and Mustard (2001) stated that:
It is generally advisable for business researchers to make use of established and reliable methodologies when embarking on a research programme. There is no point in reinventing the wheel, and candidates should only attempt to develop an entirely new methodology where this is absolutely necessary.

Selected References


The above extract, although small, is an example of the use of the Harvard system. Candidates may use different referencing systems if they wish, provided the method used is applied consistently throughout the thesis. The Harvard system remains the EBS recommended system.

2.6 Maintaining Focus

2.6.1 Introduction

The maintenance of focus is another area where candidates often experience problems. It is very easy for the candidate to become sidetracked and develop the literature review into areas where the literature is not entirely relevant to current research. This section attempts to develop an understanding of the importance of maintaining review focus.
The knowledge base relevant to a chosen research area can be relatively small, although this tends to be the exception rather than the rule. Knowledge bases can be small because the chosen research area is:

- excessively limited in scope;
- relatively new;
- highly specialised;
- specifically designed to address a prominent knowledge gap;
- centred on a newly emergent field;
- based on an entirely new application;
- based on a highly applied area.

In most cases there is a relatively well-established literature base, and candidates are often immediately impressed by the number and range of publications made in the recent past. In some cases a good general search might throw up hundreds or even thousands of relevant references. This type of result tends to occur where the search uses key works popular in the research community concerned. For example, searches including keywords such as ‘social psychology’ or ‘human resources’ can generate very large numbers of references.

Where the candidate does experience a large established knowledge base, there is always a danger that he or she will have problems in maintaining an adequate literature focus. The main reason for this is the problem of related issues. The candidate may find large numbers of articles dealing with the chosen subject as a related issue in a wider subject area. In such cases the relevant issue may be directly attached to other related issues not directly relevant.

For example, assume a search is conducted using the keywords listed below.

- Strategic alignment.
- Mergers.
- Human capital.

The candidate’s work might be centred on the potential of increasing human capital value within an organisation about to embark on a strategically focused merger. The candidate may be concentrating on showing that, where the merger is strategically focused, the potential to increase overall human capital increases as a function of the degree of strategic alignment.

The search may be conducted on the basis of all three words being required in the title or abstract of the article in the search database. The search engine or library catalogue might show the following listing.

   **Strategic alignment**: issues in mergers and acquisition planning.
   The research is based on the use of strategic alignment as an objective in the strategic planning process in mergers and acquisitions in Germany 1995–2002...
   **Mergers** and acquisitions: implications for corporate culture.
   Paper examines the impact of corporate culture on the success or otherwise of US petrochemical companies. The research covers the period 1999–2002 and includes 10 **strategically focused** mergers…
   **Human capital** in **mergers** and acquisitions: developing a typology.
   The research considers the development of a typology for the evaluation of **human capital** profiles in large-scale **mergers** in the UK…
   Merger planning: the **human capital** rationale.
   Article discusses the implications of **human capital** development systems to allow capital engineering as a component of the planning process…
   **Human capital** as a function of human cognition.
   Article explores the human cognitive process as the basis for evaluating **strategically focused** individual objectives and the **merger** of mind sets…
   Variations in **human capital** as a **strategic alignment** planning tool.
   Discusses measured variations in **human capital** as a function of the degree of **strategic alignment** that is engineered in conjunction with the **mergers** process…
   **Strategic** and non-**strategic mergers** in the UK construction industry.
   Article presents a review of recent **mergers** in the UK construction industry from a financial perspective, especially in terms of sources of finance…
   Measures of **human capital** in the US oil industry.
   Presents a methodology for the measurement of **human capital** at senior management level in US oil exploration and production companies…
   Engineering **human capital** to achieve enhanced **strategic alignment**.
   Examines tools and techniques for engineering **human capital** within local government organisations in order to improve overall **focus** on long term **strategic** objectives…
    **Mergers** and acquisitions: the myth of the failed merger.
    Examines the apparent high degree of failure in UK and US **mergers** and seeks to offer an explanation in terms of alternative methods of financial appraisal…

It is difficult to make an immediate appraisal of the likely value of the listed papers as the search engine has thrown up only the title and very basic background information. The information provided suggests that the references listed probably centre in the following areas.
1. Human capital development in mergers.
2. Impact of corporate culture in US petrochemical mergers.
3. Human capital measurement systems in UK mergers.
4. Human capital development in merger planning.
5. Human cognition and mindset combination.
6. Human capital used to engineer strategic alignment in mergers.
7. Degree of strategic alignment in UK construction company mergers.
8. Human capital measurement in US oil companies.
9. Human capital used to engineer strategic alignment of long-term strategic objectives.

The search has therefore generated references relating to human capital, strategic alignment and mergers in a wide range of applications and sectors. The candidate may decide to reject some of these references out of hand. For example, reference number 5 appears to be concerned with the human cognitive process. This may or may not be relevant to the current research. If the candidate does include a section on human cognition in the research programme, he or she opens up a whole new literature field. The adequate analysis of the literature in the field of human cognitive processes contains thousands of references. There is no point reviewing literature on human cognition unless it is directly relevant to the current research. If it is not directly relevant, development in this area represents a sidetrack – an area of research not directly related to the current research and which does not directly contribute to the main research.
References 2, 7, 8 and 9 appear to be concerned with specific industries or sectors. This does not necessarily mean they have to be disregarded. It does, however, mean that their relevance to the current research may be restricted, depending on the focus adopted. The concept of sidetracking influences is shown in Figure 2.2.

In Figure 2.2, the various literature areas covered by the 10 hypothetical references are represented as ovals. Based on the title and limited information given on each reference the overlaps appear to be as shown in Figure 2.2. The candidate may, for example, be particularly impressed with reference 6 as this reference appears to overlap all three central areas of the literature review, although some of the content probably refers to areas that are not relevant. Reference 9, however, although overlapping with two literature review areas, is essentially focused on a different set of objectives: the achievement of long-term strategic goals. In using this reference,
the candidate should remember that the focus of the current research is not directed at the achievement of long-term strategic goals. If this subject area is introduced, the research may again become sidetracked and move along a slightly diverted route to completion.

2.7 The Literature Synthesis

2.7.1 Introduction

This section attempts to develop a more detailed understanding of the literature synthesis. The literature synthesis is particularly important as it acts as the connector between the literature review and the development of the basic theory.

2.7.2 The Concept of Synthesis

The literature synthesis brings the various areas covered by the literature together so that the candidate can develop an overview of the main findings of the research and use this overview to develop the basic research theory. The synthesis must be both accurate and reliable. If the synthesis does not match the content of the literature review the basic research theory may be misaligned in relation to the true knowledge base.

Consider the following example of a synthesis based on previous literature review examples. The candidate should note that all references are fictitious and are for illustrative purposes only. Areas where the central themes are developed are shown in bold.

**Literature Synthesis**

Drawing on the previously reviewed literature on strategic alignment, mergers and human capital, the literature is synthesised as follows.

Bloggs’ (1994) work has shown that there is a link between the degree of strategic alignment engendered by an acquisition and the likelihood of long-term acquisition success. Bloggs suggested that the likelihood of success increases as a positive function of the degree of focus, both of which are functions of cultural approval. Bloggs’ results are supported, to some extent, by those of Smith (1996) and Skeeker (2001). These results were centred on the degree of relatedness of the acquisition rather than specifically on strategic alignment. Jones (2003) has, however, stated that the degree of relatedness in an acquisition is a direct function of the degree of strategic fit that can be engineered, and Jurana et al. (2003) have concluded that strategic fit in mergers and acquisitions is a direct driver of strategic alignment. The relationship between strategic fit and long-term success has been widely reported (Holly 2002; Ryan et al. 2003a; Skeese 2003; Muffin 2002). There has been no reported opposition to this theory in the strategic alignment or mergers literature. Although lack of falsifica-
tion is no evidence of accuracy, the relative silence from the relevant research community suggests that this proposed linkage is currently acceptable.

Increasing numbers of researchers are concerned with the area of strategic alignment engineering as a function of cultural impact drivers (Johnson 1998, 1999, 2001; McIntosh 2001; Skeesome 2002, 2003; Davie 2003a). This increased interest trend is mirrored to some extent by practitioners (Egbert plc 2000; Challenger plc 2001). Most of this research suggests that strategic alignment engineering is functionally related to generally positive attitudes in organisational culture in the period before and during mergers (Pikelet 2002; Davie 2003a).

Other researchers have evidenced a clear link between cultural positivity and the positive development of human capital (Currie et al. 2002; Gretna 2002). The work of Muffin (2003b) clearly concludes that where the pre-merger cultural attitude is generally positive, the measured human capital of the organisational culture increases. Muffin’s later work (Muffin 2003c) shows that there is a measurable functionality between the degree of strategic fit of a merger and the post-merger attitude of employees. Muffin’s work (Muffin 2003c) has been criticised by Ryan (Ryan 2002) on the grounds that her sample size was restricted and the measurement method used was flawed. Muffin’s counter (Muffin 2003d) was that her research was intended to be indicative.

Human capital development has been widely researched (Ross 1998; McIntosh 2000; Smith 2001). The general consensus is that human capital can best be improved in an environment characterised by generally positive perceptions. There is no clear evidence in the human capital literature to contradict this view. Pioneering work by Eilidh (2003) suggests that there is indeed a link between the degree of strategic alignment in mergers and the development of a generally positive attitude within the organisational culture leading to amplified potential for human capital development. At the time of writing this research area was in its infancy. To date there has been only one published critique of Eilidh’s work. Aill (2003) reported similar findings in his research study of over 50 mergers in the UK retail sector.

The literature synthesis suggests the following underlying observations in relation to mergers.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
• There is a functional relationship between cultural positivity and the positive development of human capital.

Clearly, this argument is somewhat Socratic and is a considerable oversimplification, but it does give an indication of the line of reasoning that should be adopted by the candidate. The next stage is to consider how these functional relationships can be exploited. Consider again the summary points listed above.

• Strategic alignment is related to long-term success.
• Long-term success is related to cultural approval.
• Strategic fit is related to strategic alignment.
• The degree of strategic alignment (focus engineering) is related to cultural positivity.
• Cultural positivity is related to the positive development of human capital.

These functionalities in turn suggest that in mergers:

• strategic alignment is related to cultural approval;
• strategic alignment is related to cultural positivity;
• cultural positivity is related to the positive development of human capital.

This in turn suggests that in mergers:

• strategic alignment is related to the positive development of human capital.

It should again be stressed that this argument is Socratic and is considerably oversimplified. It does, however, illustrate how functionalities between apparently distant variables can be established by an effective synthesis of the literature. Once again (at the risk of repetition) the analysis used a work breakdown structure (WBS) approach to disintegrate the analysis into smaller sections or elements that could be considered collectively.

The product of the synthesis process is a potential research theory. This can be stated as:

*In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.*

In reality, the research theory would have to be more focused: for example, it could address this issue in relation to retail mergers rather than mergers in general.

Based on this analysis, the candidate could go on to develop a research question as follows.

In retail mergers, is the degree of strategic alignment a function of the potential to develop the positive development of human capital?

The research aim would then be:

*To show that the degree of strategic alignment is a function of the potential to develop the positive development of human capital.*
The research objectives might be:

*To show that where high levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also high.*

*To show that where low levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also low.*

The research hypotheses might be:

$H_0$: As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.

$H_1$: As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.

The operational hypotheses might be:

$H_0$: Strategic alignment is not related to long-term success.

$H_1$: Strategic alignment is related to long-term success.

$H_0$: Long-term success is not related to cultural approval.

$H_1$: Long-term success is related to cultural approval.

$H_0$: Strategic fit is not related to strategic alignment.

$H_1$: Strategic fit is related to strategic alignment.

$H_0$: The degree of strategic alignment (focus engineering) is not related to cultural positivity.

$H_1$: The degree of strategic alignment (focus engineering) is related to cultural positivity.

$H_0$: Cultural positivity is not related to the positive development of human capital.

$H_1$: Cultural positivity is related to the positive development of human capital.

The research methodology for the main study can now be developed to address these operational hypotheses. By accepting, or rejecting, the operational hypotheses, the research hypotheses can be accepted or rejected.
2.8 Example of a Literature Review and Critique

2.8.1 Introduction

This section contains a sample literature review, synthesis and theory development section from a draft thesis. This is followed by a brief critique where the primary weaknesses in the literature are identified and discussed.

Candidates should note that the example is based on an examination paper for Introduction to Business Research 2. The literature review and synthesis are considerably smaller than would normally be required for a full draft thesis. Doctoral theses vary considerably in size, with most falling in the range 50,000–80,000 words. In many cases the literature review, synthesis and theory development account for 30–50 per cent of the overall thesis, so it is common to encounter literature reviews that amount to well over 10,000 words. It would be impractical to include a full 25–30 page literature review within this work, so a shortened sample is used for illustrative purposes instead.

Candidates should also note that the literature review shown in section 2.8.2 contains mistakes. These are placed deliberately and are identified in the critique.

2.8.2 Example of a Literature Review, Synthesis and Theory Development

1. Literature review

1.1 Introduction

This research is based on the likelihood of success of strategic alliances as a function of the primary driver behind the formation of the alliance. The aim of the research is to show that there is a direct functional relationship between strategic alliance drivers and alliance success, where success is measured according to a three-point scale that is developed specifically for the research. The research suggests that alliances formed under a strategic rationale are more likely to succeed than those formed under other types of rationale such as financial speculation. This section reviews the literature on the three main subject areas contained within the research title.

The proposed title of the research is:

A reasoned analysis of the observed direct functional relationship between strategic and strategically driven rationale and the consequent likelihood of strategic alliance success.

The literature review is therefore divided into three primary sections:

- Strategic drivers.
- Alliances and partnerships.
- Measures of alliance success.
1.2 The literature on strategic drivers

Alliances and partnerships are promoted by driving forces. These forces are often referred to as ‘drivers’ (Muffin 2000), as they drive the organisation towards forming strategic alliances. There are clearly a number of different drivers, all of which act to propel the organisation towards the formation of a strategic alliance as one element in the achievement of overall strategic objectives (Pikelett 1998). Most managers would agree that there is a range of drivers acting on the organisation moving it towards alliances. Researchers have also identified a range of different drivers (Push 1997, Elbow 1998, Shove 1998). Different researchers have assigned different names to the drivers, but most would agree on six main types as listed below.

- Strategic drivers.
- Speculative drivers.
- Financial necessity drivers.
- Management failure drivers.
- Political drivers.
- Globalisation drivers.

This classification was accepted and used by Smith (1987), Jones (1990), Smith and Jones (1992), Smith and Bloggs (1995) and Bloggs and Bloggs (2000).

According to most researchers, strategic drivers are those that suggest an alliance in order to achieve strategic objectives (Mullet 1998, Flounder 1999, Spratt 2001). In such cases the alliance could be formed with the intention of obtaining, for example, a key resource or skill that the organisation lacks but requires for achieving its overall strategic objectives. Strategic drivers include increasing strategic alignment (Winkle 1995, Cockle 2000), enhancing strategic alignment (Clam 2000) and strategic objective acceleration (Limpet 2001).

Speculative drivers apply where an organisation seeks to form an alliance with the objective of making a short- to medium-term return, which is usually financial. An organisation may form an alliance with another organisation with the intention of making money from the arrangement. An example is a company that provides financial backing for a venture under an agreement where the finance provider is repaid either directly or in the form of a share in any profits (Mule 2000).

Financial necessity drivers apply where a company is forced to form an alliance through financial necessity. A company could be in financial difficulties, and its only hope of short-term turnaround or even long-term survival could be in the formation of an alliance that provides an immediate cash injection (Horse 1998, Foal 1999). This type of driver is becoming increasingly prevalent in stagnant industries that are characterised by overcapacity such as the international airlines industry (Donkey 2001).

Management failure drivers occur where a major error or failing leaves an organisation in a position where it has no choice other than to consider the formation of a strategic alliance. Management failure drivers may be closely
related to financial necessity drivers (Grubb 2000). In other cases the underlying driver may be non-financial (Maggot 1998), such as a necessity to obtain a specific capability in order to remain competitive (Weevil 1999). The example used by Weevil (1999) was the issue of 3G digital technology licences to companies by national governments in the late 1990s. These licences effectively made the difference between companies being allowed to use digital technology in telecommunications and being prevented from doing so.

Political drivers apply where governments become involved. The most common application is in the development of major infrastructure projects such as bridges and tunnels between countries (Spanner 1995, Wrench 1998, Hammer and Nail 2000).

Strategic drivers tend to be very much time related (Austin 1996). The relative strength and direction of these drivers is dynamic (Ford 1997), and is a function of external events (Vauxhall 2000). One of the most detailed studies of strategic drivers carried out recently was that conducted by Bentley (1997). Bentley surveyed over 100 companies in an attempt to determine the range and types of strategic drivers that acted on the companies in terms of suggesting alliances and partnerships or mergers and acquisitions. Bentley’s study used a combination of historical information and retrospective interviews and questionnaires in an attempt to isolate common patterns and trends. Bentley found that companies generally move towards alliances and partnerships where the achievement of strategic objectives depends on a range of events such as capital injection, a need to acquire a specific skill or competency, a need to acquire new technology, a need to consolidate or expand, and a need to focus operations.

Bentley’s study was interesting because it showed up a number of interesting patterns. Companies that exist in conditions of constant change and innovation appear to be subjected to what Bentley called ‘amplified drivers’. In other words, strategic drivers act more strongly where the organisation operates under conditions of high innovation and change.

1.3 The literature on alliances and partnerships

Alliances and partnerships are increasingly popular in modern industry and commerce (Robin 2002). Companies are increasingly using alliances and partnerships as a means of achieving their strategic objectives (Sparrow 2003). There is some evidence to suggest that, in the US and UK, alliances and partnerships at all levels are now occurring more frequently than mergers and acquisitions.

The literature suggests that there are numerous types of alliances and partnerships, and the characteristics of each are closely linked to the drivers as discussed above. Goldfinch (1980) isolated a number of distinct forms of alliance or partnership, ranging from the relatively rare full integration to much looser forms including licensing agreements. Goldfinch’s study concluded that the majority of large alliances and partnerships centre on the formation of some kind of joint venture company, either using equity or limited by guarantee.
Goldfinch noted that this form of alliance has become increasingly popular in the UK and US since the early 1970s. Rook (1990) agreed with this suggestion in her study of 150 alliances in the western US. Magpie (1992) suggested that loose agreements including licensing agreements are common with large companies, where the alliance is based on the promotion of a particular product as opposed to being based on the development of a capability or expertise.

Grebe (1996) suggested that alliances and partnerships formed with the specific intention of increasing the degree of strategic alignment of the partner organisations have the greatest likelihood of success. Grebe’s suggestion ties in with the findings of a number of other researchers including Mallard (1997), Widgeon (1997), Teal (1998), Eider (1999) and Pintail (2000). Other researchers such as Coot (2000) and Dabchick (2000) have identified other success functions, including increased creativity and innovation and increased adaptability.

Most researchers agree that alliances and partnerships add value where the sum of the values of the alliance is greater than the sum of the values of the partners (Mallard (2000), Merlin and Hobby (2000), Peregrine (2001) and Kestrel (2003)). This added value is based on the concept of combination synergy as first put forward by Osprey (1980).

There are numerous examples of alliances and partnerships formed as a result of non-strategic drivers that have proved to be successful. Raven (2000) carried out a detailed examination of the long term Cambrian Alliance between four major telecommunications companies between 1995 and 2003. According to Raven, this alliance was formed with the primary intention of defending existing market share. It was formed as a defensive measure against the growing influence of the software giant Macrohard in the telecommunications software industry. Citing the same example, Chough and Crow (2001) said that the Cambrian Alliance must be considered as a success because it had maintained the market share of the partners for several years in the face of a very powerful competitor.

Goldfinch and Greenfinch (2003) cited the example of the proposed Air Rohan – Arnor airline alliance. In this case Air Rohan had suffered a series of serious financial losses including a major hit in the form of a £450m share write-off in failed carrier Edoras Airlines. Goldfinch and Greenfinch argued that this alliance was proposed because Air Rohan had no choice because it needed the capital investment (financial necessity driver) following bad strategic decision-making (management failure driver), while Arnor had no realistic choice because it was very worried about the impact on market share of the new major competitor Red, which had just been given clearance to commence operations in Arnor’s own back yard. This particular alliance was driven more by tactical necessity than by strategic planning.

Chaffinch and Wren (2004) also used the proposed Air Rohan – Arnor strategic alliance in their study of alliance strategic rationale. Chaffinch and Wren concluded that such alliances are formed primarily as a result of financial necessity and management failure. They are only likely to be successful in terms of
achieving tactical responses such as short- to medium-term survival after a major risk impact. They are much less likely to achieve long-term success as compared with strategic rationale alliances and partnerships.

1.4 The literature on alliance and partnership measures of success

Numerous researchers have looked at alliances and partnerships using some form of measure of success and failure. The whole point of forming a strategic alliance is to achieve some objective or objectives that cannot be achieved by each partner alone (Grebe 1996).

The most obvious measure of success in any business application is financial performance. The first instinct of analysts and shareholders is to look at profitability (Ash 1990). There are numerous studies of alliances and partnerships that have used short- to medium-term profitability as the primary measure of success (Cherry 1999, Lime 2000), and there is considerable evidence that under normal circumstances most company senior managers tend naturally to take the same view (Poplar and Plane 2002).

Some researchers have used different success measures, although such research appears to have been restricted to specific applications. Beech (2000) used risk exposure as a measure of success. Beech surveyed a number of companies under threat because of the actions of competitors, and used a five-point scale to measure the effectiveness of the defence formed by the alliance.

Oak and Aspen (2000) measured success in terms of turnaround. Their study considered turnaround of a number of different companies that had formed alliances as a means of assisting in financial recovery. Oak and Aspen’s findings suggested that success rates in this type of alliance are low, primarily because of the relative lack of power attributed to the company ‘in need’. In some cases the partner or partners used the opportunity to obtain valuable assets from the weaker partner and in some cases subsequently to take over the weaker partner. Similar observations have been made by Sycamore (2000) and Plane (2001).

Some researchers have made an attempt to use multi-point success measurement scales. Birch and Hazel (1998) measured medium-term financial gain and risk profile as their two primary measures. The underlying reasoning was that many companies are likely to see these as the two most obvious success measures unless the alliance is being formed for a specific tactical response such as protection, defence or turnaround. Birch and Hazel’s study made use of a success index which was a function of the degree of financial return and risk control offered by the alliance. Yew (2000) and Larch (2000) both made similar studies using Birch and Hazel’s approach, and found that the two-point measurement system was effective.

1.5 Summary

These sections have considered some of the primary literature sources in strategic drivers, alliances and partnerships and alliance and partnership success.
The literature makes it clear that alliances and partnerships are an accepted part of company strategic activity, and that alliances and partnerships can be driven by a range of different drivers, one of which is strategy oriented. It is also clear that alliance and partnership success can be measured in a number of different ways, and it is very important to establish the success measure being used at the formation of the alliance. For example, a defensive alliance can be very successful at defending a company from a competitor while not generating any short- or medium-term profit. This type of alliance is successful in terms of providing a defence but unsuccessful in terms of delivering profits. The extent to which the alliance is a success or a failure depends on the measurement system being used.

2. Literature synthesis

2.1 Introduction

This section pulls the three arms of the literature review together to allow the development of a summary statement that unifies the literature as much as possible. It should be appreciated that the literature on strategic drivers, alliances and partnerships and success measures represents different knowledge bases, and there are very few studies that overlap all three areas. This is one justification for the research in that, although each of these areas has been extensively explored, nobody has tried to develop doctoral research in an area that unifies the three areas.

2.2 Literature synthesis

The literature suggests that alliances and partnerships do not just happen. Companies are pushed towards forming alliances by drivers (Muffin 2000). There are various different drivers, all of which act to propel the organisation towards the formation of a strategic alliance as one element in the achievement of overall strategic objectives (Pikelett 1998). Different drivers have different characteristics (Push 1997, Elbow 1998, Shove 1998). The six most common drivers identified in the literature are strategic drivers, speculative drivers, financial necessity drivers, management failure drivers, political drivers and globalisation drivers (Smith 1987, Jones 1990, Smith and Jones 1992, Smith and Bloggs 1995, Bloggs and Bloggs 2000).

Strategic drivers are those that suggest an alliance in order to achieve strategic objectives (Mullet 1998, Flounder 1999, Spratt 2001). Strategic drivers include increasing strategic alignment (Winkle 1995, Cockle 2000), enhancing strategic alignment (Clam 2000) and strategic objective acceleration (Limpet 2001).

Speculative drivers apply where an organisation seeks to form an alliance with the objective of making a short- to medium-term return, which is usually financial (Mule 2000). Financial necessity drivers apply where a company is forced to form an alliance through financial necessity (Horse 1998, Foal 1999, Donkey 2001). Management failure drivers occur where a major error or failing leaves an organisation in a position where it has no choice other than to consider the formation of a strategic alliance (Weevil 1999, Grubb 2000).
Political drivers apply where governments become involved, especially in major infrastructure projects (Spanner 1995, Wrench 1998, Hammer and Nail 2000). Strategic drivers tend to be very much time related (Austin 1996). The relative strength and direction of these drivers is dynamic (Ford 1997), and is a function of external events (Vauxhall 2000). Alliances and partnerships are increasingly popular in modern industry and commerce (Robin 2002). Companies are increasingly using alliances and partnerships as a means of achieving their strategic objectives (Sparrow 2003). The literature suggests that there are numerous types of alliances and partnerships, and the characteristics of each are closely linked to the drivers, as discussed above (Goldfinch 1980). Alliance types vary from total integration to loose agreements (Rook 1990, Magpie 1992). Alliances and partnerships formed with the specific intention of increasing the degree of strategic alignment of the partner organisations have the greatest likelihood of success (Grebe 1996, Mallard 1997, Widgeon 1997, Teal 1998, Eider (1999), Pintail (2000). Other objectives may form successful alliances (Coot 2000, Dabchick 2000). Alliances and partnerships add value where the sum of the values of the alliance is greater than the sum of the values of the partners (Mallard 2000, Merlin and Hobby 2000, Peregrine 2001, Kestrel 2003). Alliances that are formed purely for defence reasons can be just as ‘successful’ as alliances that are formed for short- to medium-term financial return (Goldfinch and Greenfinch 2003, Chaffinch and Wren 2004). The most obvious measure of success in any business application is financial performance. The first instinct of analysts and shareholders is to look at profitability (Ash 1990, Cherry 1999, Lime 2000, Poplar and Plane 2002). Risk is also clearly a popular issue (Beech 2000). Other objectives may be required in certain cases such as turnaround (Oak and Aspen 2000, Sycamore 2000, Plane 2001). Multi-point success measurement scales for measuring alliance success are already established (Birch and Hazel 1998). There are examples of two-point measurement systems that look specifically at financial return and risk profile (Yew 2000, Larch 2000). The literature suggests that:

- strategic drivers are one type of a number of alternative drivers;
- strategic drivers apply to alliances and partnerships;
- alliances and partnerships are common;
- alliances and partnerships that improve strategic alignment are more likely to be successful;
- alliance success can be measured using a number of different measures;
- alliance success measures using short- to medium-term financial return and risk profile exist.
2.3 Summary
This section has synthesised the most important references and has linked together the primary areas of the literature in the areas of strategic drivers, alliances and partnerships and alliance and partnership levels of success. This synthesis will now be used in the development of the basic theory.

3. The basic theory
3.1 Introduction
This section develops a basic theory from the outcome of the literature synthesis.

3.2 The basic theory
The basic theory is based on the research core of showing that there is a direct functional relationship between the adoption of strategic rationale drivers and likelihood of alliance success.

The basic theory is as follows:
‘There is a direct functional relationship between the adoption of strategic rationale drivers and the likelihood of strategic alliance success’.

The basic theory will be tested using the following operational hypothesis:

\( H_0 \) ‘Where strategic rationale drivers are adopted the likelihood of strategic alliance success is not greater than when other rationale drivers are used.’

\( H_1 \) ‘Where strategic rationale drivers are adopted the likelihood of strategic alliance success is greater than when other rationale drivers are used.’

3.3 Summary
The basic theory has been stated. The research design will be based around sampling real strategic alliances that are based on strategic and non-strategic (alternative) drivers, and the success of the alliance will be evaluated.

4. Report of a pilot study
4.1 Introduction
The time available for the pilot study was very restricted, and it was therefore limited to a single sample company. Company X agreed to provide research cooperation for the pilot study.

4.2 The pilot study
Company X is a medium-sized company based in the UK. It has formed two strategic alliances in the past ten years, both with similar-sized competitors. The alliances were formed so that Company X and its partners could tender for large government infrastructure projects. Both projects were subsequently awarded and were valued at around £10m at 2004 prices. Both alliances were formed using strategic rationale drivers in that the partners wanted to be in a position to tender for large projects that were beyond their capabilities acting alone.
Three company directors of company X were interviewed and were asked to complete a short questionnaire. The directors were asked to score their interpretation of the success of each of the two alliances according to short- to medium-term financial return and reduced risk profile. They were also asked to classify the primary driver of the alliance in terms of the six primary drivers discussed in the literature review.

All three directors classified the primary driver as strategic rationale, although one director was unsure whether to classify the driver as strategic rationale or financial necessity. All three directors scored the alliances as highly successful. The scale of success was designed especially for the pilot study and comprised a five-point scale ranging from extremely unsuccessful (0) to extremely successful (5). The average score was 4.0.

The directors were asked to score success in terms of short- to medium-term financial return on a similar five-point scale. The average score was 4.0. The directors also scored reduced risk profile with an average of 3.5.

The questionnaires were backed up with detailed interviews where the directors were asked to explain their responses in more detail. The interviews revealed that all the directors felt that:

- the underlying rationale for the alliances was strategic;
- the alliances were successful;
- in terms of short- to medium-term financial return the alliances were highly successful;
- in terms of reduced risk profile the alliances were successful.

From the pilot study it is reasonable to conclude that alliances driven by strategic rationale are likely to be successful as measured in terms of short- to medium-term financial return and reduced risk profile.

### 4.3 Summary

The pilot study confirmed the suggested relationship indicated by the literature. The pilot suggested that alliances formed under strategic drivers are likely to succeed when measured in terms of short- to medium-term financial return and reduced risk profile. On the basis of these findings the next section goes on to develop the research theory.

### 5. The final theory

#### 5.1 Introduction

This section states the final research theory that will form the basis for the fieldwork aspect of this research programme.

#### 5.2 The research theory

The research theory is simply the basic theory.

The research theory is based on the research core of showing that there is a direct functional relationship between the adoption of strategic rationale drivers
and likelihood of alliance success. This research core has been supported and strengthened using the outcomes of the pilot study.

The research theory is as follows:

‘There is a direct functional relationship between the adoption of strategic rationale drivers and the likelihood of strategic alliance success.’

The research theory will be tested using the following operational hypotheses:

H₀ ‘Where strategic rationale drivers are adopted the likelihood of strategic alliance success is not greater than when other rationale drivers are used.’

H₁ ‘Where strategic rationale drivers are adopted the likelihood of strategic alliance success is greater than when other rationale drivers are used.’

5.3 Summary

This final research theory will form the basis for the design of the research method and subsequent data collection and analysis stages.

6. Summary

The proposed research has been shown to be viable. Based on the literature review and the pilot study it is reasonable to suggest that alliances driven by strategic rationale are more likely to succeed than alliances driven by non-strategic rationale when measured in terms of short- to medium-term financial return and risk profile.

The main research methodology will be designed to analyse this functionality in much more detail using a larger sample size.

2.8.3 A Critique of the Literature Review, Synthesis and Theory Development

Each section of the literature review, synthesis and theory development will be considered in terms of weaknesses and areas that could be challenged by the supervisor and/or the EBS Research Committee.

1. Literature review

The linkage between sections is non-existent. Each section stands alone, with no link to the preceding or following sections. This makes the literature review disjointed and lacking in flow. The whole review should be written so it develops naturally. Each subsection should build on the previous subsection, and the sections collectively should act to develop a central argument that supports the research base being put forward by the candidate. The overall objectives of the literature review are to show that the candidate is aware of the existing knowledge base and that the proposed research is correctly grounded within that knowledge base.

1.1 Introduction

The research title is verbose. It is not clear from the title exactly what the candidate is looking at or is trying to achieve. Titles should be as short and precise as possible. The shortest wording would be as shown below.
'An analysis of the functional relationship between strategic driven rationale and likelihood of strategic alliance success.'

1.2 The literature on strategic drivers

The reference to ‘most senior managers would agree that …’ is unsubstantiated. The candidate should avoid making statements and assertions that are not substantiated by the review. Wherever important statements are made, the candidate should ensure that these are fully supported by relevant citations. This is especially important where the statement has an important bearing on the research.

The review introduces the concept of ‘strategic objectives’ but does not define this term. Achieving strategic objectives is likely to be a success measure, so it is essential to define the term at the outset. A number of other important terms are introduced but not defined. Examples include ‘strategic alignment’, ‘strategic alignment’ and ‘strategic acceleration’. These terms should all be clearly defined and established in the context of the research. Theses often make use of a glossary where important words are defined right at the start of the work. If this is not the case in the example, important terms such as ‘strategic objectives’ should be clearly defined at first use.

The definition for speculative drivers is not referenced. Where a definition takes the form of a quotation, the quotation itself should be referenced.

The definition and development of non-strategic drivers such as speculative drivers is lengthy and does not contribute directly to the review. The candidate needs to identify these alternative drivers and briefly summarise their characteristics. The presentation in the sample literature review spends considerably more time on non-strategic drivers than it does on strategic drivers. This subsection is unbalanced and inefficient.

Considerable space is given to Bentley’s research, although the relevance of Bentley’s work to the current research is not made clear. There is also no attempt to associate Bentley’s research with other cited research, and the level of critical evaluation is again low.

1.3 The literature on alliances and partnerships

The statement about the frequency of alliances and partnerships as compared with mergers and acquisitions is not referenced. If this statement is true, it is important.

The second paragraph makes an attempt to cross-link this section with the previous section. This is good as far as it goes, but much more such linkage is needed throughout the draft.

The use of the word ‘success’ in the third paragraph confuses the issue, as it is not defined. This issue is addressed to some extent subsequently, but the definition should ideally be made before the word is used for the first time.
This section contains relatively few references and would be considerably improved by including a wider range of citations. The extent to which the references are interlinked must also be increased.

The use of punctuation in referencing is inconsistent in this section. While this does not detract significantly from the quality of the work, inconsistencies can be very annoying to the reader and can affect his or her overall enjoyment (or otherwise) in reading the text.

1.4 The literature on alliance and partnership measures of success

‘Success’ as a concept is again not defined. This section makes the first suggestion that alternative measures of success, other than short- to medium-term financial performance, may be used.

The reference to Beech’s five-point scale is of no applicability without further detail and elaboration.

1.5 Summary

More references must be introduced throughout, provided the literature base allows this.

The most serious problem with the literature review is the lack of critique. One of the main objectives of the literature review is to demonstrate to the reader that the candidate is aware of and fully understands the current knowledge base in the discipline and subject areas concerned. An awareness of the current knowledge base is vital, as the candidate’s research has to make a contribution to this knowledge base. It is not possible to make a contribution unless the researcher is aware of what is already known. In designing the contribution, the candidate has to be aware of the differing opinions of other researchers. In many cases the research field may be dominated by different schools of thought. The candidate has to be able to show that he or she has read the literature and compared differing opinions in a structured and scientific manner, and has arrived at his or her own position through this process of critique.

The references used in the literature review generally are poorly used. There is little flow and consistency in their use, and there is a distinct lack of any kind of central theme to the development of the literature review. The review should be rewritten to improve flow.
2. Literature synthesis

2.1 Introduction

The introduction is acceptable, although the fact that nobody has developed a doctoral-level research programme in this area is somewhat worrying. It could be that nobody has successfully unified the three separate sub-fields because, in fact, it is not possible to do so using current knowledge. The lack of a unifying literature base is also an area for concern, as it may be very difficult for the candidate to develop a sufficient understanding of the sub-field linkages to allow the unifying research to progress.

2.2 Literature synthesis

The literature synthesis is particularly poor. It appears that the candidate has simply cut and pasted sections from the literature review and strung them together in more or less the same sequence that each section appeared in the literature review. The idea of the synthesis is that it brings together the various sections of the literature review and combines them into a central theme that is then developed using the basic theory. The synthesis in the case study does not achieve this. The individual sections on strategic drivers, alliances and partnerships and success measures remain as separate entities.

The sections on measurement scales are interesting but contain insufficient information to be of any use. Ideally, the measurement scales should have been examined either in the literature review or in an appendix that is referenced from the literature review.

The bullet point outcomes do not match the main points in the theory (see below).

The relationship between the bullet point outcomes is not made clear. They are left as stand-alone outcomes.

2.3 Summary

The summary is acceptable.

3. The basic theory

3.1 Introduction

The introduction is too short. It merely states the obvious and serves no purpose. The introduction should have been used to set the development of the basic theory in the context of the literature review as a whole.

3.2 The basic theory

The terms ‘alliance’ and ‘strategic alliance’ are used intermittently. The text must make it absolutely clear which term is intended.

The theory itself is too brief and is not fully developed. The research aims and objectives should have been stated first and a logical progression to the basic theory should have been detailed.
The theory is to be tested using only a single operational hypothesis. It is much more advisable to test the basic theory in terms of a single research hypothesis that is itself evaluated using a series of operational hypotheses. For example, a separate operational hypothesis for each non-strategic driver could have been used. This would have provided five operational hypotheses, one for each non-strategic driver case. If each non-strategic operational hypothesis had been accepted this would have considerably strengthened the case for accepting the research hypothesis. This lack of hypotheses breakdown is a serious problem and would be identified by the DBA Research Committee as a matter for the candidate to address.

The term ‘non-strategic’ driver is not defined and is potentially confusing. For example a political driver could be very much a strategic issue. The fact that the candidate has not classified it as strategic does not mean that it is not a form of strategic driver. Again the research committee would notice this and ask for elaboration.

3.3 Summary

The summary is acceptable, although it could be improved to provide a better tie-in with the following section.

4. Report of a pilot study

4.1 Introduction

As before, the introduction is too short and does not provide an adequate lead-in for this section. The introduction should set out the basic position of the pilot study within the literature review and also within the body of the research programme as a whole.

4.2 The pilot study

There are some serious problems with the pilot study.

The pilot study is restricted to a single company, and the findings cannot be regarded as representative.

The aims and objectives of the pilot study are not stated.

The pilot study methodology is not described. The basic information provided is inadequate.

The text does not make clear who the partners were, nor if the same partners were present in both alliances. No background information is given about the partners in either case other than that they were ‘competitors’.

Insufficient detail is given about company X. The information that is given is of little evaluation use as it stands.

It is not clear how forming an alliance to win a government contract is an example of the application of strategic rationale drivers. The sole reason for the alliances appears to have been to pool resources to win a (presumably) relatively short-term contract. There is no immediate link to strategic rationale drivers.
here at all, and the outcome of the pilot study may have no relevance to the main theory.

As the pilot study report stands, it serves no purpose as it contributes nothing to the literature review.

The pilot study report is in fact not a report at all. It does not feature the standard pilot study report headings and presentation of data. It is simply a narrative of a poorly thought-out study that generated results that are of no applicable value. If a pilot study is considered to be necessary, the candidate should redesign the entire pilot study and conduct it properly and develop a proper report from it. If a pilot study is not considered to be necessary, this entire section should be deleted.

The results, such as they are, are based on a mean of only three observations, and as such are not indicative of agreement.

4.3 Summary

The summary is misleading. The pilot study cannot be taken as supporting the research findings discussed in the literature review.

5. The final theory

5.1 Introduction

As before, the introduction is too short and could be developed to introduce this section much more effectively.

5.2 The research theory

The research theory is exactly the same as the basic theory. The pilot study has been taken as confirmation that the research theory is in order and is testable. In fact, the pilot study as it stands has provided no support for the basic theory and no justification for the use of the same wording and hypotheses as were stated for the basic theory. The research theory, like the basic theory, is based purely on one operational hypothesis and lacks the usual research hypothesis – operational hypothesis structure.

The ‘research’ theory should technically be referred to as the ‘final’ theory to avoid confusion.

The research theory is weakly structured, and there would be potential problems if the research programme was allowed to proceed using this stated theory.

5.3 Summary

The summary is adequate.

6. Summary

The confusion between strategic alliances and alliances appears to continue in this final section.
No details of the proposed main research methodology are given. This is a serious weakness and is, again, likely to be identified by the DBA Research Committee.

2.8.4 **Areas Where the Literature Review, Synthesis and Theory Development Could Be Improved**

Some specific aspects of the literature review where the quality of work could be improved are listed below. These areas are indicative only. The candidate could include these and/or other possible areas for improvement. Marks are awarded for the relevance and application of additional or alternative elements.

- **Flow.** The flow of the literature review would be improved by introducing more connectivity between the various sections. The three review sections stand alone and do not flow into each other. The degree of cross-referencing and cross-citation should be increased, and any references that cross between sections should be highlighted.

- **Context.** The literature review should make it clear that there are no references that link each of the three separate review sub-fields. The literature review should also make it clear that there are several important implications. The literature synthesis is unlikely to be able to be fully developed if there are no cross-linking works that can be cited. The researcher appears to be accepting that he or she is happy to develop the DBA research element in an area where no previous work has been done and where no reference material can be called upon for guidance. The full literature review is likely to be relatively short, and there may be problems in validating the research.

- **References.** The literature review could be improved by the inclusion of more references. The number included is adequate, but in most cases only one reference is cited to justify each point made. Ideally more references should be used, especially in support of some of the more important points, provided the literature base allows this. The references themselves appear to cover a relatively narrow time window from the late 1990s to 2002–2003. This may be appropriate if the bulk of the research has been published within this timescale. Given that the subject base is alliances and partnerships, and the fact that alliances and partnerships have been around for a long time, it would seem reasonable to assume that some of the founding research must have been carried out earlier than the late 1990s.

- **Logic.** The flow of logic from the literature review through the synthesis and pilot study is generally reasonable but could be significantly improved. This ties in to some extent with the flow of the work. The logical progression between sections could be improved, as could the justification for each level in the chain of reasoning in the development of the basic theory. The bullet point summaries at the end of the literature synthesis do not tie in fully with the development of the theory, and the logic (if any) linking them together is not explored.

- **Referencing.** There is some variation in the use of brackets and semicolons in the referencing. The Harvard referencing system should be standardised throughout. An alternative system could possibly be used provided it is applied
universally throughout the text. Inconsistencies may have a relatively minor impact, but they can be irritating to the reader, and it is generally advisable to avoid irritating the examiners where possible!

- **Definitions.** The literature review contains a large number of terms and ideas that are not defined. For example, ‘success’ is clearly central to the main thrust of the research but it is not defined at any point. Several other important issues such as strategic alignment and strategic alignment are similarly not defined. The literature review could be improved significantly by the inclusion of a simple glossary where these and other important words and terms are defined.

- **Pilot study.** The pilot study is inappropriate and contributes almost nothing to the literature review submission. The pilot study should either be omitted or should be redesigned and carried out again. If repeated, the pilot study should be reported using a full report format. The methodology should be fully discussed and copies of questionnaires and results should be presented. The sample size should be increased. The relevance of the pilot study to the literature synthesis and the generation of the basic and final theories should be made explicit. The pilot study should form an intrinsic part of the development of the theory.

- **Hypotheses.** Ideally, the overall research hypothesis should be re-expressed as a single research hypothesis that is sub-divided into a series of individual operational hypotheses. These operational hypotheses should then be used as the basis for the design of the research methodology as their appraisal will form the basis for the acceptance or rejection of the research hypothesis.

- **Reference use.** The literature review should be rewritten. Reference clusters should be emphasised, and the overall use and sequence of references should be improved. The review should incorporate a logical progression where an overall argument is built up around some kind of evolving central theme or core. This is totally lacking in the present format.

**Learning Summary**

The candidate should now understand:

- the basic structure and content of a doctoral literature review;
- the relationship between the literature review and literature synthesis;
- the linkages between the literature review and the rest of the research;
- the basic sources of literature review material;
- how to use references collectively;
- how to maintain focus during the execution of the literature review.

**The Literature Review**

- The main purpose of the review is to help develop an understanding of and insight into previous research relevant to current research, and to present a reasoned critique of its contents.
- It is not possible to embark upon a reliable research project without a thorough knowledge of the subject area. The approach to the literature re-
view depends, to a considerable extent, on the research strategy and paradigms adopted.

- If a deductive approach is adopted, much of the review will focus upon evaluating theoretical and conceptual frameworks from which the research aims and objectives, research questions and hypotheses will be derived. These would subsequently be tested against empirical data.
- If an inductive approach is adopted, the data should be used to develop a grounded theory subsequently to be related to the literature. The grounded theory will be developed and applied incrementally, with adjustments made to the central theory in the light of the knowledge gained from the application.
- The candidate must strive to make a contribution to the knowledge base, even if this is only some critical observations on previous research papers, while linking what he or she has written to what has already been published.
- The primary objectives of the literature review should be to:
  - help further refine research questions and objectives;
  - identify research gaps in previous work;
  - discover explicit recommendations for further research that might provide key research questions to address;
  - help avoid replicating research;
  - provide an insight into conceptual frameworks and methodologies that may be appropriate to the candidate’s own research questions and objectives;
  - provide a context for the research;
  - summarise and synthesise existing theory on the chosen subject;
  - identify trends in research activity.
- When reading a specific research paper or book, there are several issues that should be addressed when note-taking. These are:
  - the research aims and objectives;
  - the theoretical approach;
  - the methodology used;
  - the context of the research;
  - the major results;
  - any flaws in the research;
  - connections to the research topic.
- Ideally the literature review should:
  - start at a general level before focusing down to the specific research questions and objectives;
  - provide a brief overview of key ideas;
  - summarise and compare the work of the leading researchers;
  - narrow down to highlight the work most relevant to the research;
  - provide a detailed account of the findings of this work;
  - highlight those issues where the research will provide new insights;
- indicate where, in subsequent chapters of the thesis, these items will be explored.

- It is very important that the candidate is able to look at the mass of literature available and be able to identify the quality material from the remainder.

- In most cases it is safer and more reliable to select the research leaders in a particular field as a starting point and work back from there.

- The literature should be critically evaluated and not simply accepted and described. This critical perspective should include the theory, conceptual frameworks, methodology, data collection, analysis and conclusions.

- A good review implies:
  - consistency;
  - effective analysis and synthesis;
  - the use of ideas in the literature to justify a particular approach to the topic;
  - a demonstration that the research contributes something new.

- When reviewing an existing publication the key questions to be asked are:
  - What was the methodological approach used?
  - Was it rigorously applied?
  - What data collection methods were employed, and were they appropriate?
  - Is the analysis flawed in any way?
  - Are the author’s assumptions explicit?
  - Has the author drawn logical and appropriate conclusions on the basis of the analysis?
  - Has the publication made a meaningful contribution to the development of theory or of conceptual frameworks?

**Sources of Literature**

- As the literature review progresses the candidate should ideally work up towards the higher-quality sources such as refereed research journals and conference proceedings.

- Refereed sources are those that are subject to peer review before being published.

- The most obvious classification of literature sources is **online** and **offline**.

- Online sources are those that can be accessed directly from a computer terminal.

- Offline sources are those that cannot be accessed directly from a computer terminal.

- A bibliographic database usually contains the titles of papers, their authors, and some keywords to describe the content, as well as, in many cases, an abstract of the paper.

- The Internet provides a huge range of resources, and is expanding all the time. However, specific information is variable in quantity and quality.
Search engines are the most useful method of Internet searching for the literature review as these will enable the location of the most current items.

Search engines will access World Wide Web sites that have, either in their titles or in brief descriptions, keywords specified as search parameters.

It is important to utilise a variety of such tools, as each will have different interfaces, ways of searching and methods of displaying information.

The Heriot-Watt University library offers a full distance learning service to matriculated distance learning students and doctoral candidates.

At the time of writing the Heriot-Watt University library was a member of the UK libraries plus scheme. Under this scheme, at the time of writing, matriculated distance learning students and doctoral candidates of Heriot-Watt University could make use of library services at over 100 other UK libraries.

Most Western university libraries and many university libraries across the world are subscribers to an interlibrary loans scheme. This allows one library to obtain material from other libraries.

Planning the Literature Review

It is important to plan the literature review carefully. The most immediate consideration to bear in mind is that most candidates find searching, reading and critically evaluating the relevant literature a time-consuming process that generally takes far longer than expected.

It is very unusual to encounter a literature review that is completed ahead of time.

In planning the literature review, the candidate should adopt the same basic approach that was outlined for the research proposal in Introduction to Business Research 1.

It is very important that the candidate is able to navigate through the literature as it accumulates. The candidate should ideally read each article and make notes on the article. These notes could be maintained on paper or electronically.

One major benefit of note-taking is that writing things down stimulates thinking them through properly and greatly aids the process of producing a critical review.

Candidates should maintain detailed records of all relevant papers, books and quotations throughout the course of the research.

A citation is an acknowledgement within the text of the source from which the information has been obtained.

A reference is a detailed description of the source from which the candidate has obtained the information.

All references should be listed alphabetically at the end of the thesis. If a number of publications by the same author are cited, these should be listed in chronological order.
- The Harvard referencing system is strongly recommended for EBS DBA candidates.
- The actual number of references given at the end of each chapter depends very much on the subject area and on the size of the existing knowledge base.

**Maintaining Focus**
- Candidates should always be careful to avoid the risk of becoming sidetracked.
- Sidetracking is the tendency for candidates to read literature only partially related to the research area. The candidates may include non-related areas within the research field and in some cases expand the scope of the work to include these areas.

**The Literature Synthesis**
- The literature synthesis brings the various areas covered by the literature together so that the candidate can develop an overview of the main findings of the research and use this overview to develop the basic research theory.
- The synthesis must be both accurate and reliable. If the synthesis does not match the content of the literature review, then the basic research theory may be misaligned in relation to the true knowledge base.
- The literature synthesis acts as the basis for developing the basic theory. The basic theory acts as the basis for the pilot study. The pilot study is then synthesised with the literature synthesis in order to generate the research theory.
- The research theory acts as the basis for the research question, which in turn acts as the basis for the research and operational hypotheses.

**Review Questions**

**True/False Questions**

**The Literature Review**

2.1 The literature review should act as a critique. T or F?

2.2 The literature review is largely an academic exercise. T or F?

2.3 An average doctoral literature review contains about 1000 words. T or F?

2.4 The candidate should use only refereed research journal sources. T or F?

2.5 Direct quotations from the literature should never be used. T or F?
2.6 The literature can be assumed to be fixed from the moment the review starts. T or F?

2.7 The literature review must include every reference ever written on the appropriate subject. T or F?

**Sources of Literature**

2.8 All necessary literature sources are now online. T or F?

2.9 The candidate can obtain virtually all literature sources using a single search. T or F?

2.10 It is advisable to use a range of search techniques. T or F?

2.11 The British National Bibliography is an online source. T or F?

2.12 The Heriot-Watt library provides a full service for matriculated distance learning doctoral candidates. T or F?

2.13 Online sources are more scientifically reliable than offline sources. T or F?

2.14 Textbooks are always a better source of reference materials than journals. T or F?

2.15 The overall number of journal publications per year is increasing. T or F?

2.16 All published work is correct, accurate and reliable. T or F?

**Planning the Literature Review**

2.17 It is important to plan the literature review. T or F?

2.18 In planning the literature review it is advisable to use a WBS-based approach. T or F?

2.19 The literature review must always be completed one chapter at a time. T or F?

2.20 Candidates should always maintain a record of the material that they have read. T or F?

**Referencing**

2.21 Where possible, all citations should be fully referenced. T or F?

2.22 The Vancouver referencing system is recommended for EBS DBA literature reviews. T or F?
Maintaining Focus

2.23 Maintaining research focus is a side issue. T or F?

2.24 Sidetracking is never acceptable. T or F?

The Literature Synthesis

2.25 The literature synthesis is designed to draw the review of the various subject areas together. T or F?

2.26 The literature synthesis is essentially the first step in creating a full research theory. T or F?

2.27 The literature synthesis is an important consideration in the design of the pilot study. T or F?

2.28 It is always necessary to include a pilot study. T or F?

2.29 The pilot study does not contribute to the design of the main research methodology. T or F?

Multiple-Choice Questions

The Literature Review

2.30 The main purpose of the review is to:
I. help develop an understanding and insight into relevant previous relevant research.
II. present a reasoned critique of the relevant literature.
III. generate ideas for a suitable research field.
IV. develop new research areas.
Which of the above are true?
A. I and II.
B. I, II and III.
C. II and IV.
D. III and IV.

2.31 If a deductive approach is adopted, much of the review will focus upon:
A. evaluating theoretical and conceptual frameworks.
B. developing a suitable grounded theory.
C. falsifying existing theories.
D. quantifying the literature.
2.32 If an inductive approach is adopted, the data should be used to:
A. develop a mathematical model.
B. develop a suitable grounded theory.
C. test existing models.
D. validate existing work.

2.33 The major objectives of the literature review are to:
I. help to further refine research questions and objectives.
II. identify research gaps in previous work.
III. discover explicit recommendations for further research that might provide key research questions.
IV. help to avoid replicating research.
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.

2.34 When reading a piece of literature candidates should note (amongst other things):
I. the methodology used.
II. the context of the research.
III. the major results.
IV. any flaws in the research.
Which of the above are true?
A. I and III.
B. I, II and IV.
C. I, II, III and IV.
D. II, III and IV.

2.35 During the course of the research the literature base is likely to:
A. remain static.
B. increase significantly.
C. increase slightly.
D. decrease.

Sources of Literature

2.36 Online sources are those that are:
A. available from a computer terminal.
B. available by telephone.
C. featured on television programmes.
D. available only in book (paper) form.
2.37 The following are examples of online indexes:
   I. Emerald.
   II. BIDS.
   III. Helicon.
   IV. FinBar.
Which of the above are true?
A. I and II.
B. I, II and III.
C. II, III and IV.
D. III and IV.

2.38 The best source of reference material is:
   I. Textbooks.
   II. Journals.
   III. Conference proceedings.
   IV. Newspapers.
Which of the above are true?
A. I only.
B. I, II and III.
C. I, II, III and IV.
D. III and IV.

Planning the Literature Review

2.39 In general terms the completion of the literature review usually takes:
A. about the time planned.
B. less than the time planned.
C. considerably less than the time planned.
D. longer than the time planned.

Referencing

2.40 EBS recommends the use of the:
A. Claymore referencing system.
B. Vancouver referencing system.
C. Edinburgh referencing system.
D. Harvard referencing system.
2.41 The following are examples of a Harvard referencing system reference:

II. Ryan(1)
III. Ryan (Journal of Managerial Psychiatry page 12)
IV. Ryan (2003a)

Which of the above are true?
A. I only.
B. I and II.
C. I and IV.
D. I, III and IV.

2.42 The phrase et al. means:

A. as previously stated.
B. as previously referenced.
C. and others.
D. and again.

2.43 Under the Harvard referencing system, the individual sources in the references list are listed:

A. chronologically.
B. alphabetically by author.
C. by relevance.
D. by frequency of citation.

2.44 Under the Harvard referencing system where more than one source by the same author is included in the references list, these sources are listed:

A. by importance.
B. chronologically.
C. by frequency of citation elsewhere.
D. randomly.

2.45 Under the Harvard referencing system, the last item (highest level of detail) to appear in any reference should be:

A. author's name.
B. title of the journal in which the reference appeared.
C. volume of the journal in which the reference appeared.
D. page numbers of the journal that the reference covered.

Maintaining Focus

2.46 The issue of maintaining focus is important because candidates often:

A. lose interest in the research.
B. become sidetracked.
C. disagree with the supervisor.
D. encounter difficulties because of work pressures.
The Literature Synthesis

2.47 In developing a set of operational hypotheses the candidate essentially has to synthesise:
A. one main element of the research.
B. two main elements of the research.
C. three main elements of the research.
D. four main elements of the research.

2.48 The literature synthesis generally takes place:
A. before the pilot study synthesis.
B. at the same time as the pilot study synthesis.
C. just after the pilot study synthesis.
D. before and after the pilot study synthesis.

2.49 The synthesis of the literature and the report of a pilot study (if applicable) generate the basic knowledge and understanding necessary for the formulation of the:
I. research question.
II. basic theory.
III. operational hypotheses.
IV. research hypotheses.
Which of the above are true?
A. I only.
B. I and II.
C. I, III and IV.
D. II, III and IV.

2.50 The operational hypotheses are directly derived from the:
A. research hypotheses.
B. research question.
C. literature review.
D. research proposal.
Module 3

The Pilot Study and the Formal Theory

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Learning Objectives

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

- design a pilot study;
- select an appropriate methodology;
- generate and interpret results;
- write a pilot study report;
- synthesise the pilot study results with the literature synthesis;
- use the results to develop a formal theory;
- break the formal theory down into research and operational hypotheses.

3.1 Introduction

This module develops a more detailed understanding of how to design, implement and exploit the results of a pilot study. There is no specific format for the pilot study; the design varies in relation to the characteristics of the overall research programme. The module is therefore very generalised: it attempts to develop an understanding of the various factors for consideration, and offers general guidelines. The actual design and implementation of the pilot study are specific to each research programme. The supervisor will offer advice on specific design and implementation requirements.
3.2 Pilot Study Design

3.2.1 Introduction

This section will develop an understanding of some of the main issues involved in the design of the pilot study. As discussed earlier in the text, the pilot study is very important as it is central to the development of the research theory. If the pilot study is unreliable, the basic and formal theories may also be unreliable. Although the pilot study design can vary widely depending on the application, this section will focus on a number of specific tools and techniques for illustrative purposes. There is no implication that candidates should adopt any of the approaches used in this section. The primary outcome for the candidate should be an appreciation of the various stages involved in designing the pilot study and the importance of the design in relation to the research programme as a whole.

3.2.2 Aims and Objectives

It will be recalled that the pilot study should be designed with the initial intention of developing results that can be synthesised with the literature synthesis, as shown in Figure 3.1. The pilot study summary is used in combination with the literature synthesis to develop the basic theory into a formal theory. Note that the pilot study provides the first insight into the likely outcomes of the research. In some cases this insight may be favourable, whereas in other cases it could lead to a decision to redesign one or more aspects of the research.

The pilot study should, therefore, be:

- **compatible with the literature synthesis.** The pilot study must be compatible with the synthesis outcomes from the literature review. It is common for candidates to develop a pilot study that is effective and reliable but not properly aligned with the outcomes from the literature synthesis. The most common mistake is that the pilot study evaluates only part of the scope of the literature synthesis. Candidates can become particularly interested in one aspect emerging from the literature review and synthesis and may be tempted to focus the pilot study on this particular area. Candidates should remember that the pilot study should be fully exploited and should address as many of the primary areas in the main research programme as possible.

- **reliable.** To generate reliable results, the pilot study must be carefully designed. Candidates will recall the issues of validity and reliability discussed in *Introduction to Business Research 1*. Unreliable results can influence the whole way in which the candidate develops the research theory from the original literature synthesis. The research methodology used in the pilot study must also be designed with great care.
widely effective. The pilot study should, ideally, provide a range of different levels and types of evaluation. At one level it should provide a reliable and effective evaluation of the proposed research methodology. At another, it should provide results compatible with one or more aspects of the literature synthesis and useful in the development of the formal theory. At another level still, the pilot study should provide results that enable the candidate to consider the suitability of the proposed research sample.

achievable. Candidates often make the mistake of trying to do too much with the pilot study. In many cases, the pilot study is the candidate’s first experience of ‘real’ research, and it is very easy to be over-ambitious and attempt too much. Inexperienced researchers often underestimate the time required to design and implement individual elements of research programmes. A delay in one element can cause a sequential delay in one or more other areas, resulting in serious time problems.

flexible. Where the pilot study uses a real organisation as its sample, the design should be sufficiently flexible to allow for the dynamic nature of the organisa-
tion. The participating organisation may require a number of meetings and discussions with the candidate before the pilot study scope and execution are agreed. In some cases changes may occur within the organisation while this process is taking place. The degree of change can be significant and can affect the validity of the pilot study.

- robust and replicable. The pilot study is a component of the overall research programme. As such, it is subject to the same scrutiny by the external examiners as any other part of the submitted thesis. The methodology, sample size, data collection and analysis should be carefully designed to withstand close scrutiny. Ideally, the pilot study should be replicable. Another researcher, using the same methodology and sample characteristics, should arrive at the same basic set of results. Replication can be achieved only where the level of detail and reliability in the research design is sufficiently defined. It should be appreciated that the pilot study need not always be replicable. In the DBA programme it could well be the case that this ideal requirement does not apply – for example where a candidate is studying his or her own organisation as a main case study. In this instance the outcomes of the pilot study will be unique and limited to that particular organisation.

**Time Out**

**Think about it: pilot study design flexibility.**

In 2003 an EBS doctoral research candidate was conducting research into knowledge management. He secured the support of a local company manufacturing high-quality fashion accessories and spent a considerable amount of time talking to the company directors and various managers. The candidate was able to develop a detailed organisational breakdown structure for the company, identifying and mapping the distribution of both required and actual competency profiles. He then calculated the knowledge and competency gaps within the company, compared with the ideal competency distribution. The next stage was to conduct a series of structured interviews within the company to evaluate the accuracy of his competency gap distribution model.

Just as the candidate was about to embark on his programme of structured interviews, the company announced it had made a major strategic decision to reorganise all aspects of its operations. These changes included the closure of the entire UK production facility. Production was taken over by overseas contractors in the Far East. The primary reason for these radical changes was that the company had been making losses for several years, and these losses had suddenly increased to alarming levels. The company’s bankers became involved, and the directors felt that they had no choice but to outsource as much as possible, starting with production.

The reorganisation was major and led to the company shedding around 70 per cent of its staff. This obviously invalidated the knowledge gap model the candidate had prepared so carefully, and he had no option but to cancel the pilot study and seek another company to use as a source.
By the time the candidate has completed the pilot study he or she should be in a position to:

- decide which research methodology to use for the main research study, having tested it and, where necessary, refined it in the pilot study;
- justify the final choice of data source, having considered compatible or comparable sources in the pilot study;
- develop a final formal research theory based on the outcome of the pilot study and the literature synthesis;
- demonstrate that the formal research theory has been derived from a synthesis of the literature and of the pilot study.

3.2.3 Subject Selection

Where possible, the subject of the pilot study should be carefully selected so that it is compatible with the main study. The candidate could use an unrelated subject, provided he or she can demonstrate that the evaluation method can be successfully transposed onto the main study subject.

The candidate may choose to focus his or her research, for example, on the strategic alignment of university departments in the process of implementing a major internal reorganisation. The university might be trying to improve its efficiency by merging a series of individual departments into a series of new schools in an attempt to improve efficiency. In a typical technologically-based university, the departments include the following:

- Architecture
- Biological sciences
- Chemistry
- Chemical engineering
- Civil engineering
- Computing and information technology
- Economics
- Electrical engineering
- Languages
- Mathematics
- Mechanical engineering
- Petroleum engineering
- Town planning.

As part of the reorganisation process, the university may wish to form a number of new schools where these departments are effectively merged. In this case, there is likely to be a degree of blurring of strategic alignment as the new schools adopt a new strategic plan that is effectively a compromise of the strategic plans of the component individual departments. The new strategic plans will probably be drawn up by the senior staff in the various new schools, probably in consultation with university senior staff. The candidate may wish to use the new school of engineering as the subject for the main study. This would probably involve the amalgamation of
the former departments of chemical engineering, civil engineering, electrical engineering and mechanical engineering. The candidate may arrange to observe the strategic planning process in the new engineering school over a period of months running from some time before the amalgamation to some time, perhaps several months, after amalgamation. The candidate might choose to study the development of the new strategic plans using the school of engineering as a longitudinal case study. The new school of construction design may be due for amalgamation ahead of the school of engineering. The school of construction design would make an ideal pilot study for the main longitudinal study because:

- it is undergoing a similar amalgamation process within a similar set of conditions and constraints;
- the environmental control conditions (imposed by the university) are similar in both cases;
- both schools have similar core business activities comprising (presumably) teaching, research and consultancy;
- both schools are (again, presumably) of similar size;
- the timescale for the transition of change is similar in both cases;
- the heads of both schools are likely to have similar priorities and success criteria;
- the new strategic plans being developed by each school are likely to be similar, as they are largely funded using the same assessment criteria;
- both sets of strategic plans will have to be compatible with overall university strategic plans;
- both schools are likely to be operating in similar competitive environments;
- both schools are likely to be subject to the same resource constraints, such as the amount of money that can be spent on the transition;
- the potential implications of amalgamation, such as staff reductions, are likely to be similar in both cases.

The school of construction design is, therefore, apparently a good choice for the subject of the pilot study as it is highly compatible with the proposed main study subject. In particular, a large proportion of the variables affecting the achievable degree of strategic alignment is constant in both cases. This greatly simplifies the problem involved in transposing the pilot study approach onto the main study. The greater the degree of incompatibility between the pilot and main study subjects, the more complex the transposition process becomes. For example, if the student carries out the pilot in one university with the intention of conducting the main study in another, a significant proportion of the areas of compatibility listed above immediately disappears.

For example:

- the amalgamation process may be taking place under different conditions and constraints. One university may allow considerably more flexibility than the other;
- the environmental control conditions (imposed by the university) may be different depending on individual university policy;
• the schools may have different core business activities. One university may specialise in research whereas the other may concentrate on teaching;

• the schools could be of significantly different sizes. Some universities are much larger than others;

• the timescale for the transition of change could be significantly different. One university may be in more of a hurry because of its financial condition;

• the heads of school may have entirely different priorities. One may be concerned with expansion whereas the other may be concerned with survival;

• the new strategic plans being developed by the schools could be entirely different. One university may wish to diversify whereas the other may wish to specialise;

• both sets of strategic plans will still have to be compatible with overall university strategic plans, but the two university strategic plans could have entirely different strategic objectives;

• the schools could be operating in different competitive environments. One school might be primarily interested in attracting research funding whereas the other may be more interested in increasing student numbers;

• the schools could have different resource constraints, depending on the financial position of each university;

• the potential implications of amalgamation could be different. One university may impose significant staff reductions as part of the amalgamation process whereas the other may not.

If the candidate opts for a pilot study in one university and a main study in another, the areas of difference and potential incompatibility listed above will all have to be addressed separately as part of the development process of the methodology. Each area introduces additional complexity and potential problems.

Candidates should make every effort to explore the various subjects available for the pilot and main studies and try to ensure that the pilot study subject is as compatible as possible with the proposed main study subject.

3.2.4 Methodology Selection

As mentioned above, the choice of methodology is particularly important, as an inappropriate research methodology could lead to the generation of potentially misleading results and the subsequent misalignment of the formal theory.

The methodology used in the pilot study is often very similar, or almost identical, to the methodology proposed for the main study. In some cases, pilot studies may make use of more than one methodology in order to take advantage of potential triangulation. In other cases, there may be two or more distinct research methods operating within the same overall research methodology. For example, a candidate may base his or her pilot study on the results obtained from questionnaires and may then decide to conduct a series of structured interviews to act as a back-up to the questionnaires. In such a case, the interviews may be designed to perform a number of functions. These are discussed in Section 3.2.4.2.
As far as the pilot study is concerned, there are likely to be a limited number of methodological approaches available to the candidate. The range is likely to be limited owing to resource and time constraints. In business and management research, the data collection methods are likely to be:

- the analysis of company records and historical data;
- questionnaires;
- interviews.

These methods are all relevant to both empirical and theoretical research. Methods involving direct experimentation are less likely to be applicable. In most cases, the pilot study methodology is likely to be based on the use of case studies. A case study is simply a subject sample data source (a case) that is studied in some detail. The case could be a specific company or department within a company. The case study could be executed in a number of different ways. The three most common approaches (as discussed in *Introduction to Business Research 1*) are:

- longitudinal case studies;
- cross-sectional case studies;
- validation case studies.

Longitudinal case studies are concerned with the analysis of the case over a relatively long period of time, covering a significant proportion of the lifecycle of the case. The lifecycle is the total time the case exists. For example, in a merger of two companies the lifecycle ranges from the first point at which the merger is considered to the point where it is complete. In this example, some obvious lifecycle stages include the following.

- **Inception:** where the strategists within one or both companies first generate the concept.
- **Feasibility:** where the basic financial and logistical issues are considered.
- **Pre-contract negotiations:** where the senior managers of both companies negotiate the terms and conditions of the merger and the final structure of the merged companies.
- **Stakeholder consultation:** where the various stakeholders are consulted and ‘sounded out’ on the acceptability, or otherwise, of the proposal. This phase can be particularly complex and time consuming.
- **Shareholder vote:** in most countries, if the company is public, there is a requirement for the companies concerned to call a meeting of all shareholders to put the proposed merger to a vote. There is usually a minimum ‘in favour’ vote required before the proposed merger can be progressed.
- **Final pre-contract negotiations:** the final negotiations usually include elements such as the final positioning of senior managers within the new organisational structure and the issue of new shares for old.
- **The contract:** merger contracts can be extremely complex. The contract has to address all issues relevant to both companies. Contracts are usually drawn up by specialist lawyers, in consultation with the senior managers and legal advisors of both companies.
- **Due diligence:** where each company carefully analyses the other to establish the true cost and value of the merger.

- **Implementation:** this is usually the most difficult and demanding phase. Implementation is typically considered in terms of the planning subphase and the implementation subphase.

- **Commissioning:** in this phase, the merged entity starts to work wholly as a new and different company. In practice, there is a considerable overlap between implementation and commissioning. Some parts of the merger may be commissioned while others are still in the implementation phase.

- **Completion:** the point at which the merger becomes complete. Most mergers do not have a specific completion date. In many cases, this is the point where senior managers lose interest in the fine mechanics and detail of implementation!

A longitudinal study may be concerned with this entire merger lifecycle, collecting data on the merger process from inception right through to completion. Alternatively, a longitudinal study might consider a limited number of lifecycle phases, such as the pre-contract or post-contract phases. The obvious advantage of a longitudinal study is that it creates a better understanding of the detailed processes involved.

A cross-sectional study may be concerned with only one lifecycle phase or, depending on circumstances, two or three. In the simplest case the candidate might choose a particular merger and conduct a longitudinal study lasting, perhaps, six months and then attempt to confirm or support the longitudinal study by performing a series of cross-sectional studies in other mergers.

A validation study is concerned, as the name suggests, with attempting to validate the results of other studies. In the above example, the candidate may carry out one longitudinal study on one merger and reinforce the results by carrying out a series of cross-sectional studies of different phases of other mergers. The candidate might then attempt to validate the longitudinal and cross-sectional case study results by extending the research to look at yet more mergers, probably on a cross-sectional basis.

For the pilot study, a shortened longitudinal study with a small number of cross-sectional studies and, perhaps, one validation study may be adequate. The obvious positioning of the longitudinal element of the pilot study is towards the latter stages of the literature review. This concept is shown diagrammatically in Figure 3.2.
3.2.4.1 Pilot Study Questionnaire Design

The candidate must give careful consideration to the design of any questionnaires used in the pilot study. The external and internal examiners will carefully examine the design of any questionnaires to be certain the data they produce are reliable.

Questionnaire design is considered in more detail in Introduction to Business Research 3. In the development of the pilot study, however, the candidate must have a sufficient understanding of questionnaire design to be able to design a workable and reliable questionnaire producing reliable and valid data.

Irrespective of the actual design of the pilot study questionnaire, a major consideration is always the meaning of the key terms. In terms of reactance it is important to ensure that the candidate’s understanding of any key terms or phrases matches that of the questionnaire respondents. For example a questionnaire might ask a candidate about ‘strategic alignment’. There may be more than one possible definition for the term, and it is important that a common definition is established as part of the questionnaire. There are two primary ways in which this issue can be addressed. The first option is to include a definition of terms at the start of the questionnaire. The second is to rephrase the questions.
The most obvious design for a questionnaire is to list a series of questions and invite the respondent (the person completing the questionnaire) to say whether or not he or she agrees or disagrees with the question. This is best achieved by the use of a simple listing of questions followed by tick boxes for yes or no answers. This basic format is shown in Table 3.1.

**Table 3.1 Typical yes/no questions**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does the proposed merger improve the strategic alignment of the organisation?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2</td>
<td>Is the general perception of the merger within the organisation positive?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3</td>
<td>Will the proposed merger improve the knowledge management base within the organisation?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

This approach has the obvious disadvantage of being superficial. It asks ‘what’ the respondent thinks rather than ‘why’ he or she thinks it. Questionnaires are limited in this respect. If ‘why’ questions are included, respondents often do not have the time, or the inclination, to complete the detailed answers required. Questionnaire response rates are often low unless the candidate is careful to prepare the situation before issuing them. The best way to achieve a higher response rate is to integrate the questionnaire survey with the research and notify the recipients before the questionnaires are issued.

The next stage of questionnaire development is to design a response pattern that allows some kind of **phased rating** where the respondent is invited to answer according to a scale. A typical example is a scale of ‘one to ten’ which corresponds to the respondent’s level of agreement, or disagreement, with the statement. An example of this format is shown in Figure 3.3. In this case the respondent would mark the questionnaire at point 10 if he or she strongly disagreed with the statement. A neutral response would be marked at point 5 and so on.
Figure 3.3  Typical rating questions

This slightly more detailed level of response allows more flexibility in the handling of the response data and obviously offers more detailed analysis possibilities than the simple yes or no answers shown in Table 3.1. The most obvious methods for presenting the response data would be a simple histogram as shown in Figure 3.4, a pie chart as shown in Figure 3.5 or a line diagram as shown in Figure 3.7.

| 1. The proposed merger improves the strategic alignment of the organisation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |

| 2. The general perception of the merger within the organisation is positive |
| --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |

| 3. The proposed merger will improve the knowledge management base within the organisation |
| --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |

Figure 3.4  Histogram showing response distribution
In this case, the pie chart and the histogram show the same basic information. The representations are based on the following response distribution to statement 1: ‘The proposed merger improves the strategic alignment of the organisation.’

- Strongly agree: 55%
- Agree: 25%
- Neutral: 10%
- Disagree: 5%
- Strongly disagree: 5%

This level of analysis, although elementary, is useful for picking out initial patterns in the data generated by the questionnaire.

The data can also be used to show comparative results across the various questions. Assume the responses to the three questions are as shown in Table 3.2. The corresponding pie chart comparison is as shown in Figure 3.6.

<table>
<thead>
<tr>
<th>Table 3.2 Response distribution to the three questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Statement 1</td>
</tr>
<tr>
<td>Statement 2</td>
</tr>
<tr>
<td>Statement 3</td>
</tr>
</tbody>
</table>

The data could be used more effectively in generating initial patterns and trends by the use of a simple line diagram representation as shown in Figure 3.7.

The diagram indicates that the respondents feel very strongly that the proposed merger would improve the strategic alignment of the organisation. The response peak is very high and well to the left on the diagram. The general positive perceptions and improvement in knowledge management curves, however, peak more to the right and are closely related. This suggests a generally positive link between perceptions of improved strategic alignment, positive attitudes and improved knowledge management with a stronger link between positive organisational...
attitudes and improved knowledge management than between either of these variables and improved strategic alignment.

3.2.4.2 Pilot Study Interview Design

The candidate may choose to use a series of structured interviews in addition to the questionnaire survey. In such cases, the structured interviews may be designed to perform one of a number of different functions. These are discussed below.

- **Validate the questionnaire results.**
  The questionnaire survey may apparently generate a good set of results. The candidate may, however, be concerned that the questionnaire results do not give a true representation of the opinions of the respondents. There could be a number of reasons for such concern. One example is a small and, perhaps, statistically insignificant sample size resulting from a low questionnaire response rate. In this case, the candidate may wish to show that the questionnaire responses are indeed representative by extending the survey to include additional face-to-face interviews. The interview questions could be identical to those posed in the questionnaire or they could be worded differently while essentially asking the same questions. Provided the candidate carries out a sufficiently large number of interviews, the interview responses could be used to support (or otherwise) the questionnaire responses.

- **Develop the questionnaire results.**
  The interview questions could be designed to develop the questionnaire results. This is a common application for a second survey tool. The questionnaire responses may indicate some interesting patterns. Obvious examples are areas where everybody seems to agree and areas where there are wide variances in response. The candidate may decide to develop these areas further, and may design the interview questions specifically to examine them in more detail. In such a case the interview questions are designed to invite a more detailed response on selected areas of the questionnaire survey, particularly in areas directly relevant to the literature synthesis and basic theory.
Figure 3.6 Pie chart representation of the responses to the three questions
Expand the questionnaire results.

The questionnaire may indicate some interesting connections between issues not perceived or foreseen when it was designed. This is a common occurrence where the researcher is relatively inexperienced and new to the chosen research area. The candidate may wish to avoid issuing a new questionnaire, perhaps on logistical or reactance grounds. In such a case, a series of face-to-face interviews may be useful in developing the newly discovered interest areas. In some cases, these areas can be of great importance. This is one of the great pleasures of research but it is also one of the most precarious. The research mechanism may throw up new insights that simply did not exist before, either in the mind of the candidate or in the body of the literature. Such areas can be very interesting and may justify a partial realignment of the research programme to develop and exploit them. The inherent danger is that any realignment may involve significant changes to the initial research aims and objectives, raising the risks discussed in Introduction to Business Research 1.

Contradict the questionnaire results.

The candidate may wish to check the reliability of the questionnaire responses by specifically setting out to contradict them using interview survey response data. In effect, this approach is an attempt to falsify (see Introduction to Business Research
the results of the questionnaire survey. In this case, the interview questions are designed specifically to contradict the findings of the questionnaire survey. If the questionnaire results are representative, the degree of contradiction encountered should be low. If the degree of contradiction is high, then the candidate may have a problem.

- **Examine for reactance and bias.**
  The candidate may be concerned about his or her own impact on the sample and interpretation of the questionnaire results. The implementation of face-to-face interviews certainly introduces the opportunity for reactance to have an effect. If the same people are subject to both questionnaire survey and interview, and if the same questions are asked, any difference in response could be a function of interviewer reactance. If the difference is significant, the candidate may be concerned that his or her presence is having a significant effect on the respondents. If this is the case, the use of interviews may be suspect and other aspects of the research methodology, including the direct presence of the candidate, may be called into question.

  The wording of the interview questions will depend on the specific application being sought. If the objective of the interviews is to confirm the questionnaire results, the wording will be similar to those posed in the questionnaire but structured slightly differently. Interviews are also often used as a means of securing qualitative data, which can be used in support of the quantitative data generated from questionnaires. Some examples are discussed fully in Section 3.3.

### 3.3 Pilot Study Design Example

Assume that a candidate is concerned with developing a main research programme based on the degree to which the potential for knowledge management is increased by mergers designed to improve the strategic alignment of an organisation. The candidate has completed the literature review (or has nearly completed it) and the literature synthesis suggests the line of reasoning below. Candidates should note that this reasoning was initially developed in Module 2.

#### 3.3.1 The Basic Theory to Be Tested

1. Main points from the synthesis.
   - There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
   - There is a functional relationship between long-term success and cultural approval.
   - There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
   - There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
   - There is a functional relationship between cultural positivity and the positive development of human capital.
2. Summary points from the synthesis.
   - Strategic alignment is related to long-term success.
   - Long-term success is related to cultural approval.
   - Strategic fit is related to strategic alignment.
   - The degree of strategic alignment (alignment engineering) is related to cultural positivity.
   - Cultural positivity is related to the positive development of human capital.

3. Postulations.
   - Strategic alignment is related to cultural approval.
   - Strategic alignment is related to cultural positivity.
   - Cultural positivity is related to the positive development of human capital.

4. Underlying concept.
   - Strategic alignment is related to the positive development of human capital.

5. Basic theory.

   *In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.*

6. Research question.

   *In mergers, is the degree of strategic alignment a function of the potential to develop the positive development of human capital?*

7. Research aim.

   *To show that the degree of strategic alignment is a function of the potential to develop the positive development of human capital.*

8. Research objectives.

   *To show that, where high levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also high.*
   *To show that, where low levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also low.*

9. Research hypothesis.

   \( H_0 \): As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.
   \( H_1 \): As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.

10. Operational hypotheses.

    \( H_0 \): Strategic alignment is not related to long-term success.
    \( H_1 \): Strategic alignment is related to long-term success.

    \( H_0 \): Long-term success is not related to cultural approval.
    \( H_1 \): Long-term success is related to cultural approval.
3.3.2 The Basic Methodology to Be Used

3.3.2.1 Background

In further developing this example, assume the following:

- The candidate has secured the cooperation of a suitable company. The company has agreed to allow the candidate access to all historical records and carry out an extensive questionnaire survey at all levels within the company.
- The company has also agreed to allow the candidate unrestricted access to all levels for interview.
- The candidate has designed a suitable questionnaire based on scalar-rated questions. Senior management has approved the questionnaire.
- The candidate has also designed a suitable set of structured interview questions, also approved by senior management.
- The candidate has also received permission to attend and record a significant number of pre-merger and post-merger staff meetings. The company has arranged these meetings to enable staff to express any concerns or reservations about the merger.
- The candidate intends to use a formal content analysis software package to quantify the recorded meeting discussions and interview responses. The candidate also intends to make a qualitative or subjective appraisal of these transcripts as support for the quantitative analysis.

3.3.2.2 Questionnaire Design

In the simplest form, the pilot study may use a questionnaire directly related to the primary operational hypotheses. A brief example is given below in Figure 3.8.

Consider statement 1 in more detail.

Statement 1. The long-term success of company X is related to the degree of strategic alignment that it achieves through merger.
This statement attempts to establish a perceived relationship between the long-term success of the company and the degree of strategic alignment it achieves through the proposed merger. The question does not seek to ascertain whether any such relationship is positive or negative. If a large proportion of respondents strongly agree with this statement, this response is indicative of a perception within the organisation that there is, indeed, a link between long-term success and the degree of strategic alignment offered by the merger.
The candidate should therefore consider how to generate further data on this subject, especially in relation to the functional relationship between the two variables. The obvious way of achieving this is to add further statements examining this relationship in more detail. A statement further into the questionnaire could therefore suggest that:

**Figure 3.8 Sample questionnaire**

The candidate should therefore consider how to generate further data on this subject, especially in relation to the functional relationship between the two variables. The obvious way of achieving this is to add further statements examining this relationship in more detail. A statement further into the questionnaire could therefore suggest that:
**Statement 11: The greater the degree of strategic alignment offered by the merger, the greater the likelihood of long-term success of company X.**

This statement establishes whether there is a perception that increased strategic alignment is positively linked to the likelihood of the long-term success of the company. Statement 1, therefore, established whether there is a perceived relationship and statement 11 established whether or not this relationship is perceived to be positive. The same basic work breakdown structure (WBS) should be adopted for each of the first five primary statements.

Having carefully designed the pilot study questionnaire and agreed it with the supervisor, the candidate may then issue the questionnaire, receive responses and process the results. These results could indicate a range of different preliminary conclusions. Some obvious examples are listed in Table 3.3 and Table 3.4.

### Table 3.3
**Responses to statement 1. The long-term success of company X is related to the degree of strategic alignment that it achieves through merger**

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>80%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>75%</td>
<td>15%</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>50%</td>
<td>30%</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>60%</td>
<td>30%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 3.4
**Responses to statement 11. The greater the degree of strategic alignment offered by the merger, the greater the likelihood of long-term success of company X**

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>85%</td>
<td>10%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>75%</td>
<td>15%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>45%</td>
<td>35%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>70%</td>
<td>25%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The questionnaire results for these two statements show a clearly positive response. Without any more detailed analysis it appears that:

- the majority of stakeholders at all levels within the company agree with statements 1 and 11;
• the degree of agreement is generally the same for both statements;
• in both cases the degree of agreement appears to increase with seniority.

These results are indicative. The initial conclusions are indicated by the results. The next stage in the analysis is to consider why these results have occurred. The candidate might use a series of structured interviews to deduce why the respondents have made their responses.

3.3.2.3 Interview Design

As discussed earlier, the interview questions could be designed to perform a range of different functions. The candidate might use them to attempt, for example, to confirm or falsify the questionnaire response results. In this case, the candidate may decide to use the first phase of interviews to examine the preliminary conclusions listed above. In this application, the candidate is initially concerned with developing the questionnaire responses in more detail.

In terms of the interview responses, the candidate has adopted a dual approach. The interviews will be recorded and transcribed, subject to the approval of the company. In some cases the collaborating company may request copies of the transcripts before they are analysed. In many cases, the candidate’s research ethics (see Introduction to Business Research 1) may require the offer of the same courtesy to the respondent. Some respondents may prefer to see the transcript before it is returned to the company for approval. Any editing may result in a reduction in the validity and reliability of the data contained within the transcript. This problem is, however, unavoidable in some cases.

As a general rule and under ethical considerations, it would be regarded as standard practice for the candidate to allow respondents to respond anonymously where the company (his or her employers) have access to the basic respondent data. It would (perhaps) be unreasonable to expect the candidate to answer with complete honesty about a proposed merger where the respondent knows for sure that his or her senior manager will have immediate and full access to what the respondent said.

In performing the interviews, the data generated will be analysed using two primary approaches. The candidate should remember the importance of triangulation (see Introduction to Business Research 1). The candidate may be able to arrive at combined conclusions by using different research methods as part of the overall research methodology. The two primary approaches to the interview data will be quantitative and qualitative.
Quantitative analysis will take place by the use of content analysis. The candidate will process the transcripts through a standard content analysis package to analyse the words within the transcripts. As discussed earlier, this approach is widely used in the analysis of political speeches. The US Central Intelligence Agency (CIA) makes wide use of the technique to interpret the overall underlying message behind political speeches or documents. A good example is the analysis of political statements made in the run-up to a possible US-led war against Iraq in the early months of 2003.

**Time Out**

**Think about it: content analysis.**

On 8 November 2002 the 15-member UN Security Council issued resolution 1441, which recalled a number of previous resolutions issued by the UN in relation to the disarming of the Iraqi regime under Saddam Hussein. Resolution 1441 basically said that the UN deplored the fact that Iraq had failed to allow weapons inspectors to perform their duties as agreed under earlier directives, and that Iraq had not demonstrated any material evidence towards disarmament, especially in relation to the destruction of weapons of mass destruction and medium-range offensive rocketry.

After the successful completion of the US military operations in Afghanistan, the US switched its attention to Iraq. The US began pressing for an armed threat to the Iraqi regime in the event of it failing to comply with resolution 1441. The US found allies in some UN member states, but not in others. As the debate continued, a clear polarisation of views began to emerge. The US and UK (both permanent members with veto) stood firmly together. Germany (permanent member) and France (permanent member with veto) emerged strongly against military intervention, instead arguing that Iraq should be given more time to comply. As the debate escalated, the two other permanent members with veto, China and Russia, also came out against military intervention.

Researchers using content analysis were able to show significant changes in the word content of political speeches made by the various leaders as the debate escalated. In most cases, the wording acted as a predictive tool to the eventual stance taken by the speech-makers concerned. In some cases, the emphasis of the word content also changed. The speeches made by the French leader, for example, showed an increasing use of the word ‘veto’. Permanent members with veto can use the veto to block UN resolutions. The US has used its veto on 76 occasions, especially to block resolutions that criticised Israel (35 times). Content analysis of the French leader’s speech showed that ‘veto’ was used increasingly in the period leading up to the UN vote on the issue. The use of the word ‘veto’ was also used increasingly in concordance with intransigent phrases such as ‘under any circumstances’ and ‘will not fail to’. Interestingly, France had, up until this point, used its veto 18 times, 13 of which were in conjunction with UK and US vetoes. Researchers were able to show that the probability of France using its veto increased in direct proportion to the use of the word ‘veto’ and as an increasing function of the use of intransigent terminology. In the
US, the CIA and military altered their strategy in the assumption that France would veto any new resolution authorising the use of military force against Iraq. The US strategies became more and more based on the assumption that the US would act alone or possibly with the assistance of the UK only.

Quantitative analysis of interview response has the advantage that:
• it is a widely used and accepted analysis technique;
• standard established measurement systems are available;
• it can provide insights into variations in actual meaning, quickly and effectively.

Quantitative analysis of interview response is limited in that:
• it requires detailed transcription and the use of specialist software;
• the level of analysis may be relatively superficial.
• there is always the chance that word association and concordance do not imply any deeper meaning.

**Qualitative analysis** will take place by the subjective analysis of the transcripts. Subjective analysis is the method used by the brain to understand the content of speech or text. When person A speaks to person B, person B subjectively analyses the content of person A’s words to develop an understanding of what person A is saying. If person A is speaking in German and person B does not speak the language, person B cannot understand the use of particular words, either singly or in association, and is therefore unable to make a subjective appraisal of what person A is saying.

Qualitative analysis has the advantage that:
• it mirrors the way in which the brain naturally works;
• it allows a greater depth of analysis because it offers the opportunity for the understanding of deeper meanings;
• it is relatively simple and straightforward to perform.

Qualitative analysis of an interview response is limited to the extent that:
• the interviewer may misunderstand the interviewee;
• the interviewee may not actually say what he or she means;
• the interviewee may make underlying inferences that are not immediately detectable.
• the interviewee may use ‘diplomatic’ or ‘phrased’ terms.

The candidate now has to consider how to word the interview questions so that the results can be triangulated against the results of the questionnaire survey. For example, the questionnaire survey has established a perceived link between the greater degree of strategic alignment offered by the merger, the greater the likelihood of long-term success of company X.

Interview questions, based on the merger example, could be as listed below.

**Question 1.** Why should an increase in the degree of strategic alignment offered by the merger result in a greater likelihood of long-term success for company X?
A sample of the transcribed response to this question by one senior manager might be as follows.

I think that strategic alignment is an essential element in the long-term success of the company. If you look around at mergers and acquisitions over the years, it is clear that the related moves have generally done better than the unrelated ones. I mean there are some real classics ... look at GEC Marconi or Time Warner AOL. In those cases, the merging companies were unrelated. They may have seemed like good moves at the time but we all know what happened to the dot.com bubble. In those cases, there was a distinct lack of strategic alignment and the result was anything but a success. I think, in some cases, the unrelated moves lead to problems with the cultural compatibility of the two merging organisations. I mean, Time Warner make movies while AOL provide Internet services. There is no clear strategic alignment there ... no opportunity for the skills within each company to be blended and work together to form new synergies and scale economies.

Company X has always been successful, and we ascribe a lot of that to our maintenance of strategic alignment. When considering mergers or acquisitions the first questions we ask ourselves are “to what extent does this move strengthen our strategic alignment?” and “how does this move increase our overall strategic competitive advantage?” I mean that’s what it’s all about in the long term ... to achieve long-term sustainable success you have to secure long-term strategic competitive advantage, and in order to secure long-term strategic competitive advantage you have to establish and rigorously maintain your strategic alignment. The corporate graveyards are full of companies that did not observe that simple rule.

Question 2. What about cultural approval and long-term success?

Well that’s a very interesting question. We believe that if the people are happy, the company is happy. You have to have a satisfied staff and workforce if you expect to achieve long-term success. People work better if they know what they are trying to achieve and if they know where they are going. It’s as simple as that. We broadcast our intentions to our people at an early stage. We tell them what we have in mind and why the move increases the strategic alignment of the company in terms of its long-term strategic objectives. We then communicate openly and in detail at each stage of the merger or acquisition process. We don’t hide anything. If there are going to be redundancies we announce it right up front and we launch a structured programme to help people relocate. We bend over backwards to help them. We carry out a full competency analysis right at the start and make sure that we make the best use of the human capital resources provided by the merger. You have to remember that the company is its people. In order to achieve long-term strategic success you have to have the right people doing the right jobs. Human capital is all important. It is vital for long-term success. You can only develop your human capital properly if your people are happy. They have to have a positive attitude and you can achieve that best by making sure that the company remains focused on its long-term strategic objectives. People know where the company is going and how the merger will contribute to do that.

In the above example, the candidate started by asking one of the formal questions in the questionnaire survey. The candidate knew that the majority of senior managers perceive a relationship between the degree of strategic alignment offered
by the merger and the likelihood of the long-terms success of the company. The interview question is asking why this should be the case. The second question is completely open. It does not attempt to lead the interviewee in any particular direction. It does, however, attempt to establish a link between the previous response (to a question where the link is already established) and a second research area (human capital development). The questionnaire has already established a link between cultural positivity and the potential for human capital development. This question now seeks to extend and develop the questionnaire response by exploring the possible link between the degree of strategic alignment offered by the merger and cultural positivity. If this link can be established, it suggests a possible direct link between the degree of strategic alignment offered by the merger and the potential for the development of human capital within the company. This link could then be used as a basis for another interview question.

It is generally advisable for the candidate to try to foresee the potential development of such links within the design of the interview. It is very common, however, for the candidate to suddenly see such a potential link while the interview is already in progress. This type of occurrence tends to become more frequent as the candidate learns more and more about the subject areas. Experienced researchers can develop additional questions ‘off the cuff’ as they suddenly become aware of a possible link or implication as the interview progresses. It is, of course, important to remember that additional unplanned questions may cause problems as previous interviews will, presumably, have been carried out without these questions being asked.

In analysing the sample response given above, the candidate may do a simple word search highlighting the key research relevant words. In this case, the selected words might be:

- strategic alignment/relatedness/unrelatedness
- success/problems/competitive advantage
- mergers/acquisitions
- cultural approval/positivity
- human capital/capability/skills

The content analysis programme will reveal the following occurrences of these words.

*I think that strategic alignment is an essential element in the long-term success of the company. If you look around at mergers and acquisitions over the years it is clear that the related moves have generally done better than the unrelated ones. I mean there are some real classics … look at GEC Marconi or Time Warner AOL. In those cases the merging companies were unrelated. They may have seemed like good moves at the time but we all know what happened to the dot.com bubble. In those cases there was a distinct lack of strategic alignment and the result was anything but a success. I think in some cases the unrelated moves lead to problems with the cultural compatibility of the two merging organisations. I mean Time Warner make movies while AOL provide Internet services. There is no clear
strategic alignment there … No opportunity for the skills within each company to be blended and work together to form new synergies and scale economies.

Company X has always been successful and we ascribe a lot of that to our maintenance of strategic alignment. When considering mergers or acquisitions the first questions we ask ourselves are “to what extent does this move strengthen our strategic alignment?” and “how does this move increase our overall strategic competitive advantage?” I mean that’s what it’s all about in the long term… to achieve long-term sustainable success you have to secure long-term strategic competitive advantage, and in order to secure long-term strategic competitive advantage, you have to establish and rigorously maintain your strategic alignment. The corporate graveyards are full of companies that did not observe that simple rule.

Question 2. What about cultural approval and long term success?
Well that’s a very interesting question. We believe that if the people are happy, the company is happy. You have to have a satisfied staff and workforce if you expect to achieve long-term success. People work better if they know what they are trying to achieve and if they know where they are going. It’s as simple as that. We broadcast our intentions to our people at an early stage. We tell them what we have in mind and why the move increases our strategic alignment of the company in terms of its long-term strategic objectives. We then communicate openly and in detail at each stage of the merger or acquisition process. We don’t hide anything. If there are going to be redundancies we announce it right up front and we launch a structured programme for helping the people relocate. We bend over backwards to help them. We carry out a full competency analysis right at the start and make sure that we make the best use of the human capital resources provided by the merger. You have to remember that the company is its people. In order to achieve long-term strategic success you have to have the right people doing the right jobs. Human capital is all important. It is vital for long-term success. You can only develop your human capital properly if your people are happy. They have to have a positive attitude, and you can achieve that best by making sure that the company remains focused on its long-term strategic objectives. People know where the company is going and how the merger will contribute to that.

In this case the analysis might reveal the following basic data:

**Word count**
- strategic alignment/relatedness/unrelatedness: 11 occurrences
- success/problems/competitive advantage: 7 occurrences
- mergers/acquisitions: 4 occurrences
- cultural approval/positivity: 2 occurrences
- human capital/capability/skills: 5 occurrences
Concordance analysis

- strategic alignment/relatedness/and success/competitive advantage: 4 occurrences
- strategic alignment/relatedness/and human capital/capability/skills: 4 occurrences

If the total number of sentences in the interview extract is 100, the probability of occurrence of the words ‘strategic alignment’ and related words appearing in a sentence is 11 per cent. The probability of the words ‘human capital’ and related words appearing in the same sentence is 5 per cent. The probability of both word sets appearing in the same sentence is therefore 0.6 per cent. The actual number of occurrences is four times, which equates to 4 per cent of sentences.

This suggests that the two word sets appear together much more frequently than would be expected by a random distribution of the word sets throughout the extract. The significance of association of these two word sets can be calculated by plotting 0.6 per cent as the mean on a normal distribution and considering 4 per cent in terms of the number of standard deviations it represents above the mean. In this case, the significance of association is high. This implies that the interviewee strongly associates strategic alignment with human capital, even though this question was not asked specifically in the interview. This is an example of a deduction that can be made by analysing interview responses quantitatively.

The same interview responses can also be analysed qualitatively. There are several areas within the transcription offering subjective qualitative support for the quantitative results. For example:

I think in some cases the unrelated moves lead to problems with the cultural compatibility of the two merging organisations. There is no clear strategic alignment there... No opportunity for the skills within each company to be blended and work together to form new synergies and scale economies.

We bend over backwards to help them. We carry out a full competency analysis right at the start and make sure that we make the best use of the human capital resources provided by the merger.

In order to achieve long-term strategic success you have to have the right people doing the right jobs. Human capital is all important. It is vital for long-term success.

You can only develop your human capital properly if your people are happy. They have to have a positive attitude, and you can achieve that best by making sure that the company remains focused on its long-term strategic objectives. People know where the company is going and how the merger will contribute to that.

These extracts all support the idea that the respondent perceives strategic alignment to be related to human capital.

The same basic approach would be adopted for the meetings the candidate intends to attend. Content analysis is slightly more complex where several people are
speaking in a meeting. This approach applies provided individuals can be properly identified.

### 3.3.3 Summary

This section has given a brief overview of one possible research methodology that might be used for a pilot study where the basic research theory is:

\[ \text{In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.} \]

The pilot study methodology has used a selected set of tools and techniques to address the research question, which is:

\[ \text{In mergers, is the degree of strategic alignment a function of the potential to develop the positive development of human capital?} \]

In designing the research methodology it was assumed that:

- the candidate has secured the cooperation of a suitable company;
- the company has also agreed to allow the candidate unrestricted access to all levels for the use of questionnaire and interview surveys;
- the candidate has opted to base the pilot study on a longitudinal case study basis.
  The primary data collection tools will be questionnaires and structured interviews. The questionnaires will be issued first and the interview questions will be partly based on the questionnaire results;
- the candidate has opted to use both qualitative and quantitative analysis techniques;
- questionnaires will be analysed using simple statistical techniques based primarily on frequency of response comparisons;
- interviews and meetings will be recorded and transcribed. The transcriptions will then be analysed using a combination of quantitative tools based on content analysis and qualitative approaches;
- the interview questions will be designed to extend and develop the questionnaire responses where appropriate;
- the suitability of the longitudinal case study approach will be assessed with a view to using it as the main study primary approach;
- the suitability of the quantitative and qualitative techniques, described above, will also be evaluated with a view to using them in the main research case studies.

### 3.4 Pilot Study Report

#### 3.4.1 Introduction

This section develops one possible format for the pilot study report. The candidate should note that the term ‘report’ may be slightly misleading. The pilot study report
is an integral part of the doctoral thesis and, as such, adopts exactly the same writing style and presentation format as the rest of the thesis. It is effectively a report because it is reporting on the design and implementation of the pilot study and also on the results generated and the way they have been interpreted.

In most theses the pilot study report and theory development form a self-contained chapter.

3.4.2 Pilot Study Report Example

It will be recalled from Module 1 that the pilot study report generally comprises a number of distinct sections. The titles and arrangement of the sections will vary in relation to the nature of the research programme. A likely set of headings is listed below.

- Introduction.
- Subject details.
- Methodology.
- Results.
- Pilot study summary.

The result is a set of outcomes and conclusions that are then combined with the literature synthesis to develop the formal theory.

The following sections 3.4.2.1 to 3.4.2.5 are written in the form of a real pilot study report. Narrative notes are included, where required, in italics. Most of the content of sections 3.4.2.1 to 3.4.2.5 will now be self-explanatory. Please note that all references in these sections are fictitious and are for illustrative purposes only.

3.4.2.1 Introduction

The pilot study was designed to apply the main themes emerging from the literature synthesis to a real company in order to assess the applicability of the literature synthesis outcomes. The pilot study was conducted as a longitudinal study lasting just under six months, from June 2002 to January 2003. The subject used was company X. This company had already agreed to act as the subject for the pilot study. A letter of support is contained in the research proposal (see Introduction to Business Research 1). Data were collected using a combination of questionnaires, structured interviews and attendance at merger team meetings where the proceedings were recorded and transcribed.

The primary objective of the pilot study was to collect and process real data in order to assess the validity of the primary outcomes from the literature review synthesis. The validity of the literature synthesis outcomes is important as these are subsequently used as the basis for the formation of the formal theory.

A secondary objective of the pilot study was to assess the suitability of the longitudinal case study approach using questionnaires, structured interviews and attendance at merger team meetings as the primary data collection tools.

These basic objectives are common to many pilot studies (Jones, 1996).
This joint approach, where literature synthesis outcomes are considered in parallel with the development and refinement of the proposed main study research, places the pilot study within the area of grounded theory (Pikelet, 2002). This type of grounded theory approach has been used in the implementation of numerous pilot studies in the past (Muffin, 1999; Charles, 2000; McIntosh, 2001).

Note: The candidate should reinforce all sections of the pilot study with suitable references where appropriate. In this case, the candidate is justifying the basic pilot study objectives by referring to Jones (1996), and has established the pilot study research methodology firmly in the sphere of grounded theory. Muffin (1990), Charles (2000) and McIntosh (2001) have used the same approach for pilot studies.

3.4.2.2 Subject Details

The subject of the pilot study was company X. The company has not been named in compliance with a confidentiality agreement, signed at the outset of the research programme. Company X is a medium-sized retail organisation with a turnover of around £60 million for 2002/2003 and around 6000 employees across the UK. Company X has a history of mergers and acquisitions, having merged twice in its history and made a total of four acquisitions, two of which were hostile. The candidate was given access to staff at all levels in the company headquarters and at all levels in individual retail outlets. The candidate was also given access to a series of merger team meetings set up by the company to facilitate the dissemination of information relating to the merger, through all levels of the company.

Note: It may be necessary to provide further information on company X in an appendix. The examiners will wish to satisfy themselves that company X is reasonably compatible with the company or companies used in the main study (see Section 3.2.2).

3.4.2.3 Methodology

Individual staff members were issued with a structured questionnaire containing 30 questions. A copy of the questionnaire is shown in appendix 1 (there is no appendix 1 in this example). This questionnaire was subsequently modified and used in the main study data collection process. The questions related to the operational hypotheses and required the respondent to provide responses on a basic one to ten scale to indicate an outcome between ‘strongly agree’ and ‘strongly disagree’. Questionnaire responses were extracted and checked before being entered on the pilot study research database. The data were then analysed using simple statistical techniques to show the frequency of occurrence of different responses.

Questionnaires have been widely used in similar research in the past. Grebe (1998) used questionnaires to collect data on post-merger cultural integration, and Pikelet (1999a) used questionnaires in her research on post-merger conflict propagation. A total of 106 questionnaires were issued for this pilot study of which 89 were fully completed and returned. Respondents were chosen at random across the entire workforce of company X.

Note: The candidate’s use of references here is weak. The text does not indicate the industry or sector in which Grebe (1998) and Pikelet (1999a) were working. The candidate has already indicated that company X is a retail organisation. It is important that the Grebe (1998) and Pikelet (1999a) references
are expanded to establish the compatibility of their work with the current research. If this compatibility cannot be shown, there is little point in including the references.

Individual staff members were also interviewed using a standard structured interview question list. The interview questions were designed to confirm and extend the data recovered from the questionnaire responses. In all cases, the interview questions asked basically the same as those posed in the questionnaire but sought to link together one or more questionnaire questions in an attempt to provide further information on possible interlinkages. This approach was used by Watt (1980) in his research into pre-merger organisational design in the UK retail industry.

Interview responses were analysed both quantitatively and qualitatively. Quantitative analysis took the form of content analysis. All recordings were made with the consent of those present. The recording equipment was not visible during the meetings. The recordings were later fully transcribed, scanned and formatted for electronic analysis. The transcripts were then coded and analysed using a standard content analysis package. The package adopts the Sarah–Ryan typology (Sarah and Ryan, 1995). This approach has been widely used in the content analysis of team interaction in the social sciences (Davie, 2000a; Edwards, 2002; Walker, 2003). Qualitative analysis was by subjective appraisal of the transcriptions. In some cases, specific extracts of the transcriptions were used for triangulation with the quantitative results from the questionnaires and merger team observations. A total of 18 structured interviews were carried out for this pilot study. Interviewees were chosen at random from across the entire workforce of company X.

Note: The reference to Watt (1980) is more specific, but the candidate should increase the number of references if possible. There is also the problem that the Watt (1980) reference is old. This could indicate that the candidate struggled to find a suitable reference for the use of interviews in the appropriate sectors. The examiners would probably pick up on this point in the examination.

Merger team meetings were observed and recorded using the same approach and processing tools as detailed above for the interview responses. The Sarah–Ryan (Sarah and Ryan, 1995) typology has been used on a number of occasions for the analysis of team and group interaction (Davie, 2000; Adams, 2000). A total of 12 merger team meetings were attended in connection with the collection of data for this pilot study.

The methodology was applied in order to test the following operational hypotheses:

\( H_0: \) Strategic alignment is not related to long-term success.
\( H_1: \) Strategic alignment is related to long-term success.

\( H_0: \) Long-term success is not related to cultural approval.
\( H_1: \) Long-term success is related to cultural approval.

\( H_0: \) Strategic fit is not related to strategic alignment.
\( H_1: \) Strategic fit is related to strategic alignment.
H₀: The degree of strategic alignment (alignment engineering) is not related to cultural positivity.
H₁: The degree of strategic alignment (alignment engineering) is related to cultural positivity.

H₀: Cultural positivity is not related to the positive development of human capital.
H₁: Cultural positivity is related to the positive development of human capital.

3.4.2.4 Results

The primary pilot study results are listed below. All results are stated in the context of source perceptions. For example, where functionalities are identified, these are as perceived by the staff within company X. It could be argued that, even if every respondent perceives a functionality to exist, that functionality does not necessarily exist, because everyone could be wrong. This issue will be addressed in the main study, where a greater degree of triangulation takes place.

1. Strategic alignment is a function of long-term success.
2. Long-term success is a function of cultural approval.
3. Strategic fit is a function of strategic alignment.
4. The degree of strategic alignment is a function of cultural positivity.
5. Cultural positivity is a function of the positive development of human capital.
6. Strategic alignment is a function of the potential for the positive development of human capital.

Results 1 to 5 were generated directly from the acceptance of the operational hypotheses. Exploiting the functionalities demonstrated by findings 1 to 5 allowed the development of asserted finding 6.

Result 1. Strategic alignment is a function of long-term success

The questionnaire survey results were as shown in Table 3.5.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>80%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>75%</td>
<td>15%</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>50%</td>
<td>30%</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>60%</td>
<td>30%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The proportion of senior managers, functional managers and other stakeholders who agreed with statement 1 was 90 per cent. The corresponding figure for opera-
tives was lower, but still significant, at 80 per cent. The highest incidence of disagree-ment was amongst operatives, at 15 per cent.

Content analysis of interview and meeting transcripts indicated that the word association between strategic alignment and long-term success was significantly higher than would be expected for a random distribution. In the case of the interviews, the association was significant at the 99 per cent confidence level in all cases apart from operatives, where the word association was not significant. The corresponding value for the meetings transcriptions was significant at the 95 per cent level, again with the exception of operatives, where there was no significant association. There was considerable subjective support for result 1 in both interviews and merger team meetings. Extracts of the appropriate transcripts are given in the appendix.

**Result:**

- Reject $H_0$: ‘Strategic alignment is not related to long-term success.’
- Accept $H_1$: ‘Strategic alignment is related to long-term success.’

**Result 2. Long-term success is a function of cultural approval**

The questionnaire survey results were as shown in Table 3.6.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>70%</td>
<td>20%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>70%</td>
<td>10%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>60%</td>
<td>25%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>60%</td>
<td>30%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The level of agreement with statement 2 was, again, high, although not quite as high in relation to result one. The proportion of senior managers, functional managers and other stakeholders who agreed with statement 2 was 80–90 per cent. The corresponding figure for operatives was still lower, although the overall proportion of operatives who agreed is higher than was the case in finding 1.

Content analysis of interview and meeting transcripts indicated that the word association between long-term success and cultural approval was higher than would be expected for a random distribution. In the case of the interviews, the association was significant at the 95 per cent confidence level in all cases, while the corresponding value for the meetings transcriptions was significant at the 90 per cent level in all cases. Subjective interpretation of interview and meetings transcripts suggested that the higher level of operative agreement to statement 2 occurred because operatives
feel more strongly about cultural approval. Subjective analysis suggested that operatives feel less in control of the conditions necessary for cultural approval than senior managers. They therefore regard positivity as an important issue.

Result:

- **Reject** $H_0$: ‘Long-term success is not related to cultural approval.’
- **Accept** $H_1$: ‘Long-term success is related to cultural approval.’

**Result 3. Strategic fit is a function of strategic alignment**

The questionnaire survey results were as shown in Table 3.7.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>70%</td>
<td>20%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>70%</td>
<td>10%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>10%</td>
<td>20%</td>
<td>50%</td>
<td>10%</td>
<td>10%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>50%</td>
<td>20%</td>
<td>10%</td>
<td>15%</td>
<td>5%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Majority agreement was present in all cases apart from operatives. The level of agreement was, again, lower than in findings 1 and 2, although still sufficiently prominent as to be clear. The low figure for operatives was surprising. Content analysis showed the concordance between strategic alignment and strategic fit to be at least 90 per cent in all cases, again with the exception of the operatives. In the case of the operatives, the word association was not significant. Subjective analysis of interview and meeting transcripts subsequently suggested that this low reading could have arisen as a result of confusion. Some 60 per cent of operatives in interview asked for clarification of the question. This suggests that the questionnaire survey distribution for operatives averages around 50 per cent because of confusion. Lack of understanding of the question both on the questionnaire and at subsequent interview could explain the 50 per cent neutral reading.

Result:

- **Reject** $H_0$: ‘Strategic fit is not related to strategic alignment.’
- **Answer** $H_1$: ‘Strategic fit is related to strategic alignment.’

**Result 4. The degree of strategic alignment is a function of cultural positivity**

The questionnaire survey results were as shown in Table 3.8.
Table 3.8  Responses to questionnaire statement 4. The degree of strategic alignment achieved through merger is related to the degree of cultural positivity achieved through merger

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>80%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>75%</td>
<td>15%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>65%</td>
<td>25%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>60%</td>
<td>35%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The proportion of agreement for statement 4 was very high, particularly at functional manager and senior manager level, with no disagreement at all. The degree of approval, although uniformly high, was again highest among senior managers and lowest among operatives. The concordance word association was significant at the 99 per cent level in all cases, with a marginally higher level of concordance at interview than while attending merger team meetings. Subjective analysis of meeting transcripts suggested that mergers causing the least change and disruption are those most welcomed by staff. Generally, the more strategically aligned the merger, the lower the likelihood of any significant changes in work practices. This point of view was more prevalent among operatives than among functional or senior managers.

Result:

- Reject H₀: ‘The degree of strategic alignment is not related to cultural positivity.’
- Accept H₁: ‘The degree of strategic alignment is related to cultural positivity.’

Result 5. Cultural positivity is a function of the positive development of human capital

The questionnaire survey results were as shown in Table 3.9.

Table 3.9  Responses to questionnaire statement 5. Cultural positivity is related to the positive development of human capital

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior managers</td>
<td>85%</td>
<td>10%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Functional managers</td>
<td>90%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Operatives</td>
<td>70%</td>
<td>20%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Other stakeholders</td>
<td>60%</td>
<td>30%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>
The proportion of agreement for statement 5 was, again, very high. For the first time, the proportion of operatives’ approval was at least equal to the proportion of other stakeholders’ approval. The concordance analysis showed a clear word association between cultural positivity and human capital. This association was always at least 99 per cent. Subjective analysis of interview responses suggested that most managers felt that human capital potential can be most readily developed in an atmosphere characterised by a pervading positive attitude. Discussion of this issue at meetings was infrequent, although when the HR department did raise the issue of human capital development, the discussion continued with a significant word association between human capital development and cultural attitude, particularly positive cultural attitude.

Result:

- Reject $H_0$: ‘Cultural positivity is not related to the positive development of human capital.’
- Accept $H_1$: ‘Cultural positivity is related to the positive development of human capital.’

**Result 6. Strategic alignment is a function of the potential for the positive development of human capital**

The line of reasoning behind result 6 is as shown below.

Strategic alignment = $f(\text{Long-term success})$

and

Long-term success = $f(\text{Cultural approval})$

dependent

Strategic alignment = $f(\text{Cultural approval})$

and since

Cultural positivity = $f(\text{Positive development of human capital})$

then

Strategic alignment = $f(\text{Positive development of human capital})$

The results of the pilot study indicate that there is a functional relationship between the degree of strategic alignment developed by a merger and the potential for the positive development of human capital. The nature of the functionality has not been established by the pilot study. The identification of the characteristics of the functionality will become a research aim of the main study.

There is no evidence in the literature that any work on the conjoined areas of strategic alignment and the potential for the positive development of human capital has been published. The functionality appears to represent a gap in the literature although it is fully supported by other literature in related sub-fields.

**3.4.2.5 Pilot Study Summary**

The pilot study has generated the following primary results.

- Strategic alignment is a function of long-term success.
- Long-term success is a function of cultural approval.
• Strategic fit is a function of strategic alignment.
• The degree of strategic alignment is a function of cultural positivity.
• Cultural positivity is a function of the positive development of human capital.
• Strategic alignment is a function of the potential for the positive development of human capital.

The results generated have been based on the single longitudinal study using company X as a sample. The results are limited in terms of the following factors.
• The results were generated using relatively small sample sizes.
• The source was limited to a single company.
• As a result of time limitations, it was not possible to track the perceptions of individuals or groups over time.
• The questionnaire survey and interview approaches worked well, but there is no guarantee they will do so with a larger sample size.
• The generation of result 6 is based on a chain of reasoning that is not proven.

The above example shows a clear line of deductive and inductive reasoning based on the outcomes of the pilot study and the literature synthesis. In this example the line of reasoning is reasonably logical and supported. In many cases the outcomes of the pilot study may contradict one or more elements of the literature synthesis. In such cases the candidate may have to reconsider one or more components of the basic theory. In other cases the candidate may have to look again at the literature and see whether there is any supportive evidence to suggest that the conflict may in fact be representative of divisions in the literature. In many cases there may be literature that actually supports the apparent contradiction. In extreme cases the candidate may have to re-evaluate the pilot study where there is clear literature evidence from a number of authors who dispute one or more pilot study outcomes. The most likely cause of this type of problem is an inadequately designed pilot study. The candidate should also remember that the pilot study may involve only relatively small sample sizes, and the outcomes may not be representative and may not therefore match the general opinion of the literature, which reflects the combined findings of a number of researchers involving a much larger sample size.

Where the candidate has any doubts in these areas, the supervisor should be consulted for an opinion.

### 3.5 Synthesis of the Pilot Study and the Literature Synthesis

#### 3.5.1 Introduction

This section considers the final stage involved in the generation of a formal theory. The candidate already has a basic theory that was developed primarily from the literature review. The candidate now has to consider what has been learned from the pilot study and decide which parts of the basic theory have to be modified as it is developed into a formal theory.
3.5.2 Synthesis of the Literature Synthesis and Pilot Study Report

The final synthesis stage is concerned with bringing together the primary outcomes of the literature review with the results of the pilot study. If the pilot study has been designed correctly, the results should be very similar to the outcomes of the literature review. In developing the synthesis a decision will have to be made on any areas where the outcomes of the literature synthesis do not match the results of the pilot study.

Consider again the main outcomes from the literature synthesis (Module 2) and the pilot study.

The Literature Synthesis
The main points to emerge from the literature synthesis as discussed in Module 2 were the following.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
- There is a functional relationship between cultural positivity and the positive development of human capital.

The Pilot Study
The main findings of the pilot study report were the following.

- Strategic alignment is a function of long-term success.
- Long-term success is a function of cultural approval.
- Strategic fit is a function of strategic alignment.
- The degree of strategic alignment is a function of cultural positivity.
- Cultural positivity is a function of the positive development of human capital.

By derivation

- Strategic alignment is a function of the potential for the positive development of human capital.

In all cases except the final pilot study result, the results of the pilot study are compatible with the outcomes of the literature synthesis. The literature suggested that there was a functional relationship between each of the variables listed and the pilot study confirms that these functional relationships appear indeed to be present, even if this is measured only in terms of the perceptions of the people who were interviewed or asked to return questionnaires.

In the case of the final pilot study result, this result has been derived rather than observed. The literature could be analysed in just the same way as the pilot study.
findings were in order to make this derivation, but in this case there is no clear evidence of literature in the field of strategic alignment and the potential for the positive development of human capital.

The pilot study may have produced data where one or more of the main points from the literature synthesis and pilot study do not tie up. In this case, one or more of the pilot study operational hypotheses may have been accepted or rejected based on pilot study results, but this acceptance or rejection does not agree with the literature. For example, the literature makes it clear that there is a clear link between strategic alignment and strategic fit. If the pilot study had suggested there is no link between strategic alignment and strategic fit, the candidate would have to try to find out why. This type of mismatch could occur, for example, in the following situations:

- The pilot study methodology is unreliable.
- The sample is not representative of the environment.
- The data have been improperly handled.
- The analysis technique is suspect.
- The candidate has had a reactive effect on the subject.
- The results have been wrongly interpreted.
- The sample size cannot produce statistically reliable results.

### 3.6 Developing the Final Theory and Hypotheses

#### 3.6.1 The Formal Theory

Based on the synthesis of the literature and the pilot study, the original basic theory is suitable for adoption as the formal theory. If any part of the basic theory pilot study hypotheses had been rejected this might not have been the case. The formal theory, in this case, may be stated as:

> In UK retail mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.

The potential of this theory has been demonstrated by the pilot study, and it is supported by the literature.

The research aim is:

> To show that the degree of strategic alignment is a function of the potential to develop the positive development of human capital.

The research objectives are:

> To show that, where high levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also high.

> To show that, where low levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also low.
The research hypothesis is:

\[ H_0: \text{As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.} \]
\[ H_1: \text{As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.} \]

The operational hypotheses are:

\[ H_0: \text{Strategic alignment is not related to long-term success.} \]
\[ H_1: \text{Strategic alignment is related to long-term success.} \]

\[ H_0: \text{Long-term success is not related to cultural approval.} \]
\[ H_1: \text{Long-term success is related to cultural approval.} \]

\[ H_0: \text{Strategic fit is not related to strategic alignment.} \]
\[ H_1: \text{Strategic fit is related to strategic alignment.} \]

\[ H_0: \text{The degree of strategic alignment (alignment engineering) is not related to cultural positivity.} \]
\[ H_1: \text{The degree of strategic alignment (alignment engineering) is related to cultural positivity.} \]

\[ H_0: \text{Cultural positivity is not related to the positive development of human capital.} \]
\[ H_1: \text{Cultural positivity is related to the positive development of human capital.} \]

The research methodology for the main study can now be developed to address these operational hypotheses. By accepting or rejecting the operational hypotheses, the research hypotheses can be accepted or rejected.

The chain of causality adopted in developing the formal theory can be summarised as shown below.

\[ SF = \text{Strategic alignment.} \]
\[ LTS = \text{Long-term success.} \]
\[ CP = \text{Cultural positivity or approval.} \]
\[ STF = \text{Strategic fit.} \]
\[ PPDHC = \text{Potential for the positive development of human capital.} \]

Using the above abbreviations it is clear that:

\[ SF = f(LTS) \]
\[ LTS = f(CP) \]

Therefore

\[ SF = f(CP) \]
It is clear that
\[ CP = f(PPDH) \]

And since
\[ SF = f(STF) \]

it follows that
\[ SF = f(PPDH) \]
\[ STF = f(PPDH) \]

The line of deductive reasoning is relatively clear in this case, although the chain of reasoning is, admittedly, Socratic. The candidate should note that it is often very useful to summarise any lines of reasoning that have been developed. The examiners will generally be able to follow any such lines of reasoning, but it makes their job easier if the candidate spells out the reasoning stage by stage. It may also be useful to reinforce each stage in the causal chain by the use of references, provided this does not slow down the speed at which the causal links can be appreciated.

**Learning Summary**

This section has attempted to develop an understanding of how the pilot study can be used to assist in the development of a formal theory from the literature-review-based basic theory. The approach adopted has been as general as possible. As pilot studies differ widely depending on the characteristics of the research programme, this was intentional.

The candidate should now understand:
- how to design a pilot study;
- how to select an appropriate methodology;
- how to generate and interpret results;
- how to write a pilot study report;
- how to synthesise the pilot study results with the literature synthesis;
- how to use the results to develop a formal theory;
- how to break the formal theory down into research and operational hypotheses.

**Pilot Study Design**

- The pilot study is very important as it is central to the development of the research theory.
- If the pilot study is unreliable, the basic and formal theories may also be unreliable.
- The pilot study generates results to be directly related to the outcomes of the literature synthesis.
- The pilot study should be compatible with the literature synthesis.
- The pilot study should produce reliable data.
- The pilot study should be capable of providing an evaluation of both the literature synthesis and the methodology proposed for the main research study.
- The pilot study should be as flexible as possible, as companies often change after the pilot study has been initiated and before it has been completed.
- Where possible, the subject of the pilot study should be carefully selected so as to be compatible with the main study.
- The candidate could use an unrelated subject, provided he or she can demonstrate that the evaluation method can be successfully transposed to the main study subject.
- The choice of methodology is particularly important, as an inappropriate research methodology could lead to the generation of potentially misleading results and the subsequent misalignment of the formal theory.
- The methodology used in the pilot study is often very similar, or almost identical, to the methodology proposed for the main study.
- In some cases pilot studies may make use of more than one methodology in order to take advantage of potential triangulation.
- In other cases there may be two or more distinct research methods operating within the same overall research methodology.
- Typical methodological approaches that may be used on the pilot study include:
  - the analysis of company records and historical data;
  - questionnaires;
  - interviews.
- Typical case study approaches include:
  - longitudinal case studies;
  - cross-sectional case studies;
  - validation case studies.
- Longitudinal case studies are concerned with the analysis of the case over a relatively long period of time, covering a significant proportion of the lifecycle of the case.
- The lifecycle is the total time the case exists. Some obvious lifecycle stages include:
  - inception;
  - feasibility;
  - pre-contract negotiations;
  - stakeholder consultation;
  - shareholder vote;
  - final pre-contract negotiations;
  - the contract;
  - due diligence;
  - implementation;
  - commissioning;
Module 3 / The Pilot Study and the Formal Theory

A longitudinal study may be concerned with this entire merger lifecycle, collecting data on the merger process from inception right through to completion.

A cross-sectional study may be concerned only with one lifecycle phase, or perhaps two or three depending on circumstances.

A validation study is concerned with attempting to validate the results of other studies.

Questionnaires should ideally be based on a scalar or phased rating response.

Questionnaire responses can be simply illustrated using histograms, pie charts and line diagrams.

Interviews can be designed to:
- confirm the questionnaire results;
- develop the questionnaire results;
- expand the questionnaire results;
- contradict the questionnaire results;
- validate the questionnaire results;
- examine for reactance and bias.

Pilot Study Design Example

The pilot study should be used both to help develop the formal theory and to evaluate the proposed research methodology.

Questionnaires should be kept as brief as possible.

Questionnaire response rates tend to be low.

Interview questions designed to develop and expand the questionnaire results should be phrased to ask the same question but in a different way.

Questionnaires and interview responses can be analysed using either qualitative and/or quantitative approaches.

Quantitative approaches are based on objective analysis.

Qualitative approaches are based on subjective analysis.

Content analysis is an example of a combined qualitative and quantitative approach.

Content analysis assigns codes to words and calculates the frequency of concordance of words and concordances between two or more words.

Pilot Study Report

The pilot study report will probably be structured around the following headings:
- Introduction.
- Subject details.
- Methodology.
- Results.
- Pilot study summary.
• The pilot study report should present results in a format compatible with the development of the formal theory.
• The pilot study results should be structured around the same format as the outcomes of the literature synthesis.
• The subject should be clearly and accurately described.
• The report should stress the compatibility of the subject with the proposed main study subjects.
• The methodology should be described in detail. Sample questionnaires and interview questions should be attached in an appendix.
• The methodology section should be fully referenced.
• The results should be clearly stated.
• Any interlinkages between results should be stressed.
• Any lines of reasoning or thought processes should be carefully detailed.
• The report summary should list the results of the pilot study and explain their significance in the development of the theory. Where appropriate, suitable references should be cited.
• The report summary should detail any limitations in respect of the results.

Synthesis of the Pilot Study and the Literature Synthesis

• The final synthesis stage is concerned with bringing together the primary outcomes of the literature review with the results of the pilot study.
• If the pilot study has been designed correctly, the results should be very similar to the outcomes of the literature review.
• In developing the synthesis, a decision will have to be made on any areas where the outcomes of the literature synthesis do not match the results of the pilot study.
• Any areas where the pilot study results are incompatible with the literature review synthesis outcomes should be highlighted.
• Such mismatches may occur where:
  – the pilot study methodology is unreliable;
  – the sample is not representative of the environment;
  – data have been improperly handled;
  – the analysis technique is suspect;
  – the candidate has had a reactive effect on the subject;
  – the results have been wrongly interpreted;
  – the sample size is not statistically relevant.

Developing the Final Theory and Hypotheses

• The formal theory should be developed from the synthesis of the pilot study results and the literature synthesis outcomes.
• The formal theory should be fully justified.
Review Questions

True/False Questions

**Pilot Study Design**

3.1 The pilot study should be designed with the initial intention of developing results that can be synthesised with the literature synthesis. T or F?

3.2 The pilot study should ideally be compatible with the literature synthesis outcomes. T or F?

3.3 It does not matter if the pilot study results are unreliable. T or F?

3.4 The pilot study should be replicable. T or F?

3.5 The pilot study methodology has to be exactly the same as the main study methodology. T or F?

3.6 The pilot study subject must be the same as the subject to be used in the main study. T or F?

3.7 The pilot study subject should be compatible with the subject to be used in the main study. T or F?

3.8 The choice of methodology is particularly important as an inappropriate research methodology could lead to the generation of potentially misleading results and the subsequent misalignment of the formal theory. T or F?

3.9 In some cases pilot studies may make use of more than one methodology in order to take advantage of potential triangulation. T or F?

3.10 In other cases there may be two or more distinct research methods operating within the same overall research methodology. T or F?

3.11 Most research subjects can be considered as having a definable lifecycle. T or F?

3.12 A longitudinal study is usually concerned with the whole lifecycle or with a number of lifecycle phases. T or F?

3.13 A cross-sectional study is usually concerned with one lifecycle phase. T or F?

3.14 Questionnaires should generally be as complex as possible. T or F?

3.15 Yes/no questionnaire responses give greater data definition than scalar response questionnaires. T or F?
3.16 Interviews are always designed to confirm the results of the questionnaire survey. T or F?

3.17 Interview questions that are designed to contradict questionnaire results are not acceptable. T or F?

**Pilot Study Design Example**

3.18 A postulation is an extension of a summary point. T or F?

3.19 The research question is based on the basic theory. T or F?

3.20 There should always be more than one research hypothesis. T or F?

3.21 Questionnaires must always be used in a pilot study. T or F?

3.22 Interviews must always be used to reinforce questionnaire responses. T or F?

3.23 It is best to use a combination of quantitative and qualitative approaches if possible. T or F?

3.24 Triangulation should generally be used if possible. T or F?

**Pilot Study Report**

3.25 The pilot study report should be submitted separately from the main thesis. T or F?

3.26 The pilot study report is assessed separately from the literature review submission. T or F?

3.27 The pilot study report methodology section should contain sufficient detail to allow the research results to be replicated. T or F?

3.28 The pilot study report methodology section should be referenced where appropriate. T or F?

**Synthesis of the Pilot Study and the Literature Synthesis**

3.29 The pilot study results should be synthesised with the outcomes of the literature synthesis. T or F?

3.30 Areas where the pilot study results and the literature synthesis outcomes disagree should be disregarded. T or F?
Developing the Final Theory and Hypotheses

3.31 The formal theory must be a reflection of the basic theory. T or F?

3.32 The formal theory must be expressed in terms of hypotheses. T or F?

Multiple-Choice Questions

Pilot Study Design

3.33 The pilot study should be designed to be:
   I. compatible with the literature synthesis.
   II. reliable.
   III. achievable.
   IV. flexible.
   Which of the above are true?
   A. I only.
   B. I and II.
   C. I, II, III and IV.
   D. II, III and IV.

3.34 By the time the candidate has completed the pilot study he or she should be in a position to:
   I. decide on which research methodology to use for the main research study, having tested it and where necessary having refined it in the pilot study.
   II. be able to justify the final choice of data source, having considered compatible or comparable sources in the pilot study.
   III. develop a final formal research theory based on the outcome of the pilot study and the literature synthesis.
   IV. decide whether or not to initiate a main study validation study.
   Which of the above are true?
   A. I and II.
   B. I, II and III.
   C. II, III and IV.
   D. III and IV.

3.35 The pilot study sample should ideally be:
   A. identical to the proposed main study subject.
   B. identical to the proposed main study subject in terms of company turnover.
   C. completely different from the proposed main study sample.
   D. compatible with the proposed main study sample.
3.36 The pilot study research methodology should be designed to:
A. be appropriate to the research aims and objectives.
B. include only questionnaires.
C. include both questionnaires and structured interviews.
D. include only historical data sources.

3.37 Typical return rates for questionnaires with no preliminary respondent preparation are typically:
A. 100%.
B. over 80% but less than 100%.
C. over 50% but less than 80%.
D. less than 50%.

Pilot Study Design Example

3.38 Questionnaires have a number of limitations including:
I. low response rate.
II. lack of relevance.
III. lack of detailed response.
IV. researcher reactance issues.
Which of the above are true?
A. I only.
B. I and II.
C. I and III.
D. II, III and IV.

3.39 Questionnaires produce data that can be analysed using:
A. qualitative techniques.
B. quantitative techniques.
C. both qualitative and quantitative techniques.
D. neither qualitative nor quantitative techniques.

3.40 Qualitative analysis of interview data has the advantage that it:
I. mirrors the way in which the brain naturally works.
II. allows a greater depth of analysis because it offers the opportunity for the understanding of deeper meanings.
III. is relatively simple and straightforward to perform.
IV. uses purely quantitative analysis techniques to analyse data.
Which of the above are true?
A. I only.
B. I and II.
C. I, II and III.
D. II, III and IV.
3.41 Qualitative analysis has the limitation that the interviewee may:
I. misunderstand what the interviewee means.
II. not actually say what he or she means.
III. make underlying inferences that are not immediately detectable.
IV. use ‘diplomatic’ or ‘phrased’ terms.
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.

Pilot Study Report

3.42 Typical pilot study report headings include the following:
I. Introduction.
II. Subject details.
III. Methodology.
IV. Results.
Which of the above are true?
A. I, III and III.
B. I, II, III and IV.
C. II, III and IV.
D. III and IV.

3.43 One of the primary functions of the pilot study is to evaluate the research methodology proposed for:
I. the main study longitudinal study (where appropriate).
II. the main study cross-sectional studies (where appropriate).
III. the main study validation studies.
IV. the pilot study.
Which of the above are true?
A. I and II.
B. II and III.
C. II and IV.
D. II, III and IV.
3.44 The pilot study report should include:
   I. a full list of results.
   II. a statement of any limitations that may affect the results.
   III. recommendations for further research.
   IV. a full literature synthesis.
Which of the above are true?
   A. I only.
   B. I and II.
   C. I, II and III.
   D. II, III and IV.

**Synthesis of the Pilot Study and the Literature Synthesis**

3.45 The synthesis of the pilot study results and literature synthesis outcomes may significantly influence the design of:
   I. the literature review.
   II. the main study research methodology.
   III. the main study sample or samples.
   IV. the main study data analysis approach.
Which of the above are true?
   A. I and II.
   B. I, II and III.
   C. II, III and IV.
   D. III and IV.

3.46 Once complete, the synthesis of the pilot study results and literature synthesis outcomes should be:
   A. submitted as a separate report.
   B. written into the thesis as part of a chapter.
   C. retained for possible future use.
   D. discarded.

**Developing the Final Theory and Hypotheses**

3.47 Once developed the final theory:
   A. can never be changed.
   B. may be modified but any modifications should be minimal.
   C. can be extensively modified.
   D. can be ignored.
3.48 Ideally the final theory should be stated in terms of:
I. a research question.
II. a series of research aims and objectives.
III. a literature review.
IV. a set of research and operational hypotheses.
Which of the above are true?
A. I only.
B. I and II.
C. I, II and IV.
D. II, III and IV.
Module 4

Working with the Supervisor

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Learning Objectives
By the time the candidate has completed this module, he or she should understand:
• what a supervisor is;
• why a supervisor is necessary;
• what the supervisor does;
• how to communicate with the supervisor;
• how to develop a working relationship with the supervisor;
• what to expect of the supervisor;
• the difference between good and bad questions;
• what to do if there are problems;
• the concept of formal literature review progress reports and informal progress reports;
• what is required in completing the formal reports;
• how to complete the formal literature review progress reports.

4.1 Introduction
In writing the research proposal, the candidate largely worked alone with the assistance, as required, of an EBS mentor. The mentor provided general help and advice on the format and development of the research proposal. The mentor did not supervise the candidate but acted more in the role of a guide.

In writing the literature review submission, the candidate is assisted by a research supervisor. The supervisor is appointed by the university and, in normal circumstances, is available to act in the supervisory role for the duration of the candidate’s research programme.
4.2 The Concept of Doctoral Supervision

4.2.1 Introduction

This module examines the concept of doctoral supervision. The aim of this section is to ensure that the candidate fully understands what supervision is and why it is important to the research programme.

4.2.2 Aims and Objectives of Doctoral Supervision

The word ‘supervise’ can be defined as:

To observe a person or a process to ensure that whatever is being done is done correctly.

An example is:

The weapons inspectors appointed by the UN security council are currently supervising the disposal of weapons of mass destruction.

A supervisor is:

A person who supervises another person or process.

An example is:

Dr Jones is currently acting as supervisor for Ms McIntosh in the development of her research.

Supervision is:

When a supervisor observes a person or process to ensure that whatever is being done is done correctly.

An example is:

Candidates cannot complete the literature review without an adequate level of supervision.

The supervisor, therefore, is responsible for observing the development of the literature review to ensure that it is done correctly. In this case ‘done correctly’ means to a standard likely to be acceptable to the internal and external examiners who will examine the student and thesis at the viva voce examination. The supervisor has a detailed understanding of the general standards required because he or she has successfully supervised other doctoral candidates in the past. As with many things in life, there is often little or no substitute for experience. The supervisor has seen the problems and challenges thrown up by doctoral research, and will have
experience of how best to handle these to reduce their impact on the research as much as possible.

Candidates should appreciate that doctoral research is very time consuming. One of the greatest dangers faced by candidates is additional work being required, together with the considerable time demand this often imposes. This is the primary reason why it is important not to change the aims and objectives of the research once they have been developed and agreed. Candidates who are not supervised can easily develop their research along the wrong lines or become sidetracked. In such cases the additional work required may take weeks or months. The supervisor will advise the candidate to keep the research focused and avoid any temptation to expand the research field after it has been agreed.

In working with the supervisor, the candidate should make every effort to ensure that:

- the research remains focused;
- any proposed modification of the research aims and objectives is kept to a minimum;
- the literature consulted is relevant and appropriate;
- the research programme progresses as planned;
- any problem areas are identified and dealt with as quickly as possible;
- progress reports are completed and submitted on time.

4.3 The Supervisor–Candidate Relationship

4.3.1 Introduction

This section develops an appreciation of the importance of the supervisor–candidate relationship during the formation of the literature review submission.

It should be noted that the overall time required to complete the supervised stage is highly variable and depends on a wide range of different factors, including the nature of the research, the characteristics of the data, the ability/commitment of the candidate, and family and other commitments, etc. Under University regulations the candidate has a maximum of 10 years to complete the entire DBA programme. Successful candidates usually complete it considerably more quickly; as a general rule, a good student with a reasonable amount of time to spend should be able to complete the supervised stage within a period of around three to four years. In exceptional cases it may be possible to complete the supervised stage in around two years.

4.3.2 Developing a Working Relationship with the Supervisor

Candidates often have problems in establishing a good working relationship with the supervisor. This is an important issue, as the candidate more or less depends on the supervisor to provide guidance and advice over a relatively long period. In most cases, the supervision period will last several years. With so much at stake from the
candidate’s point of view, and given the timescales involved, it is essential that a
good working relationship is formed and maintained.

It should be stressed that there is an annual fee for the supervision element, and
from a cost point of view it is in the candidate’s own interests to complete the
supervised stage as quickly as possible. It is also important to realise that successful
doctoral research tends to involve a degree of momentum. There are so many
complex issues to be addressed and so many factors to be considered that the
research can be done effectively only on the back of a ‘wave’ of progress. Stops and
starts in the research process interrupt this wave and restrict the fluidity of the
research. In other words it is best to start on the supervised stage, build up a degree
of momentum and then maintain it through to completion with no interruptions or
pauses if possible. The more stops and starts there are, the less likely it is that the
research will be successful.

An added issue with distance learning doctoral research is that there may be a
considerable geographical distance between the candidate and supervisor. It could
be argued that it is more difficult to create and maintain a good working relationship
where there is less opportunity for face-to-face conversation and exchange.

Most working relationships develop from the range of expectations that each
party to the relationship holds. It is difficult to develop a good working relationship
if the reality of that relationship does not meet a significant proportion of the
expectations held by either party.

The candidate will generally expect the supervisor to:

- be courteous and attentive;
- maintain a positive attitude;
- be available when required (within limits);
- read submissions carefully before meetings or conversations take place;
- be consistent;
- offer good, reliable advice;
- offer a potential role model;
- be supportive and offer encouragement;
- critically analyse work when offering feedback;
- provide detailed and reliable feedback;
- act in a professional manner.

The supervisor will normally expect the candidate to:

- be courteous and attentive;
- listen to advice and consider it carefully;
- observe agreed meeting/conversation times;
- observe submission deadlines;
- carefully prepare and check work before submitting it for review;
- work independently as much as possible;
- use initiative to solve everyday problems;
- thoroughly think things through before contacting the supervisor;
avoid asking questions with obvious answers.

4.3.3 The Changing Role of the Supervisor

It is very important for the candidate to appreciate that the role of the supervisor is dynamic. It changes with the stage of the research programme reached. In the initial stages of the literature review the supervisor has relatively little information to go on apart from the candidate’s research proposal. By the time the pilot study is complete, the supervisor has a full and detailed knowledge of the research programme. The supervisor is therefore, in some ways, moving along a learning curve similar to the candidate, at least as far as the current research is concerned. The role of the supervisor, and/or the advice and assistance he or she can give, depends on the stage of the literature review submission considered.

The primary characteristics of the role of the supervisor at each of the main stages are discussed below.

- **Development of the literature review chapters.** The role of the supervisor while the student is developing the various literature review chapters is steering the candidate towards suitable sources of literature and offering advice and feedback on the draft chapters as they are prepared. The supervisor can also offer useful advice on the literature searches and search techniques being carried out and the suitability of the literature being obtained. Where necessary, the supervisor can also offer advice on the extent to which the literature review is remaining focused as it develops.

- **Literature review synthesis.** The literature synthesis calls for a different range of skills from the candidate, and the role of the supervisor changes accordingly. The supervisor is now able to offer advice on how to link different literature fields together and how to develop common outcomes from different literature threads. The supervisor may explain how to represent the research effort as a research question and then break the question down into components that can be separately analysed. It is sometimes necessary to urge candidates to think in integrative terms when they are new to the concept.

- **Pilot study design.** During the pilot study design, the supervisor will assist the candidate to think in terms of research methodology, analysis and results. In many cases the design of the pilot study is the candidate’s first experience of actual research method design. The supervisor can offer advice on the various research methodologies and specific research methods available, and on those that may or may not be appropriate in the case of the current research.

- **Pilot study.** As the candidate develops the pilot study he or she will encounter a whole series of methodological and procedural challenges that were either unforeseen or unforeseeable during the pilot study design phase. Typical examples include questionnaires yielding inconclusive results, or problems with the interpretation of data. The supervisor can offer advice on how to address these issues and provide guidance on how lessons learned on the pilot study can be recorded and incorporated into the main study design methodology.
• **Synthesis of the pilot study outcomes and literature synthesis.** Many candidates find this stage the most difficult in the preparation of the literature review submission. The main problem arises where the candidate has to take two blocks of knowledge from different sources and amalgamate them into a new combined block of knowledge to be used as a springboard for the development of the basic theory. The supervisor can advise on how to focus on the overlaps between the sources and how to draw the focus inwards so that a new combined focus appears, exploiting the linkages between the two sources as the focusing process continues.

• **Research theory, question and hypotheses.** Candidates also often struggle when faced with the challenge of forming a basic theory and refining it into a series of operational and research hypotheses. The difficulty is that the candidate has to synthesise all that has been learned from the literature review and pilot study and then, using this understanding, project his or her thoughts forward from the ‘known’ into the ‘unknown’. This can be a very difficult process. The supervisor, at this stage, can offer advice on how to formulate a basic theory from the literature review and pilot study outcomes and how to phrase the theory so that it can be more readily disintegrated into measurable aims and objectives and hypotheses.

The candidate should remember how the relevant phase or stage of the research affects the type and level of advice the supervisor can provide. There will be progression from general to more specific advice as the literature review submission progresses.

### 4.3.4 The Need to Teach the Supervisor

Candidates often forget they are acquiring knowledge about the research programme at a much faster rate than the supervisor. The supervisor will initially have a greater knowledge of the research area because he or she will usually be an expert in that field or a related field. The candidate, however, may have less knowledge in the same field but considerably more practical experience than the supervisor.

As the research programme progresses, the candidate acquires research knowledge in the specialist subject at a much faster rate than the supervisor. The only exception to this would be where the supervisor is an expert in exactly the same field or is directly involved with the development of the research programme itself. The general progression of knowledge development of the candidate and supervisor is as shown in Figure 4.1.
The point at which the crossover occurs obviously depends on the starting subject knowledge of the supervisor and the candidate. In all cases the curves will cross at some point. The difference between the candidate curve and the supervisor curve represents the knowledge gap between the candidate and the supervisor. To allow the supervisor to act as effectively as possible, the candidate should address this knowledge gap by ‘teaching’ the supervisor in a reversal of the normal role.

This idea of teaching the supervisor may sound odd at first, but it is a logical extension of the student–supervisor relationship at doctoral level. Even though the supervisor is a subject specialist, the chances of an exact match between the supervisor’s area of expertise and that of the student are small. Inevitably, as the student develops his or her research there will arise a need for the student to convey what he or she is learning and discovering to the supervisor to supplement the supervisor’s knowledge of that area. The more the supervisor can develop knowledge in the student’s specific interest area, the more valuable the advice he or she is likely to be able to provide.

Figure 4.1   Supervisor advice detail curve

The point at which the crossover occurs obviously depends on the starting subject knowledge of the supervisor and the candidate. In all cases the curves will cross at some point. The difference between the candidate curve and the supervisor curve represents the knowledge gap between the candidate and the supervisor. To allow the supervisor to act as effectively as possible, the candidate should address this knowledge gap by ‘teaching’ the supervisor in a reversal of the normal role.

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4.3.5 Working with the Supervisor

4.3.5.1 Initial Contact

The supervisor is required to contact the candidate as soon as possible after being appointed. The initial contact is usually by Skype and/or telephone, giving the supervisor an opportunity to introduce him or herself and establish a rapport with the candidate. The supervisor, having received a copy of the candidate’s research proposal and studied it in detail, will be interested in gathering some basic information including:

- the precise aims and objectives of the research;
- any background information (over and above that provided by EBS);
- a proposed programme for completion of the literature review;
- the candidate’s experience;
- the time, per week, available to the candidate for developing the literature review;
- any difficulties or problems encountered to date;
- any concerns or reservations;
- the proposed method of contact and timescales for response.

Ideally the supervisor and candidate should meet at some point during the supervised stage, although this is often not possible given the geographical location of student and supervisor. If a face-to-face meeting is possible, it should be considered desirable. Most supervisors, experienced in supervising distance learning doctoral research, would agree that the working relationship is considerably improved by meeting the candidate. The responsibility for arranging the meeting lies with the
supervisor. It may be possible to arrange such a meeting if the candidate and supervisor live in the same geographical location, but it may not be possible where there is a considerable difference in location. For example, the candidate may live on an island in the Caribbean and the nearest suitable supervisor may live in New Zealand. Under such circumstances it may not be practical to arrange a meeting because of the distances and logistics involved. In other cases, there may be an opportunity to meet at a later date, for example if the New Zealand supervisor is attending a conference in Miami in six months’ time.

Whatever the circumstances, it is essential that the candidate and supervisor establish a rapport as early as possible in the development of the literature review, and that this rapport is maintained for the duration of the literature review and analysis phases of the research.

4.3.5.2 Monthly Review

Once the initial contact has been made, the communication between the supervisor and candidate must be maintained on a regular basis. There is no hard-and-fast rule about how much direct contact is required between the supervisor and the candidate. The actual contact required depends on the individual circumstances and is largely at the discretion of the supervisor. As a very general indication, the supervisor can be expected to spend an average of around four to six hours per month on direct contact with the candidate, although the actual amount is dependent on the circumstances. Direct contact means all time spent assisting the candidate in the development of the literature review. It therefore includes the time spent on:

- Skype conversations;
- telephone conversations;
- email exchanges;
- reading and writing letters;
- reading and considering progress reports;
- writing feedback forms and communicating with the senior supervisor;
- conducting background research.

It should be stressed that four to six hours per month is an average value. The actual time required depends on a number of factors, including:

- the stage of development of the research;
- the ability and research experience of the candidate;
- the nature of the research.

The degree of direct contact really depends on the candidate. Some candidates prefer to work very closely with the supervisors, whereas others prefer to maintain a more distant working relationship. The choice of each individual candidate depends as much on personal characteristics as on experience and research ability. In all circumstances, the direct contact time of around six hours is very important, and candidates are advised to make full use of it. Six hours, or thereabouts, may not seem like a great deal of time, yet it is considerably more than most full-time on-campus candidates receive (an average of perhaps four hours per month in UK universities).
EBS recommends that the candidate and supervisor establish a monthly cycle for a periodic review. Most supervisors ask candidates to give a brief informal report each month in addition to the quarterly formal progress reports required under EBS DBA regulations. The informal monthly review should briefly list the previous month’s developments. Typical headings include:

- literature consulted this month;
- particularly useful and relevant citations;
- words written this month;
- work reviewed by the supervisor this month;
- any problems;
- any revisions to the literature review timescale;
- issues for discussion with the supervisor.

The informal monthly review is normally emailed to the supervisor a few days before the end of the month. The supervisor then reads it in detail and contacts the candidate by email to resolve any areas of concern. It is important that the candidate raises any issues or problem areas with the supervisor as quickly as possible after they arise or become apparent. The best way to raise issues for discussion with the supervisor is to list them as part of the informal monthly review.

Typical issues raised by candidates include:

- difficulties in accessing a particular sector of the literature;
- problems in tying together two different literature streams;
- uncertainty in interpreting results presented in a particular paper;
- problems in pilot study questionnaire design;
- problems in interpreting pilot study results;
- delays in the development of the literature review.

Candidates should note that the supervisor should be approached for advice on any areas relating directly to the research. For example, if the candidate is having family problems that affect the development of the literature review, he or she should let both the supervisor and EBS DBA administration know there is a problem. The supervisor needs to be aware of all factors affecting the development of the research.

### 4.3.5.3 Milestone Review

Over and above the informal monthly reviews and formal progress report systems, it is often advisable for the candidate and supervisor to establish a milestone review system. As discussed in *Introduction to Business Research 1*, milestones are important markers within the research programme where a key element or section of work is completed. Obvious milestones within the development of the literature review submission are the completion dates of the various chapters of the literature review and the pilot study. An example of a milestone schedule is listed below based on the completion of:

- the literature review chapter 1;
- the literature review chapter 2;
• the literature review chapter 3;
• the literature review chapter 4;
• the literature review synthesis;
• the pilot study design;
• the pilot study;
• the synthesis of the pilot study outcomes and literature synthesis;
• the research theory, question and hypotheses.
• the outline research methodology.

Some supervisors may wish the candidate to complete all sections of the literature review submission before reading it as a finished draft. Other supervisors may prefer to read a draft of each section as it is produced. Both approaches require the same amount of supervisor time, but the latter approach is potentially much more useful to the candidate. Where the candidate receives informal feedback on a chapter-by-chapter or section-by-section basis, he or she is able to implement changes and learn from the process before moving on to the next chapter or section. The candidate also knows that the work is progressing at a reasonable standard. It can be particularly frustrating, or even quite frightening, for a candidate to complete a final draft, send it to the supervisor and receive it back with hundreds of required corrections and amendments.

The final choice of review approach is the decision of the supervisor. Whichever approach is adopted, the end of each literature review chapter, the pilot study design, the pilot study itself and the literature synthesis are all important milestones and should be the subject of an informal milestone review.

The milestone review itself is primarily based on looking back over the section of completed work and evaluating the extent to which it has contributed to the research. It is also important to use the milestone review to identify problems or areas where the chapter or section could have been completed more effectively. The candidate can develop a simple basis for a review by using a simple chapter check as shown in Table 4.1.

<table>
<thead>
<tr>
<th>Table 4.1</th>
<th>Milestone review checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chapter 6 The literature on strategic alignment</strong></td>
<td>In relation to this specific chapter of the literature review, the following questions should be asked.</td>
</tr>
<tr>
<td>• Is the literature content exhaustive?</td>
<td>• Does the chapter contain a sufficient proportion of up-to-date references?</td>
</tr>
<tr>
<td>• Have all the primary researchers been cited?</td>
<td>• Has the candidate highlighted any obvious gaps in the literature?</td>
</tr>
<tr>
<td>• Is the chapter correctly focused on the aims and objectives of the current research?</td>
<td>• Have these gaps been justified?</td>
</tr>
<tr>
<td>• Does the chapter link to the chapters immediately preceding and following it?</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 6 The literature on strategic alignment

- Does the review identify any areas where the candidate intends to develop new insights?
- Are there any contradictions to the proposed basic aims and objectives stated in the research proposal?
- Does the content of the chapter remain compatible with the original outcome field?
- Does the chapter include an adequate critique of previous research methodologies used in this field?
- What is the most common methodology used in the literature and is it compatible with the methodological proposals for the pilot study?
- What were the main problems encountered in the development of this chapter?
- Are these problems likely to recur in future chapters and, if so, why?
- Can these problems be mitigated and, if so, how?
- What help or advice is required from the supervisor?

The checklist acts as a useful review tool. Each of the elements is important, although the most important are those referring to the problems encountered and how these might be mitigated in subsequent chapters. The element on the advice required from the supervisor is also very important. The candidate should ensure that questions put to the supervisor after the milestone (and monthly) reviews are based on genuine necessity. Supervisors are generally happy to answer most types of question, provided they are reasonable and could not have been answered by the candidate with a little extra effort and background research. Supervisors tend to be particularly appreciative where the candidate can establish a clear background as to:

- why the question is necessary;
- how the answer will contribute directly to the candidate’s progress;
- how the answer will be used to assist in the development of subsequent chapters.

4.4 Questions for the Supervisor

4.4.1 Introduction

The initial contact, monthly progress reports, informal progress reports and milestone reviews may generate questions in the mind of the candidate. As stated previously, the supervisor will appreciate not being bombarded with low-level questions where the candidate could have worked out the answer with a little thought and perhaps some background research.

Questions can usually be asked of the supervisor at any time. Some supervisors prefer an agreed day and/or time each week for questions, while others are happy to receive and answer questions as and when required. The candidate should remember the supervisor can only provide so much time for supervision, so it is important
to make best use of that time. It is important, therefore, that the candidate is careful to ensure he or she asks ‘good’ questions rather than ‘bad’ ones.

This section presents some examples of good and bad questions.

4.4.2 Examples of Good Questions

Good questions refer to specific sections of the literature review or the pilot study where the candidate wishes to draw on the supervisor’s specific expertise. In asking a good question the candidate is not asking for guidance on an issue that he or she could resolve without the assistance of the supervisor. Good questions should focus on specific issues where the supervisor can give professional opinion or advice based on his or her knowledge and experience. The candidate can then use this opinion or advice to make a more informed decision.

Typical good questions include questions that:

- specifically require the supervisor’s expertise;
- relate to a stated area and are set in the context of the literature;
- require complex reasoning and appropriate specialist knowledge;
- address gaps or areas that are unclear in the literature;
- involve new areas where there may be no publications to provide guidance.

Some examples of good questions are given below.

**Good question 1.**

‘I read Muffin’s (2000) paper and I understood most of the underlying rationale. I then read Ail’s (2001) paper that criticised Muffin on the grounds that the survey sample size was too small and the confidence limits were not sufficiently established. I disagreed with Ail’s assertion that Muffin’s methodology was flawed by making use of grounded theory in the context of action research. I also read Ryan’s (2003) paper. Ryan seemed to be saying that grounded theory is acceptable in the context of action research provided the correct research paradigm is adopted (phenomenology). I don’t understand why a positivist approach is not appropriate for grounded theory in the context of action research.’

The supervisor is likely to answer as follows.

‘This is a very good question. It illustrates why the literature review should be a critical review. The literature as it stands makes it very difficult to differentiate between the work of Muffin (2000) and Ail (2001). At present (2003) there are very few other sources to draw on in order to develop an argument on either point of view. In my opinion, Ryan’s (2003) work reinforces the work of Muffin rather than that of Ail. It is by no means clear that Muffin’s sample size was in fact too small, given the stated scope and application of her research. I would advise you to read the recent work by Skeesome (2003). While this work is not directly related to the work of Muffin or Ail, it uses a similar sample size in a similar application and has been positively received by Tivity (2003a) and Jurnana (2003).’

This is a good question because it asks a specific question in relation to the literature. The specific question is necessary because the candidate has identified an area of apparent contradiction in the literature. In inexperienced researchers, contradictions within the published literature can often lead to confusion because inexperienced candidates often assume that because something has been
published it must be correct. This is in fact not the case. The fact that Ail (2001) disagreed with Muffin (2000) does not mean that either Ail or Muffin is necessarily correct or incorrect. It simply means that Ail does not agree with Muffin. Either Muffin or Ail could be correct. Alternatively they could both be incorrect. The candidate, in making the critical review, has to make a reasoned argument on which point of view to accept, while accepting that one, both or neither point of view could be correct.

Good question 2.

‘I have designed my research methodology for the pilot study. I have based it on a longitudinal case study backed up by a series of cross-sectional studies using questionnaire surveys and interviews as data collection vehicles. I intend to record all responses and then use the Sarah–Ryan (1999) classification system of content analysis to codify and analyse the transcripts. I have looked at the Hacks–Kildeer (1968) and the Stanley–Hipperson (1980) classification systems, and I feel that Sarah–Ryan offers definite codification and processing advantages (Jones, 2000; Walker, 2000). Would you agree with my assessment?’

The supervisor is likely to answer as follows.

‘I agree. Jones (2000) and Walker (2000) both had problems with the flexibility and range of codification options offered by the Stanley–Hipperson system. Jones (2000) found the range of coding options to be too restrictive, and the range of analysis options was limited. Walker (2000) was able to use Stanley–Hipperson successfully, but only with a limited sample and relatively small transcriptions. Sarah–Ryan builds on Stanley–Hipperson and extends the range and flexibility of codification and analysis options. I would certainly agree that you should use Sarah Ryan rather than Stanley–Hipperson in your pilot study.’

This question again is specific and appropriate. The candidate is effectively asking for a professional opinion based on observations from the literature. Provided content analysis classification systems are within the expertise of the supervisor, the candidate is taking the opportunity to obtain the supervisor’s advice on an important strategic question. It can be assumed that if the Sarah–Ryan system is adopted and used successfully in the pilot study it might well be used as the primary data collection method in the main study.

Good question 3.

‘I am having difficulty in linking the literature on strategic alignment and human capital. I have read Pikelet (2002) and Ail (2001), who both suggest that there is a relationship between the degree of strategic alignment in a merger and the generation of cultural positivity within one or both merging organisations. This view has been supported by John (2001). I have also read Muffin (2000) and Ryan (2000), who both suggest a link between cultural positivity and the potential for the development of increased human capital values. The findings of Muffin (2000) and Ryan (2000) have been supported by McIntosh (2001) and Tivity (2002), and seem to be fairly reliable. I have not, however, been able to establish any link between these two threads within the literature. I have conducted exhaustive searches on six international high-level search facilities and I am certain that there is a gap in the literature. Is this likely to be indeed the case and could I exploit this gap in my main research?’

The supervisor is likely to answer as follows.

‘There does indeed appear to be a gap in the literature in the area of linking the threads of strategic alignment and cultural positivity, and cultural positivity and development of human
capital. I first detected this gap about six months ago when researching for a textbook on cultural positivity that I am writing at the moment. I understand from my contacts in the US that pioneering work in this area is currently being conducted by Williams and Gallagher at Pencil-Vania University and Reeves and Mortimer at Mont Blanc University in the US. These researchers have reached pilot study stage, but there has as yet been no publication, so you would not detect any of this work in your literature searches. Given that the gap genuinely appears to be present, and also that this gap has been detected and is being addressed by two prominent teams in the US, it would appear that the gap is exploitable. I have, as yet, not detected any research in this area outside the US. In my opinion the gap is available and is exploitable. I see no reason why you should not align your main study towards it provided this realignment does not involve any major corresponding realignment of your primary research aims and objectives.’

This is the kind of question that can ignite the imagination of the supervisor. Most researchers are naturally excited by the idea of promising new research areas within their own area of expertise. The supervisor in this case is obviously already aware of the gap in the literature and may even have already been thinking about addressing it himself or herself. Supervisors are often surprised and impressed when candidates come up with ‘gems’ like this. The supervisor will immediately start thinking in terms of working closely with the candidate in order to exploit the detected literature gap, and the possibility of joint publications both before and after completion of the research will immediately arise. This kind of opportunity generates a whole new range of potential deliverables.

4.4.3 Examples of Bad Questions

The candidate should make every effort to avoid asking bad questions. Supervisors do not like to receive bad questions because they waste time and detract from the valuable interaction that should be taking place through the use of good questions. Typical bad questions include questions that:

- are irrelevant;
- lie outside the scope of the research;
- the candidate could answer himself/herself;
- lie outside the expertise of the supervisor (within limits);
- have obvious answers;
- have answers that are clearly indicated by the literature;
- are addressed in the EBS Introduction to Business Research texts;
- are too general or all-encompassing.

Some examples of bad questions are given below.

Bad question 1.

‘I am worried about the number of citations in chapter 6. I cited more than 80 high-level sources in chapter 5, but chapter 6 includes only four high-level sources. Is this OK?’

The supervisor is likely to answer as follows.

‘This question is impossible to answer. The number of high-level citations required depends entirely on the number of high-level citations available in the literature. If there are 10 high-level references that are directly relevant to the current research, then all 10 should be cited. If you are
happy that there are indeed only four high-level references in the strategic alignment literature, then your coverage and development are sufficient.’

This is a bad question because it is the candidate’s responsibility to carry out all necessary literature searches in order to satisfy himself or herself that all related high-level publications have been identified. The question in this case is effectively asking whether or not the literature search and critical review conducted to date are adequate. This is not the supervisor’s decision. In some cases the supervisor may know of certain relevant high-level references that have not been cited. In such situations the supervisor will indicate this to the candidate. It is not, however, the supervisor’s responsibility to familiarise himself or herself fully with the specific outcome field and research literature scope established by the candidate.

Bad question 2.

‘What do you think of the way in which I have synthesised my pilot study results and literature synthesis? Have I tied the two elements together well enough?’

The supervisor is likely to answer as follows.

‘This is your decision. The objective of synthesising the pilot study outcomes and the literature synthesis is to bring together the literature and your own experimental work so that you can make an evaluation of the suitability of your proposed research methodology and aims and objectives for the main study. You have to be sure that your literature review covers all the main publications in each of the research fields that are included in your outcome field. This issue relates to question 1 as answered above. Your pilot study methodology and sample appear to be appropriate, so provided your literature review is complete and representative, there should not be a major issue here.’

This is a bad question because the candidate is asking about how well he or she has drawn together two different elements (the literature review and the pilot study) when the suitability of one of these elements (the literature review) has already been questioned in question 1. Without knowing whether the literature review is complete and representative, the supervisor cannot comment on the synthesis of the literature review and the pilot study results. The most the supervisor could say would be that the synthesis is all right as far as it goes.

Bad question 3.

‘I need to get a copy of Skeesome’s PhD. She completed it in 1998 at Chubb University in the US. How can I get hold of a copy?’

The supervisor is likely to answer as follows.

‘You should be able to get hold of a copy through the Heriot-Watt interlibrary loans service, provided you are a matriculated student. If you are resident in the UK you could sign up to the interlibrary cooperation scheme. This covers most UK university libraries and would allow you borrowing rights and use of interlibrary loans from just about any UK university library. Alternatively if you are outside the UK you could approach your local university library with the standard letter of introduction from Heriot-Watt University and apply for associate membership. The copy will probably be provided on microfiche so you should make sure that you will have access to an appropriate microfiche reader.’

This is a bad question because it wastes valuable candidate–supervisor interaction time on a question that the candidate could have answered himself or
herself simply by reading *Introduction to Business Research* 2 Module 2, or by contacting the Heriot-Watt University library distance learning service direct. The candidate may still find the supervisor’s answer to be useful, but the time involved in obtaining it could have been better used on a more detailed and deserving question.

### 4.5 Possible Problem Areas

#### 4.5.1 Introduction

As with any kind of relationship, working or otherwise, there is the potential for problems in the supervisor–candidate relationship. Such problems could arise from a wide range of sources, including personality clashes and unresolved differences in opinion. This section attempts to go through a number of potential problem areas, and offers some advice on what the candidate should do in an attempt to address them as quickly as possible.

#### 4.5.2 Some Possible Problem Areas and What to Do About Them

Many candidates never experience any significant problems in their working relationship with the supervisor. In many cases the relationship works well, even if it includes some arguments and differences of opinion! The discussion that can be generated as a result of an exchange of ideas can be positive and very useful to the candidate in the development of the research. Problems arise where an event or exchange has a negative impact on the research. Where such events occur, if they do, they must be identified and dealt with as quickly as possible. The candidate should remember that the supervisor is an experienced and qualified researcher and plays a vital role in the development of the research. The candidate must not attempt to develop his or her research without the active involvement of the supervisor. If the working relationship is damaged in any way, it is imperative that it is fixed, or alternative action is taken, before the candidate attempts to make any significant additional progress on the research.

The relationship that develops between the candidate and the supervisor depends very much on the expectations of each party. The following sections focus on the problems that can affect this relationship from the point of view of each party. In some cases, problems can occur because the candidate and the supervisor have different perceptions of what is required. Where candidate and supervisor expectations differ, there is a potential for conflict.

#### 4.5.2.1 The Candidate’s Point of View

The following section considers some of the most common problem areas from the doctoral candidate’s point of view.

- **The supervisor is not available.**
  The unavailability or absence of the supervisor is probably the largest single area of complaint in doctoral supervision. Candidates expect their supervisor to be
available, and they are often annoyed to find that he or she is not in fact available when required. This point of view is understandable, as the candidate may be stuck on a particular issue and may not be able to proceed until he or she secures the advice of the supervisor. Candidates should remember that EBS DBA supervisors are normally full-time academics and therefore carry normal teaching and research loads. Candidates should make use of all the standard communication media and allow a reasonable time for the supervisor to respond.

- **The supervisor is always away somewhere.**
  Candidates should also remember that supervisors are normally research active and are likely to travel to different venues in association with the development of their own research. An obvious example is attendance at conferences in different parts of the world. A supervisor based in the UK may travel to Australia to attend an international conference where he or she is presenting research papers. Allowing for travel time and additional meetings, the supervisor may be away from his or her normal location for two weeks or more. Another obvious reason for the supervisor being away from his or her normal location is holidays, especially during the summer months. In some cases the supervisor may be away for several weeks at a time.
  The best way of identifying and managing supervisor absence is through close communications between the supervisor and the candidate. Effective communications are central in any good working relationship. At the start of each quarter the candidate and supervisor should, if practicable, check their diaries and identify any periods of the following three months when they will be absent from their normal locations. The supervised student web pages can be accessed from anywhere in the world, so the supervisor and candidate can use them as a common communication base irrespective of their independent travels.

- **The supervisor tries to impose his or her will.**
  Supervisors can be rather opinionated. This applies particularly, for example, where the supervisor is a recognised and established expert in the relevant field. In such cases candidates sometimes find themselves being edged towards a position where they do not necessarily want to be. The candidate may have chosen a related field and may find himself or herself being edged towards the mainstream area that forms the supervisor’s primary area of expertise. Where this does happen the research proposal acts as terms of reference. This document sets out the initial aims and objectives of the research, and these were developed and agreed before the supervisor was appointed.

- **The supervisor is slow to respond.**
  Candidates sometimes feel that the supervisor is taking too much time to respond to questions or requests for advice. The EBS guidebooks for both candidates and supervisors give outline response times for candidates and students to address communications and submissions. If the candidate feels that the supervisor is not achieving these response times, he or she should contact the DBA administrator as early as possible.

- **The supervisor isn’t an expert in the precise research field.**
  This is another possible problem area. EBS makes every attempt to match up the expertise of the supervisor with the current research area of the student. In many
cases this matching is a fairly straightforward process where the candidate is developing research in a well-established area. Problems may arise where the candidate is interested in an area where there is relatively little literature and where the number of potential supervisors is likely to be small. In such cases the supervisor will certainly be an expert in a closely related area, but there may be a slight difference in the precise area of specialisation. Candidates should remember that all supervisor–candidate matches are approved by the EBS Research Committee, so the committee is satisfied that the match is appropriate. If the candidate has any reservations he or she should contact EBS DBA administration as quickly as possible.

- **The supervisor doesn’t direct me to enough specific reading.**
  Candidates who are unfamiliar with research may assume that a research programme is much the same as an undergraduate course. At doctoral level, however, candidates are expected to carry out their own literature reviews and identify the material that is most appropriate for their research. The supervisor is responsible only for directing the candidate in the general area required and then leaving the candidate to get on with the more detailed reading. Some candidates are new to this approach and find it difficult to get used to. The best approach is for candidates to familiarise themselves with the process of reading and collecting potential literature reference material. As the candidate generates a more detailed understanding of the literature, he or she will, at some point, be able to see what level of reading is adequate, and the range of additional reading that is necessary in order for him or her to be able to command a sufficient understanding of the relevant research area.

- **The supervisor is reluctant to assist.**
  Very occasionally a supervisor may become somewhat reluctant to offer the standard levels of help or advice. This situation could result from a number of different sources. The supervisor may have workload problems, or there may be personality clash issues (see below) or difficulties resulting from an unresolved difference of opinion. In all cases the candidate should make every effort to resolve the problem as quickly as possible. If the candidate is unable to resolve the problem, he or she should notify DBA administration at the earliest possible time.

- **The supervisor is incompetent.**
  Supervisors are carefully selected by EBS. There is, however, always the possibility that a particularly experienced candidate may be matched with a relatively inexperienced supervisor, or with a supervisor who has relatively limited industrial or commercial experience in the chosen research area. In such cases the candidate may feel that he or she knows considerably more about the application of the chosen research area than the supervisor. In some instances this may indeed be the case. The supervisor, however, is still more conversant with the requirements of doctoral research, and the candidate should always bear this in mind.

- **The supervisor expects too much.**
  Supervisors vary widely. Each supervisor has his or her own personality, ideals and set of standards. Full-time doctoral candidates who are based in the same
department or school but have different supervisors sometimes compare the expectations of the respective supervisors. Candidates sometimes think that their supervisors ‘expect too much’ as compared with somebody else’s supervisor. It is true that some supervisors expect more from their doctoral students than other supervisors. This can have both positive and negative effects. A high-expectation supervisor may influence the candidate to conduct a particularly impressive piece of research, whereas a lower-expectation supervisor may influence the candidate more towards a more workmanlike everyday piece of work. In either event, both the high-expectation supervisors and low-expectation supervisors will make every effort to ensure that the candidate develops the literature review to an acceptable standard.

- **The supervisor is leaving.**
  Occasionally the supervisor may wish to withdraw from his or her duties as supervisor. Normally the supervisor contracts to provide supervision for the duration of the research programme, but there could be unforeseen events that restrict the ability of the supervisor to continue in that role. Obvious examples include illness or family problems. Where the supervisor does intend to withdraw, EBS has no alternative but to allocate a replacement supervisor. In such circumstances, the withdrawing and replacement supervisors will make every effort to work together in order to achieve a smooth and efficient transition.

4.5.2.2 **The Supervisor’s Point of View**

Problems can also often arise because the candidate is not working to supervisor expectations. Supervisors are experienced doctoral supervisors and they tend to have well-established expectations of how candidates should behave and perform at each stage in the research. These expectations have generally evolved from long and sometimes painful experience over a number of years of successful supervision. It is very important that candidates are aware of these expectations, as failure to understand them could result in the supervisor becoming dissatisfied with the candidate’s progress and/or attitude although the candidate does not realise that he or she has done anything wrong.

Some typical problem areas in relation to supervisor expectations are discussed below.

- **The candidate should show more independence.**
  Candidates should be prepared to work unsupervised for a significant proportion of the time. The supervisor is contracted to spend only so much time either in direct contact or in reviewing the candidate’s work. Supervisors are busy people, and they are often involved in the direct supervision of more than one piece of research. It is therefore very important that the candidate develops a sense of work independence at an early stage in the development of the literature review submission.

- **The candidate ignores advice.**
  The issue of giving and taking advice has been discussed above. It should be stressed that supervisors often become annoyed and perhaps resentful where candidates ask for advice, are given it, and then ignore it. This is a surprisingly
common occurrence. There are really two levels of consideration to be made on the issue of advice. Where the candidate asks for a specific piece of advice, he or she is under more of an obligation to accept that advice than if the supervisor has offered the advice without being asked for it by the candidate. The candidate should make every effort to appreciate that the rejection of advice offered in response to a request from the candidate can be extremely frustrating for the supervisor.

- **The candidate shows no initiative.**
  Candidates should remember that the doctoral research programme is their responsibility. The supervisor is there to supervise, not do the work. Supervisors sometimes find it irritating when they encounter candidates who look to be ‘led by the hand’ rather than working out basic problems by themselves. For example, the candidate can expect some general help and advice from the supervisor in relation to which areas of the literature should be examined and to what level. The candidate should then go to the computer and/or library and identify the relevant books and journal articles. Candidates must use their initiative and reasoning ability rather than constantly contacting the supervisor for advice on relatively minor issues.

- **The candidate hasn’t made much of an effort in writing up the material.**
  Candidates often submit work for consideration to the supervisor where the material has clearly not been fully thought through before submission for consideration. The exact amount of information sent to the supervisor for review will vary, depending on the arrangements agreed between the supervisor and the candidate. In some cases the supervisor may ask to see individual literature review chapters as they are written so that he or she can review them in detail and offer any subsequent advice. In any case, the supervisor will have to review sections of the candidate’s work in order to complete the progress review reports. It is very common for candidates to submit work that has obviously not been properly thought through. Typical examples include:
  - literature reviews chapters that do not link together;
  - incorrect references;
  - test containing grammatical and spelling errors;
  - hypotheses clearly not reflecting the basic theory or literature synthesis;
  - research questions clearly not derived from either the literature review or the pilot study;
  - flawed pilot study.
  While it is the supervisor’s responsibility to provide advice and guidance, supervisors may become annoyed when they receive work for review that is clearly defective. Where work submitted for review is particularly poor, the supervisor may feel that the candidate is to some extent wasting his or her time. The candidate should make every effort to ensure that any work submitted for review is up to the highest possible standards, both in terms of content and presentation.

- **The candidate just isn’t getting the hang of this.**
  Completing IBR1, IBR2 and IBR3 and going on to complete a viable research proposal are clear demonstrations of the candidate’s basic understanding of the
underlying principles of doctoral research. The successful completion of these elements, however, is no guarantee of the candidate’s ability to design and implement his or her full research programme through the supervised stage. It is, unfortunately, quite common for doctoral candidates to struggle badly with the research element at the supervised stage. Some people are very good at reading books and passing examinations, whereas others are very good at designing and implementing research programmes. Some people are good at both, whereas some are much better at one element than they are at the other. As far as the DBA is concerned, the most dangerous combination is the case of the candidate who is good at passing examinations, and therefore achieves a good MBA score, but is not so good at research. In some cases the problem may remain hidden throughout IBR1, IBR2 and IBR3 and even through the mentored stage. The real issue may not become apparent until the supervised stage, where the candidate really has to start thinking for himself/herself and has to develop new concepts, ideas and procedures. In some cases the supervisor may make every effort and try very hard to help the candidate to progress, but it becomes apparent that the candidate is not developing an understanding of the research programme at anything like the rate required for a reasonable likelihood of success.

4.5.2.3 General Issues

- Communication issues.
Many traditional doctoral research programmes involve the candidate working with the supervisor in full-time mode based on campus. On-campus supervision tends to involve a degree of direct communication between the candidate and the supervisor. In a typical on-campus PhD scenario the supervisor might request a formal meeting once each month. The meeting is usually preceded by the submission of a monthly progress and review report by the candidate, in which the candidate details his or her progress since the last meeting. The progress report is then discussed in detail at the meeting, and a set of targets for the coming month are assembled. These targets are then reviewed against actual progress at the next review meeting. This approach allows the candidate and the supervisor to remain in close contact, and the supervisor is always aware of how the candidate is progressing and where any delays have occurred.

Distance learning research supervision, such as in the EBS DBA programme, often relies on other forms of communication. The EBS DBA programme makes use of purpose-designed web-based supervision boards where the candidate and supervisor can exchange messages and discuss any aspect of the research on a secure basis. The web-based faculty board system allows candidates to post copies of monthly progress reports or draft literature review chapters, etc. directly to the supervisor. Unlike regular email, the faculty board system maintains a full and permanent record of all exchanges between the supervisor and the student. This is important as it allows the senior supervisor to keep an eye on the exchanges that are going on between each supervisor and his or her candidates and to pick up on any issues, such as late reports or a lack of communication, as quickly as they become apparent.
• **Personality clashes.**
  One of the most common problems to arise in the candidate–supervisor relationship is that of personality clash. There is a potential for personality clash in most walks of life, and the candidate–supervisor relationship is no different. Candidates sometimes feel that the supervisor is overbearing and opinionated, whereas supervisors sometimes feel that the candidate is intransigent and unwilling to listen to advice. In other cases the candidate and supervisor may simply not ‘get on’ together as people. This sometimes occurs where the personalities of the candidate and the supervisor are too similar! It also sometimes happens where the candidate is, for example, a senior manager in a large company and the supervisor is an academic with limited business experience. In such cases the candidate may feel that he or she knows much more about the ‘real world’ than the supervisor.
  The candidate should remember that the supervisor is familiar with doctoral research and is best placed to know what format and structure should be included in the research programme generally and in the literature review submission specifically. The candidate should always listen carefully to the supervisor’s advice and consider its content carefully. The candidate is under no obligation to take the supervisor’s advice, although this is strongly recommended. Note also that, if the candidate refuses to take the supervisor’s advice on an important aspect of the research, the supervisor may feel that he or she is supervising a piece of research that is now flawed. In this situation the supervisor is in a very difficult position. He or she has a professional obligation to supervise the research and attempt to see that it is developed to the required standard. It can be difficult for a supervisor to continue to offer full enthusiasm and support where he or she feels that the research is developing in the wrong direction or where a major issue has not been addressed.
  Candidates are advised to work as closely as possible with the supervisor and make every effort to overcome any personality clashes at the earliest possible stage. If there is a problem, the candidate should make every effort to address and overcome it. If the situation becomes unacceptable, and appears to be deteriorating, the candidate should inform the DBA administrator at the earliest possible time. In some cases the involvement of a third party may resolve the situation. In the worst case it may be necessary for a replacement supervisor to be appointed.

• **Differences of opinion.**
  It is fairly common for the candidate and the supervisor to have differences of opinion on how the research should be conducted. This position sometimes develops where the candidate has a long history, perhaps at senior management level, within a large company and he or she has strongly held opinions on what should be included in the research programme and how it should be developed.
  In some cases the supervisor may advise against the candidate’s point of view. Typical grounds could be academic rigour and validation. The candidate is again reminded that the supervisor is familiar with doctoral supervision and is fully aware of common shortcomings such as the absence of academic rigour and
validation. The candidate should think very carefully indeed before going directly against the supervisor’s advice.

- **Records.**
  Another common problem area centres on the production and maintenance of records. In developing the literature review the candidate may be involved with hundreds of different references, and the literature review chapters may be drafted and rewritten several times. It is relatively common for the candidate and supervisor to agree on a particular action, such as changing the location of a particular reference within the text, and then one or both parties forget about the agreement. It is generally advisable for the candidate to keep a detailed record of any agreements made with the supervisor, and to make sure that all such agreements are carefully implemented.

- **Taking advice.**
  It cannot be overemphasised that the candidate should always take the advice of the supervisor. In most cases the supervisor knows more about doctoral research than the candidate, and the candidate should always follow the supervisor’s advice. Failure to do so must be regarded as a high-risk option. The research could quickly become misaligned and there may be real problems in ‘fixing it’ later should the student regret ignoring the supervisor’s advice.

### 4.6 Formal Quarterly Progress Reports

#### 4.6.1 Introduction

When preparing the literature review submission, the candidate is required to complete a formal quarterly progress report. The formal quarterly progress report is different from the monthly and milestone reviews in that it is a formal requirement of EBS. In other words, the monthly and milestone reviews are recommended but remain optional while the formal quarterly report is obligatory. Formal quarterly progress reports are sent to the supervisor and may be scrutinised by both the senior supervisor and by the EBS DBA Research Committee as evidence that the literature review submission is being developed and that the candidate is performing satisfactorily. This section considers the format and structure of the quarterly progress reports and attempts to ensure that the candidate fully understands the importance and significance of the reports.

#### 4.6.2 Function of the Formal Quarterly Progress Reports

The formal quarterly progress reports serve a number of important functions. They are important in all cases but especially so in the case of distance learning students. Some of those functions are listed below.

- **Monitoring and control.**
  The literature review submission is a significant piece of work and may take months or even, in some cases, years to complete. In most cases the literature review submission represents a considerable time and cost investment for a candidate. It is therefore important that EBS has an idea of how well the literature
review submission is progressing and remains reasonably satisfied that the candidate continues to show sufficient potential for there to be a reasonable chance of the literature review submission being successfully completed at some point. There is no point in the candidate spending a great deal of time and money on the literature review submission if it will subsequently have no chance of being successful. The EBS Research Committee uses the literature review progress reports as terms of reference in looking for evidence that the candidate is progressing satisfactorily.

- **Early warning.**
  The quarterly reports provide an early indication of any emerging problems. It is common for candidates to become so immersed in their literature review that they forget what their primary aims and objectives were. The research committee and supervisor retain a copy of the candidate’s original research proposal. The research proposal contains a clear statement of the aims and objectives of the research. It is very important that these aims and objectives remain fixed as much as possible during the preparation of the literature review submission. It is unfortunately common to find candidates developing a literature review that is not fully aligned with the initial aims and objectives stated in the research proposal. Without a quarterly reporting system, the candidate can reach completion of the literature review before the research committee is able to detect any such misalignment.

  It is also important to remember that the research proposal, once agreed by the Research Committee, is more or less fixed as a term of reference and as the foundation for the development of the literature review and final thesis. The supervisor and student can agree minor changes, but any significant changes have to be referred back to the DBA Research Committee for approval.

- **Consensus.**
  There are a number of different people and groups involved in the development of the literature review submission. The candidate develops the submission under the guidance of the supervisor. The senior supervisor may act as a moderator to ensure that the report submitted is valid. The EBS Research Committee has the final say on whether or not the literature review submission is acceptable. The progress reports are the vehicle for communicating the developing research around this network of different people. The idea is that everybody gets a copy of the latest progress report as soon as it is produced, and everybody therefore knows exactly how far and how well the literature review has progressed up to that point. Without a centralised reporting system, the supervisor can have one version of a particular chapter, while the candidate might be working on an updated version and so on. The reports act to generate the opportunity for consensus amongst those concerned.

### 4.6.3 Progress Reports Content and Feedback

Formal quarterly progress reports are issued by the DBA Administration Manager direct to candidates. Candidates complete the report pro forma and return the completed form to the supervisor. The supervisor receives the report, studies it
carefully and then completes a short summary element, which effectively responds to the items raised in the candidate’s element of the form.

In addition to completing the summary element of the progress report, the supervisor normally issues more detailed informal feedback to the student on general progress to date. The supervisor uses such feedback to draw attention to any areas of concern, or where the candidate should make any amendment or modification to his or her work as it progresses.

The feedback can relate to all the main areas covered in the original research proposal, and may also provide detailed information on the current literature review. A favourable feedback element is likely to confirm that the literature review submission:

- is progressing satisfactorily;
- relates to the content of the research proposal;
- is correctly aligned to the stated research aims and objectives;
- covers a sufficient range of sources;
- makes use of a sufficient standard of sources;
- demonstrates sufficient promise for further development;
- (perhaps) contains problem areas still to be addressed.

4.6.3.1 Typical Supervisor Feedback Requirements

Feedback requirements are effectively instructions from the supervisor. The candidate is strongly advised to comply in all respects with such requirements. Failure to do so can result in the literature review progressing while containing serious flaws.

Some typical supervisor requirements are listed below. Please note the actual feedback will depend on the individual case. This feedback is provided for indicative purposes only.

Note: All references are fictitious and are for illustrative purposes only.

- The literature sources do not accurately complement the aims and objectives stated in the research proposal. The candidate should reconsider the scope of the literature review and ensure that the references cited are entirely relevant to the stated research field and research aims and objectives.
- The literature review is not sufficiently focused. The candidate has included a large proportion of peripheral references and insufficient references in the central research areas. The candidate should conduct further literature searches in order to identify further central references.
- The literature sources are not of a sufficiently high standard. The candidate has made extensive use of newspaper and Internet articles. Although these are correctly referenced, they do not represent sources of sufficient standing. The candidate should conduct further literature searches and identify higher-quality sources including refereed research journals.
- The sources used in peripheral review areas are adequate but there is a lack of integrating references. These are required in order to maintain the structure of
the literature review and the development of a strong central theme. The sample chapter should be considered in detail and where appropriate rewritten in order to generate this flow and central theme. The theme itself should be founded in strategic alignment, building up through mergers to the potential for the development of human capital. Each successive chapter should build on the previous chapter or chapters in order to develop this central theme. The theme itself should be founded in the first literature review chapter. There is no evidence of any such foundation in the sample chapter provided. The candidate should read the chapter again carefully, identify any references to the central theme, and develop them in more detail. If necessary, additional references to the central theme should be added.

- The candidate appears to have concentrated primarily on five or six different sources for the development of much of the draft chapter. For example, the reference Muffin (2000) has been cited no less than 21 times in the draft chapter, and the reference to Pikelet (1998) has been cited 16 times. These references are clearly being overused whereas other valuable references are being largely ignored. For example, the work of Ryan (1999) is closely related to that of Muffin (2000), but the Ryan (1999) reference has hardly been developed. The candidate should look carefully at the distribution of references and the extent to which they have been developed in order to achieve a better balance of development.

- The draft chapter does not contain sufficient critical analysis. The candidate has listed and described a number of different sources, but no real attempt has been made to develop a critique of the various sources. For example, the work of Muffin (2000) contradicts earlier findings by Jones (1997). The candidate has, however, cited the Jones (1997) reference in support of the suggestion that the development of human capital is a function of the degree of strategic fit offered by a merger. In citing both Muffin (2000) and Jones (1997) the candidate is referring to two sets of postulations that are basically contradictory. This approach is fine so long as the candidate stresses that the two sources are contradictory and develops some form of critical appraisal of each point of view.

4.6.3.2 Typical Supervisor Feedback Recommendations

Feedback recommendations are effectively suggestions from the supervisor. The candidate should always follow the advice of the supervisor and implement his or her suggestions unless there is a compelling reason to do otherwise. The supervisor will generally expect to see conformation of his or her feedback and advice. If the candidate declines to take the supervisor’s advice, the candidate should clearly state (a) that he or she has declined to follow the feedback and (b) why he or she has decided on this course of action.

Some example feedback comments are listed below.

- The literature review is not proceeding at the planned rate of progress. The candidate has completed one draft chapter and appears to have collected sufficient reference material to complete approximately 50 per cent of the second chapter. The research proposal indicated that the candidate intended to have sufficient material to allow the completion of two complete chapters by the date
set aside for submission of the indicative progress report. The candidate may wish to consider the possibility of increasing work output.

- The writing style is inadequate. There are numerous spelling mistakes and grammatical errors both within the report and in the draft chapter itself. These should be corrected before the final draft is completed. Candidates should remember that internal and external examiners can require amendments to correct poor grammar and spelling if they so choose. Based on evidence provided by the draft chapter, problems with spelling and grammar are likely to continue as subsequent chapters are developed and written up. Under these circumstances the candidate should give serious consideration to making use of a proofreader.

- The writing style could be improved, especially in terms of developing a flow between the various sections and subsections of the sample chapter. In some areas, for example subsections 1.4.2 and 1.4.4, the text is rambling and unstructured. The candidate should rewrite these sections in order to improve the presentation of the work.

- Some of the subsections appear to be rather small. The text could be improved by removing a number of subsection headings, for example 3.7.7 and 5.6.2, and incorporating the contents of these subsections into the preceding subsections.

- The text suffers from a lack of diagrammatic representation. Around 90 per cent of the draft chapter is solid text. Useful diagrams could be included to illustrate the principles outlined in sections 1.3.2, 1.3.4, 1.4.2, 1.5.5 and 1.6.4. These diagrams would break up the current monotony of the text, and would also allow some of the descriptive text to be omitted.

4.6.3.3 Following Feedback Advice

As stressed in Section 4.3.2, the candidate should always take the supervisor’s advice unless there is a very good reason not to do so. If the candidate chooses not to follow any advice or guidance from the supervisor, the candidate should make this absolutely clear so the supervisor is aware of the fact. The supervisor will probably ask why his or her advice has not been followed, and it will be the responsibility of the candidate to provide a full and detailed explanation.

It is possible that the candidate may have acceptable grounds for not accepting the supervisor’s advice. In such cases the supervisor may be prepared to modify his or her advice once the reasons for non-acceptance have been explained by the candidate.

If, however, the supervisor stands by his or her original advice, then the candidate should always accept the advice of the supervisor. Failure to do so could invalidate the underlying standard of the thesis and could lead to disastrous consequences later.

It should also be noted that the supervisor will normally refer non-compliance to the DBA Research Committee.
Learning Summary

The candidate should now understand:

- what a supervisor is;
- why a supervisor is necessary;
- what the supervisor does;
- how to communicate with the supervisor;
- how to develop a working relationship with the supervisor;
- what to expect of the supervisor;
- the difference between good and bad questions;
- what to do if there are problems;
- the concept of formal literature review progress reports and informal progress reports;
- what is required in completing the formal reports;
- how to complete the formal literature review progress reports.

The following sections summarise the main learning outcomes to emerge from each section of this module.

The Concept of Doctoral Supervision

- The word ‘supervise’ can be defined as: to observe a person or a process to ensure that whatever is being done is done correctly.
- A supervisor is a person who supervises another person or a process.
- Supervision is when a supervisor observes a person or process to ensure that whatever is being done is done correctly.
- The supervisor is responsible for watching the development of the literature review in order to ensure that it is done correctly.
- In this context ‘done correctly’ means in compliance with university regulations and to a standard that will be satisfactory for the internal and external examiners.
- In working with the supervisor the candidate should make every effort to ensure that:
  - the research remains focused;
  - the candidate does not become sidetracked;
  - any proposed modification of the research aims and objectives is kept to a minimum;
  - the literature consulted is relevant and appropriate;
  - the research programme progresses as planned;
  - any problem areas are identified and dealt with as quickly as possible;
  - progress reports are completed and submitted on time;
The Supervisor–Candidate Relationship

- Candidates often have problems in establishing a good working relationship with the supervisor.
- It is essential that the candidate makes every effort to secure a good working relationship with the supervisor as the whole subsequent development of the research programme depends on it.
- The supervisor–candidate working relationship is considerably more difficult to nurture in the case of distance learning doctoral research.
- The role of the supervisor changes as a function of the phase of the literature review submission development being considered.
- At some point the specialist knowledge of the candidate in the specialist research area will exceed that of the supervisor. At this point the candidate will have to start to ‘teach’ the supervisor.
- Making the initial contact is the responsibility of the supervisor.
- The supervisor and candidate should meet at least once during the first few months of the development of the literature review submission.
- In some cases a face-to-face meeting may not be logistically possible.
- The candidate and supervisor should arrange monthly reviews and milestone reviews over and above the formal progress reporting system.
- Typical monthly review items for discussion include:
  - literature consulted this month;
  - particularly useful and relevant citations;
  - words written this month;
  - work reviewed by the supervisor this month;
  - any problems;
  - any revisions to the literature review timescale;
  - issues for discussion with the supervisor;
- The monthly review is normally emailed to the supervisor a few days before the end of the month. The supervisor then reads it in detail and contacts the candidate by telephone to discuss the contents.
- Typical issues raised by candidates include:
  - difficulties in accessing a particular sector of the literature;
  - problems in tying together two different literature streams;
  - uncertainty in interpreting the results presented in a particular paper;
  - problems in pilot study questionnaire design;
  - problems in interpreting pilot study results;
  - delays in the development of the literature review.
- Milestones are major events in the development of the literature submission, such as the completion of a draft chapter.
Questions for the Supervisor

- The candidate should carefully consider questions before putting them to the supervisor. This is necessary in order to ensure that the candidate makes the most effective use of valuable candidate–supervisor interaction time.

- Typical good questions include questions that:
  - specifically require the supervisor’s expertise;
  - relate to a stated area and are set in the context of the literature;
  - require complex reasoning and appropriate specialist knowledge;
  - address gaps or areas unclear in the literature;
  - involve new areas where there may be no publications to provide guidance;

- Typical bad questions include questions that:
  - are irrelevant;
  - lie outside the scope of the research;
  - the candidate could answer himself/herself;
  - lie outside the expertise of the supervisor (within limits);
  - have obvious answers;
  - have answers clearly indicated by the literature;
  - are addressed in the EBS Introduction to Business Research texts;
  - are too general or all-encompassing.

Possible Problem Areas

- The candidate tends to have a very different view of the working relationship from the supervisor.

- Common candidate complaints include the following:
  - The supervisor is not available.
  - The supervisor is always away.
  - The supervisor tries to impose his or her will.
  - The supervisor is slow to respond.
  - The supervisor isn’t an expert in the research field.
  - The supervisor doesn’t direct me to enough specific reading.
  - The supervisor is reluctant to assist.
  - The supervisor is incompetent.
  - The supervisor expects too much.
  - The supervisor is leaving.

- Common supervisor complaints include the following.
  - The candidate should show more independence.
  - The candidate ignores advice.
  - The candidate shows no initiative.
  - The candidate hasn’t made much of an effort in writing this.
  - The candidate just isn’t getting the hang of this.

- Communication issues represent a common area for problems, especially in the case of distance learning students.
• Personality clashes between candidates and supervisors are surprisingly common. They are potentially very disruptive and should be addressed immediately.
• Differences of opinion are acceptable so long as they lead to constructive debate. They should be addressed at once if their effects become disruptive.
• Where there are major differences of opinion the candidate should generally take the supervisor’s advice.
• Candidates and supervisors should maintain accurate records of what has been discussed and agreed.

Progress Reports
• The candidate is required to complete formal quarterly literature review progress reports and send them to the supervisor.
• Formal literature review progress reports fulfil a number of functions including:
  – monitoring and control;
  – early warning;
  – consensus.
• The supervisor receives the report and studies it carefully. He or she then completes a summary element and returns the form to the student.
• The supervisor usually also offers detailed informal feedback.
• The feedback relates to the progression of the literature review submission.

Review Questions

True/False Questions

The Concept of Doctoral Supervision

4.1 Virtually all forms of doctoral research involve an element of supervision. T or F?

4.2 The supervisor tells the candidate what to do. T or F?

4.3 The supervisor acts as a form of guarantee that the research programme will be successful. T or F?

4.4 A good supervisor will ensure that a candidate always succeeds in his or her doctoral research. T or F?

The Supervisor–Candidate Relationship

4.5 The working relationship between the supervisor and candidate is not important. T or F?
4.6 The supervisor is responsible for ensuring that a good working relationship develops. T or F?

4.7 The candidate can generally expect the supervisor to be consistent. T or F?

4.8 The supervisor can normally expect the candidate to listen to the supervisor’s advice and consider it carefully. T or F?

4.9 The role of the supervisor changes over the course of the development of the literature review submission. T or F?

4.10 In some cases it is necessary for the candidate to teach the supervisor. T or F?

4.11 It is the responsibility of the candidate to make initial contact with the supervisor. T or F?

4.12 The monthly review is a part of the formal progress reporting process required by the EBS Research Committee. T or F?

4.13 Milestone reviews are always produced monthly. T or F?

### Questions for the Supervisor

4.14 There is no difference between good questions and bad questions for the supervisor. T or F?

4.15 Good questions are typically those that require complex answers. T or F?

4.16 All good questions relate to research methodology. T or F?

4.17 Good questions tend to be specific rather than general. T or F?

4.18 There is no such thing as a bad question to ask the supervisor. T or F?

### Possible Problem Areas

4.19 Many candidates encounter no problems with the supervisor–candidate working relationship. T or F?

4.20 Candidates often complain that the supervisor is not available when required. T or F?

4.21 Supervisors can be expected to be available at all times. T or F?

4.22 The supervisor is always an expert in the exact relevant field. T or F?

4.23 Supervisors often feel that candidates should show more independence. T or F?
4.24 Supervisors don’t mind answering questions where the candidate could easily have answered these questions themselves. T or F?

4.25 Effective communication is particularly important in distance learning doctoral supervision. T or F?

**Progress Reports**

4.26 Quarterly formal progress reports are useful for monitoring and control purposes. T or F?

4.27 Quarterly formal progress reports often provide early warning of potential problems. T or F?

4.28 The candidate is likely to encounter only quarterly formal EBS progress reports. T or F?

4.29 Informal progress reports are unnecessary. T or F?

4.30 The quarterly formal progress report is usually completed when the literature review is nearly complete. T or F?

4.31 There is usually no need to submit more than one progress report of any kind. T or F?

4.32 Quarterly formal progress reports are usually responded to with formal feedback. T or F?

4.33 The senior supervisor has the final say over what informal feedback is issued. T or F?

**Multiple-Choice Questions**

**The Concept of Doctoral Supervision**

4.34 When the supervisor offers advice the candidate:
   I. may sometimes ignore it.
   II. should consider it carefully.
   III. must always implement it.
   IV. should always ask for further elaboration.
Which of the above are true?
A. I only.
B. I and II.
C. I, II and III.
D. II, III and IV.
4.35 The candidate should regard the supervisor as a:
A. superior.
B. subordinate.
C. colleague.
D. research assistant.

The Supervisor–Candidate Relationship

4.36 The candidate can generally expect the supervisor to:
I. be available when required (within limits).
II. read submissions carefully before meetings or conversations take place.
III. be consistent.
IV. offer good, reliable advice.
Which of the above are true?
A. I and II.
B. I and II.
C. I, II, III and IV.
D. II, III and IV.

4.37 The supervisor can normally expect the candidate to:
I. be entirely retrospective.
II. observe submission deadlines.
III. prepare and check work carefully before submitting it for review.
IV. avoid asking questions with obvious answers.
Which of the above are true?
A. I and II.
B. I, II and III.
C. II only.
D. II, III and IV.

4.38 The initial contact discussion typically addresses:
I. the precise aims and objectives of the research.
II. any background information (over and above that provided by EBS).
III. a proposed programme for completion of the literature review.
IV. proposed method of contact and timescales for response.
Which of the above are true?
A. I and II.
B. I, II and III.
C. I, II, III and IV.
D. III and IV.
4.39 Informal monthly reviews during the development of the literature review submission are generally:
   A. recommended.
   B. not recommended.
   C. mandatory.
   D. prohibited.

4.40 Informal milestone reviews during the development of the literature review submission are generally:
   A. recommended.
   B. not recommended.
   C. mandatory.
   D. prohibited.

Questions for the Supervisor

4.41 The supervisor generally provides around:
   A. three to four hours’ direct contact time per week.
   B. two to four hours’ direct contact time per month.
   C. four to six hours’ direct contact time per month.
   D. more than six hours’ direct contact time per month.

4.42 Typical good questions include questions that:
   I. specifically require the supervisor’s expertise.
   II. relate to a stated area and are set in the context of the literature.
   III. require complex reasoning and appropriate specialist knowledge.
   IV. address gaps or areas that are unclear in the literature.
   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.

4.43 Typical bad questions include questions that:
   I. are irrelevant.
   II. lie outside the scope of the research.
   III. the candidate could answer himself/herself.
   IV. address gaps or areas that are unclear in the literature.
   Which of the above are true?
   A. I and II.
   B. I, II and III.
   C. II, III and IV.
   D. III and IV.
Module 4 / Working with the Supervisor

Possible Problem Areas

4.44 Generally the supervisor should be available:
A. at all times.
B. whenever required by the candidate.
C. during normal working hours.
D. as contracted and as agreed with the candidate.

4.45 Candidates should make every effort to:
I. respond to supervisor comments.
II. avoid asking irrelevant questions.
III. continuously expand the research field.
IV. send the supervisor copies of all identified literature.
Which of the above are true?
A. I and II.
B. I, II and III.
C. II and IV.
D. III and IV.

Progress Reports

4.46 The EBS DBA literature review progress reporting system makes use of:
A. formal progress reports.
B. informal progress reports.
C. formal and informal progress reports.
D. senior supervisor progress reports.

4.47 The supervisor provides official feedback in response to:
I. weekly official progress reports.
II. all milestone progress reports.
III. quarterly official progress reports.
IV. the indicative literature review progress report.
Which of the above are true?
A. I only.
B. I and II.
C. III only.
D. II, III and IV.

4.48 In terms of whether or not progress is satisfactory, the final decision in relation to the formal literature review progress reports lies with the:
A. candidate.
B. supervisor.
C. senior supervisor.
D. EBS Research Committee.
Module 5

Literature Review Submission Orientation

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Learning Objectives

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

- the concept of literature review submission orientation;
- the difference between hypothesis-based and exploratory-based orientation;
- the relevance of sample size in each orientation;
- the concept of the orientation matrix and orientation quadrants;
- how the research programme can be oriented towards different quadrants;
- how the research programme can be oriented across quadrants;
- how each orientation contributes to the knowledge of the subject;
- how hypothesis-based orientation angles towards the discovery of new facts;
- how exploratory-based orientation angles towards independent critical power.

5.1 Introduction

This module considers the alternative orientations for the literature review submission and, indeed, for the research programme as a whole. This section acts a bridge between the theoretical aspects discussed in Modules 1 to 4 and the two example literature review submissions presented in Module 6 and Module 7. Module 5 aims to establish the context in which the candidate makes a decision on the orientation of the literature review submission. The module effectively acts as an introduction to Module 6 and Module 7.

Module 6 develops an understanding of the development of a set of a research questions, aims and objectives and a set of hypotheses from a literature synthesis
and the outcomes of a pilot study. This type of research approach is known as **hypothesis-based** or **definitive** as it represents research carried out on a series of samples (companies) and represents the ‘best guess’ of the overall situation at a particular point. Note that, if the sample is well chosen, the results are likely, although not absolutely certain, to be applicable to the population in general.

Module 7 addresses an alternative orientation where the research is **exploratory-based** or **indicative**. As such it does not necessarily provide a ‘best guess’ of the overall situation at a given point. Indicative research identifies pointers or signs by looking in detail at one sample and using the outcomes from this sample as an indicator of the overall situation. As only one sample is used, the results of the research cannot be inferred as applying to the population in general. Further studies would be required in order to transform this indicative research into a definitive result.

**Note**: It is very important for candidates to realise that Modules 6 and 7 are presented as examples of the two primary alternative formats for EBS DBA literature review submissions. Candidates who intend to develop a hypothesis-based approach should read Module 6 as an example of a literature review submission. Candidates who intend to develop an exploratory-based approach should read Module 7 as an example of a literature review submission. Candidates who are undecided at this stage should read both. Much of the example literature review included in Modules 6 and 7 is common to both modules, although the application is different. Candidates should therefore not read both modules unless they are undecided about which approach to adopt. Candidates should read either Module 6 or Module 7 depending on the intended orientation of their research. Further details on the hypothesis-based and exploratory-based approaches are given later in this module.

Both approaches are equally valid for EBS DBA research programmes. The indicative approach may be suitable for some DBA programmes in that it provides the opportunity for candidates to concentrate on one specific company (perhaps their own company) in detail.

It is important that candidates are aware of the indicative approach because it reflects the format likely to appeal to a significant number of EBS DBA students who wish to conduct research where:

- the candidate’s company is the primary sample;
- there may not be a great deal of relevant literature in the subject area concerned.

This module examines the research validity of such applications and suggests alternative forms of research design within the context of university regulations for doctoral theses.

Candidates should note that the terms ‘company’ and ‘organisation’ are used interchangeably throughout this module. It is appreciated that many candidates may work for ‘organisations’ rather than ‘companies’. The two terms are interchangeable and are used in this context. The information contained in the text is equally relevant for both terms.

**A note on application**: It should be made clear that this module introduces the concept of research orientation. Candidates should appreciate that the research can be oriented in one of several different alignment options. The orientation chosen depends on the circumstances under which the research is conducted and also in relation to the application required for the end results. It is very important that candidates (and indeed managers who are applying the results) realise the strengths and weaknesses of
each orientation so that they are better placed to make informed decisions on the basis of the research findings.

5.2 The Hypothesis-Based Approach

5.2.1 Introduction

The hypothesis-based approach is quickly summarised in this section. The detailed development of a research hypothesis from a literature review and pilot study has been discussed in detail in Modules Module 2 and Module 3.

5.2.2 The Hypothesis-Based Approach

The hypothesis-based approach is adopted in most traditional PhD research programmes. In this approach, the candidate conducts a literature review and synthesises it to form a basic theory, as discussed in Module 2. This theory is then evaluated using a pilot study, as discussed in Module 3. Depending on the outcome of the pilot study, the basic theory is developed into a formal theory, from which a set of aims and objectives, a research question and a set of research and operational hypotheses are developed. The hypotheses are then evaluated using quantitative or qualitative approaches or a combination of both.

The hypothesis-based approach is suitable for many forms of research. It is applicable to highly theoretical research such as the development of a new mathematical formula that extends an existing formula. The approach is also suitable for more applied research in situations where a considerable body of research exists.

It is important to understand that although the hypothesis-based approach is by far the most popular approach used in doctoral research orientation (and therefore forms the basis for Modules 2 and 3 of this text), it is not the only approach to research orientation. Other orientations can be used and, in some cases, may be equally or more appropriate in the development of EBS DBA research.

5.3 The Exploratory-Based Approach

5.3.1 Introduction

This section considers the exploratory-based orientation. This is the primary alternative to the hypothesis-based orientation. The main difference between the two is that whereas the hypothesis-based approach usually considers the general applicability of a theory, the exploratory-based approach concentrates on a small sample, possibly as small as a single sample, in detail. In business exploratory-based research, the single sample is usually an individual company or other form of organisation. In exploratory-based research the focus is more on the operational characteristics of this single entity.
5.3.2 The Concept of the Exploratory-Based Approach

Exploratory-based orientation assumes that the candidate wishes to make use of his or her own (or a suitable collaborating) company or other form of organisation as the primary data source. The candidate may wish to study one particular aspect of this company in great detail to address a specific issue, problem or potential development area. For example, company X may have a specific problem in relation to the implementation of a new enterprise-wide risk management system (EWRMS) based on a substantiated risk interdependency field analysis. The company may be in a position to design most aspects of the EWRMS but be unable to determine some of the risk interdependencies that must be evaluated for the risk interdependency field to be fully specified.

*Note:* The concept of enterprise-wide risk management systems and risk interdependency fields is discussed in detail in the EBS text *Strategic Risk Management.*

A typical problem area could be that of determining the risk interdependency between different types of unforeseen and unforeseeable risk and the impact these risks could have on the individual risk levels within the organisation. The candidate may wish to centre the research on the identification and evaluation of these unforeseeable risks in terms of their individual magnitude and in terms of the interdependency between them and the other nodes in the risk interdependency field. The candidate may decide to conduct this identification and evaluation using a scenario-planning-based approach with some form of probabilistic assessment using subjective probabilities. The candidate may try several different scenario planning and evaluation approaches in one or more pilot studies before finding an appropriate identification and evaluation method. These may then be applied to the main EWRM problem faced by the company.

The results could indicate a range of useful and interesting outcomes of direct relevance and value to company X. As a result of the candidate’s work, the company may be able to successfully develop a representative risk interdependency field, and also introduce a fully operational EWRMS.

The candidate’s work, while being useful and valuable to company X, may have been carried out to the level of rigour required for the award of a doctoral degree. However, there are some obvious problems that emerge in relation to the results. The most obvious is that the results have been obtained purely from research in company X, and are therefore *definitive* only in terms of company X. The results, however, may also be *indicative* of the characteristics of companies Y and Z. The extension and development of the results obtained from company X to a more general application in companies Y and Z could form the basis of a future research programme.

5.3.3 University Regulations and the Exploratory-Based Approach

Candidates will recall that all EBS DBA theses contain exactly the same level of rigour as Heriot-Watt University PhD theses. DBA and PhD doctoral theses are examined in exactly the same way as PhD theses and are exposed to exactly the same level of scrutiny by internal and external examiners.
Heriot-Watt University regulations on doctoral theses are clear. The most important regulation in terms of the standard of work required for the award of a doctoral degree is contained in University regulation 6 Section 8.1.1, which states that:

*The thesis shall form a contribution to the knowledge of the subject and afford evidence of originality, shown either by the discovery of new facts or by the exercise of independent critical power.*

In other words the thesis shall:

- form a contribution to the knowledge of the subject;
- afford evidence of originality.

The requirement for an original contribution to the knowledge of the subject can be evidenced by the:

- discovery of new facts;
- exercise of independent critical power.

The exploratory-based approach is likely to make use of the latter option for evidencing the original contribution to the knowledge of the subject. *Independent* means not influenced or controlled in any way by other events, people or things. *Critical* means giving opinions or judgements, and *power* means a natural skill or ability to do something. It therefore follows that the candidate can evidence a contribution to the knowledge of a subject by showing his or her ability (power) to make use of his or her free (independent) opinions and judgement (critique).

This is a very important point. Most doctoral examiners would probably agree that the discovery of new facts and the exercise of independent critical power are two entirely different ways of demonstrating an original contribution to the knowledge of a subject.

In order to make the demonstration by the generation of new facts, the facts have to be arrived at using a research approach that justifies the use of the word ‘fact’. *Fact* means something that has been done or a thing that is presented as having an objective reality. If somebody lifts a ball and then lets go of it, it is a fact that the ball will fall to earth under gravity. For the candidate to present results as the discovery of new facts, the results must have some form of objective reality. In most cases, this means that they must have been arrived at through some form of scientific reasoning and analysis.

In order to make the demonstration through independent critical power, the candidate does not necessarily have to produce any new facts at all. The candidate still has to demonstrate the ability to use independent critical reasoning. Alternatively, new facts could be generated but these could be company specific and therefore not generally applicable, provided the candidate demonstrates independent critical power in the development of these company-specific facts.

Many EBS DBA candidates may opt for this latter form of demonstration since they may wish to base their research on a single company as sample. In this case, it may be difficult to produce objective facts since the sample characteristics of the
sample company are not known in relation to other companies. This idea can be extended to include an example. Consider a company that is considering investing in a new external training programme in order to increase the efficiency of its employees. The course itself might cost £5000 per head. In evaluating the cost effectiveness of the course, the company could carry out an experiment to see how effective the course is. They might decide to put one employee through the course and subsequently discover that the efficiency of that employee has increased by 16 per cent. This may seem like a good investment and the company might, therefore, contract to put 100 employees through the course at a cost of £500 000. Subsequent investigations may then reveal that the average increase in efficiency has only been 8 per cent. The company may now regard the larger investment as being essentially bad.

The problem arose, of course, because the company based its initial appraisal of the effectiveness of the course on a single person. That person may not be representative of the entire employee base. In this case, the single person used in the pilot study may have been particularly clever, good at his or her job, highly motivated and committed and so on. That single survey, therefore, generated a false perception of the effectiveness of the course because the sample was too small to be considered reliable.

It would therefore be difficult to describe the results obtained from the analysis of one person or one company as being new facts. They may well be facts about that company or person but they are not necessarily facts about all companies in a particular sector or about all the people in a country. The knowledge base is concerned with the knowledge that applies to collections of companies or individuals rather than knowledge about individual companies or people. Facts about specific companies and individuals do not necessarily imply facts about groups of companies or people because they are not indicative of the population as a whole.

The specific facts on a given company or person, although not necessarily knowledge base facts, may provide a sufficient base for the candidate to make a contribution (non-fact) to the knowledge base by demonstrating an independent critical power in relation to the specific facts. For example, the single person who attended the training course could be studied in more detail. The candidate could study the person’s personal characteristics relating training course attendance to likely efficiency improvement. Such individual characteristics could include intelligence quotient, motivation, commitment, receptiveness to new ideas, flexibility, adaptability and so on. These characteristics can all be measured by established techniques. The improvement in performance could then be matched against these characteristics and used to form a prediction of what kind of efficiency improvement could be expected from the workforce as a whole, based on the comparison of the individual characteristics with the average characteristics of the workforce as a whole. The results would therefore be indicative of the results expected in the workforce as a whole.

Existing literature may assist in developing such a list of characteristics. The candidate may also be able to justify a few others that the literature omits.

University regulations permit this independent critical power approach in demonstrating a contribution to the knowledge base. It is sometimes more difficult
to demonstrate than the discovery of new facts. This difficulty reflects the classical differences between quantitative and qualitative approaches. In some ways, a qualitative approach may seem ‘easier’ though in fact this is not the case. It can be relatively straightforward to demonstrate the discovery of a new virus based on electron microscope investigations and DNA analysis. It may be much more difficult to prove the likely or potential impact of the new virus on people.

Candidates should consider all angles carefully before making a decision on which approach to adopt.

5.3.4 Exploratory-Based Research and the Literature

An obvious implication of adopting a company-based approach is that the research is highly specific and there is unlikely to be a specific matching in the literature. The knowledge of the basic subject area may be well established but the specific application to the subject company will almost certainly be non-existent. This position can generate a number of problems.

- **There is unlikely to be any significant literature on a specific company.**
  This is not always the case. For example, there are numerous case studies on companies like Hewlett-Packard in the literature, but these tend to concentrate on the specific aspect that the relevant researcher was pursuing. There is unlikely to be much literature on the specific aspect that is being studied by the candidate. As a result the candidate is likely to have relatively little contextual guidance in the specific organisational type chosen.

- **Any company-specific literature that does exist is likely to be out of date.**
  Companies are highly dynamic and operate under conditions of change. Company specific literature tends to become obsolete and superseded by events very quickly.

- **A reasoning bridge is likely to be required.**
  The relevant literature is likely to focus outside the specific sample specified for the research. In the hypothesis-based approach it is often possible to find a literature focus that exactly coincides with the research hypothesis. In some cases the literature may contain a gap that forms the focus of the research hypothesis itself (see the example literature review submission in Module 6). In exploratory-based research there is always a gap between the literature review focus and the specific company research focus. The candidate therefore has to be able to establish a bridge between the two foci. This can be a complex and demanding process.

- **Parallels may be complex.**
  The candidate may be able to identify research of a similar specific nature that has been carried out in another company. At first glance it may seem that such research may be useful in the current exploratory-based research, but the parallels may in fact be complex and difficult to establish. Companies are very individualistic, even where their outward appearance may seem similar. For example, two essentially similar organisational structures may hide wide differences in organisational culture, and the cultural element could be a primary driver in the specific research area under consideration. In the strategic alignment and development of human capital example discussed earlier in the text, cultural
factors are likely to play a major role in the development of human capital. In many cases cultural differences, when added to all the other variables that distinguish individual companies from other companies, can make company-specific case studies very difficult to use.

It should be clear that the literature review is just as important in the exploratory-based orientation as in the hypothesis-based orientation. In both cases the literature acts as the basis for the underlying theory or research question. In exploratory-based research the literature is likely to be less directly aligned with the specific research question, although the same requirement for literature review focus and synthesis remains. In the case of exploratory-based research the candidate is likely to receive less direct specific guidance from the literature, and a greater degree of independent critical power is likely to be required.

Candidates should carefully consider the literature issue before making a final choice on orientation.

Note: It should be stressed again (as it was in Introduction to Business Research 1) that the candidate must demonstrate a viable literature base in the proposed area of research. The candidate must do this both at research proposal stage and later in the full literature review stage. The full literature review must show that there is an adequate literature base on which to found the current research. The DBA Research Committee is only likely to accept a literature review submission that clearly demonstrates a viable literature base and is unlikely to accept a literature review submission with a non-viable literature base unless the candidate is able to make a sufficiently strong and convincing case in support.

5.3.5 Framing a Company-Based Research Question

The development of a suitable research question has been discussed in detail in Modules 2 and 3 of this text and also in Introduction to Business Research 1. The process in the case of exploratory-based research is essentially the same. The primary difference is that in the case of exploratory-based research there is no requirement to develop a formal research hypothesis. Many exploratory-based researchers develop a simple research question that forms the basis for the subsequent methodology design, data collection and analysis.

The question is usually generalised but relates to a specific sample company. Two typical example questions are listed below.

- Do companies use the increase in strategic alignment generated by merger to enhance the positive development of human capital?

  This research could focus on the extent to which companies actually make use of the opportunity provided by increased focus through merger to increase the positive development of human capital. It could, for example, examine the understanding within the company of the opportunity provided and consider any formal and/or informal procedures in place for the exploitation of the opportunity. Where processes and procedures are in place, the research could examine their effectiveness in terms of identifying areas where improvements could be made and/or areas where the appropriate procedures are not in place. A grounded theory approach could then be adopted to assess the effectiveness of refined
and new procedures on the ongoing development of human capital. The outcomes could be a ‘before and after’ map of the organisation showing pre-research and post-research procedural systems together with a summary of the increases in human capital development occurring as a result of the various procedural changes.

It should be stressed again that these outcomes would be definitive only in terms of the sample company. They may, however, be indicative of the shortcomings and potential for improvement in procedural systems of other similar companies.

- Do companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital?

This research could concentrate on the extent to which the sample company attempts to optimise (as opposed to use) the opportunities offered by increased strategic alignment through merger. The research could develop an evaluation system to show the various drivers of human capital development in the company. These could include cultural positivity, communication systems, human resources function effectiveness and innovation, learned knowledge and so on. The research could then identify and develop some kind of measurement or classification system for these drivers so that the actual degree of exploitation can be expressed as a proportion of the maximum possible degree of exploitation. The results might indicate that some drivers are being exploited more than others.

The research could then examine the relative importance of the various drivers. For example, in the sample company cultural positivity may be a more important driver than communications, yet the company may have a higher degree of achieved exploitation in the communications driver. In this case the company may have correctly identified the drivers, but may be inefficiently promoting a less important driver to a greater extent than a more important one.

The research outcomes could provide the company with a map of the various drivers together with a relative importance or significance of each one. The balance of effort and resources allocated to the various drivers could then be optimised by allocating the greatest effort to the most significant drivers. In other cases, the research might indicate interdependencies between drivers. For example, the cultural positivity driver could be interdependent with the communications driver. An increase in the effort allocated to the communication driver could automatically result in an increase in the effectiveness of the cultural positivity driver, without any additional allocation of effort to that driver. This, in turn, could give rise to a whole research area in itself – that of driver balancing.

These examples give some idea of the form and content of exploratory-based research questions. It should be clear that the approach to be taken in addressing them is likely to be entirely different from the approach taken in addressing a formal quantifiable hypothesis and that the results generated from the research are also likely to be different. The outcomes of exploratory-based research still contribute to the knowledge of the subject being researched, but in a different way. The emphasis is much more on the exercise of independent critical power than on the discovery of new facts.
5.4 The Research Orientation Matrix

5.4.1 Introduction

This section considers the orientation options available. There are, in fact, several options that could be adopted in EBS DBA research. This section, and the two example literature review submissions that follow in Module 6 and Module 7, concentrate on the two most popular types (hypothesis-based and exploratory-based). Most doctoral theses fall within one or other of these categories.

5.4.2 Hypothesis-Based Research versus Exploratory Research

The classic definitive or hypothesis-based approach to developing a research hypothesis is detailed in Module 6. In this approach, the literature review and synthesis is used to develop a basic theory that is refined into a formal theory using the outcomes of a pilot study. This process takes place with the subsequent intention of developing a research methodology that will attempt to evaluate the theory by looking in detail at a longitudinal case study and a series of cross-sectional case studies. The outcome, using this approach, is the acceptance or rejection of a research hypothesis that links strategic alignment and the development of human capital. The sample in this approach may be several large companies using one or more longitudinal case studies with a pilot study and perhaps several cross-sectional studies in support of the main studies.

The outcomes of the hypothesis-based approach therefore generally reflect a relatively large sample size. In typical doctoral research the sample size could be hundreds depending on the characteristics of the data collection process. A researcher might, for example, issue 500 questionnaires within a single large organisation. Another researcher might select 500 organisations and issue a single questionnaire to each organisation. The important factor is to ensure the research is generalisable. The sample size has to be large enough to make the sample representative of the population.

The definitive element of the hypothesis-based approach can be defined as:

*Not questionable or cannot be improved; final, best guess or complete.*

This approach is definitive because it provides the candidate’s best guess of the situation at a given time. This does not mean that the results are guaranteed to be correct or cannot be falsified. It simply means that the research has been correctly designed and implemented, to the satisfaction of the examiners, and provides a final, accepted best guess of the position, perhaps in a sector or industry based on a number of samples.

The alternative exploratory-based approach is based on the adoption of a position where the outcomes represent those offered by a single sample. These outcomes are indicative of what may be the position in a wider population. In the exploratory-based approach the sample size may indeed be only one, and there may be no formal research or operational hypotheses. The research is much more likely
to be based on a straightforward research question set primarily in the context of the sample company.

The indicative element of the hypothesis-based approach can be defined as:

*Indicating or providing a sign that something exists.*

The two extremes of hypothesis-based and exploratory-based orientations are shown diagrammatically in Figure 5.1.

![Figure 5.1 Basic research orientation matrix](image)

In Figure 5.1 the horizontal axis represents the continuum of possible orientations between hypothesis-based research and exploratory-based research. The vertical axis shows a similar continuum from a single data sample to numerous data samples. The quadrants on the diagram represent different combinations of hypothesis and exploratory approach and single and numerous sample sizes. Quadrant A therefore represents a hypothesis-based piece of research using multiple case studies. This is the approach assumed in the sample literature review submission presented in Module 6.

Quadrant B represents a single case study approach using hypothesis-based research. Quadrant C represents an exploratory approach used on numerous case studies, and quadrant D represents a single case study exploratory approach. This is the approach assumed in the sample literature review submission presented in Module 7.

The simple matrix represented in Figure 5.1 covers the four primary orientations that can be adopted. In some cases a particular orientation might be appropriate for a given stage of a research programme, whereas the programme itself moves through different orientations or quadrants as the research develops. This concept is shown diagrammatically in Figure 5.2.
Figure 5.2 shows the possible steps involved in developing a large-scale research programme to establish whether there is a link between BSE in cows and CJD in humans (see the detailed example in Module 2). The first stage in the research programme might have been initiated when veterinary surgeons began noticing strange symptoms in cows. The first step might have been to perform post-mortem examinations on dead cows in order to identify the cause of death. This would clearly have been exploratory research (because the cause of death was not known) on a single sample. This first examination might have indicated that the cause of death was brain tissue degeneration caused by an unknown entity.

![Figure 5.2 Research programme progression stages](image)

The next obvious step would have been to carry out a large number of post-mortem examinations on a larger number of dead cows. The research at this stage (stage 2) remained experimental because the cause of death could have been different in each case even though the symptoms were similar. The research programme would then have indicated that the cause of death in nearly all cases was the same: some form of neurological degeneration caused by an unknown entity.

The next stage would have been the generation of a hypothesis. Scientists were aware that a similar disease (scrapie) had existed in sheep for hundreds of years. The obvious hypothesis would have related to the transfer of the disease from sheep to cattle. If this had indeed been the case, then scrapie must have crossed the species...
divide between sheep and cows. At this point the scientists would have started to be concerned that, if the disease could cross one species divide, it could perhaps cross another and be transferred to humans. In order to assess the acceptability of the cow–human divide the scientists would first have to evaluate the likelihood of the sheep–cow divide. This would have involved stage 4, which would have been the large-scale evaluation of hundreds of cow brains to determine whether the disease had crossed from sheep to cows.

Subsequent research indicated that this was the case. The research programme would then have been extended to include human fatalities, with a similar phased approach being adopted.

It should be clear that EBS DBA doctoral research could be centred on any one of these quadrants or across one or more quadrants or, indeed, across all four quadrants. Considering again the BSE–CJD example, it is clear that each of the stages described formed a contribution to the knowledge on the subject.

- Stage 1 established that one dead cow had BSE.
- Stage 2 established that a large number of dead cows had BSE.
- Stage 3 established that there appeared to be a testable theory that BSE was contracted from scrapie.
- Stage 4 established that BSE in cows was, indeed, contracted from scrapie in sheep.

Any one of these stage outcomes forms a contribution to the knowledge on the potential transfer of the disease across species. The earlier stages are exploratory-based (indicative), in that they indicate that the disease may cross species barriers, whereas the later stages are hypothesis-based (definitive) in that they show that the disease does indeed cross the species divide. The later stages, however, are dependent on the completion of the earlier stages. As is the case in most types of research, indicative research is necessary in order that definitive research can be defined.

It should be noted that stage 1 contributed to the knowledge of scrapie–BSE in terms of one particular dead cow. This cow could have been unusual, and therefore the results of the post-mortem were not generally applicable. The fact, however, that BSE was detected in one dead cow, through a process of independent critical power, established that BSE might have crossed the species barrier. Stage 2 contributed to the knowledge of scrapie–BSE in the same way, in that a large number of dead cows appeared to be carrying the disease. Stage 3 initiated the contribution to the knowledge of scrapie–BSE by establishing a testable hypothesis that formed the first stage in the discovery of new facts. The final stage 4, based on empirical evidence, established that there was indeed a link between scrapie and BSE. In itself, the link established in stage 4 did not establish a link between BSE and CJD because the research was not designed to establish this link. The results of stage 4, however, established one link in the chain of research that eventually led to a link between BSE and CJD and was therefore a contributor to the knowledge in terms of the discovery of new facts.

In other words, the research programme overall contributed to the knowledge of the link between BSE and CJD at various different levels. The exploratory-based
research contributed to the knowledge of the link through independent critical power, whereas the hypothesis-based research contributed to the knowledge through the discovery of new facts. In order for the discovery of new facts to occur, independent critical power was necessary to provide the basis for the hypothesis-based research that would lead to the discovery of new facts. Both exploratory-based and hypothesis-based research approaches therefore fulfil university regulations in terms of contributing to the knowledge of a subject.

Candidates can therefore elect to orient their research programme in any of the quadrants shown in Figure 5.1 and Figure 5.2. The choice made generally depends on the level of information available in the current knowledge base. Candidates may also orient the research so that it overlaps one or more quadrants, as shown in Figure 5.3.

<table>
<thead>
<tr>
<th>Numerous samples</th>
<th>Orientation A</th>
<th>Multiple case study</th>
<th>Orientation C</th>
<th>Extended exploratory study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4. Strategic alignment as a driver in UK retail sector mergers</td>
<td></td>
<td>2. The degree of strategic alignment achieved by the strategic planning policy of Companies X and Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. A longitudinal study of merger implementation policy and strategic alignment drivers in Company X with supportive cross-sectional studies of Companies Y and Z and a validation study using Companies A, B and C.</td>
<td></td>
<td>5. A longitudinal study of merger implementation and strategic alignment drivers in Companies X, Y and Z based on pilot exploratory studies of Companies A, B and C.</td>
<td></td>
</tr>
<tr>
<td>Single sample</td>
<td>3. A longitudinal study of merger implementation policy and strategic alignment drivers in Company X</td>
<td></td>
<td>Orientation B</td>
<td>Single case study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Orientation D</td>
<td>Exploratory study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6. A longitudinal study of merger implementation and strategic alignment drivers in Company X based on a pilot exploratory study of company Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. The degree of strategic alignment achieved by the strategic planning policy of Company X</td>
</tr>
</tbody>
</table>

**Figure 5.3 Alternative single and multiple orientations**

In Figure 5.3 a range of different combinations of overlap are shown.

- In **case 1** the candidate has based the research on the degree of strategic alignment achieved by the strategic planning policy of company X. The research is therefore indicative. The research evaluates the strategic planning policy of company X, accepting that company X may not be representative of other companies. The outcomes of the research are therefore indicative of what may be expected of compatible companies as a whole.
- In **case 2** the candidate has adopted basically the same approach as in case 1 but has extended the research to include an additional company. This extends the
research, but the results remain indicative. The contribution to the knowledge therefore remains dependent on independent critical power.

- In case 3 the candidate has introduced a research hypothesis and has adopted a longitudinal study approach. This gives the candidate the opportunity to discover new facts, although the sample size is too small for any such facts to be reliable.

- In case 4 the candidate has tested a hypothesis against a large number of samples. In this case the candidate may be in a position to demonstrate the discovery of new facts that are generally applicable, provided the study is suitably validated.

- In case 5 the candidate has used a combined approach. He or she has conducted a series of exploratory-based works using pilot studies and has then conducted both a longitudinal study and a series of cross-sectional studies to evaluate a hypothesis. The candidate has therefore made use of independent critical power in demonstrating the discovery of new facts. This position is (arguably) the strongest one to be in, in terms of defending the thesis at examination; the candidate has effectively contributed to the knowledge of the subject using both of the demonstration criteria required under university regulations.

- In case 6 the candidate has carried out a longitudinal study to evaluate a research hypothesis-based on pilot study results from an exploratory-based element. This position is weaker than case 5 in that the main study sample size is smaller.

In some cases the candidate may design the research programme so that the orientation includes all four quadrants. An example is shown in Figure 5.4.

In Figure 5.4 the candidate has effectively included all areas of the dual continuum. The research is based on an exploratory study conducted using company W as a sample. In this case this study has been treated as a pilot. The pilot study has then been extended to include companies D, E and F. These exploratory studies have then been used as a basis for the development of a research theory, tested by formal hypotheses, based on the outcomes of the research on companies A, B and C. The main research study in this case is carried out on company X. The progression in this case is indicated by the arrows shown in Figure 5.4.

The continuum of options between hypothesis-based and exploratory-based research orientation represents the scope of a number of different research considerations. These are represented in Figure 5.5.
As shown in Figure 5.5, research orientations that angle towards hypothesis-based research tend to be:

- research and operational hypothesis testing;
- definitive;
- quantitative;
- positivist;
- traditional;
- perhaps more appropriate towards the traditional PhD.

This approach is perhaps more suitable for the traditional PhD route, which is aimed at definitive results using quantitative analysis to assemble definitive outcomes or deliverables. By contrast, research orientations that angle towards exploratory-based research tend to be:

- exploratory-based;
- indicative;
- qualitative;
- phenomenological;
- innovative;
- perhaps less appropriate to a traditional PhD and more appropriate to a DBA.
As shown in Figure 5.5, the greater the focus is away from the centre of the hypothesis-based and exploratory-based continuum, the greater the relative polarisation between the two characteristics sets discussed above. A balanced research programme will address each quadrant, but candidates may elect to focus on one quadrant only.

### 5.4.3 Examples

#### 5.4.3.1 Hypothesis-Based Example

An evaluation of the relationship between the degree of strategic alignment engendered in mergers and the positive development of human capital in the UK retail sector.

The research is based on a longitudinal case study of one large organisation and a series of cross-sectional studies of similar companies undergoing similar mergers. The research is validated against a representative sample of UK retail company mergers. A formal research question is developed from a synthesis of the literature review and the outcomes of a pilot study. Data are collected by questionnaires and structured interviews. Questionnaire responses and interviews are recorded and transcribed and are analysed using an established content analysis methodology.

In this case, the candidate has chosen to adopt the traditional approach of developing a formal research hypothesis from a research question, which itself is
developed from a formal literature review and pilot study. The research aims to illustrate a general pattern among mergers in the UK retail sector. A formal hypothesis is used as the basis for a combination of qualitative and quantitative analyses. The outcome of the research is a statement of the observed and measured functional relationship between strategic alignment arising from mergers and the extent to which this encourages the positive development of UK capital. The results apply to the UK retail sector in general.

In this case, the contribution to the knowledge base is evidenced by a combination of the discovery of new facts and independent critical power. The research is:

- **hypothesis-based** in that it bases the analysis on the evaluation of a formal research hypothesis;
- **definitive** in that it adopts a formal scientific procedure to ensure that the results generated are representative of the UK retail sector as a whole;
- **quantitative** in that data are extracted from questionnaire survey responses and interview transcriptions and then analysed using content analysis (presumably based on frequency and concordance distributions);
- **positivist** in that it assumes that a true picture of the situation can be generated by quantitative-based analysis;
- **traditional** in that it uses the classical approach of developing a formal research question and hypothesis from a literature synthesis and a pilot study;
- **traditional PhD** oriented in that the scientific approach of building up a research hypothesis and then formally testing it is that used by many PhD research programmes.

This research programme is clearly a type A (hypothesis-based) orientation. A full example is given in Module 6.

5.4.3.2 Exploratory-Based Example

Do companies exploit the full potential for the positive development of human capital arising from the strategic alignment generated by mergers in the UK retail sector?

The research is based on a longitudinal study of company X. The research seeks to examine the processes used by the company in developing human capital before, during and after a major merger. The research is largely qualitative, relying on detailed structured interviews of stakeholders at all levels within the organisation. The outcome of the research is an evaluation of whether or not the company exploits the potential to develop its human capital in the context of the opportunity provided by the increased degree of strategic alignment arising from a merger.

This approach is, clearly, much more exploratory-based. The research is primarily concerned with company X, although the research programme may contain some kind of validation study where the results from company X can at least be exposed to a larger sample size to assess their general applicability. The research may not make use of a formal hypothesis, relying instead on a more general question. The research is based more on the operational processes within the organisation that drive the positive development of human capital, than on the link between strategic alignment and human capital. The results may indicate the extent to which company
X actually uses the conditions of increased strategic alignment through merger to develop its human capital.

In this case, the contribution to the knowledge base is evidenced by independent critical power, as any new facts discovered relate only to company X, although these facts may be indicative of potential new facts in the wider sector. The research is:

- **exploratory-based** in that it is exploring processes in company X rather than being based on a formal hypothesis;
- **indicative** in that the results apply purely to company X, although these results may be indicative of similar results that may be expected from the wider sector;
- **qualitative** in that the research appears to rely more on subjective rather than objective appraisal;
- **phenomenological** in that the research uses a more qualitative approach and attempts to address the inner workings and processes of the company in order to understand how things work;
- **innovative** in that it uses a non-traditional approach;
- **non-traditional PhD** in that the route chosen does not reflect the majority approach taken in classical PhD research design. The proposed approach concentrates on one specific company with the intention of appraising the extent to which that company takes advantage of potentially favourable conditions to develop a key operational component.

### 5.5 Research Orientation and Risk

#### 5.5.1 Introduction

This section considers the risk associated with the outcomes of research. Candidates will recall from *Introduction to Business Research 1* that the publication of a set of findings in a research journal does not necessarily mean that these results are true. Similarly, even though a particular research theory or law may have stood for several years, this does not mean that it will never be falsified. This section considers some of the risks associated with the different research orientations.

It should be appreciated that the most significant risk of all as far as an EBS DBA researcher is concerned is the risk that the research will not result in a DBA. It could be argued that all other risks are secondary to this one.

It should also be appreciated that candidates probably cannot identify and/or appreciate all the risks associated with a particular research design option. More experienced researchers who have published widely may have a good understanding and appreciation of the risks associated with a particular design strategy, but the average DBA candidate is more likely to be relatively new to research and, therefore, less familiar with the risks associated with each particular research orientation.
5.5.2 The Risk Issue

A research programme faces numerous risks as it is planned and implemented. The orientation of the research, between exploratory-based and hypothesis-based, is an important consideration in relation to the distribution of the risks that face the research. The range and type of risks faced by a research programme are sometimes collectively referred to as the risk profile. This describes all the risks that face the programme, usually classified according to the likelihood of the risk occurring and the potential impact of the risk if it does indeed occur.

Note: The concept of the risk profile is discussed in more detail in the EBS text Strategic Risk Management.

Some operational risk elements including time limitations and resource availability were discussed in Introduction to Business Research 1. It is necessary, however, to consider the risk profile as including a wider range of non-operational risks. Some typical risks facing a research programme are listed below.

- The results may not be reliable.
- The results may not be representative, and therefore may not contribute to the knowledge base.
- The sample size may be small, so that the results are not generalisable.
- The results may not be in a form that allows triangulation.
- The results may be restrictively indicative.
- If several stages are involved, the results generated in one stage may not be sufficient to allow progress to the next stage.
- A change may occur in the chosen exploratory-based research sample (where appropriate) that renders further use of this sample inappropriate.
- The results generated by multiple exploratory-based research samples may not develop sufficient grounds for the generation of a formal research theory and hypotheses.
- Researcher bias may be a problem.
- Researcher–sample reactance may be a problem.
- Environmental changes may occur that render the current approach obsolete.

This list is just a sample of some of the risks in the risk profile that face a research programme. With some thought it should be apparent that this risk profile is larger in the case of exploratory-based research than in hypothesis-based research. Some examples are listed below.

- **The results may not be representative, and therefore may not contribute to the knowledge base.**

  The greatest single risk involved in exploratory-based research is that the results are applicable only to the chosen sample and cannot be considered as being representative of the sector or industry concerned as a whole. This is not a problem provided the scope of the research aims and objectives is clearly established at the outset. The problems arise where the candidate asserts that the results are anything more than indicative of the sector or industry as a whole. This may seem obvious, but it is a common problem in *viva voce* examinations where the
research is exploratory-based but the conclusions drawn and presented are set in the context of the wider environment.

- **A change may occur in the chosen exploratory-based research sample (where appropriate) that renders further use of this sample inappropriate.**
  In exploratory-based research the sample size may be unity. The research programme is therefore very exposed to risks relating to changes in the single sample. Where the sample size is larger, some sample changes can be absorbed depending on the research philosophy and methodology adopted. In any case, the impact of a sample characteristics change will have more of an impact where the sample size is unity than where the sample size is larger. It is important to appreciate that sample companies do change over time. Companies are dynamic, and they evolve in relation to both internal and external stimuli. A major change, such as a decision to close down local production and switch it overseas, could invalidate the whole basis of an exploratory-based research programme based on a single sample.

- **Researcher–sample reactance may be a problem.**
  The problem of reactance is common to most management and business research. There is always a risk that the presence of the researcher in some way impacts on the operation of the sample. It is logical to assert that the more time the researcher spends with the sample company, the greater the effects of this reactance are likely to be. If the researcher spends 10 hours working with each of 10 companies the reactance is likely to be $X$. If the same researcher spends a 100 hours working with a single company, the reactance is likely to lie in the range of $X$ to $10X$. In any case, the effects of the researcher reactance are likely to be proportionately higher as the sample size decreases.

- **Environmental changes may occur that render the current approach obsolete.**
  Companies operate within their own business environment. Companies have to change in response to changes in that environment. An obvious example is a change in the behaviour of a major competitor. Such changes can occur without warning, and can have a major impact on how a given company operates and approaches business. Environmental changes are likely to have a certain impact on sample companies. As the sample size increases, the relative impact on the research is reduced because any such external impacts are diluted. The impact of an environmental change on a single sample will be relatively more pronounced than the corresponding impact on a larger sample size, simply as a result of the differences that exist between companies.

  It should therefore be apparent that the risk profile varies in relation to the research orientation adopted. Generally, exploratory-based research has a higher risk profile because there is more that can go wrong in the case of smaller sample sizes. Hypothesis-based research has a lower risk profile because it generally involves larger sample sizes where any impacts that directly affect the sample are diluted because of the size and diversity of the sample.
The risk profiles that relate to risk orientation can be represented on a simple risk map as shown in Figure 5.6. Candidates should note that the concept of risk mapping is covered in detail in the EBS text *Strategic Risk Management*.

![Risk map for research orientation](image)

**Figure 5.6  Risk map for research orientation**

Hypothesis-based research is generally lower risk for the reasons stated above. The risk profile generally increases as the sample size falls. It is not possible to say exactly when a given sample size changes from low risk to medium risk, because the appropriate sample size varies in relation to the design of the research project. Exploratory research is generally considered to be high risk because of the vulnerability of the single sample. As the sample size increases the risk profile reduces. It is again not possible to say exactly when a given sample size changes from high risk to medium risk, because the appropriate sample size again varies in relation to the design of the research project.

It is generally possible to say that the risk profiles for large-sample exploratory-based research projects are similar (medium risk) to those of low-sample hypothesis-based research programmes. As the chosen research programme entry point traverses from exploratory-based towards hypothesis-based research, the overall risk profile diminishes as shown in Figure 5.7. The progression shown in Figure 5.7 is perhaps something of an oversimplification, but it does illustrate how the risk profile generally contracts as the sample size increases and as the formalised and definitive hypothesis-based approach is adopted.
It should be stressed again that candidates are free to choose the orientation of their choice. It should, however, be appreciated that exploratory-based research that is largely based on one sample is more risky than hypothesis-based research that is based on larger sample sizes. It should also be appreciated that single-sample exploratory-based research, although more risky, is potentially of greater value to the company that acts as the single sample. It is perhaps worth referring to the EBS text *Strategic Risk Management* at this point. The *Strategic Risk Management* text makes it clear that risk and opportunity go hand in hand. The greatest rewards are often secured under conditions where the degree of associated risk is highest.

Candidates should therefore carefully balance and consider the risks that are inherent in undertaking research under any given orientation. More general, definitive, hypothesis-based research is lower risk but is likely to be of less specific value to a given company. More specific, indicative, exploratory-based research is higher risk but is likely to be of more specific value to a given (sample) company.

**Figure 5.7  Risk map showing research orientation risk profile**

This section has considered risk orientation in relation to the risk profile that is associated with each orientation. Candidates should be aware that although hypothesis-based research offer fewer risks and a reduced risk profile, the outcomes of the research are less likely to be of direct applicability to any given company. It should be appreciated that the dilution effect works both ways. The use of larger sample sizes results in a dilution of the impact of specific risks on the sample as a whole. The larger sample size, however, results in a dilution of the specific value of the output of the research. Candidates have a difficult choice to make when deciding on research.
orientation. The difficulties associated with the research have to be balanced against the potential specific value of the research results to the subject company or companies.

5.6 Research Orientation and Phasing

5.6.1 Introduction

Candidates should be aware that although the research orientation matrix shows the position of a given research project within the range of approaches and sample sizes that are available, the matrix also acts as a basis for describing different phases of a research project. This section discusses this concept and develops some examples to illustrate the idea.

5.6.2 The Phasing Issue

Large-scale research programmes often involve a number of separate phases. These phases represent the different stages that are involved in addressing a given research problem. For example, a particular research project may be designed around providing a solution to a particular defined problem. The company that the candidate works for may find that the value added by a series of recent mergers and acquisitions has been lower than expected. The company may not have an immediate answer as to why this is the case. The issue is, however, very important to the company because the investment in mergers and acquisitions may be considerable, and the company will almost certainly be under pressure from stakeholders to show a result for the money used. As a result the company has to find a way to address the problem and ensure that future mergers and acquisitions add significant value.

In designing a research programme to address this issue of how to address lower than expected added value, the candidate has to consider the problem at two levels or in two distinct phases.

- **Phase 1** involves *why* previous mergers and acquisitions have underperformed in terms of adding value to the company. The candidate must ascertain why things have been happening as they have in order to be able to design a suitable solution.

- **Phase 2** involves the design and implementation of suitable *corrective strategies and actions*. Having identified why past mergers and acquisitions have been underperforming, the research develops suitable corrections or modifications in order to address the factors that are driving the low performance characteristics.

In other words, in most real applications the overall research programme may be concerned with both *identifying* and *solving* the problem.

In other cases the research programme may be concerned with more than two phases. Consider the BSE–vCJD example considered in Section 5.4.2. The real issue involved in this case is the development of a treatment for vCJD in humans. In
arriving at this outcome, however, the research programme essentially has to
traverse three stages. These stages are:

- **Phase 1**: Establishing that BSE in cattle originates from scrapie in sheep.
- **Phase 2**: Establishing that vCJD in humans originates from BSE in cattle.
- **Phase 3**: Establishing a cure for vCJD in humans.

It should again be stressed that any one of these areas provides a doctoral re-
search area in its own right. A doctoral research programme could equally involve
one or more individual stages. For example, a thesis on the cure stage could draw
heavily on the background research conducted in the BSE–CJD link stage. The full
sequence of events in the three phases of establishing a cure for CJD in humans is
shown in Figure 5.8.
In Figure 5.8 the initial stage is as discussed in Section 5.4.2. The research programme was initiated by the exploratory post-mortem examination of a single dead cow. This examination indicated a scrapie-like disease in the brain of the cow. This...
finding generated sufficient concern for further exploratory investigations of other dead cows. When the disease was found to be widespread among cows, the next was to develop a hypothesis-based approach and test it first on 1 dead cow and then or a large sample of other dead cows. The end result of phase one was a conclusion that BSE in cows was indeed related to scrapie in sheep, and the disease appeared to have crossed the species barrier.

In the second phase (not shown in Figure 5.8 for clarity) the link between BSE in cattle and vCJD in humans was established. This second stage followed more or less exactly the same procedure as the first phase. Exploratory post-mortem examination of one and then later more dead people showed that the same pattern of brain degeneration was present. The research was developed into a hypothesis-based approach, and a large number of post-mortem examinations on suspected victims were carried out. The outcome of the second phase was the conclusion that BSE had indeed crossed the species barrier again and had been contracted by humans in the form of vCJD.

Having established that there was a scrapie–BSE–vCJD link, the research scientists were extremely concerned. The observed incidence of BSE in cattle was very high. At the peak infection point in 1992, more than 37,000 cattle were known to be infected, and the actual number was probably considerably higher. The scientists reasoned that if this kind of infection rate were to transpire in humans the effects would be catastrophic.

The obvious third phase in the research was concerned with finding a cure for vCJD. At the time of writing (April 2003) no such cure had been found, although a considerable amount of background research had been conducted. The research to find a cure developed along more or less exactly the same lines as the research to establish the transmission links. Various different experimental studies were conducted, usually based on laboratory-based experiments where various treatments were tried out on laboratory mice. Over time various drugs were developed that appeared to arrest the spread of vCJD. Each combination of drugs was examined initially using an exploratory-based approach building up to a full hypothesis-based approach with full clinical trials where particularly promising drugs were identified.

The most prominent of these up to 2003 were quinacrine and chlorpromazine. These drugs were both carefully tested under exploratory-based and hypothesis-based research programmes on laboratory mice before being exploratory tested on a human for the first time. The first exploratory-based use of quinacrine and chlorpromazine on a human vCJD victim was carried out in August 2001. Preliminary results indicated that the treatment might have arrested the spread of the disease in this particular patient. This occurrence was of course based on a sample size of one and might have been fortuitous, so the next stage was to carry out large-scale hypothesis-based experimentation.

It should therefore be clear that the research orientation matrix shows a number of stages of a research phase. In practice there may be numerous phases involved in the process of arriving at a particular research solution, and each phase typically comprises a number of stages. An EBS DBA candidate might chose to base his or her research on a single stage, several stages, an entire phase or a number of phases.
All approaches are equally valid provided the research contributes to the knowledge base and is original. The number of stages or phases adopted depends largely on whether the candidate chooses to evidence the originality of his or her work by the discovery of new facts or by the exercise of independent critical power.

5.6.3 Summary

This section has considered the phase and stage structure of research from a number of different angles. It is important that candidates understand the complexity and implications of a large-scale research programme. It is also important that candidates are able to carefully consider their own research and what it is intended to achieve in relation to the timescales and resources that are available. The phases and/or stages that are chosen as the basis for the work determine the research approach that should be used and whether the outcomes of the research are indicative or definitive.

The candidate should also realise that the research is all about contributing to the knowledge of a particular subject. In the vCJD example, the knowledge of the subject has been developed by different researchers making different types of contribution over a period of years. The discovery of the link between scrapie and BSE was no less important than the discovery of quinacrine and chlorpromazine as possible arresting agents to the spread of the disease in a human brain. The discovery of the applicability of the drugs would not have been made, nor would it have been necessary, without the initial link between scrapie and BSE. Indeed the requirement for the development of a cure for vCJD, and hence the research associated with the development of that cure, was driven by the initial cross-species transfer of the disease. Research findings in any stage or phase are just as important and relevant as research in other phases and stages in terms of building up the conditions for the discovery of a cure for vCJD.

Learning Summary

This module has developed an introduction to research programme orientation in relation to hypothesis-based orientation and exploratory-based orientation. The candidate should now understand:

- the concept of literature review submission orientation;
- the difference between hypothesis-based and exploratory-based orientation;
- the relevance of sample size in each orientation;
- the concept of the orientation matrix and orientation quadrants;
- how the research programme can be oriented towards different quadrants;
- how the research programme can be oriented across quadrants;
- how each orientation contributes to the knowledge of the subject;
- how hypothesis-based orientation angles towards the discovery of new facts;
- how exploratory-based orientation angles towards independent critical power.

The candidate should now be in a position to decide on which orientation is most appropriate for his or her research. Modules 6 and Module 7 provide
examples of complete type A (hypothesis-based) and type D (exploratory-based) oriented literature review submissions respectively.

Candidates who intend to develop a type A hypothesis-based approach should read Module 6, which presents an example literature review submission based on this approach. Alternatively, candidates who intend to develop a type D exploratory-based approach should read Module 7, which presents an example literature review submission based on this approach.

The primary differences between the two approaches are summarised in Table 5.1. Candidates should note that the yes/no designations are intended to indicate the average position. In some cases, the yes/no indications shown may be inapplicable for one or both approaches.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type A hypothesis-based approach</th>
<th>Type D exploratory-based approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature review</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Extended literature review</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Literature review synthesis</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Basic theory</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pilot study*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Synthesis of literature synthesis and pilot study outcomes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Research aims and objectives</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Formal theory</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Research question</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Research hypothesis</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Operational hypotheses</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

*A pilot study is not always necessary in type A hypothesis-based research.

In both approaches the following elements are common.

- Literature review.
- Literature review synthesis.
- Basic theory.
- Research aims and objectives.
- Formal theory.
- Research question.

In the case of type A hypothesis-based research there is no requirement for an extended literature review, and in some cases there may be no requirement for a pilot study.

In the case of type D exploratory-based research there is no requirement for pilot study and, therefore, no need for a synthesis of the pilot study outcomes.
and literature synthesis. There is also no requirement for the generation of research or operational hypotheses.

It should again be stressed that the candidate has a free choice of which research approach to adopt. In some cases the candidate may choose to adopt an element of both type A (hypothesis-based) and type D exploratory-based research approaches, or a combination of the two, or even type B and C or combined A, B, C and D approaches.

**The Hypothesis-Based Approach**

- The hypothesis-based approach is adopted in most traditional PhD research programmes.
- In the hypothesis-based approach, the candidate conducts a literature review and synthesises it to form a basic theory.
- This theory is then evaluated using a pilot study.
- Depending on the outcome of the pilot study, the basic theory is developed into a formal theory from which a set of aims and objectives, a research question and a set of research and operational hypotheses are developed.
- The hypotheses are then evaluated using quantitative or qualitative approaches or a combination of both.
- The hypothesis-based approach is suitable for most forms of research. It is applicable to highly theoretical research such as the development of a new mathematical formula that extends an existing formula.
- The approach is also suitable for more applied research such as the evaluation of the effectiveness of a particular introduced element in improving management effectiveness.

**The Exploratory-Based Approach**

- Exploratory-based orientation assumes the candidate wishes to make use of his or her own (or a suitable collaborating) company as the primary data source.
- The candidate may wish to study one particular aspect of this company in great detail to address a specific issue, problem or potential development area.
- A typical problem area could be that of determining the risk interdependency between different types of unforeseen and unforeseeable risks and the impact these risks could have on the individual risk levels within the organisation.
- The candidate’s work, while being useful and valuable to company X, may have been carried out to the level of rigour required for the award of a doctoral degree.
- There are some obvious problems that emerge in relation to the results. The most obvious is that the results have been obtained purely from research in company X and are, therefore, *definitive* only in terms of company X. The results, however, may also be *indicative* of the characteristics of companies Y and Z. The extension and development of the results obtained from compa-
ny X to a more general application in companies Y and Z could form the basis of a future research programme.

- Candidates can choose to base the originality of their research on the discovery of new facts or on the exercise of independent critical power.
- An obvious implication of adopting a company-based approach is that the research is highly specific and there is unlikely to be a specific matching in the literature.
- The knowledge of the basic subject area may be well established but the specific application to the subject company will almost certainly be non-existent. This position can generate a number of problems. These include the following:
  - There is unlikely to be any significant literature on a specific company.
  - Any company-specific literature that does exist is likely to be out of date.
  - A reasoning bridge is likely to be required.
  - Parallels may be complex.

**The Research Orientation Matrix**

- The outcomes of the hypothesis-based approach reflect a relatively large sample size. In typical doctoral research as many as 20 or 30 companies may be included in the sample.
- The outcomes of a hypothesis-based approach are general, being based on data provided from a range of different sources.
- The alternative exploratory-based approach is based on the adoption of a position where the outcomes represent those offered by a single sample.
- Exploratory-based outcomes are indicative of what may be the position in a wider population. In the exploratory-based approach the sample size may be one, and there may be no formal research or operational hypotheses.
- In the exploratory-based approach the research is much more likely to be based on a straightforward research question set primarily in the context of the sample company.
- Research may be conducted in each, some or all quadrants of the matrix.
- A research programme may enter at any quadrant in the matrix and may develop through subsequent quadrants.
- A research programme may span across two or more matrix quadrants.
- In some cases the candidate may design the research programme so that the orientation includes all four quadrants.
- Generally, as the research orientation swings towards hypothesis-based it becomes more:
  - research and operational hypothesis testing;
  - definitive;
  - quantitative;
  - positivist;
  - traditional;
  - PhD-oriented;
likely to make a contribution by the discovery of new facts.

- Generally, as the research orientation swings towards exploratory-based it becomes more:
  - exploratory-based;
  - indicative;
  - qualitative;
  - phenomenological;
  - innovative;
  - DBA-oriented;
  - Likely to make a contribution by the exercise of independent critical power.

**Research Orientation and Risk**

- A research programme faces numerous risks as it is planned and implemented. The orientation of the research, between exploratory-based and hypothesis-based is an important consideration in relation to the distribution of the risks that face the research.
- The range and type of risks faced by a research programme are sometimes collectively referred to as the **risk profile**. This describes all the risks that face the programme, usually classified according to the likelihood of the risk occurring and the potential impact of the risk if it does indeed occur.
- Some typical non-operational risks facing a research programme are listed below.
  - The results may not be reliable.
  - The results may not be representative, and therefore may not contribute to the knowledge base.
  - The sample size may be small, so that the results are not generalisable.
  - The results may not be in a form that allows triangulation.
  - The results may be restrictively indicative.
  - If several stages are involved, the results generated in one stage may not be sufficient to allow progress to the next stage.
  - If several phases are involved, the results generated in one stage may not be sufficient to allow progress to the next phase or stage.
  - A change may occur in the chosen exploratory-based research sample (where appropriate) that renders further use of this sample inappropriate.
  - The results generated by multiple exploratory-based research samples may not develop sufficient grounds for the generation of a formal research theory and hypotheses.
  - Researcher bias may be a problem.
  - Researcher–sample reactance may be a problem.
  - Environmental changes may occur that render the current approach obsolete.
- The risk profile varies in relation to the research orientation adopted.
• Generally, exploratory-based research has a higher risk profile because there is more that can go wrong in the case of smaller sample sizes.
• Hypothesis-based research has a lower risk profile because it generally involves larger sample sizes where any impacts that directly affect the sample are diluted because of the size and diversity of the sample.
• The risk profiles that relate to risk orientation can be represented on a simple risk map.
• It is generally possible to say that the risk profiles for large-sample exploratory-based research projects are similar (medium risk) to those of low-sample hypothesis-based research programmes.
• As the chosen research programme entry point traverses from exploratory-based towards hypothesis-based research, the overall risk profile diminishes.
• Candidates are free to choose the orientation of their choice. It should, however, be appreciated that exploratory-based research that is based largely on one sample, is more risky than hypothesis-based research that is based on larger sample sizes.
• Single-sample exploratory-based research, although more risky, is potentially of greater value to the company that acts as the single sample.

Research Orientation and Phasing
• Large-scale research programmes often involve a number of separate phases.
• These phases represent the different stages that are involved in addressing a given research problem.
• In many research programmes the overall aims of the research may be concerned with both identifying and solving the problem.
• The earlier phases are often concerned with identifying the problem.
• The later phases are often concerned with solving the problem.
• Each phase normally comprises a number of stages.
• EBS DBA research can address a single stage, a series of stages, a phase or a series of phases or any combination of these.

Review Questions

True/False Questions

The Hypothesis-Based Approach

5.1 The hypothesis-based approach produces indicative results. T or F?

5.2 The hypothesis-based approach is typical of most PhD research programmes. T or F?

5.3 The hypothesis-based approach is typical of most DBA research programmes. T or F?
5.4 The hypothesis-based approach is suitable for most forms of research. T or F?

5.5 The hypothesis-based approach is the only approach suitable for doctoral research. T or F?

5.6 The hypothesis-based approach produces results that are always reliable. T or F?

The Exploratory-Based Approach

5.7 The exploratory-based approach produces results that are not as those produced by the hypothesis-based approach. T or F?

5.8 Exploratory-based orientation assumes the candidate wishes to make use of his or her own (or a suitable collaborating) company as the primary data source. T or F?

5.9 Exploratory-based research is not acceptable under university regulations. T or F?

5.10 Exploratory-based research generally contributes to the knowledge of a subject through the discovery of new facts. T or F?

5.11 In order to demonstrate a contribution to knowledge through independent critical power, the candidate does not necessarily have to produce any new facts. T or F?

5.12 The exploratory-based approach is probably more appropriate when addressing the characteristics of a single company. T or F?

5.13 There is unlikely to be much literature of relevance on specific companies. T or F?

5.14 A reasoning bridge is often required in exploratory-based research. T or F?

5.15 A research question is the same as a research hypothesis. T or F?

The Research Orientation Matrix

5.16 Hypothesis-based research uses the same basic approach as exploratory-based research. T or F?

5.17 Hypothesis-based research is more useful than exploratory-based research. T or F?

5.18 Exploratory-based research usually involves the development of a formal research theory and research hypotheses. T or F?

5.19 Indicative research carries equal weight as definitive research. T or F?
5.20 Full research programmes often include numerous phases. T or F?

5.21 Each phase is generally made up of a number of stages. T or F?

5.22 In some cases, a research programme can run across a number of orientation matrix quadrants. T or F?

5.23 In the orientation matrix, an exit point for one piece of research can act as an entry point for another. T or F?

5.24 Generally, hypothesis-based research tends to be quantitative. T or F?

5.25 Generally, hypothesis-based research tends to be more appropriate for traditional PhD research. T or F?

5.26 Generally, hypothesis-based research tends to be phenomenological. T or F?

5.27 Generally, exploratory-based research tends to be qualitative. T or F?

5.28 Generally, exploratory-based research tends to be definitive. T or F?

5.29 Generally exploratory-based research tends to be more appropriate for DBA research. T or F?

**Research Orientation and Risk**

5.30 All research programmes face a degree of risk. T or F?

5.31 A risk profile is a description of all the risks that face a particular enterprise. T or F?

5.32 Exploratory-based research tends to carry a lower risk profile than hypothesis-based research. T or F?

5.33 Exploratory-based research is more susceptible to changes within the sample organisation(s) than hypothesis-based research. T or F?

5.34 Exploratory-based research is more susceptible to changes in the external environment than hypothesis-based research. T or F?

5.35 Exploratory-based research is more protected by the sample-dilution effect than hypothesis-based research. T or F?
Research Orientation and Phasing

5.36 The concluding stage of one research programme can form the starting point of another research programme. T or F?

5.37 Exploratory-based research programmes often act as the basis for subsequent hypothesis-based research programmes. T or F?

5.38 In some cases hypothesis-based research programmes are dependent upon earlier work developed in exploratory-based research programmes. T or F?

5.39 In many cases exploratory-based research and hypothesis-based research programmes complement each other. T or F?

Multiple-Choice Questions

The Hypothesis-Based Approach

5.40 The hypothesis-based approach is suitable:
   A. for most forms of research.
   B. only for PhD research.
   C. only for DBA research programmes.
   D. only for non-doctoral research programmes.

5.41 The hypothesis-based approach is usually associated with research that is:
   A. definitive.
   B. indicative.
   C. exhaustive.
   D. representative.

The Exploratory-Based Approach

5.42 The exploratory-based approach is usually associated with research that is:
   A. definitive.
   B. indicative.
   C. exhaustive.
   D. representative.
5.43 Indicative research has the limitation that it:
I. applies only to one sector of industry.
II. is relevant only to one company or other small sample size.
III. is relevant only to one country.
IV. addresses only outline management strategies.
Which of the above are true?
A. I only.
B. II only.
C. II and III.
D. II, III and IV.

5.44 Under university regulations, evidence of originality can be provided by:
I. the discovery of new facts.
II. the development of new ideas.
III. independent critical power.
IV. irrationality.
Which of the above are true?
A. I only.
B. I and II.
C. I and III.
D. I, II, III and IV.

5.45 In conducting a literature review for an exploratory-based research programme the candidate should accept that:
I. there is unlikely to be any significant literature on a specific company.
II. any company-specific literature that does exist is likely to be out of date.
III. a reasoning bridge is likely to be required.
IV. parallels may be complex.
Which of the above are true?
A. I only.
B. I and II.
C. I, II, III and IV.
D. II, III and IV.

The Research Orientation Matrix

5.46 EBS DBA candidates can develop a research programme that is based on:
I. a formal research hypothesis.
II. a research question.
III. data from a single sample.
IV. data from multiple samples.
Which of the above are true?
A. I and II.
B. II and III.
C. I, II, III and IV.
D. II and IV.
5.47 EBS DBA can develop research programmes that centre on:
I. one quadrant.
II. two quadrants.
III. three quadrants.
IV. four quadrants
Which of the above are true?
A. I only.
B. I and II.
C. I, II and III.
D. I, II, III and IV.

5.48 Hypothesis-based research is most likely to be:
I. quantitative.
II. phenomenological.
III. traditional.
IV. perhaps more appropriate towards the traditional PhD.
Which of the above are true?
A. I only.
B. I and II.
C. I, III and IV.
D. III and IV.

5.49 Exploratory-based research is most likely to be:
I. indicative.
II. qualitative.
III. positivist.
IV. innovative.
Which of the above are true?
A. I and II.
B. I and III.
C. I, II and IV.
D. III and IV.

Research Orientation and Risk

5.50 In terms of the risk profile facing a research programme, the hypothesis-based approach is generally considered to be:
A. more risky than the exploratory-based approach.
B. as risky as the exploratory-based approach.
C. slightly less risky than the exploratory-based approach.
D. considerably less risky than the exploratory-based approach.
5.51 Typical elements that can affect a single sample more than multiple samples include:
   I. theorisation.
   II. researcher bias.
   III. researcher reactance.
   IV. sample change.
Which of the above are true?
   A. I only.
   B. I and II.
   C. II and III.
   D. II, III and IV.

5.52 In general terms, riskier research projects:
   A. always offer higher potential rewards.
   B. may offer higher potential rewards.
   C. never offer higher potential rewards.
   D. should be avoided.

**Research Orientation and Phasing**

5.53 In terms of the research orientation matrix, every research project involves at least:
   A. one stage.
   B. four stages.
   C. one phase.
   D. two phases.

5.54 In terms of the research orientation matrix, each phase includes:
   A. one stage.
   B. two stages.
   C. three stages.
   D. four stages.

5.55 In the BSE–CJD cure research example, the research involved:
   A. one stage.
   B. two stages.
   C. three stages.
   D. four stages.
Module 6

Type A (Hypothesis-Based) Literature Review Submission Example

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Note: Candidates who intend to develop a hypothesis-based research programme should read this example (type A hypothesis-based) literature review submission. Candidates who intend to develop an exploratory-based research programme should read the example (type D exploratory-based) literature review submission presented in Module 7.

Learning Objectives

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

• the literature review;
• the literature synthesis;
• the design and justification of the pilot study;
• the execution of the pilot study;
• the results of the pilot study;
• any concerns or issues emerging from the pilot study;
• the synthesis of the pilot study outcomes and the literature synthesis;
• the areas of agreement and disagreement;
• any changes to the research proposal aims and objectives;
• any remedial actions needed to address these changes;
• a formal theory for investigation in the main study.
6.1 Introduction

This module adopts a different approach from the previous modules. It represents one large case study and provides an example of a hypothesis-based literature review submission, including a pilot study report. It is intended to give the candidate an outline idea of what the actual literature review submitted to the EBS Research Committee might look like.

It has been necessary to limit the content of the module to a level similar to that of earlier modules. As a result, the literature review submission presented here may be shorter than the actual submission made by the candidate. There is no real average for literature review submissions as the volume of text depends on the size of the relevant literature and on the scope of the individual research field. Many literature reviews comprise about 10,000 words. Assuming about 500 words per page (single space), this equates to about 20 pages of single-spaced text. In some cases the literature could be larger at 20,000 words or more if this is justified by the literature available in the relevant field. The pilot study itself could easily be another 20 pages and the synthesis and theory development another 10 or 15 pages.

It should therefore be appreciated that the literature review is a major piece of work. It represents a considerable time investment for the candidate, and must be presented correctly and contain all the information required by the EBS Research Committee.

Candidates should note that this example makes use of fictional references and is for illustrative purposes only. The text is, again, interspersed with notes attempting to illustrate the underlying rationale behind the development of each stage of the review. These notes are shown in italics.

The text not in italics is intended to appear as it would in the final thesis. As a result, the text may refer to previous and subsequent chapters of the thesis that have not been discussed. For example, towards the end of this module the example chapter refers to the research methodology chapter that follows on in the actual thesis. The research methodology for the main study has not yet been discussed and, in fact, is not addressed in Introduction to Business Research 2.

There is no standard format for either a literature review or a pilot study report. The size, approach, format and structure of the literature review vary, depending on the research area concerned. The example provided in this module is just that, an example. In some cases an EBS DBA literature review and pilot study may look very similar to this example, whereas in others it may look very different. As discussed in Module 2, a pilot study might not even be necessary. For example, a candidate might choose to adopt a well-established methodology using a sample that has previously been analysed, albeit with the intention of investigating a new angle or approach. In such cases, a pilot study may not be necessary, provided the candidate can justify the lack of a pilot study either by reference to the literature or by logical deduction, as both the research methodology and sample have been previously evaluated.

In all cases it is important to note that the literature review, literature synthesis, report of the pilot study and the synthesis of the pilot study outcomes and literature
6.2 The Context of the Development of the Formal Theory

6.2.1 Introduction

As discussed, this module is a large case study that presents a sample format and layout for a literature review, literature synthesis, pilot study report and synthesis of the pilot study outcomes and literature synthesis. For the example to be of any use, it is important that the candidate should understand the context in which it is presented. This section briefly summarises the context for this example.

6.2.2 The Context of the Development of the Formal Theory

The literature review, literature review synthesis, pilot study report and synthesis of the pilot study outcomes and literature synthesis are designed to facilitate the development of a formal theory for testing in the main study. The formal theory is designed to address the doctoral research title shown below.

*The importance of the degree of strategic alignment achieved in mergers to the potential for the development of human capital.*

The title has been designed to address an apparent gap in the literature (see below) in that there appears to be no literature linking the strategic alignment achieved in mergers with the potential to develop human capital.

*Note:* This is an example. There may actually be relevant literature addressing this exact area. The example is fictitious and is for illustrative purposes only.

The literature review aims to demonstrate a detailed and extensive knowledge of the published research relevant to this current research. It also aims to review and evaluate critically the work of other researchers with the intention of strengthening the current approach. The most logical approach to developing the literature review is to produce three separate chapters based more or less on the wording of the research title. There are therefore three literature review chapters as follows.

- The literature on strategic alignment.
- The literature on mergers.
- The literature on cultural positivity and the positive development of human capital.

Each specific subject area will be developed separately, with reference to the other two where possible. A synthesis chapter, where the main work in each subject area is brought together and analysed to assist in the development of a basic theory, follows these specific chapters. The literature synthesis ends with a listing of the main relevant areas emerging from the existing knowledge base. These allow the generation of a basic theory that links them together. The fact that the literature suggests something, however, is not sufficient grounds for committing the research
programme to this specific area. It is much safer, in most cases, to conduct a pilot study as a safeguard. The pilot study can be used to ‘check out’ the suitability of the basic theory to find out whether it is worth developing into a formal theory to be analysed in the main study.

As neither the literature synthesis nor the pilot study outcomes alone are sufficient to make the commitment of the entire research programme, the two elements must be synthesised to generate identifiable areas of commonality and difference. It is only when the results of this second synthesis are available that a decision can be made on the formal theory. It is essential that the formal theory is carefully thought through and fully justified. The entire research methodology and analysis sections (see Introduction to Business Research 3) will be designed around this formal theory, and any intrinsic flaws will become magnified as the main study develops.

A final important point to remember is that the EBS Research Committee will examine the formal theory in detail, together with the underlying rationale and justification shown for it. The EBS Research Committee will not accept the literature review submission if the formal theory is:

- unworkable;
- flawed;
- impractical;
- not supported by the literature;
- inadequately supported by pilot study evaluation*;
- incompatible or at odds with the contents of the research proposal;
- incompatible with the title of the research programme;
- incompatible with the stated aims and objectives of the research programme;
- incompatible with the stated research question;
- not expressed in terms of workable hypotheses**.

* As previously discussed, a pilot study is not always necessary.

** Formal research and operational hypotheses are not always necessary. In some cases, a simple research question may be sufficient.

Note: The remainder of this module is presented in the form of an actual chapter in the doctoral thesis. Additional notes and comments are included in italics. Any text in italics would not appear in the final chapter text.

### 6.3 The Literature Review

#### 6.3.1 Introduction

The literature review is intended to act as a critical evaluation of the published work that represents the knowledge base in the area of strategic alignment as a function of the potential for the positive development of human capital. The review itself demonstrates an understanding of the knowledge base and also justifies the nature and format of the basic theory developed from the literature review outcomes. The literature review is structured to reflect the primary subject areas contained in the title of the research. The first section considers the literature on strategic alignment.
The second section details the literature on mergers and acquisitions, and the third section looks at the literature on cultural positivity and the positive development of human capital. The literature review is immediately followed by the literature synthesis, where the various review chapters are brought together to generate collective outcomes leading to the development of the basic research theory.

6.3.2 The Literature on Strategic Alignment

Note: The first part of the literature review addresses the subject of strategic alignment. It is important that the review establishes this fundamental subject area at the outset and, where possible, sets the subject in the context of the other main subject areas to be addressed in the literature review.

6.3.2.1 Introduction

There is relatively little analytical literature on strategic alignment, although interest in the area has been growing rapidly over the past 20 years or so. Most of the sources use data generated in the UK and US; occasional published studies are based on data generated in Europe. This section reviews this literature and highlights some of the main themes emerging from it.

6.3.2.2 The Literature

Strategic Alignment as a driver

The literature on strategic alignment has been growing rapidly in recent years. Increasingly, UK and US companies are beginning to realise that strategic alignment is a very important consideration in strategic planning (Larsson, 2000). There appears to be a functional relationship between the degree of strategic alignment present in an organisation and the likelihood of long-term sustainable competitive advantage (Woodstock, 1997; Clinker, 1998). Over the past 20 years companies in the US and UK have recognised this relationship, and there has been a significant shift away from diversification (the acquisition of non-related targets) towards strategically focused acquisitions (Ribald, 2000). In some cases, such as the Heron and Dipper groups, this transition in strategic alignment has been characterised by large groups divesting non-related holdings (Sumptner, 1999).

Strategic alignment is, of course, not achievable only through mergers and acquisitions. Companies constantly realign their operations to meet changes in the external environment, including changes in demand (Bloggs, 1994). For example, companies may realign their strategic planning periodically with the intention of increasing strategic alignment through internal reorganisation. Glencoe (2000) conducted a survey of 40 UK companies and found that 70 per cent of them attempted to increase strategic alignment through internal reorganisation over a five-year period. Glencoe’s results indicate that the success rate was relatively low, with only around 40 per cent of the sample actually achieving an increase in the degree of strategic alignment obtained. Glencoe’s results have been criticised by Jurana (2003) on the grounds of survey design and the fact that the research contained no validation study. Similar concerns were raised by McKinder (2001), although she
suggested that Glencoe’s results agreed, in principle, with those collected in her research in collaboration with Reefer (McKinder and Reefer, 2001). Both Glencoe (2000) and McKinder and Reefer (2001) agree that the two primary approaches to achieving increased strategic alignment are (a) internal reorganisation and (b) mergers and acquisitions.

This assertion has received some support in the literature. Steerpike (2001) identified internal reorganisation and mergers and acquisitions as two of the primary drivers behind the achievement of enhanced strategic alignment in his study of six major manufacturing companies. Steerpike used a ten-point scale to measure strategic alignment together with questionnaires and structured interview techniques to gather data to calibrate the scale. Flay (2001a) criticised Steerpike’s results on the grounds that the strategic alignment measurement scale was indicative rather than definitive. Steerpike’s rejoinder (Steerpike, 2001a) accepted this limitation, and he is currently (2003) involved in additional work to refine the measurement scale. Steerpike’s results support the results of Glencoe (2000) and McKinder and Reefer (2001) in asserting the importance of strategic alignment to the achievement of an organisation’s strategic objectives.

Ruffin (2000) carried out research involving data collected from 10 major oil companies. Ruffin’s research differentiated between upstream and downstream functions (before refining and after refining respectively). Ruffin found that all the major oil companies surveyed were purposefully moving towards enhanced strategic alignment in both functional areas. Ruffin developed this research by interviewing the strategic planners in each company and found that the achievement of functional strategic alignment was a specific strategic objective in all cases. Jeraboam (2001) agreed strongly with Ruffin’s findings, suggesting that the primary driver behind the goal of achieving enhanced strategic alignment in oil companies was the need to address major changes in the competition over the period 1990–2000. Sangria (2001a) agreed with Jeraboam’s findings, pointing to the number of large-scale mergers that occurred during this period, which were driven largely by falling world oil prices and saturation in the oil production and refining markets. As Muffin (2003) pointed out, the consolidation of the oil production sector in the same period was a classic example of companies using mergers and acquisitions to enhance strategic alignment.

Note: This section has established that strategic alignment is a genuine issue and of concern to real companies. The section has cited a number of sectors where there are clear examples of companies striving to enhance strategic alignment to address both internally and externally driven concerns. The section so far is weak in that it does not address any research specifically in the research sector of UK retail.

In recent years, there has been an increase in the activities of UK retail companies in trying to achieve enhanced strategic alignment through mergers and acquisitions. Halbarad (2003) conducted some interesting grounded theory research, looking specifically at the proposed acquisition of Safeway plc by Morrison plc. Halbarad found that the underlying driver behind Morrison’s move was indeed the enhancement of strategic alignment within the group as a whole. Strider’s (2003) simultaneous research showed that Morrison considered strategic alignment as by
far the most important strategic consideration behind the move. Interestingly, as pointed out by Asfaloth (2003), a number of competing bidders for Safeway included non-retail specialists whose move drivers were not based on enhancing strategic alignment. Asfaloth pointed out that most of the rival bidders were, in fact, seeking to establish a foothold in UK retail with a possible intention to develop a future strategic alignment in this area. This assertion was, to some extent, substantiated by an anonymous article in the *Money Markets Magazine* (2003), which highlighted specifically the bids placed by non-retail bidders for Safeway.

*Note: This section corrects the absence of retail-relevant literature. It also makes use of a real example. This is particularly useful as it establishes the literature in context and applies it to an actual event. Generally, the literature review is strengthened when it can be directly applied.*

There is some evidence to suggest that the enhancement of strategic alignment within companies is moving up the management agenda. Rylands (1998) carried out an extensive survey amongst senior managers in the top five UK industrial sectors between 1996 and 1998. Ryland’s (1998) results suggested that over 90 per cent of senior managers involved in the development of strategic plans rated the enhancement of strategic alignment as a key strategic aim of the organisation. Fletcher (1999) carried out similar research in hospital trusts, noting the increasing tendency of these trusts to specialise in a small number of specialist treatment areas. Fletcher estimated that over 90 per cent of health board strategic planners rated the enhancement of strategic alignment as being a primary strategic objective. Other researchers (Donaghue and Stevenson, 2000; Bearne and Boadle, 2001; Calill, 2001) confirmed Fletcher’s results in health trusts across the UK. Denning (2002) equated this type of specialisation with the long-term likelihood of trusts meeting prescribed treatment times and ultimately in securing greater long-term funding from the UK government.

**Strategic alignment and success**

A number of researchers have attempted to demonstrate the functionality between the degree of strategic alignment achieved by an organisation and the likelihood of long-term success in specific industries or sectors. Most of the studies have equated long-term success with sustained or enhanced competitive advantage. Refill (1999) compared the degree of strategic alignment in companies with long-term financial performance. Refill compared strategically focused companies with diversified companies using a strategic alignment classification system based on earlier work by Proton (1997). Larsson (2000) also based his classification system on the same basic approach as that used by Proton (1997). Refill (1999) found that, over a four-year period, strategically focused organisations were financially more successful than non-focused competitors of similar size and competing in the same selected sector. Woodstock (1997) and Clinker (1998) used different classification systems but arrived at basically the same conclusions.

In many cases, researchers have referred to the reduced scope and magnitude of the company risk profile achieved through increasing strategic alignment (Proton. 1997; Refill, 1999; Larsson, 2000). These researchers reported that strategically focused companies face a more manageable risk profile because the various strate-
gic, operational, change and unforeseen risks are more closely grouped and related, and are therefore more readily identifiable and analysable. In turn, this allows the strategically focused company to establish a more focused and reliable risk management system as a defence shield against internally and externally driven risk (Refill, 1999; Lupin, 2000). Lupin argues that competitive advantage can be considerably assisted and protected by a highly focused and strongly developed enterprise-wide risk management system. Lupin’s (2000) work can be criticised on the grounds that it did not address a sufficiently wide range of success drivers (Chopin, 2001; Bush, 2002). Work by Daisy (2001) partially addressed the shortcomings of Lupin’s work. Daisy used a 14-point classification system of success drivers. Validation studies indicated that 95 per cent of senior managers surveyed agreed that the classification system adequately addressed all relevant drivers. Daisy’s work shows a clear link between the degree of focus achievable in the enterprise-wide risk management system and the long-term likelihood of the company being successful.

Note: This section establishes the relationship between strategic alignment and long-term success. It does not, however, specifically establish the literature in the context of mergers and acquisitions as the driver behind the achievement of enhanced strategic alignment.

Some of these same researchers, and others, have attempted more specifically to address the issue of the degree of strategic alignment offered by a merger or acquisition with the likelihood of long-term company success. Larsson’s (2000) suggestions have been extensively supported in the literature. Woodstock (1997) and Clinker (1998) both expressed strong support for Larsson’s work. Bloggs’s (1994) work, which largely built on and extended pioneering work by Ronson (1990), has shown there is a clear link between the degree of strategic alignment engendered by an acquisition and the likelihood of long-term acquisition success. Bloggs suggested that the likelihood of success increases as a linear function of the degree of strategic alignment, both of which are functions of cultural approval. Bloggs’s results are supported, to some extent, by those of Smith (1996) and Skeeker (2001). These results were centred on the degree of relatedness of the acquisition rather than specifically on strategic alignment. Jones (2003) has, however, stated that the degree of relatedness in an acquisition is a direct function of the degree of strategic fit that can be engineered, and Jurana et al. (2003) have concluded that strategic fit in mergers and acquisitions is a direct driver of strategic alignment. The relationship between strategic fit and long-term success has been widely reported (Holly, 2002; Muffin, 2002; Ryan et al., 2003a; Skeesome, 2003). There has been no reported opposition to this theory in the strategic alignment or mergers literature. Although lack of falsification is no evidence of accuracy, the relative silence from the relevant research community suggests that this proposed linkage is currently acceptable.

De Boer (2001) attempted to calculate a mathematical function to express the relationship between strategic fit and likelihood of company success in the context of mergers and acquisitions. De Boer used the earlier work of Mols (2001) in establishing a template for the measurement of fit. De Boer’s approach was based on the designation of 20 key fit indicators (KfIs) that could be applied in the early consideration of a merger or acquisition. De Boer’s (2001) classification system differed from Mols’s (2001) system primarily in the range of indicators considered and the definition applied to the various classifications. De Boer’s results indicated a
strong correlation between the degree of strategic fit, especially in relation to management systems, risk management systems and operational processes KFI's and likelihood of success. De Boer's result showed a particularly high correlation in the case of senior management compatibility and risk management systems. De Boer's findings in relation to risk management confirm those of Refill (1999) and Lupin (2000) and also largely reflect those of Daisy (2001).

Fountain and Penn (2000) developed a seven-point scale for company success in relation to strategic alignment, which was calibrated against and corrected for timescale since initiation of initiatives to enhance strategic alignment. Fountain and Penn's (2000) results suggested that an increase in strategic alignment creates a greater likelihood of success, in terms of the financial efficiency of the company. Cartridge (2001) developed similar research that considered purely financial measures of success over a five-year period. Cartridge's (2001) results suggested that increased strategic alignment tended to lead to increased efficiency in all areas of the sample company's production system. Scheaffer (2001) criticised Cartridge's (2001) results on the basis that the sample comprised only one company, although in great detail. Nib (2001) conducted similar research using a sample of 11 companies and reported findings broadly compatible with Cartridge's (2001) results.

**Strategic alignment and cultural positivity**

An increasing number of researchers have been concerned with the area of strategic alignment engineering as a function of cultural impact drivers (Johnson, 1998, 1999, 2001; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). This increased interest trend is mirrored, to some extent, by practitioners (Egbert plc, 2000; Challenger plc, 2001). The term ‘strategic alignment engineering’ (SFE) was first used in an article by Beeford (2000) in a conference paper presented at the First International Conference on Strategic Engineering at Edinburgh Business School. Beeford used the term SFE to describe the design and planning of strategic alignment variables (partially in mergers and acquisitions) to achieve the best possible strategic fit through change. Beeford saw the degree of strategic fit achieved by an organisation as being central to the attitudes of stakeholders in the petrochemical industry. Beeford's results showed a clear link between strategic fit and cultural positivity. Beeford argued that stakeholders are generally more positive when the organisation has a clear set of strategic objectives contained within a clearly defined field. Beeford also argued that this could have been because the human cognitive process has evolved to frame problems and desired outcomes within a framework of logical accepted outcomes. This approach receives much support in the human psychology literature (Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000).

Most of this research suggests that strategic alignment engineering is functionally related to generally positive attitudes in organisational culture in the period before and during mergers (Pikelet, 2002; Davie, 2003a).

Other researchers have evidenced a clear link between cultural positivity and the positive development of human capital (Currie et al., 2002; Gretna 2002). The work of Muffin (2003b) clearly concludes that, where the pre-merger cultural attitude is generally positive, the measured human capital of the organisational culture increas-
es. Muffin’s later work (Muffin, 2003c) shows that there is a measurable functionality between the degree of strategic fit of a merger and the post-merger attitude of employees. Muffin’s work (Muffin, 2003c) has been criticised by Ryan (Ryan, 2003) on the grounds that her sample size was restricted and the measurement method used was flawed. Muffin’s counter (Muffin, 2003d) was that her research was intended to be indicative rather than definitive, and was intended to act essentially as a pilot study for later more definitive work.

Other researchers have suggested that strategic fit, either through internal initiative or through mergers and acquisitions, can act as a damper on pre-implementation speculation and the development of group conflict (Belcher, 1999; Blucher, 2001). Belcher reviewed earlier work by Khan (1997); Rosenberg (1998) and Schultz and Schultz (1999) in pointing out that company cultures frequently undergo a period of turmoil preceding a major organisational change. Belcher suggested that examples of such changes could include (a) major internal reorganisations and (b) mergers and acquisitions. Belcher reviewed a series of human resource team meetings and reports from 25 different companies in the process of undergoing either internal reorganisations or mergers. Belcher reported that, in every case, the companies undergoing the change to improve the degree of strategic fit of long-term strategic objectives exhibited lower levels of internal turmoil.

Belcher went on to cite Plum (1995) and Mustard (1995) in asserting that the degree of turmoil within an organisation pre-change is directly related to the potential for the generation of conflict within the workforce. The work of Plum (1995) and Mustard (1995) have both been criticised on the grounds that their methodologies ignored established approaches. Puffin (2000), however, supported both works, arguing that the methodologies used were both scientifically rigorous and replicable. On the balance of published opinion, it seems reasonable to conclude that there may be a link between the degree of strategic fit achieved through change and cultural positivity. Siskin (2000) made more or less the same assertion in his study of conflict propagation in strategically focused and diversified companies, agreeing with the results given by Puffin (2000).
6.3.2.3 Summary

The literature on strategic alignment suggests that this is an important research area, growing in popularity. The degree of strategic alignment generated, through either mergers or non-merger initiatives, appears to be a key driver of long-term success. Companies, as well as researchers, are starting to realise this, and there has been a significant switch from unrelated mergers and acquisitions towards related ones. Change generating a high degree of strategic alignment reduces the overall range and variability of the risk profile facing an organisation and encourages the development of cultural positivity. The next section of the literature review considers the literature on mergers and acquisitions. The research is concerned with the strategic alignment generated in mergers, and the strategic alignment literature should be viewed in the context of the general literature on mergers and acquisitions.

6.3.3 The Literature on Mergers and Acquisitions

6.3.3.1 Introduction

The previous section considered strategic alignment and the impact that enhanced strategic alignment can have on the prospects for long-term success. This section considers mergers and acquisitions from a general point of view.

There is an extensive and varied literature on mergers and acquisitions. This is due largely to the relative age of the subject area. The first large-scale mergers took place in the US in the nineteenth century when the railroad system linked the east and west coasts. The railroad system allowed companies to trade across the length and breadth of the country for the first time. This led to a relative reduction in the importance of geographical separation between different companies located in different cities. Companies, for the first time, could consider effective mergers that would open up new markets and customer bases far away from where these had previously existed. Mergers and acquisitions have continued in a series of waves ever since, and researchers have been covering the subject with varying degrees of interest.

6.3.3.2 The Literature

Mergers as a driver

Mergers take place for a number of different reasons. Groucho (1970) identified four primary underlying reasons for mergers. These were: (a) to enhance strategic alignment; (b) to speculate; (c) to spread risk; and (d) to achieve growth in a stagnant market. Groucho argued that the only valid reason of these four was that of strategic alignment, although the other reasons were in widespread use. Reilly (1975) considered that mergers intended to speculate were associated with a high degree of failure, and Cole (1985) argued that diversification, as a means of reducing the overall risk profile of an organisation, was, in fact, a fallacy. Simba (1995) has asserted that mergers to achieve growth in a stagnant market do not in fact create growth at all, other than on paper.
Reilly’s (1975) work was supported by a number of researchers (Gimli, 1995; Peacock, 1998; Teaspoon, 1999; Warlock, 1999a). Speculative mergers occur where a company merges with, or acquires, another company with the intention of increasing the value of that company before selling it off at a later time at a profit. Speculative financiers and venture capitalists classically use this approach. There is no doubt that there have been some recent successful speculative mergers, such as the UK Go Airlines and Homebase deals, but there have also been some classic failures. The key to success is to acquire companies in a growth sector where that growth is highly likely to continue for a number of years (Doppler and Dunker, 2002).

Reilly’s (1975) founding paper on the overestimation of the ability to reduce risk by spreading it through diversification has received a great deal of attention in the literature. Reilly argued that although diversification does, indeed, distribute risk across a wider base, it also increases the overall size and scope of the risk profile. In addition, as management becomes diversified to cover the increasing number of diverse companies, its specialist ability to react to an incident in one particular field diminishes. Cole (1985) strongly endorsed these views, an endorsement that has been reinforced by numerous researchers over the years since Reilly’s (1975) publication (Rasta, 1980; Dork, 1984; Dork and Dockendorff, 1986; Rivers, 1990; Bakewell, 1992).

Simba’s (1995) assertion that mergers in a stagnant market do not necessarily generate growth has received widespread support in the literature. Oiler (1996) supports Simba’s assertion, citing international oil companies as examples. Dripper (1997) and Heckler and Grubb (1998) both discussed the issues of market stagnation and options for growth. Dripper (1997), in particular, showed that although stagnant market mergers increased the size of the merging companies, in most cases they did not generate any net growth. The primary variable appears to be the overall growth in the market itself rather than individual merging companies (Gaseous, 1998).

The only one of Groucho’s (1970) four classifications to receive positive support from the literature is that of strategic alignment. Mergers designed to enhance strategic alignment have a higher probability of being successful than those aimed at any of the other three of Groucho’s classifications (Nancho, 1985; Raisin, 1990; Nadir, 1992; Box, 1995).

**Mergers and strategic alignment**

As discussed above, mergers designed to enhance strategic alignment tend to have the greatest likelihood of success when compared with the other objectives stated by Groucho (1970). In addition, companies do appear to be moving towards strategic alignment as the primary objective in mergers and acquisitions (Sumptner, 1999; Ribald, 2000; Ruffin, 2000; Jeraboam, 2001; Steerpikle, 2001).

Glorfindel (2000) carried out a survey of 20 retail companies in an attempt to measure the degree of strategic alignment achieved through mergers and acquisitions. Glorfindel attempted to classify different levels of strategic alignment using a methodology based on earlier work by Proton (1997), Refill (1999) and Larsson
Glorfindel was able to show that there is a long-term relationship between the degree of strategic alignment offered by organisational change and the success of the organisation. It is worth noting again that Woodstock (1997) and Clinker (1998) used different classification systems but basically arrived at the same conclusions. Glorfindel (2000) also claimed that mergers and acquisitions should be based primarily on achieving enhanced strategic alignment over and above all other considerations. This assertion was questioned by Thomas (2000a), who suggested that enhancing strategic alignment could not be regarded as the only success criterion for mergers and acquisitions. Stobart (2000) agreed with Thomas (2000a), citing cases where speculation and growth could be primary factors. Cycle (2001) took a longer-term view, partially supporting Glorfindel, in saying that speculative mergers and acquisitions can provide only a short-term or tactical solution whereas strategically focused mergers and acquisitions address the long-term success, or otherwise, of the subject company.

The concept of long-term versus short-term success, resulting from mergers, appears to be neglected in the literature. Brando and Pacino (2000) distinguished between the two outcome criteria in their paper in the *Chubb Business Review*. Brando and Pacino suggested that current measurement systems for merger success or failure did not succeed in differentiating between the two timescales in terms of success evaluation. Credo (2000) supported this view, suggesting that short-term measures of failure may, in fact, have been hiding potential long-term measures of success. Credo’s assertion was, to some extent, borne out by Carnacki’s (2001) study of 10 mergers. Carnacki reported that, in terms of short-term measures of success, eight of the mergers studied would be classified as failures, whereas in terms of longer-term success, specifically measured over five years or more, the failure rate dropped to 20 per cent. Tinsley (2000) and Hogg (2000) both criticised Carnacki’s results on the grounds of small sample size, although Hogg (2000) suggested essentially similar results in her study of 25 US companies.

Based on the literature, it seems reasonable to suggest that mergers designed to enhance strategic alignment should be considered from both a short-term and a long-term viewpoint. It may be misleading to consider successful outcomes based on one or other basic approach (Hodgson and Eurovan, 2002). Strategically focused mergers should concentrate on long-term measures of success rather than short-term equivalents (Cave and Mars, 2003), and should be balanced against the other outcome criteria required of the merger (Hope and Hodgson, 2003).

A number of researchers have looked directly at the issue of cultural fit and strategic alignment in mergers. In merging any two organisations, the issue of fit will arise (Joiner, 2002). ‘Fit’ is the term used to describe the extent to which the two merging organisations blend together to produce the final merged organisation (Blender, 2001). In some mergers the strategic fit may be good, whereas in others it may be bad. In most cases there will be areas where capabilities are duplicated, and others where capabilities will be deficient or missing entirely (Blender, 2001). Blender developed a system for mapping and evaluating pre-merger fit patterns. Using this approach, companies – in theory – can map not only their own capabilities but also those of the potential merger partner or acquisition target. The maps can then be overlaid to show strengths and weaknesses in the strategic fit of the proposed merger or acquisition. The approach was basically the same as that used by Juicer and Pulp (1995). The research of Blender (2001), Joiner (2002) and Juicer and Pulp (1995) was all based on the underlying assumption that the strategic fit engineered in a merger or acquisition is a direct driver of the degree of strategic alignment enhancement available through the merger or acquisition process.

Grinder and Mill (2003) used a similar approach to that adopted by Blender (2001) in their strategic fit analysis of 30 US companies undergoing mergers. Grinder and Mill (2003) found that 60 per cent of strategic planners were making decisions on the strategic fit of mergers and acquisitions by using subjective appraisal techniques that mirrored the mapping process described by Blender (2001). In 55 per cent of cases, proposed mergers or acquisitions were rejected because of the potential mismatch in strategic fit offered by the details of the move. Baker (2003) reported on similar research carried out in government supply companies in the US. Baker’s results suggested that the degree of strategic fit offered by potential target companies was the largest single determinant of whether or not a proposed acquisition went ahead.

**Mergers and success**

Between 1995 and 2003 a large amount of literature evolved around the issue of why mergers fail. Researchers became increasingly interested in the background to the apparently high number of ‘failed’ mergers and acquisitions that occurred, especially in the last few years of the twentieth century. Some obvious examples were the disastrous mergers of AOL Time Warner and the former GEC Marconi with a number of US dot.com companies. Within less than two years of merger, AOL Time Warner was losing staggering sums of money.

Ballcock (2000) suggested a number of common reasons why mergers fail. Ballcock suggested that the main reasons were: (a) lack of strategic alignment; (b) poor
implementation; (c) poor cultural integration; and (d) unreasonable timescale for evaluation. Ballcock’s assertion that a lack of strategic alignment was fundamental in driving merger failure directly supports the findings and assertions of Nancho (1985), Raisin (1990), Nadir (1992) and Box (1995), and is compatible with Groucho’s (1970) classification system. In terms of strategic alignment, Ballcock (2000) suggested that, as companies lose strategic alignment, the overall strategic and operational objectives of the organisation also become unfocused. Duckworth and Baggins (2000) drew similar conclusions from their research of mergers in the microelectronics industry, as did Champitt and Neep (2001) in their comparable study based on the UK financial sector. Champitt and Neep also related the loss of strategic and operational focus to a reduction in organisational positivity amongst stakeholders.

This link between loss of strategic alignment and adverse effects on cultural positivity has been explored by Cakebread (2002). Cakebread conducted extensive surveys among stakeholders at all levels within the UK food production industry. She found that cultural positivity was significantly affected by employees losing touch with what the organisation was trying to achieve. Cultural integration appears to be a particularly important issue in merger success. In his survey of over a 100 medium-to-large-scale mergers, Morrissey (2003) concluded that cultural integration was second only to the degree of strategic alignment in determining whether most mergers are successful.

Poor implementation has been cited as a common cause for merger failure. Researchers including Pool and Ball (1997), Rickett (1998) and Musket (1999) have all cited poor implementation as a key element in explaining why the mergers they used as samples failed. Rickett (1998) suggested that senior managers are often actively involved in merger negotiations and in planning the organisational structure of the merged organisation, but they often appear to lose interest once the merger enters the more mechanistic implementation phase. Garden and Jacobs (2001) and Hall and Oates (2002) have both made the same assertion.

**Mergers and cultural positivity**

The literature suggests that mergers generally have a negative effect on employee staff attitudes (Crabbe, 1997; Springstein, 1998; Winkle, 1999). The primary reason for this negative effect appears to be uncertainty about the effects that the proposed merger will have on employees (Carapace, 2000). Boomer (2001) suggested that cultural positivity usually fluctuates in the period leading up to the merger deal, followed by a negative period immediately after the deal is signed. Depending on the success of the implementation process, cultural positivity generally increases thereafter as a function of time. If the implementation process is effective and the merger has been properly planned, positivity will eventually reach equilibrium at a point equivalent to or greater than it was before the merger negotiations began (Pepper, 1998; Condiment, 1999).

Most researchers in this area agree that fluctuations in cultural positivity can be either amplified or damped by different variables (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001; Cakebread, 2002). Dodder-
er (2001) suggested that cultural positivity can be increased by mergers and acquisitions provided the change can be effectively communicated to all staff as being positive. The issue of communications appears again and again in the literature on mergers and cultural positivity (Hackett, 1997; Stoatir, 1998; Glaekit, 1999). Most researchers agree that the key to nurturing cultural positivity in mergers and acquisitions is the design and implementation of an effective organisation-wide or enterprise-wide communication system. Even with such a system there will still be cultural negativity, for example among employees about to be made redundant as a result of the merger (Murray, 1998), but provided the change is shown to be in the best interests of the organisation, and of the workforce as a whole, cultural positivity generally follows (Bligh, 2001; Christian, 2002).

In the case of acquisitions and, in particular, hostile acquisitions the picture can be different. Employees of target companies can often feel at a considerable disadvantage (Hannibal, 2002). A number of researchers (Druze, 1996; Cumberland, 1997; Stuart, 1998) have referred to the conqueror–conquered mindsets that tend to permeate the workforces of acquirer and target companies. Nomad (2000) has shown that cultural positivity is much higher in the acquirer company mindset than in the target company mindset, and that, in the case of target company mindsets, the normal dampers on cultural negativity may not apply. Nomand’s results have been challenged in the social psychology literature on the grounds that the basic methodology was flawed (Sutcliffe, 2001) and the sample size was too small (Neilson, 2001). Other researchers have expanded Nomad’s work to consider specific sector samples such as mergers in the pharmaceutical (Pill, 2001) and chemical industries (Cadmium, 2002).

Orville (2000) has shown that the achievement of cultural positivity is related to the scale of the merger or acquisition concerned. Orville’s results indicated that the larger the merger or acquisition, the more difficult it was to achieve cultural positivity. Keith (2000) has suggested that this functional relationship could be because larger companies have more difficulty in developing a truly effective enterprise-wide communication system because of the scale of the operation involved. Gossip (2002) and Heresay (2002) both stressed the importance of informal communication systems acting over and above any formal enterprise-wide communication system. Gossip’s results suggest that a significant proportion (as high as 80 per cent) of cultural positivity relevant communication in mergers actually takes place through informal rather than formal channels. Heresay (2002) replicated Gossip’s results in the same mobile telecommunications sector in the UK in the period 1998–2001.

Wimsey (1999) reported that, in most acquisitions, there is a relationship between cultural positivity and seniority. Wimsey’s results suggested that senior managers in target companies become uneasy about their post-acquisition prospects at an early stage and often initiate possible moves as soon as the target interest becomes apparent. Wimsey suggested that senior managers become more concerned earlier because acquiring senior management may perceive them as a threat. This assertion has been borne out by the findings of Boss (2001) and Leader and Grubb (2001). Greer and Freud (2002) have questioned all three sets of results, saying that the authority levels in each case were insufficiently defined. There may be some justification in this assertion, although Wimsey’s (1999), Boss’s (2001) and Leader
and Grubb’s (2001) conclusions were all based on the authority assessment system used by Master (1970) in his pioneering foundation work in this area. Based on the evidence, the balance of doubt suggests more in favour of Wimsey (1999), Boss (2001) and Leader and Grubb (2001) than in favour of Greer and Freud (2002).

The literature also suggests that there is an important cultural issue relating to positivity as a driver of long-term merger success. Mitchell (1998) reviewed the literature on cultural integration in mergers and reported that problems in achieving cultural integration accounted for the majority of merger failures. Butcher (1998) contested Mitchell’s (1998) findings because he felt the methodology used was not sufficiently sensitive to allow the full complexity of the various integration drivers to be measured. Fowler (1999) took cognisance of Butcher’s (1998) critique when designing his own research methodology. Fowler reported that cultural integration starts from an initial point based on the extent to which there has been pre-merger speculation and a reduction in pre-announcement cultural positivity. Thomson (2000) supported Butcher’s (1998) findings, developed a similar research programme, and published similar findings.

6.3.3.3 Summary

This section of the literature review has considered the general literature on mergers and acquisitions, building on the first section of the literature review on strategic alignment. Mergers and acquisitions are used widely by companies in the pursuit of success. It is apparent that many mergers and acquisitions fail to meet their initial objectives, and it is also clear that the degree to which strategic alignment and the extent to which resulting cultural positivity are achieved is a key driver of merger success. Good strategic fit and strategic alignment may act as dampers on the classic cultural disruption caused by mergers and acquisitions and internal non-merger reorganisation initiatives. The issue of strategic fit is, clearly, closely related to the issue of strategic alignment: both are important determinants of merger success or failure.

The final section of the literature review considers the literature on cultural positivity and the development of human capital. This area forms the third and final subject area within the title of this research.

6.3.4 The Literature on Cultural Positivity and the Positive Development of Human Capital

6.3.4.1 Introduction

This final section reviews the literature on cultural positivity and the development of human capital. It builds on the previous literature review sections on strategic alignment and mergers and acquisitions. This final section extends the literature to review the connections between cultural positivity and the development of human capital as drivers of merger success or failure.
6.3.4.2 The Literature

**Cultural positivity and the positive development of human capital as a driver**

This link between loss of strategic alignment and adverse effects on cultural positivity has been explored by Cakebread (2002). Cakebread conducted extensive surveys among stakeholders at all levels within the UK food production industry. She found that cultural positivity was significantly affected by employees losing touch with what the organisation was trying to achieve.

Human capital development has been widely researched (Ross, 1998; McIntosh, 2000; Smith, 2001). The general consensus is that human capital can best be improved in an environment characterised by positive perceptions. There is no clear evidence in the human capital literature to contradict this view.

Muffin (2000) and Ryan (2000) both suggest a link between cultural positivity and the potential for the development of increased human capital values. The findings of Muffin (2000) and Ryan (2000) have been supported by McIntosh (2001) and Tivity (2002), and seem to be fairly reliable. Muffin’s results indicate a functional relationship between cultural positivity and the positive potential to develop human capital. Organisational members appear to be more receptive to internal development when they operate in a positive cultural environment. As negative influences and variables are introduced, the potential range and extent of human capital development decrease (Ryan, 2000). Ryan’s results appear to match those of Muffin (2000), even though the data sources were entirely different. Muffin’s (2000) results were based on a data set comprising 10 US financial companies, whereas Ryan’s (2000) sample was UK local government departments. The similarity of the results profile, given the considerable difference in the data sources, is striking (McIntosh, 2001). The fact that Tivity (2002) generated similar findings, using airline companies as the data source, suggests that Muffin’s (2000) findings are generally applicable.

Skylark (2000) expressed cultural positivity in terms of the degree of observed conflict within the organisation. Using a major bank as a data source he measured the occurrence of conflict over a one-year period and expressed this against human capital development using scales first designed by Chalker (1996). Chalker’s scales have been widely used in human resources research (Manpower, 1997; Toil, and Labour, 1998; Fellah, 1990; Slave, 2000), and are widely respected (Overseer, 2001). Skylark (2000) was able to show that there was a relationship between fluctuations in cultural positivity and corresponding fluctuations in human capital development. Skylark (2000) used his own scale for measuring human capital development, although the same scale has since been used by Pramm and Pusher (2001) and Bodkin and Brace (2001). There appears to be no major criticism of Skylark’s (2000) results in the literature.

Jofis (2000) attempted to demonstrate the relationship between cultural positivity and human capital development using measures first used by Schofield (1990). Jofis (2000) included in his study one company that had recently undergone merger. Although Jofis did not comment on the possible impact of the merger, it appears
from his results that cultural positivity fell immediately post-merger, with a corresponding fall in human capital development.

**Cultural positivity and the positive development of human capital and success**

There is considerable evidence in the literature that cultural positivity and the development of human capital are central to the long-term success of an organisation. Krebs (1997) conducted a large-scale survey over several years clearly showing that organisations enjoying cultural positivity and fully exploiting their human capital are likely to be more successful than companies that do not. Krebs’s (1997) work has been extensively cited in the literature, including Holtz (1997), Schumacker (1997), Saruman (1998), Gloin (1999), Bree and Bee (2000), Ring (2001) and Doom (2002).

Schumacker (1997) was able to show that there was a relationship between cultural positivity and financial performance. In his study, Krebs plotted the correlation between measured differences in cultural positivity over a number of years. His results indicated that financial performance diminished as cultural positivity diminished. Schumacker’s (1997) results suggested that (a) there is a time lag between a change in cultural positivity and a corresponding change in company financial performance, and (b) this relationship is self-amplifying in that a change in financial performance acts as a direct driver of cultural positivity. Orion (1998) replicated Schumacker’s (1997) work. Rigel and Antares (1999) used Schumacker’s (1997) methodology in their study of the long-term success of three US retail organisations. Rigel and Antares reported that both the conditions for, and the achievement of, long-term success increased as initiatives were put in place to increase cultural positivity and exploit the value of the companies’ human capital resources.

Coulthard (1998) suggested that the development of human capital is crucial in terms of a company achieving long-term success. Coulthard reported a measurable link between cultural cohesiveness and long-term human capital development. Other researchers such as Trulli (1999) reported a link between cultural cohesion and long-term likelihood of success. Trulli used financial performance as one measure of success but also recognised others, including innovation and ability to respond to change. Thak and Nabonidas (2000) suggested that innovation is directly related to the development of human capital because employees can contribute fully to strategic innovation only when they have been with the company long enough to appreciate the detail of how it operates. Belit (2000) and Amra (2000) both agree with this reasoning. Juma (2001) attempted to support Thak and Nabonida’s (2000) work in his two-year longitudinal study of a US computer component manufacturer. Juma (2001) reported that as internal initiatives for increasing the development of human capital were designed, implemented and began to take effect, the conditions for long-term success were improved. Juma stressed that his research identified the conditions for long-term success rather than long-term success itself. Zarono (2002) reported similar findings; he also carried out a validation study in an attempt to (a) measure actual long-term success and (b) show that his results were general. Zenobia (2002) criticised Zarono’s (2002) validation study on the grounds that the validation sample was not compatible with the main study. Zenobia’s criticisms
appear to be in order, as the validation study used government suppliers whereas the main study focused on an arms manufacturer.

Ripley (2000) carried out a long-term longitudinal study of six automobile manufacturing companies. She developed a subjective measurement system that allowed data to be collected and analysed to show the relationship between cultural positivity and the long-term success of different parts of the company structure. Ripley (2000) adopted the approach taken earlier by Alien (1987) in equating cultural positivity with cultural approval. Other researchers including Nostromo (1988) and Marine (1990) have made this same assumption. Ripley (2000) was able to show that cultural positivity and approval improved the operational performance of all levels of the subject organisations. Ripley also asserted that this effect was more pronounced towards senior management levels of the organisation than at the lower operational levels. Ripley hypothesised that this could have been because the senior managers were instrumental in introducing measures to include cultural positivity, and therefore were more closely associated with the effort. Ripley (2000) suggested that initiatives to improve cultural positivity and approval are imposed more at lower levels, and are therefore less immediately attractive, although this attractiveness tends to increase as a function of time. These are interesting suggestions, and are partially borne out by the works of Jester (2000), Trencher (2000) and Docker and Dyke (2001).

Clampitt (1998) suggested that individual motivation and commitment tend to increase as cultural positivity increases. Clampitt (1998) justified her results by citing examples from the world of competitive sports. For example, football teams tend to play better when the individual players are happy with team performance (Ferguson, 1996). If performance falls, confidence also falls and cultural positivity decreases as a result (Venables, 1997). The net effect is a diminishing level of commitment and motivation as the position of the team becomes less clear and less certain. In such cases the manager may have to make an extra effort to motivate the team and re-instill confidence (Houlier, 1998). As there is an established link between motivation and commitment and success (McCleish, 2001; McNeill, 2001) it seems reasonable that these elements and the cultural positivity they generate are, indeed, drivers of overall success.

**Cultural positivity and the positive development of human capital and strategic fit**

There is a small but very interesting literature on cultural positivity and the development of human capital and the degree of strategic fit offered by a merger or acquisition. Holmes (1988) first suggested a link between the degree of strategic fit offered by a merger or acquisition and the degree of cultural positivity likely to accrue from the proposed change. Holmes conducted an extensive survey of hundreds of employees at all levels within organisations both before and after mergers or acquisitions took place. His results suggested that cultural positivity was greatest where the degree of strategic fit offered by the merger or acquisition was high. Cracker (1990), building on Holmes’s (1988) results, found, in his study of UK engineering companies, that there was a linear appositive functional relationship between strategic fit and cultural positivity.
Minder (2000) considered the relationship between strategic fit and strategic alignment in his study of UK clothing manufacturers. Minder’s (2000) results suggested that companies that could achieve high levels of strategic fit or compatibility were more likely to develop long-term strategic alignment enhancement. These results were later supported by Mason (2001) and Columbo (2002). Quincy (2002) took an opposite view, arguing that strategic fit is a subjective concept that cannot be measured in practice and therefore cannot be taken into consideration in objective strategic decision-making. Most of the relevant literature appears to disagree with Quincy (2002). Starsky (2002) and Bill (2002) both took the view that strategic fit can be mapped in a form that makes informed analysis and evaluation possible. Hutch (2002) and Kojak (2002) both reported that they had generated validated results showing that strategic alignment can be engineered through the selection of mergers and acquisitions based on the optimisation of strategic fit.

**Cultural positivity and the positive development of human capital and strategic alignment**

There is very little published work linking the positive development of human capital with strategic alignment. Pioneering work by Eilidh (2003) suggests there is a link between the degree of strategic alignment in mergers and the development of a positive attitude within the organisational culture leading to amplified potential for human capital development. At the time of writing, this research area was in its infancy. To date, there has been only one published critique of Eilidh’s work. Aill (2003) reported similar findings in her research study of over 50 mergers in the UK retail sector.

Pikelet (2002) and Aill (2001) both suggest that there is a relationship between the degree of strategic alignment in a merger and the generation of cultural positivity within one or both merging organisations. This view has been supported by John (2001). Given the established link between cultural positivity and enhanced potential of human capital, it seems reasonable to conclude there is likely to be a link between strategic alignment, cultural positivity and the positive potential to develop human capital. There is at present however, no published work linking strategic alignment with the positive potential to develop human capital. Extensive and exhaustive searches of the literature indicate a gap in the literature in this linking area.

It is understood that pioneering work in this area is currently being conducted by Williams and Gallagher at Pencil-Vania University and Reeves and Mortimer at Mont Blanc University in the US. These researchers have reached pilot study stage, but there has as yet been no publication: therefore online searches of the literature do not detect the presence of this work. None of this work is likely to reach publication stage before the completion of this research. Reference will made to any results published by Williams and Gallacher and Reeves and Mortimer as soon as they are made available.

6.3.4.3 **Summary**

This section of the literature review has considered the literature on cultural positivity and the development of human capital. Increased strategic alignment
encourages positivity and the conditions for the positive development of human capital. Cultural positivity and the effective development of human capital are important drivers of long-term success and both are functions of strategic fit, which is itself a function of strategic alignment. There is no literature at present directly linking strategic alignment with the development of human capital; pioneering work is, however, under way in the US.

6.3.5 Literature Review Summary

The literature review has covered strategic alignment, mergers and acquisitions and cultural positivity and the development of human capital. The literature suggests that: (a) there is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success; (b) there is a functional relationship between long-term success and cultural approval; (c) there is a functional relationship between the degree of strategic fit and strategic alignment in mergers; (d) there is a functional relationship between strategic fit (focus engineering) and cultural positive attitudes; and (e) there is a functional relationship between cultural positivity and the positive development of human capital.

In all cases, these conclusions have been generated from the literature itself rather than by speculation or conjecture.

The literature review has indicated an apparent gap in the literature in that there are no publications in the area directly linking strategic alignment and the development of human capital. It seems reasonable, therefore, to concentrate on this area as the primary research question for the current research. Given the other connections and links suggested by the research, it appears that if the link between strategic alignment and the potential to develop human capital can be established, this will lead to the identification of another driver set behind long-term success in mergers and acquisitions.

Note: It is important that this section, which concludes the basic literature review, establishes the main themes emerging from the literature review in the context of the current research. These themes will be expanded and developed in the literature synthesis and will be developed into a basic theory to be evaluated in the pilot study.

6.4 Literature Synthesis and Development of a Basic Theory

6.4.1 Introduction

This section synthesises the preceding literature review chapters with the objective of developing the primary outcomes of each section. These outcomes are used as the basis for developing the basic research theory. This theory is the basis for the pilot study and pilot study synthesis before being developed into a formal research theory. The formal research theory is then used in the development of the research methodology and analytical sections of the research, which are covered in detail in Introduction to Business Research 3.
6.4.2 The Literature Synthesis

The literature synthesis suggests the following underlying observations in relation to mergers.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
- There is a functional relationship between cultural positivity and the positive development of human capital.

These headings are now considered individually in the literature synthesis.

Note: In developing this section the candidate should think in terms of being a lawyer developing a case for the prosecution or defence in a court of law. A prosecution or defence lawyer can make assertions but is likely to impress the jury only if they are supported by evidence. The more evidence the lawyer can put forward in support of these assertions, the more powerful the argument becomes.

In the literature review synthesis, the candidate summarises the main points emerging from the literature, reciting all relevant references from the previous literature review. Any reader (or examiner) who disagrees with the arguments or points of view presented in the synthesis is also disagreeing with the numerous supporting references. This weakens the counter-argument considerably unless the reader or examiner can cite counter-evidence. Provided the candidate is sure that the literature review is (a) exhaustive and (b) a full critique, the candidate’s position is strong.

1. There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.

Companies have long used mergers and acquisitions in the search for long-term success. As early as 1970, strategic alignment was identified as a key strategic objective in mergers and acquisitions (Groucho, 1970; Reilly, 1975; Cole, 1985). The literature clearly indicates that mergers aimed at enhancing strategic alignment have a greater likelihood of success than those aimed at other strategic objectives (Nancho, 1985; Raisin, 1990; Nadir, 1992; Box, 1995; Ballcock, 2000; Glorfdel, 2000; Champitt and Neep, 2001; Cycle, 2001).

Companies are increasingly viewing strategic alignment as a driver in strategic planning (Larsson, 2000). The literature suggests that there appears to be a functional relationship between the degree of strategic alignment present in an organisation and the likelihood of long-term sustainable competitive advantage (Woodstock, 1997; Clinker, 1998). This growing awareness has been characterised by a shift towards strategically focused mergers and acquisitions (Ribald, 2000) and away from non-related mergers and acquisitions (Sumptner, 1999).

Strategic alignment can be achieved or enhanced by internal reorganisation and initiatives (Bloggs, 1994; Glencoe, 2000; Ruffin, 2000; Jeraboam, 2001; McKinder and Reefer, 2001; Steerpike, 2001; Muffin, 2003) as well as by mergers and acquisitions, but strategic alignment is increasingly becoming the primary consid-
eration in deciding on whether or not to proceed with a proposed merger or acquisition (Ryland, 1998; Fletcher, 1999; Asfaloth, 2003; Halbarad, 2003; Strider, 2003). This approach appears to be general across a range of sectors (Fletcher, 1999; Donaghue and Stevenson, 2000; Bearne and Boadle, 2001; Calill, 2001; Halbarad, 2003).

Several researchers have shown a positive functionality between the degree of strategic alignment achieved by an organisation and the likelihood of long-term success in specific industries or sectors (Ronson, 1990; Proton, 1997; Woodstock, 1997; Clinker, 1998; Refill, 1999; Fountain and Penn, 2000; Larsson, 2000; Cartridge, 2001; Nib, 2001; Scheafffer, 2001). One school of thought suggests that this increased likelihood of long-term success is due to the diminished and more focused risk profile offered by a strategically focused company (Refill, 1999; Lupin, 2000; Daisy, 2001; De Boer, 2001).

Another school of thought has attributed the enhanced likelihood of long-term success to the cultural approval more likely in the case of a strategically focused move (Smith, 1996; Skeeker, 2001). The link between cultural approval or positivity and strategic fit has been established in the strategic alignment literature (Johnson, 1998, 1999, 2001; McIntosh, 2001; Beeford, 2002; Skeesome, 2002, 2003; Davie, 2003a) and in the psychology literature (Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000). Cultural positivity is, clearly, a driver in determining long-term merger success (Holtz, 1997); Krebs, 1997; Schumacker, 1997; Saruman, 1998; Gloin, 1999; Bree and Bee, 2000; Ring, 2001; Doom, 2002).

A third line of reasoning has attributed the effect to the degree of strategic fit (as opposed to focus) that can be achieved through the move (De Boer, 2001; Holly, 2002; Muffin, 2002; Jurana, 2003; Skeesome, 2003). There is clearly a link between strategic fit in mergers and acquisitions and cultural positivity (Holmes, 1988; Cracker, 1990; Minder, 2000; Mason, 2001; Columbo, 2002).

The literature suggests that the relative success of strategically focused or unfocused mergers has to be defined in terms of either long-term or short-term measures of success (Branso and Pacino, 2000; Credo, 2000; Hogg, 2000; Tinsley, 2000; Carnacki, 2001). Strategically focused mergers tend to generate success in the longer-term rather than the shorter-term (Hodgson and Eurovan, 2002; Cave and Mars, 2003; Dion and Tilsley, 2003; Flay and Fluke, 2003; Gazolba and Bird, 2003).

**Conclusion:** The literature suggests that there is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.

2. **There is a functional relationship between long-term success and cultural approval.**

There can be little doubt that cultural approval is necessary in virtually any organisation if long-term success is to be achieved (Holtz, 1997; Krebs, 1997; Schumacker, 1997; Butcher, 1998; Coulthard, 1998; Nostromo, 1998; Rigel and Antares, 1998; Saruman, 1998; Trulli, 1998; Gloin, 1999; Bree and Bee, 2000; Ripley, 2000; Thomson, 2000; Ring, 2001; Doom, 2002).

Ballcock (2000) cited difficulties in cultural integration as one of the primary reasons why mergers fail. The summary discussed above indicates a clear link
between strategic alignment and long-term success. A number of researchers have indicated a clear relationship between strategic alignment and cultural attitudes (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Pikelet, 2001; Aill, 2002; Skeesome, 2002, 2003; Davie, 2003a). It is also clear that a good strategic fit, either through internal initiatives or through mergers and acquisitions, acts as a damper on the development of cultural disapproval (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001).

Internal initiatives and mergers and acquisitions generally have a negative impact on cultural positivity (Crabbe, 1997; Springstein, 1998; Winkle, 1999). The primary reason for this negative effect appears to be uncertainty about the effects the proposed merger will have on employees (Carapace, 2000). Cultural positivity effects tend to be strongly time-related (Pepper, 1998; Condiment, 1999; Boomer, 2001). The literature suggests that cultural positivity can be either amplified or damped by different variables (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001, Cakebread, 2002). It also suggests that the damping effect is particularly significant in the case of enterprise-wide communication systems (Hackett, 1997; Stoatir, 1998; Glaikit, 1999; Dodderer, 2001). The literature implies that cultural positivity is measurably different under the same universal conditions in the case of acquirers and targets in acquisitions (Druze, 1996; Cumberland, 1997; Stuart, 1998).

The success drive capacity of cultural positivity is also related to the size of the merger or acquisition (Keith, 2000; Orville, 2000), to the communication systems existing within the merging or acquiring companies (Gossip, 2002; Heresay, 2002), and to the authority level considered (Wimsey, 1999; Jester, 2000; Trencher, 2000; Boss, 2001; Docker and Dyke, 2001; Leader and Grubb, 2001; Freud, 2002; Grubb, 2002).

**Conclusion:** The literature suggests that there is a functional relationship between long-term success and cultural approval.

3. **There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.**

The literature in this area is sparse. Relatively few researchers have directly linked strategic fit with strategic alignment. The primary reason for this appears to be that researchers often use the two terms interchangeably. Other researchers clearly refer to strategic fit when they refer to strategic alignment engineering (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a).

Some researchers have specifically considered the relationship between strategic fit and strategic alignment (Juicer and Pulp, 1995; Minder, 2000; Blender, 2001; Mason, 2001; Bill, 2002; Columbo, 2002; Hutch, 2002; Joiner, 2002; Kojak, 2002; Quincy, 2002; Starsky, 2002; Baker, 2003; Grinder and Mill, 2003). The findings of these research programmes all clearly indicate a direct relationship between strategic fit and strategic alignment.

Other researchers have measured the degree of relatedness between strategic fit and strategic alignment (Jones, 2003; Jurana et al., 2003). Both research programmes concluded that strategic fit in mergers and acquisitions is a direct driver of strategic alignment. Other research programmes have identified the link be-
between strategic fit and long-term likelihood of success (De Boer, 2001; Mols, 2001; Holly, 2002; Muffin, 2002; Ryan et al., 2003a, Skeesome, 2003).

Strategic fit has been stated as being beneficial in the development of cultural positivity (Cracker, 1990; Homes, 1998; Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000), which is, itself, a function of strategic alignment. There has been no reported opposition to any of these links in the literature. Given the established link between strategic alignment and success, and Jones’s (2003) link between strategic alignment and strategic fit, it seems reasonable to assert that there is, indeed, a functional relationship between strategic fit and strategic alignment.

**Conclusion:** The literature suggests that there is a functional relationship between the degree of strategic fit and strategic alignment in mergers.

4. There is a functional relationship between strategic alignment engineering and cultural positive attitudes.


Numerous researchers have identified strategic fit as a function of cultural impact drivers (Johnson, 1998, 1999, 2001; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). Practitioners have also detected the importance of this issue (Egbert plc, 2000; Challenger plc, 2001). Other researchers have stressed the importance of the link between strategic alignment engineering (strategic fit) and positive cultural attitudes (Pikelet, 2002; Davie, 2003a). The possible workforce speculative damper effect has been explored by a number of researchers (Mustard, 1995; Plum, 1995; Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schutz and Schultz, 1999; Puffin, 2000; Blucher, 2001; Dodderer, 2001; Cakebread, 2002). In all cases the results indicated that a good strategic fit coupled with effective communication systems can minimise negativity effects (Hackett, 1997; Stotar, 1998; Glaekit, 1999; Bligh, 2001; Christian, 2002). In such cases the relative position of acquirer and target must be recognised (Druze, 1996; Cumberland, 1997; Stuart, 1998; Nomad, 2000; Pill, 2001; Cadmium, 2002).

In some cases, specific analysis techniques have been developed to map strategic fit capabilities in relation to likely positive attitude propagation (Juicer and Pulp, 1995; Blender, 2001; Joiner, 2002; Baker, 2003; Grinder and Mill, 2003). In all cases, the research results indicated a clear link between strategic fit and the propagation of cultural positivity. This is significant, as mergers and acquisitions typically generate cultural negativity (Crabbe, 1997; Springstein, 1998; Winkle, 1999) unless carefully managed, largely as a result of uncertainty generated by change (Pepper, 1998; Condiment, 1999; Carapace, 2000; Boomer, 2001).

Other researchers have supported the view of functionality between strategic fit and cultural positivity while focusing on different variables including scale (Keith, 2000; Orville, 2000), communications obstacles (Gossip, 2000; Heresay, 2000), seniority (Wimset, 1999; Boss, 2001; Leader and Grubb, 2001) and time-scale (Butcher, 1998; Mitchell, 1998; Thomson, 2000).
Conclusion: The literature suggests that there is a functional relationship between strategic alignment engineering and cultural positive attitudes.

5. There is a functional relationship between cultural positivity and the positive development of human capital.

There is a large and varied literature on human capital and human capital development. All the literature suggests that human capital can best be improved in an environment characterised by generally positive perceptions (Ross, 1998; McIntosh, 2000; Smith, 2001). Other researchers have clearly established a link between cultural positivity and the potential for the development of increased human capital values (Fellah, 1990; Schofield, 1990; Chalker, 1996; Manpower, 1997; Toil and Labour, 1998; Jofis, 2000; Muffin 2000; Skylark, 2000; Slave, 2000; Ryan, 2000; Bodkin and Brace, 2001; McIntosh, 2001; Overseer, 2001; Pramm and Pusher, 2001; Tivity, 2002). There are virtually no contradictory views in the literature.

Researchers have also demonstrated a clear link between cultural positivity and increased potential for human capital development as key success drivers in organisations (Alien, 1987; Nostromo, 1988; Krebs, 1997; Schumacker, 1997; Coulthard, 1998; Rigel and Antares, 1998; Amra, 2000; Belit, 2000; Ripley, 2000; Thak and Nabonidas, 2000; Juma, 2001; Zarono, 2002; Zenobia, 2002).

Other researchers have concentrated on specific aspects of the relationship between cultural positivity and the development of human capital including commitment and motivation (Fergusson, 1996; Venales, 1997; Clampitt, 1998; Houlier, 1998; Jester, 2000; Trencher, 2000; Docker and Dyke, 2001; McLeish, 2001; McNeill, 2001).

The overwhelming evidence from the literature is that there is a clear link between cultural positivity and the potential for the positive development of human capital.

Conclusion: The literature suggests that there is a functional relationship between cultural positivity and the positive development of human capital.

The literature review therefore suggests the following synthesised outcomes:

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
- There is a functional relationship between cultural positivity and the positive development of human capital.
6.4.3 The Development of the Basic Theory

The Synthesis Summary

The synthesised outcomes listed above can be elaborated as follows:

- **Strategic alignment is related to long-term success.**
  Companies that enhance strategic alignment tend to be more successful. This appears to apply in mergers and acquisitions and also in non-merger initiatives. The success factor may be due to the reduced scope of the risk profile and/or the cultural positivity that tends to be associated with strategically focused moves or moves with good strategic fit. Success in this context is defined in the longer term rather than the shorter term.

- **Long-term success is related to cultural approval.**
  Companies that develop an environment of cultural approval tend to be more successful. The cultural integration problem is one of the main reasons why mergers and acquisitions fail. Cultural approval or positivity is one of the main drivers of long-term success. Cultural approval is linked to strategic alignment and cultural fit.

- **Strategic fit is related to strategic alignment.**
  The degree of strategic fit offered by a merger or acquisition directly affects the degree of strategic alignment that can be achieved. Strategic alignment is desirable in terms of long-term success, so strategic fit becomes an objective in selecting merger partners or acquisition targets. Good strategic fit encourages cultural positivity.

- **The degree of strategic fit (focus engineering) is related to cultural positivity.**
  Mergers or acquisitions exhibiting a good strategic fit tend to relate to higher levels of cultural positivity. Stakeholders feel happier when the range of strategic objectives is focused and clearly defined. The higher the degree of strategic fit in a merger, the greater is the likelihood of long-term success.

- **Cultural positivity is related to the positive development of human capital.**
  Human resources can be developed more effectively in an environment of cultural positivity than in an environment of cultural negativity. People are more highly committed, and motivated to develop, where the environment is positive. The development of human capital is a key driver in the achievement of long-term success.

These functionalities, in turn, suggest that in mergers, long-term success is dependent on:

- strategic alignment;
- strategic fit;
- cultural positivity;
- the development of human capital.

There is no unifying theory in the literature that embraces all of these areas. As already stated, work in progress in the US by Reeves and Mortimer and Williams and Gallacher had not published at the time this research was in progress.
The Basic Theorisation
Given that long-term success is dependent upon both strategic fit and the development of human capital and that:

- strategic alignment is a function of strategic fit;
- cultural positivity is a function of strategic fit;
- the development of human capital is a function of cultural positivity;

it seems reasonable to postulate a theory based on the derived functional relationship between strategic alignment and the positive development of human capital. It is therefore theorised that, in mergers:

*the positive development of human capital is a function of strategic alignment.*

Note: It should again be stressed that this argument is Socratic and considerably oversimplified. It does, however, illustrate how functionalities between apparently distant variables can be established by an effective synthesis of the literature. Once again (at the risk of repetition) the analysis used a work breakdown structure (WBS) approach to disintegrate the analysis into smaller sections or elements that could be considered collectively.

The Basic Research Theory
The result of the synthesis process is a potential research theory based on the literature. The basic research theory is:

*In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.*

Note: In reality, the research theory would have to be more focused: for example, it could address this issue in relation to retail mergers rather than mergers in general.

Note: It is important to appreciate that this basic theory has been developed exclusively from the literature. Each step of the synthesis summary and the basic theorisation was developed from published works. The only point of conjecture was the apparent gap in the literature linking strategic alignment and the potential to develop human capital. The examiners will look for evidence that the theory is substantiated. The theory is not just an idea that candidate has come up with. It was arrived at logically by a careful, detailed and critical evaluation of all the relevant literature.

The Research Question
The research question is:

*In retail mergers, is the degree of strategic alignment a function of the potential to develop the positive development of human capital?*
The Research Aims and Objectives

The research aim is:

*To show that the degree of strategic alignment is a function of the potential to develop the positive development of human capital.*

The research objectives are:

1. ‘To show that where high levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also high’.
2. ‘To show that where low levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also low’.

The Research and Operational Hypotheses

The research hypothesis is:

\[ H_0: \text{As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.} \]

\[ H_1: \text{As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.} \]

The operational hypotheses are:

Hypothesis 1

\[ H_0: \text{Strategic alignment is not a function of long-term success.} \]

\[ H_1: \text{Strategic alignment is a function of long-term success.} \]

Hypothesis 2

\[ H_0: \text{Long-term success is not a function of cultural approval.} \]

\[ H_1: \text{Long-term success is a function of cultural approval.} \]

Hypothesis 3

\[ H_0: \text{Strategic fit is not a function of strategic alignment.} \]

\[ H_1: \text{Strategic fit is a function of strategic alignment.} \]

Hypothesis 4

\[ H_0: \text{The degree of strategic fit is not a function of cultural positivity.} \]

\[ H_1: \text{The degree of strategic fit is a function of cultural positivity.} \]

Hypothesis 5

\[ H_0: \text{Cultural positivity is not a function of the positive development of human capital.} \]

\[ H_1: \text{Cultural positivity is a function of the positive development of human capital.} \]
Hypothesis 6 (derived)

H₀: ‘Strategic alignment is not a function of the positive development of human capital.’
H₁: ‘Strategic alignment is a function of the positive development of human capital.’

The operational hypotheses, with the exception of hypothesis 6, reflect the primary outcomes of the literature synthesis. Hypothesis 6 is derived from hypotheses 1–5 and forms the main research outcome.

6.5 Report on the Pilot Study

6.5.1 Introduction

Note: The following example of a pilot study report is a full version incorporating the extracts used in Module 3.

Note: The pilot study report does not need to repeat the main aims and objectives of the research. These have already been stated in the research proposal and reiterated in the literature review progress reports. The report of the pilot study will probably appear as a subsection of a chapter (probably the Literature Synthesis and Report of a Pilot Study chapter) in the final thesis. The report follows on from the various literature review chapters and is already fully established in context. The candidate can, therefore, launch straight into it with no unnecessary preambles.

The pilot study was designed to apply the main themes emerging from the literature synthesis to a real UK retail company in order to assess:

- the applicability of the literature synthesis outcomes;
- the suitability of the research methodology for use in the main study.

The primary objective of the pilot study, therefore, was to collect and process real data to assess the validity of the outcomes from the literature review synthesis. The validity of the literature synthesis outcomes is important, as these are subsequently used as the basis for the formation of the formal theory.

A secondary objective was to assess the suitability of the longitudinal case study approach using questionnaires, structured interviews and attendance at merger team meeting as the primary data collection tools.

These basic objectives are common to many pilot studies (Jones, 1996; Bloggs, 1998; Walther, 2002).

The literature synthesis generated clear interrelationships among the primary research field elements. Some of these linkages appear to be more firmly established than others. The pilot study was specifically designed to probe these linkages within a real company to assess their suitability for use as the basis for the formal theory.

The pilot study was conducted as a longitudinal study lasting just under six months from August 2002 to January 2003. The subject used was company X.

Company X agreed to contribute to the research at research proposal stage. A letter of support was attached to the research proposal, and a copy is attached to the literature review submission for reference. The company has a record of small-to-medium-sized mergers and acquisitions, commencing in 1980 and continuing to the
present. In its time, company X has made a range of different mergers and acquisitions, from fully-related to non-related. The company is therefore in a position to provide information on the success or otherwise of a range of merger types.

The pilot study was designed in parallel with the development of the literature synthesis. It was felt that this approach would make optimal use of the time available, and it had the additional advantage of increasing the degree of interrelatedness between the development of the pilot study and the literature synthesis. This joint approach, where literature synthesis outcomes are considered in parallel to the development and refinement of the proposed main study research, places the pilot study within the area of grounded theory (Pikelet, 2002). This type of grounded theory approach has been used in the implementation of numerous pilot studies in the past (Muffin, 1999; Charles, 2000; McIntosh, 2001).

Note: The candidate should reinforce all sections of the pilot study with suitable references where appropriate. In this case, the candidate has justified the basic pilot study objectives by referring to Jones (1996), and has established the pilot study research methodology firmly in the sphere of grounded theory. Muffin (1990), Charles (2000) and McIntosh (2001) have used the same approach for pilot studies.

Data were collected using a combination of questionnaires, structured interviews, and attendance at merger team meetings, where the proceedings were recorded and transcribed.

Questionnaires were distributed at random across all levels of the organisation to generate a representative sample (Nikey, 2000; Chandler, 2002a).

6.5.2 Subject Details

The subject of the pilot study was company X. The company has not been specifically named in compliance with a confidentiality agreement reached at the outset of the research programme. Company X is a medium-sized retail organisation with a turnover of around £60 million for 2002/2003 and around 6000 employees across the UK. Company X has a history of mergers and acquisitions, having merged twice in its history and having made a total of four acquisitions, two of which were hostile. Fully related acquisitions included small-to-medium-sized retail companies. Diversified acquisitions have included a small DIY chain and a builder’s merchant company.

The candidate was given access to staff at all levels in the company headquarters and also at all levels to staff in individual retail outlets. The candidate was also given access to a series of merger team meetings set up by the company to facilitate the dissemination of information, relating to the merger, through all levels of the company.

At the time the research was carried out, Company X was involved in negotiations for another related merger. The company asked that no details of this proposed merger were given in the thesis. The company did agree to allow the candidate to record that the company was specifically interested in using the degree of strategic alignment offered by the merger to increase the potential for the development of its human capital. Company X had a detailed policy on human
capital development, seeing this as a fundamental resource and a key element in the sustainability of the company’s competitive advantage. The merger history, current merger activity and direct concern with the positive development of human capital made company X an ideal subject for the pilot study research.

Note: It may be necessary to provide further information on Company X in an appendix. The examiners will wish to satisfy themselves that Company X is reasonably compatible with the company or companies used in the main study. There is, of course, a balance between what the examiners need to know and the information the company is prepared to have disclosed by the candidate. This balance could create problems, and would be the subject of a ‘good’ question to put to the supervisor.

6.5.3 **Methodology**

The methodology was based on the following primary elements.

| Alignment: | Longitudinal case study base |
| Data collection: | Questionnaires |
| | Structured interviews |
| | Recorded discussion at meetings |
| Data analysis: | Content analysis (Sarah–Ryan classification) |
| | Simple statistical analysis |

The longitudinal case study approach is widely used in this type of application. Johnson (1997) used a longitudinal approach based on a six-month data collection period for recording discussions at pre-merger team meetings. Wallyford (2000) used a six-month study in assessing cultural attitudes immediately post-merger in a single retail company. Drax and Eggborough (2002) used a six-month interview and questionnaire campaign in measuring changes in cultural positivity following major company announcements in the UK retail sector.

Individual staff members were issued with a structured questionnaire containing 30 questions. A copy of the questionnaire is shown in appendix 1. This questionnaire was subsequently modified and used in the main study data collection process. The questions related to the operational hypotheses and required the respondent to provide responses on a basic one-to-ten scale to indicate an outcome between ‘strongly agree’ and ‘strongly disagree’. Questionnaire responses were extracted and checked before being entered onto the pilot study research database. The data were then analysed using simple statistical techniques to show the frequency of occurrence of different responses.

Questionnaires have been widely used in similar research in the past. Grebe (1998) used similar questionnaires to collect data on post-merger cultural integration, and Pikelet (1999a) used similar questionnaires in her research on post-merger conflict propagation. A total of 106 questionnaires were issued for this pilot study with 89 questionnaires fully completed and returned. Respondents were picked at random across the entire workforce of Company X.
Note: The candidate’s use of references here is weak. The text does not indicate the industry or sector in which Grebe (1998) and Pikelet (1999a) were working. The candidate has already indicated that company X is a retail organisation. It is important that the Grebe (1998) and Pikelet (1999a) references are expanded so as to establish the compatibility of their work with the current research. If this compatibility cannot be shown, there is little point in including the references.

Individual staff members were also interviewed using a standard structured interview question list. The interview questions were designed to confirm and extend the data recovered from the questionnaire responses. In all cases, the interview questions asked basically the same as those posed in the questionnaire but sought to link together one or more questionnaire questions in an attempt to provide further information on possible interlinkages. This approach was used by Watt (1980) in his research into pre-merger organisational design in the UK retail industry.

Note: The Reference to Watt (1980) is more specific. The candidate should, however, have increased the number of references if possible. There is also the problem that the Watt (1980) reference is old. This could indicate that the candidate struggled to find a suitable reference for use on interviews in the appropriate sectors. The examiners would probably pick up on this point in the examination. The references in relation to qualitative versus quantitative correlation and content analysis are relevant but not subject specific.

Interview responses were analysed both quantitatively and qualitatively. Quantitative analysis took the form of content analysis.

All recordings were made with the consent of those present. The recording equipment was not visible during the meetings. The recordings were later fully transcribed, scanned and formatted for electronic analysis. The transcripts were then coded and analysed using a standard content analysis package. The package adopts the Sarah–Ryan typology (Sarah and Ryan, 1995). This approach has been widely used in the content analysis of team interaction in the social sciences (Davie, 2000a; Edwards, 2002; Walker, 2003). Qualitative analysis was by subjective appraisal of the transcriptions. In some cases, specific extracts of the transcriptions were used for triangulation with the quantitative results from the questionnaires and merger team observations. A total of 18 structured interviews were carried out for this pilot study. Interviewees were picked at random from across the entire workforce of Company X.

Due consideration was given to authority levels within the organisation (Ryland, 1998; Fletcher, 1999) as a determinant of response.

Note: This is an important cross-reference. It is one of the few examples cited by the candidate where the research methodology is related directly back to the general literature review. It is very important that cross-referencing should be used as extensively as possible in all aspects of the literature review submission. The candidate (depending on direct relevance) could also have cited other methodologies that considered authority levels, such as in relation to Wimsey (1999), Jester (2000), Trencher (2000), Boss (2001), Docker and Dyke (2001), Leader and Grubb (2001), Grubb (2002) and Freud (2002).

The blend of quantitative and qualitative comparison was designed to generate good correlation coefficients (Chatt, 1999; Statt, 2000; Graph, 2001; Pair, 2001).
It is accepted that the content analysis technique used (Sarah–Ryan) may contain inherent structural limitations in terms of coding flexibility (Fruit, 1999; Maple, 2000; Tart, 2001). While Sarah–Ryan may be acceptable for a limited-scale pilot study (Martin, 2000; Sadie, 2000) it may require adaptation for a more detailed longitudinal case study (Cranberry, 1999; Quince, 2000; Loganberry, 2001). Individual adaptations appear to present little difficulty provided the modifications are correctly evaluated and calibrated (Passion, 2000; Plum, 2000; Kiwi and Fruit, 2001).

It is accepted that the questionnaire- and interview-based approach has methodological limitations, as discussed by Mellon (2002), Pear (2002) and Kiwi (2003). The questionnaire return rate was relatively high in the pilot study, primarily because of the careful non-reactive preparation carried out (Plead and Begg, 1998; Neil, 1999; Rejoinder, 2000).

Merger team meetings were observed and recorded using the same approach and processing tools as detailed above for the interview responses. The Sarah–Ryan (Sarah and Ryan, 1995) typology has been used on a number of occasions for the analysis of team and group interaction (Adams, 2000; Davie, 2000). A total of 12 merger team meetings were attended in connection with the collection of data for this pilot study.

Reactance and bias appear to have been contained within reasonable levels, having based the interview and questionnaire question design on the recommendations made by Robespere (1999) and Torquemada (2000).

*Note: The candidate has attempted to address the issues of reactance and bias here, but the address is weak. The candidate has not made any reference to the application or sector of Robespere’s (1999) or Torquemada’s (2000) research. Ideally, this section should be developed and should include specifically relevant references.*

The methodology was applied in order to test the following operational hypotheses:

**Hypothesis 1**

- H₀: ‘Strategic alignment is not a function of long-term success.’
- H₁: ‘Strategic alignment is a function of long-term success.’

**Hypothesis 2**

- H₀: ‘Long-term success is not a function of cultural approval.’
- H₁: ‘Long-term success is a function of cultural approval.’

**Hypothesis 3**

- H₀: ‘Strategic fit is not a function of strategic alignment.’
- H₁: ‘Strategic fit is a function of strategic alignment.’
Hypothesis 4
H0: 'The degree of strategic fit is not a function of cultural positivity.'
H1: 'The degree of strategic fit is a function of cultural positivity.'

Hypothesis 5
H0: 'Cultural positivity is not a function of the positive development of human capital.'
H1: 'Cultural positivity is a function of the positive development of human capital.'

Hypothesis 6 (derived)
H0: 'Strategic alignment is not a function of the positive development of human capital.'
H1: 'Strategic alignment is a function of the positive development of human capital.'

The operational hypotheses address the research hypothesis, which is as follows.

H0: 'As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.'
H1: 'As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.'

The research hypothesis addresses the research aim and objectives, which are as follows.

The research aim is:

To show that the degree of strategic alignment is a function of the potential to develop the positive development of human capital.

The research objectives are:

1. 'To show that where high levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also high.'
2. 'To show that where low levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also low.'

The research aims and objectives address the research question, which is as follows.

In retail mergers, is the degree of strategic alignment a function of the potential to develop the positive development of human capital?

The research question addresses the basic research theory, which is as follows.

In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.
Note: It may seem repetitive to list the full rationale behind the generation of the research and operational hypotheses again. This reasoning must, however, be restated as, in many cases, one or more of the hypotheses might change as a result of the literature synthesis. In this case the literature fully supports the hypotheses and there are no changes. In cases where any aspect of the underlying rationale is required, the rationale must be fully restated so that the logical progression of developing the hypotheses can be seen.

Note: There appears to be no elaboration on one of the methodological approaches mentioned; simple statistical analysis. No matter how simple the method used it should be described and justified as appropriate.

Note: Where appropriate the candidate could have strengthened the underlying rationale behind the generation of the operational hypotheses by citing other research where similar chains of reasoning have been presented. For example, given the nature of their research it is likely that at least one of Woodstock (1997), Clinker (1998), Sumptner (1999), Larsson (2000) and Ribald (2000) put forward a research hypothesis linking strategic alignment to long-term success.

Strategic alignment is, of course, achievable not only through mergers and acquisitions. Companies constantly realign their operations to meet changes in the external environment, including changes in demand (Bloggs, 1994). For example, companies may realign their strategic planning periodically with the intention of increasing strategic alignment through internal reorganisation. Glencoe (2000) conducted a survey of 40 UK companies and found that 70 per cent of them attempted to increase strategic alignment through internal reorganisation over a five-year period. Glencoe’s results indicate that the success rate was relatively low, with only around 40 per cent of the sample actually achieving an increase in the degree of strategic alignment obtained. Glencoe’s results have been criticised by Jurana (2003) on the grounds of survey design and the fact that the research contained no validation study. Similar concerns were raised by McKinder (2001), although she suggested that Glencoe’s results agreed in principle.

6.5.4 Results

The primary pilot study results are listed below. All results are stated in the context of source perceptions. For example, where functionalities are identified, these functionalities are as perceived by the staff within company X. It could be argued that even if every respondent perceives a functionality to exist, that functionality does not necessarily exist, because everybody could be wrong. This issue will be addressed in the main study, where a greater degree of triangulation takes place.

1. Strategic alignment is a function of long-term success.
2. Long-term success is a function of cultural approval.
3. Strategic fit is a function of strategic alignment.
4. The degree of strategic alignment is a function of cultural positivity.
5. Cultural positivity is a function of the positive development of human capital.
6. Strategic alignment is a function of the potential for the positive development of human capital.
Results 1–5 were generated directly from the acceptance of the operational hypotheses. Exploiting the functionalities demonstrated by findings 1–5 developed result 6.

Note: In this section the tables of results presented in Module 3 are not reproduced.

**Result 1. Strategic alignment is a function of long-term success**

The proportion of senior managers, functional managers and other stakeholders who agreed with statement 1 was 90 per cent. The corresponding figure for operatives was lower, but still significant, at 70 per cent. The highest incidence of disagreement was amongst operatives at 15 per cent.

Content analysis of interview and meeting transcripts indicated that the word association between strategic alignment and long-term success was significantly higher than would be expected for a random distribution. In the case of the interviews, the association was significant at the 99 per cent confidence level, apart from operatives, where the word association was not significant. The corresponding value for the meetings transcriptions was significant at the 95 per cent level, again with the exception of operatives, where there was no significant association. There was considerable subjective support for result 1 in both interviews and merger team meetings. Extracts of the appropriate transcripts are given in the appendix.

Result:

- Reject $H_0$: ‘Strategic alignment is not related to long-term success.’
- Accept $H_1$: ‘Strategic alignment is related to long-term success.’

**Result 2. Long-term success is a function of cultural approval**

The level of agreement with statement 4 was again high, although not quite as high as in relation to result 1. The proportion of senior managers, functional managers and other stakeholders who agreed with statement four is 80–90 per cent. The corresponding figure for operatives was still lower, although the overall proportion of operatives who agreed is higher than was the case in finding one.

Content analysis of interview and meeting transcripts indicated that the word association between long-term success and cultural approval was higher than would be expected for a random distribution. In the case of the interviews, the association was significant at the 95 per cent confidence level in all cases, whereas the corresponding value for the meetings transcriptions was significant at the 90 per cent level in all cases. Subjective interpretation of interview and meetings transcripts suggested that the higher level of operative agreement to statement 2 was because operatives feel more strongly about cultural approval. Subjective analysis suggested that operatives feel less in control than senior managers of the conditions necessary for cultural approval. They therefore regard positivity as an important issue.

Result:

- Reject $H_0$: ‘Long-term success is not related to cultural approval.’
- Accept $H_1$: ‘Long-term success is related to cultural approval.’
Result 3. Strategic fit is a function of strategic alignment

Majority agreement was present in all cases, apart from operatives. The level of agreement was, again, lower than in findings 1 and 2, although still sufficiently prominent as to be clear. The low figure for operatives was surprising. Content analysis showed the concordance between strategic alignment and strategic fit to be at least 90 per cent in all cases, again with the exception of the operatives. In the case of the operatives, the word association was not significant. Subjective analysis of interview and meeting transcripts subsequently suggested that this low reading could have arisen as a result of confusion. Some 60 per cent of operatives in interview asked for clarification of the question. This suggests that the questionnaire survey distribution for operatives averages around 50 per cent because of confusion. Lack of understanding of the question both on the questionnaire and at subsequent interview could explain the 50 per cent neutral reading.

Result:

- Reject $H_0$: ‘Strategic fit is not related to strategic alignment.’
- Accept $H_1$: ‘Strategic fit is related to strategic alignment.’

Result 4. The degree of strategic alignment is a function of cultural positivity

The proportion of agreement for statement 4 was very high, particularly at functional manager and senior manager level, with no disagreement at all. The degree of approval, although uniformly high, was again highest among senior managers and lowest among operatives. The concordance word association was significant at the 99 per cent level in all cases, with a marginally higher level of concordance at interview than while attending merger team meetings. Subjective analysis of meeting transcripts suggested a general awareness that the mergers that cause the least change and disruption are the ones that are most welcomed by staff. Generally the more focused the merger, the lower the likelihood of any significant changes in work practices. This point of view was more prevalent among operatives than among functional managers or senior managers.

Result:

- Reject $H_0$: ‘The degree of strategic alignment is not related to cultural positivity.’
- Accept $H_1$: ‘The degree of strategic alignment is related to cultural positivity.’

Result 5. Cultural positivity is a function of the positive development of human capital

The proportion of agreement for statement 5 was, again, very high. For the first time, the proportion of operative approval was at least equal to the proportion for other stakeholders. The concordance analysis showed a clear word association between cultural positivity and human capital. This association was always at least 99 per cent. Subjective analysis of interview responses suggested that most managers felt that human capital potential can be most readily developed in an atmosphere characterised by a pervading positive attitude. Discussion of this issue at meetings
was infrequent, although when the HR department did raise the issue of human capital development, the discussion continued with a significant word association between human capital development and cultural attitude, particularly positive cultural attitude.

**Result:**

- **Reject** $H_0$: ‘Cultural positivity is not related to the positive development of human capital.’
- **Accept** $H_1$: ‘Cultural positivity is related to the positive development of human capital.’

**Result 6. Strategic alignment is a function of the potential for the positive development of human capital**

The line of reasoning behind result 6 is as shown below.

Strategic alignment = $f$(Long-term success)

and

Long-term success = $f$(Cultural approval)

therefore

Strategic alignment = $f$(Cultural approval)

and since

Cultural positivity = $f$(Positive development of human capital)

then

Strategic alignment = $f$(Positive development of human capital)

The results of the pilot study indicate that there is a functional relationship between the degree of strategic alignment developed by a merger and the potential for the positive development of human capital. The nature of the functionality has not been established by the pilot study. The identification of the characteristics of the functionality will become a research aim of the main study.

There is no evidence in the literature that any work on the strategic alignment potential for the positive development of human capital functionality has been published. The functionality appears to represent a gap in the literature although it is fully supported by other literature in related subfields. Pikelet (2002) and Ail (2001) both suggest that there is a relationship between the degree of strategic alignment in a merger and the generation of cultural positivity within one or both merging organisations. John (2001) supported these findings in his study of UK retail organisations. Muffin (2000) and Ryan (2000) both suggest a link between cultural positivity and the potential for the development of increased human capital values. These findings have been supported by McIntosh (2001) and Tivity (2002), and seem to be fairly reliable. Extensive searches of the literature have not provided evidence of any published work on the relationship between strategic alignment and the potential for the positive development of human capital. This was confirmed in discussions with the research supervisor in early 2003. The supervisor indicated that work in this field is currently being pioneered by Williams and Gallagher at Pencil-Vania University and Reeves and Mortimer at Mont Blanc University in the US. At the time of writing the thesis (early 2003) these researchers had generated some
interesting findings suggesting there is, indeed, a functional relationship between the degree of strategic alignment offered by a merger and the potential for the positive development of human capital. The research, however, had not reached publication stage, and therefore could not be cited in this current literature review and pilot study.

Note: The candidate should be careful in referring directly to the supervisor. The thesis is the candidate's own work, and he or she is directly responsible for the entire content. In this context the reference to the supervisor is perhaps acceptable, as it is used almost as an acknowledgement that the supervisor indicated that research in the gap areas is in progress, even though it has not reached the publications stage. The candidate should also be wary of referring to non-published research, as unpublished work has not been subjected to any form of peer review. The reference, in this case, is probably acceptable as the candidate is not basing any work on the unpublished work.

6.5.5 Pilot Study Summary

The pilot study has generated the following primary results.

- Strategic alignment is a function of long-term success.
- Long-term success is a function of cultural approval.
- Strategic fit is a function of strategic alignment.
- The degree of strategic alignment is a function of cultural positivity.
- Cultural positivity is a function of the positive development of human capital.
- Strategic alignment is a function of the potential for the positive development of human capital.

These results have been generated based on the single longitudinal study using company X as a sample. The results are limited in terms of the following factors.

- The results were generated using relatively small sample sizes.
- The source was limited to a single company.
- As a result of time limitations, it was not possible to track the perceptions of individuals or groups over time.
- The questionnaire survey and interview approaches worked well, but there is no guarantee they will do so with a larger sample size.
- The generation of result 6 is based on a chain of reasoning that is not proven.
6.6 Synthesis of the Pilot Study Outcomes, the Literature Synthesis and the Development of a Formal Theory

6.6.1 Introduction

This section considers the final stage in the generation of a formal theory. The candidate already has a basic theory developed primarily from the literature review. The candidate now has to consider what has been learned from the pilot study and decide which parts of the basic theory have to be modified as it is developed into a formal theory.

*Note:* Candidates are again reminded that the formal theory must be carefully developed and the underlying rationale must be fully detailed. The EBS Research Committee will examine this aspect carefully in the literature review submission.

*Note:* Sections 6.6.1 and 6.6.2 are introductory to the case study and do not form part of the case study itself. The case study starts at the heading ‘the literature synthesis’ below.

6.6.2 Synthesis of the Literature Synthesis and Pilot Study Report

The final synthesis stage is concerned with combining the primary outcomes of the literature review and the results of the pilot study. If the pilot study has been designed correctly, the results should be very similar to the outcomes of the literature review. In developing the synthesis a decision will have to be made on any areas where the outcomes of the literature synthesis do not match the results of the pilot study.

Consider again the main outcomes from the literature synthesis (Module 2) and the pilot study.

**The Literature Synthesis**

The main points to emerge from the literature synthesis as discussed in Module 2 were as follows.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
- There is a functional relationship between cultural positivity and the positive development of human capital.

**The Pilot Study**

The main findings of the pilot study report were as follows.

- Strategic alignment is a function of long-term success.
- Long-term success is a function of cultural approval.
- Strategic fit is a function of strategic alignment.
- The degree of strategic alignment is a function of cultural positivity.
- Cultural positivity is a function of the positive development of human capital.

By derivation

- Strategic alignment is a function of the potential for the positive development of human capital.

In all cases, except the final pilot study result, the results of the pilot study are compatible with the outcomes of the literature synthesis, and, indeed, appear to complement them. The literature suggested that there was a functional relationship between each of the variables listed, and the pilot study confirms these functional relationships appear to be present, even if this is measured only in terms of the perceptions of the people interviewed or asked to return questionnaires, or who were observed during pre-merger discussions and meetings. In no case do the findings of the pilot study contradict the outcomes of the literature synthesis.

In the case of the final pilot study result, this has been derived rather than observed. The literature could be analysed in just the same way as the pilot study findings to make this derivation, but in this case there is no clear evidence of literature in the field of strategic alignment and the potential for the positive development of human capital.

The pilot study may have produced data where one or more of the main points from the literature synthesis and pilot study do not tie up. In this case, one or more of the pilot study operational hypotheses may be accepted or rejected based on pilot study results, but this acceptance or rejection does not agree with the literature. For example, the literature makes it clear that there is a clear link between strategic alignment and strategic fit. If the pilot study had suggested there is no link between strategic alignment and strategic fit, the candidate would have to find out why. This type of mismatch could occur for example where:

- the pilot study methodology is unreliable;
- the sample is not representative of the environment;
- the data have been improperly handled;
- the analysis technique is suspect;
- the candidate has had a reactive effect on the subject;
- the results have been wrongly interpreted;
- the sample size is not statistically relevant.

As a result of the close correlation between the literature synthesis outcomes and pilot study findings, it is considered reasonable to proceed with the main study on the basis of the six operational hypotheses listed below.

**Hypothesis 1**

H<sub>0</sub>: ‘Strategic alignment is not a function of long-term success.’

H<sub>1</sub>: ‘Strategic alignment is a function of long-term success.’
Hypothesis 2
H0: ‘Long-term success is not a function of cultural approval.’
H1: ‘Long-term success is a function of cultural approval.’

Hypothesis 3
H0: ‘Strategic fit is not a function of strategic alignment.’
H1: ‘Strategic fit is a function of strategic alignment.’

Hypothesis 4
H0: ‘The degree of strategic fit is not a function of cultural positivity.’
H1: ‘The degree of strategic fit is a function of cultural positivity.’

Hypothesis 5
H0: ‘Cultural positivity is not a function of the positive development of human capital.’
H1: ‘Cultural positivity is a function of the positive development of human capital.’

Hypothesis 6 (derived)
H0: ‘Strategic alignment is not a function of the positive development of human capital.’
H1: ‘Strategic alignment is a function of the positive development of human capital.’

The primary function of the main study is to evaluate whether each operational hypothesis should be accepted or rejected. In the case of the acceptance of each of the operational hypotheses, the research may be able to conclude that the main research hypothesis, as given below, may be accepted.

H0: ‘As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.’
H1: ‘As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.’

6.6.3 An Evaluation of the Pilot Study Methodology

The pilot study research methodology performed within the operational objectives. No major problems were encountered in the administering and processing of the structured interviews or research questionnaires. The Sarah–Ryan content analysis method worked well, subject to the limitations offered by the classification system (Davie, 2000a; Edwards, 2002; Walker, 2003). The range and depth of classification options in the pilot study sample were considered to be appropriate. The correlation between the structured interview responses and the questionnaire responses was satisfactory. The correlation between the quantitative and qualitative results was
more difficult to assess, particularly given the relatively small sample sizes involved. This comparison will become more apparent once the main study can be initiated.

It is accepted that the questionnaire- and interview-based approach has limitations, but these are not considered to be restrictive in this type of pilot study (Mellon, 2002; Pear, 2002; Kiwi, 2003). It is accepted that additional content analysis classification flexibility may be needed in the larger main study (Fruit, 1999; Maple, 2000; Tart, 2001). This is not foreseen as being a problem, as there are numerous examples in the literature where existing content analysis techniques have been used with adaptations to suit individual applications (Cranberry, 1999; Quince, 2000; Loganberry, 2001). Individual adaptations appear to present little difficulty provided the modifications are correctly evaluated and calibrated (Passion, 2000; Plum, 2000; Kiwi and Fruit, 2001).

The questionnaire return rate was high in the pilot study, primarily because of the careful non-reactive preparation carried out. This will be repeated in the main study, and it is anticipated that the return rate will be similarly high (Plead and Begg, 1998; Neil, 1999; Rejoinder, 2000).

The blend of quantitative and qualitative comparison appeared to work well, with good correlation between the two sets of results. The correlation coefficients were similar to those reported by Chatt (1999), Statt (2000), Graph (2001) and Pair (2001) in their surveys of similar pilot study samples.

Reactance and bias appear to have been contained within reasonable levels, having based the interview and questionnaire question design on the recommendations made by Robespere (1999) and Torquemada (2000).

Overall, the pilot study methodology appears to have worked well and will be adopted for the main study research methodology design.

Note: The main study research methodology is discussed fully in Introduction to Business Research 3.)

6.6.4 Implications for the Main Study

As a result of the synthesis of the literature review synthesis and pilot study outcomes the basic theory is adopted as a formal theory for evaluation in the main study. The formal theory is as follows.

In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.

This theory now becomes the formal theory that underlies the main research study. Given the success of the pilot study methodology, the same methodological approach will be used for the development of the main study, with minor adjustments to allow for the different sample sources and scale of the longitudinal and cross-sectional case studies.

The design of the main methodology is discussed in the following chapter on research methodology.
Note: It may again seem repetitious to list the full rationale behind the generation of the research and operational hypotheses and how these relate to the research aims and objectives, question and theory. This restatement of the underlying rationale is again required in this section because the synthesis of the pilot study outcomes and the literature review may lead to one or more steps of the rationale being changed. In this case the literature review synthesis and pilot study outcomes fully support the rationale behind the generation of the operational hypotheses, and no changes are necessary. In cases where any aspect of the underlying rationale is changed, the rationale must be fully restated so that the logical progression of developing the hypotheses can be seen.

Where fundamental changes are required, for example to the research aim or one or more of the objectives, it may be necessary to develop a new rationale and extend the literature reviews as appropriate. As discussed in Module 1, changes at this stage to the research aims and objectives should be avoided as much as possible, as such changes may necessitate extensive additional literature searches and reviews and could result in previous work becoming abortive. In addition, the EBS Research Committee will specifically compare the final aims and objectives stated in the literature review submission with those in the research proposal. Any significant changes will have to be fully justified and backed up by the appropriate remedial actions and, where necessary, by amendment and/or redesign of the research programme.

6.6.5 Summary

The literature synthesis and pilot study outcomes have now been synthesised, and the results have been used to support the development of a formal theory. The research question, aims and objectives, research and operational hypotheses are unchanged following their successful exposure to the literature and pilot study outcomes. This section has attempted to justify the choice and development of formal theory by reviewing the literature and conducting a pilot study to evaluate the applicability of the formal theory. The next chapter in the thesis reviews the design of the main study research methodology.

The literature and pilot study will be further reviewed in the literature reappraisal and theory development chapter of this thesis. This reappraisal and development will take place once the final results of the main study have been discussed. The objective of revisiting the literature and pilot study at the end of the main study is to see whether the main study results provide any further insights, or whether potentially new interpretations are possible having conducted the main study.

Learning Summary

This module has attempted to provide an understanding of one possible format for the development of a formal research theory from a synthesis of the pilot study outcomes and the literature synthesis. The candidate should now understand one possible format for presenting:

- the literature review;
- the literature synthesis;
- the design and justification of the pilot study;
- the execution of the pilot study;
the results of the pilot study;
any concerns or issues emerging from the pilot study;
the synthesis of the pilot study outcomes and the literature synthesis;
the areas of agreement and disagreement;
any changes to the research proposal aims and objectives;
any remedial actions needed to address these changes;
a formal theory for investigation in the main study.

Review Questions
These self-assessment questions are slightly different from the normal format in that they question the module example rather than a normal module text.

True/False Questions

The Context of the Development of the Formal Theory

6.1 It is important to set the formal theory in context. T or F?
6.2 The formal theory should address the research programme title. T or F?
6.3 The chapters in the literature review can be randomly selected. T or F?
6.4 The formal research theory has implications for the entire research programme. T or F?
6.5 The EBS Research Committee may reject a literature review submission that contains a formal theory that is unworkable. T or F?
6.6 The EBS Research Committee may reject a literature review submission that contains a formal theory incompatible with the chosen research question. T or F?
6.7 A pilot study is always necessary. T or F?

The Literature Review

6.8 The literature review should address each of the major subject areas in the title of the research programme. T or F?
6.9 In most cases each literature review chapter should be broken into sections. T or F?
6.10 The literature review suggests that strategic alignment is achievable only through mergers and acquisitions. T or F?
6.11 The literature review suggests that strategic alignment is one of the primary drivers of long-term company success. T or F?
6.12 The literature review is restricted purely to citations from the strategic alignment literature. T or F?

6.13 The literature review suggests that strategic alignment is an issue both for researchers and for real strategic planners. T or F?

6.14 The literature review should ideally cite more references from the UK retail sector. T or F?

6.15 The literature suggests a functional relationship between strategic alignment and cultural positivity. T or F?

6.16 The literature review suggests that most mergers actually fail. T or F?

6.17 The literature review suggests that most mergers cause organisational disruption resulting in an increase in cultural positivity. T or F?

6.18 The literature review suggests that there is a link between cultural positivity and organisational seniority. T or F?

6.19 The literature review suggests that there is a link between cultural positivity and the potential for the development of human capital. T or F?

6.20 The literature review summary suggests that there is a functional relationship between strategic fit and positive cultural attitudes. T or F?

**Literature Synthesis and Development of a Basic Theory**

6.21 The literature synthesis should not recite any references used in the literature review. T or F?

6.22 The literature synthesis suggests that strategic alignment may increase the likelihood of long-term success because it restricts the risk profile. T or F?

6.23 It is possible to deduce from the literature synthesis that there is a functional relationship between cultural positivity and long-term success. T or F?

6.24 The development of the basic theory is not based on the outcomes of the literature synthesis. T or F?

6.25 The research question is developed from the basic theory. T or F?

**Report on the Pilot Study**

6.26 The outcomes of the pilot study must always match the outcomes of the literature synthesis. T or F?
6.27 The pilot study should not contain any references. T or F?

6.28 The pilot study methodology must be the same as the main study methodology. T or F?

6.29 Pilot study results should be supported by references where possible. T or F?

**Synthesis of the Pilot Study Outcomes, the Literature Synthesis and the Development of a Formal Theory**

6.30 This section attempts to develop a theory based on the pilot study outcomes and the literature synthesis. T or F?

6.31 The outcomes of the pilot study must always agree with the literature synthesis. T or F?

**Multiple-Choice Questions**

**The Context of the Development of the Formal Theory**

6.32 This section:
   A. is part of the *Introduction to Business Research 2* text and does not appear in the thesis.
   B. is an essential part of the thesis.
   C. should be included in the pilot study report section of the thesis.
   D. should be included in the introduction chapter of the thesis.

**The Literature Review**

6.33 An average literature review usually contains:
   A. one chapter.
   B. two chapters.
   C. between three and six chapters.
   D. more than ten chapters.

6.34 Each literature review chapter should ideally:
   A. stand alone.
   B. refer to each other literature review chapter.
   C. refer to the research methodology chapter.
   D. refer to the main conclusions chapter.
6.35 The literature review suggests that long-term success is driven by:
   I. good cultural integration.
   II. enhanced strategic alignment.
   III. internal reorganisation.
   IV. mergers and acquisitions.
Which of the above are true?
A. I only.
B. I and II.
C. II, III and IV.
D. III and IV

6.36 The literature review suggests that strategic alignment is a function of:
   I. strategic fit.
   II. long-term success.
   III. cultural positivity.
   IV. the potential for the positive development of human capital.
Which of the above are true?
A. I only.
B. I and II.
C. I, II and III.
D. II, III and IV.

6.37 The literature review suggests that strategic alignment:
A. acts to amplify cultural positivity.
B. acts to damp cultural positivity.
C. has no effect on cultural positivity.
D. eliminates cultural negativity.

**Literature Synthesis and Development of a Basic Theory**

6.38 The literature synthesis suggests that:
   I. there is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
   II. there is a functional relationship between long-term success and cultural approval.
   III. there is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
   IV. there is a functional relationship between strategic alignment engineering and cultural positive attitudes.
Which of the above are true?
A. I and II.
B. I, II and III.
C. I, II, III and IV.
D. II and IV.
6.39 The literature review suggests that organisational uncertainty resulting from a merger announcement can be reduced by:
I. the use of effective formal communication channels.
II. the use of effective informal communication channels.
III. the use of threat techniques.
IV. abandoning the proposed merger.
Which of the above are true?
A. I and II.
B. II and III.
C. II and IV.
D. IV only.

6.40 The basic theory is based on the:
I. literature synthesis.
II. outcomes of the pilot study.
III. main study results.
IV. main study validation study.
Which of the above are true?
A. I only.
B. I and II.
C. II and III.
D. II, III and IV.

6.41 The literature synthesis and outcomes of the pilot study suggest that long-term success is driven by:
I. strategic alignment.
II. strategic fit.
III. cultural positivity.
IV. the development of human capital.
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.

6.42 The literature synthesis and outcomes of the pilot study suggest that:
I. strategic alignment is a function of the development of human capital.
II. strategic alignment is a function of strategic fit.
III. cultural positivity is a function of strategic fit.
IV. the development of human capital is a function of cultural positivity.
Which of the above are true?
A. I and II.
B. I, III and IV.
C. I and IV.
D. II, III and IV.
Report on the Pilot Study

6.43 The pilot study report methodology section should give details of the pilot study:
I. sample.
II. data collection techniques.
III. data processing and analysis techniques.
IV. results.
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.

6.44 The pilot study report should give details of:
I. the main study results and conclusions.
II. the design of the methodology for the main study.
III. any problems with the methodology and proposed solutions.
IV. any pilot study implications for the main study design.
Which of the above are true?
A. I and II.
B. I and III.
C. II, III and IV.
D. III and IV.

6.45 The pilot study report concluded that:
I. strategic alignment is a function of long-term success.
II. strategic fit is a function of strategic alignment.
III. the degree of strategic alignment is a function of cultural positivity.
IV. cultural positivity is a function of the positive development of human capital.
Which of the above are true?
A. I, II and III.
B. I, II, III and IV.
C. II, III and IV.
D. IV only.

6.46 In the pilot study results, the primary conjectural result was that:
A. the degree of strategic alignment is a function of cultural positivity.
B. cultural positivity is a function of the positive development of human capital.
C. strategic alignment is a function of long-term success.
D. strategic alignment is a function of the potential for the positive development of human capital.
Synthesis of the Pilot Study Outcomes, the Literature Synthesis and the Development of a Formal Theory

6.47 The synthesis of the pilot study outcomes and literature synthesis leads to the formulation of the:
I. basic theory.
II. formal theory.
III. formal research question.
IV. formal research hypothesis.
Which of the above are true?
A. I only.
B. 
C. II and III.
D. II, III and IV.

6.48 In the example, the outcomes of the pilot study:
A. fully supported the literature synthesis.
B. partially supported the literature synthesis.
C. partially contradicted the literature synthesis.
D. entirely contradicted the literature synthesis.

6.49 In the example the overall outcome of the synthesis of the pilot study outcomes and the literature synthesis was to proceed with the main study:
I. using the methodology evaluated in the pilot study.
II. using the same hypotheses evaluated in the pilot study.
III. subject to minor modifications in the formal theory.
IV. after modifying the research aims and objectives significantly.
Which of the above are true?
A. I only.
B. I and II.
C. I, II and III.
D. II, III and IV.
Module 7

Type D (Exploratory-Based) Literature Review Submission Example

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Note: Candidates who intend to develop an exploratory-based research programme should read this example (type D exploratory-based) literature review submission. Candidates who intend to develop a hypothesis-based research programme should read the example (type A hypothesis-based) literature review submission presented in Module 6.

Learning Objectives

By the time the candidate has completed this module, he or she should understand how to present a type D (exploratory-based) literature review submission and the primary differences between a type A (hypothesis-based) and type D (exploratory-based) literature review submission.

7.1 Introduction

This module is structured in a similar way to Module 6. It again represents one large case study that presents a sample type D (exploratory-based) literature review submission. In this particular case the exploratory-based approach does not make use of a pilot study. Like Module 6, this module is intended to give the candidate an outline idea of what the actual literature review, as submitted to the EBS Research Committee, might look like, this time using an exploratory-based approach.

It is assumed that the literature review used in Module 6 (hypothesis-based) can be largely reused in Module 7 (exploratory-based), although the review has been extended slightly to include measures of human capital development drivers. The literature review submission presented in this module has again been restricted in size to make the module compatible with the other modules in the text. Candidates
should note that the literature review submission presented in this module might be shorter than the actual submission made by the candidate. The literature review submission made by the candidate could be larger, at 20,000 words or more, if this is justified by the literature available in the relevant field.

As with Module 6, candidates should note that this review makes use of fictional references and is for illustrative purposes only. The text is again interspersed with notes illustrating the underlying rationale behind the development of each stage of the review. These notes are shown in italics.

As with Module 6, the text not in italics is intended to appear as it would in the final thesis. As a result, the text may refer to previous and subsequent chapters of the thesis that have not been discussed. In addition, candidates should again note that there is no standard format for an exploratory-based literature review submission. The size, approach, format and structure of the literature review submission vary, depending on the research area concerned. The example provided in this module is just that, an example. In some cases, an EBS DBA literature review submission may look very similar to this example, whereas in others it may look very different.

**Important note**

This module is essentially a repeat of Module 6, which was a worked example of a type A (hypothesis-based) literature review submission. This module is a similar worked example of a type D (exploratory-based) literature review submission. The type A and type D literature review submissions are entirely different. A candidate would opt to submit one or other (or indeed a type B or type C as appropriate). This module therefore:

- repeats some of the literature review and literature synthesis material contained in Module 6;
- extends the literature review to include the areas of optimisation and optimisation drivers;
- extends the literature synthesis to include these two additional areas.

Candidates should note that because this is an example of a type D (exploratory based) literature review submission it does not:

- contain a pilot study or pilot study report;
- contain a formal theory or hypothesis;
- include a theory development section.

Additionally, as this module is effectively an alternative format for Module 6, it does not contain a formal module summary or self-assessment questions, as much of the module summary and self-assessment questions presented in Module 6 are also appropriate for Module 7.
7.2 The Context of the Development of the Literature Review Submission

7.2.1 Introduction

As discussed, this module is a large case study presenting a sample format and layout for a type D (exploratory-based) literature review submission. The context in which the literature review submission is assumed to be set is similar to that used in Module 6, although the research programme centres on a research question rather than a formal hypothesis. In this particular case it has been assumed that the candidate does not intend to develop a formal theory or any form of research or operational hypotheses. It is also assumed that the candidate has elected to develop a research question without any kind of pilot study.

7.2.2 The Context of the Development of the Literature Review Submission

The exploratory-based literature review submission is based in the same research area of strategic alignment and its impact on the potential for the development of human capital. However, in this case the research is concerned with the extent to which companies optimise the increased strategic alignment offered by mergers in order to enhance the positive development of human capital. The exploratory-based research question therefore is as shown below.

- Do companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital in order to create long-term success?

As with the hypothesis-based approach example, the research question is designed to address an apparent gap in the literature in the sub-areas linking strategic alignment with the development of human capital.

The literature review in this case is conducted in exactly the same way as in Module 6. The research question given above suggests the same basic breakdown for the literature, consisting of:

- the literature on strategic alignment;
- the literature on mergers;
- the literature on the positive development of human capital.

The title suggests, however, that an additional literature review area may be required in that the question refers to the optimisation of the increase in strategic alignment generated by mergers. This word was not used in the proposed research title discussed in Module 6. It introduces a new element to the context, because it implies a success-dependent process or series of actions within the company. The literature, as has already been discussed, suggests a link between strategic alignment and the positive development of human capital. There has, as yet, been no discussion on the extent to which companies in general, or this one in particular, optimise the situation to enhance the development of human capital.
In order to keep the research in context, therefore, there is almost certainly a requirement for the candidate to address this new angle. The revised scope of the literature therefore becomes the literature that addresses:

- strategic alignment;
- mergers;
- the positive development of human capital;
- optimisation.

In this context, optimisation refers to the extent to which companies make most use of the increased strategic alignment offered by mergers to enhance the positive development of human capital.

Note: The remainder of this module is presented in the form of an actual chapter in the doctoral thesis. Additional notes and comments are included in italics. Any text in italics would not appear in the final chapter text.

7.3 The Extended Literature Review

7.3.1 Introduction

Note: The literature review in the case of the type D (exploratory-based) literature review submission is more or less the same as in the case of the type A (hypothesis-based) submission. The same basic headings are used, with the additional headings of ‘optimisation’ and ‘optimisation drivers’. The synthesis is adapted to include these two additional headings.

The literature review is intended to act as a critical evaluation of the published work that represents the knowledge base in the area of strategic alignment as a function of the potential for the positive development of human capital. The review itself demonstrates an understanding of the knowledge base and also justifies the nature and format of the basic theory developed from the literature review outcomes. The literature review is structured to reflect the primary subject areas contained in the title of the research. The first section considers the literature on strategic alignment, the second section details the literature on mergers and acquisitions, and the third section looks at the literature on cultural positivity and the positive development of human capital. The literature review is immediately followed by the literature synthesis, where the various review chapters are brought together to generate collective outcomes acting as the basis for the development of the basic research theory.

The literature review also addresses the literature on optimisation in the context of strategic alignment, arising from mergers and human capital. There is relatively little evidence in the literature of any research that has positively established that companies do or do not optimise the strategic alignment generated by merger to increase the positive development of human capital. There is, however, a large and well-established literature on organisational optimisation in a number of relevant and related areas including strategic alignment and mergers.
7.3.2 The Literature on Strategic alignment

Note: The first part of the literature review addresses the subject of strategic alignment. It is important that the review establishes this fundamental subject area at the outset and, where possible, sets the subject in the context of the other main subject areas to be addressed in the literature review.

7.3.2.1 Introduction

There is relatively little analytical literature on strategic alignment, although interest in the area has been growing rapidly over the past 20 years or so. Although most of the sources use data generated in the UK and US, there are occasional published studies based on data generated in Europe. This section reviews this literature and highlights some of the main themes emerging from it.

7.3.2.2 The Literature

Strategic alignment as a driver

The literature on strategic alignment has been growing rapidly in recent years. Increasingly, in the UK and US, companies are beginning to realise that strategic alignment is a very important consideration in strategic planning (Larsson, 2000). There appears to be a functional relationship between the degree of strategic alignment present in an organisation and the likelihood of long-term sustainable competitive advantage (Woodstock, 1997; Clinker, 1998). Over the past 20 years companies in the US and UK have recognised this relationship, and there has been a significant shift away from diversification (the acquisition of non-related targets) towards strategically focused acquisitions (Ribald, 2000). In some cases, such as the Heron and Dipper groups, this transition in strategic alignment has been characterised by large groups divesting non-related holdings (Sumptner, 1999).

Strategic alignment is, of course, not achievable only through mergers and acquisitions. Companies constantly realign their operations to meet changes in the external environment, including changes in demand (Bloggs, 1994). For example, companies may realign their strategic planning periodically with the intention of increasing strategic alignment through internal reorganisation. Glencoe (2000) conducted a survey of 40 UK companies and found that 70 per cent of them attempted to increase strategic alignment through internal reorganisation over a five-year period. Glencoe’s results indicate that the success rate was relatively low, with only around 40 per cent of the sample actually achieving an increase in the degree of strategic alignment obtained. Glencoe’s results have been criticised by Jurana (2003) on the grounds of survey design and the fact that the research contained no validation study. Similar concerns were raised by McKinder (2001), although she suggested that Glencoe’s results agreed, in principle, with those collected in her research in collaboration with Reefer (McKinder and Reefer, 2001). Both Glencoe (2000) and McKinder and Reefer (2001) agree that the two primary approaches to achieving increased strategic alignment are (a) internal reorganisation and (b) mergers and acquisitions.
This assertion has received some support in the literature. Steerpike (2001) identified internal reorganisation and mergers and acquisitions as two of the primary drivers behind the achievement of enhanced strategic alignment in his study of six major manufacturing companies. Steerpike used a ten-point scale to measure strategic alignment together with questionnaires and structured interview techniques to gather data to calibrate the scale. Flay (2001a) criticised Steerpike’s results on the grounds that the strategic alignment measurement scale was indicative rather than definitive. Steerpike’s rejoinder (Steerpike, 2001a) accepted this limitation, and he is currently (2003) involved in additional work to refine the measurement scale. Steerpike’s results support the results of Glencoe (2000) and McKinder and Reefer (2001) in asserting the importance of strategic alignment to the achievement of an organisation’s strategic objectives.

Ruffin (2000) carried out research involving data collected from 10 major oil companies. Ruffin’s research differentiated between upstream and downstream functions (before refining and after refining respectively). Ruffin found that all the major oil companies surveyed were purposefully moving towards enhanced strategic alignment in both functional areas. Ruffin developed this research by interviewing the strategic planners in each company and found that the achievement of functional strategic alignment was a specific strategic objective in all cases. Jeraboam (2001) agreed strongly with Ruffin’s findings, suggesting that the primary driver behind the goal of achieving enhanced strategic alignment in oil companies was the need to address major changes in the competition over the period 1990–2000. Sangria (2001a) agreed with Jeraboam’s findings, pointing to the number of large-scale mergers that occurred during this period, which were driven largely by falling world oil prices and saturation in the oil production and refining markets. As Muffin (2003) pointed out, the consolidation of the oil production sector in the same period was a classic example of companies using mergers and acquisitions to enhance strategic alignment.

Note: This section has established that strategic alignment is a genuine issue and of concern to real companies. The section has cited a number of sectors where there are clear examples of companies striving to enhance strategic alignment to address both internally and externally driven concerns. The section so far is weak in that it does not address any research specifically in the research sector of UK retail.

In recent years, there has been an increase in the activities of UK retail companies in trying to achieve enhanced strategic alignment through mergers and acquisitions. Halbarad (2003) conducted some interesting grounded theory research, looking specifically at the proposed acquisition of Safeway plc by Morrison plc. Halbarad found that the underlying driver behind Morrison’s move was indeed the enhancement of strategic alignment within the group as a whole. Strider’s (2003) simultaneous research showed that Morrison considered strategic alignment as by far the most important strategic consideration behind the move. Interestingly, as pointed out by Asfaloth (2003), a number of competing bidders for Safeway included non-retail specialists whose move drivers were not based on enhancing strategic alignment. Asfaloth pointed out that most of the rival bidders were, in fact, seeking to establish a foothold in UK retail with a possible intention to develop a future strategic alignment in this area. This assertion was, to some extent, substanti-
ated by an anonymous article in the *Money Markets Magazine* (2003) which highlighted specifically the bids placed by non-retail bidders for Safeway.

Note: This section corrects the absence of retail-relevant literature. It also makes use of a real example. This is particularly useful as it establishes the literature in context and applies it to an actual event. Generally, the literature review is strengthened when it can be directly applied.

There is some evidence to suggest that the enhancement of strategic alignment within companies is moving up the management agenda. Rylands (1998) carried out an extensive survey amongst senior managers in the top five UK industrial sectors between 1996 and 1998. Ryland’s (1998) results suggested that over 90 per cent of senior managers involved in the development of strategic plans, rated the enhancement of strategic alignment as a key strategic aim of the organisation. Fletcher (1999) carried out similar research in hospital trusts, noting the increasing tendency of these trusts to specialise in a small number of specialist treatment areas. Fletcher estimated that over 90 per cent of health board strategic planners rated the enhancement of strategic alignment as being a primary strategic objective. Other researchers (Donaghue and Stevenson, 2000; Bearne and Boadle, 2001; Calill, 2001) confirmed Fletcher’s results in health trusts across the UK. Denning (2002) equated this type of specialisation with the long-term likelihood of trusts meeting prescribed treatment times and ultimately in securing greater long-term funding from the UK government.

**Strategic alignment and success**

A number of researchers have attempted to demonstrate the functionality between the degree of strategic alignment achieved by an organisation and the likelihood of long-term success in specific industries or sectors. Most of the studies have equated long-term success with sustained or enhanced competitive advantage. Refill (1999) compared the degree of strategic alignment in companies with long-term financial performance. Refill compared strategically focused companies with diversified companies using a strategic alignment classification system based on earlier work by Proton (1997). Larsson (2000) also based his classification system on the same basic approach as that used by Proton (1997). Refill (1999) found that, over a four-year period, strategically focused organisations were financially more successful than non-focused competitors of similar size and competing in the same selected sector. Woodstock (1997) and Clinker (1998) used different classification systems but arrived at basically the same conclusions.

In many cases, researchers have referred to the reduced scope and magnitude of the company risk profile achieved through increasing strategic alignment (Proton, 1997; Refill, 1999; Larsson, 2000). These researchers reported that strategically focused companies face a more manageable risk profile because the various strategic, operational, change and unforeseen risks are more closely grouped and related, and are therefore more readily identifiable and analysable. In turn, this allows the strategically focused company to establish a more focused and reliable risk management system as a defence shield against internally and externally driven risk (Refill, 1999; Lupin, 2000). Lupin argues that competitive advantage can be considerably assisted and protected by a highly focused and strongly developed enterprise-wide
risk management system. Lupin’s (2000) work can be criticised on the grounds that it did not address a sufficiently wide range of success drivers (Chopin, 2001; Bush, 2002). Work by Daisy (2001) partially addressed the shortcomings of Lupin’s work. Daisy used a 14-point classification system of success drivers. Validation studies indicated that 95 per cent of senior managers surveyed agreed that the classification system adequately addressed all relevant drivers. Daisy’s work shows a clear link between the degree of focus achievable in the enterprise-wide risk management system and the long-term likelihood of the company being successful.

Note: This section establishes the relationship between strategic alignment and long-term success. It does not, however, specifically establish the literature in the context of mergers and acquisitions as the driver behind the achievement of enhanced strategic alignment.

Some of these same researchers, and others, have attempted more specifically to address the issue of the degree of strategic alignment offered by a merger or acquisition with the likelihood of long-term company success. Larsson’s (2000) suggestions have been extensively supported in the literature. Woodstock (1997) and Clinker (1998) both expressed strong support for Larsson’s work. Bloggs’s (1994) work, which largely built on and extended pioneering work by Ronson (1990), has shown there is a clear link between the degree of strategic alignment engendered by an acquisition and the likelihood of long-term acquisition success. Bloggs suggested that the likelihood of success increases as a linear function of the degree of strategic alignment, both of which are functions of cultural approval. Bloggs’s results are supported, to some extent, by those of Smith (1996) and Skeeker (2001). These results were centred on the degree of relatedness of the acquisition rather than specifically on strategic alignment. Jones (2003) has, however, stated that the degree of relatedness in an acquisition is a direct function of the degree of strategic fit that can be engineered, and Jurana et al. (2003) have concluded that strategic fit in mergers and acquisitions is a direct driver of strategic alignment. The relationship between strategic fit and long-term success has been widely reported (Holly, 2002; Muffin, 2002; Ryan et al., 2003a; Skeesome, 2003). There has been no reported opposition to this theory in the strategic alignment or mergers literature. Although lack of falsification is no evidence of accuracy, the relative silence from the relevant research community suggests that this proposed linkage is currently acceptable.

De Boer (2001) attempted to calculate a mathematical function to express the relationship between strategic fit and likelihood of company success in the context of mergers and acquisitions. De Boer used the earlier work of Mols (2001) in establishing a template for the measurement of fit. De Boer’s approach was based on the designation of 20 key fit indicators (KFI s) that could be applied in the early consideration of a merger or acquisition. De Boer’s (2001) classification system differed from Mols’s (2001) system primarily in the range of indicators considered and the definition applied to the various classifications. De Boer’s results indicated a strong correlation between the degree of strategic fit, especially in relation to management systems, risk management systems and operational processes KFI s and likelihood of success. De Boer’s result showed a particularly high correlation in the case of senior management compatibility and risk management systems. De Boer’s findings in relation to risk management confirm those of Refill (1999) and Lupin (2000) and also largely reflect those of Daisy (2001).
Fountain and Penn (2000) developed a seven-point scale for company success in relation to strategic alignment, which was calibrated against and corrected for timescale since initiation of initiatives to enhance strategic alignment. Fountain and Penn’s (2000) results suggested that an increase in strategic alignment creates a greater likelihood of success, in terms of the financial efficiency of the company. Cartridge (2001) developed similar research that considered purely financial measures of success over a five-year period. Cartridge’s (2001) results suggested that increased strategic alignment tended to lead to increased efficiency in all areas of the sample company’s production system. Scheaffer (2001) criticised Cartridge’s (2001) results on the basis that the sample comprised only one company, although in great detail. Nib (2001) conducted similar research using a sample of eleven companies and reported findings broadly compatible with Cartridge’s (2001) results.

**Strategic alignment and cultural positivity**

An increasing number of researchers have been concerned with the area of strategic alignment engineering as a function of cultural impact drivers (Johnson, 1998, 1999, 2001; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). This increased interest trend is mirrored, to some extent, by practitioners (Egbert plc, 2000; Challenger plc, 2001). The term ‘strategic alignment engineering’ (SFE) was first used in an article by Beeford (2000) in a conference paper presented at the First International Conference on Strategic Engineering at Edinburgh Business School. Beeford used the term SFE to describe the design and planning of strategic alignment variables (partially in mergers and acquisitions) to achieve the best possible strategic fit through change. Beeford saw the degree of strategic fit achieved by an organisation as being central to the attitudes of stakeholders in the petrochemical industry. Beeford’s results showed a clear link between strategic fit and cultural positivity. Beeford argued that stakeholders are generally more positive when the organisation has a clear set of strategic objectives contained within a clearly defined field. Beeford also argued that this could have been because the human cognitive process has evolved to frame problems and desired outcomes within a framework of logical accepted outcomes. This approach receives much support in the human psychology literature (Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000).

Most of this research suggests that strategic alignment engineering is functionally related to generally positive attitudes in organisational culture in the period before and during mergers (Pikelet, 2002; Davie, 2003a).

Other researchers have evidenced a clear link between cultural positivity and the positive development of human capital (Currie et al., 2002; Gretna, 2002). The work of Muffin (2003b) clearly concludes that, where the pre-merger cultural attitude is generally positive, the measured human capital of the organisational culture increases. Muffin’s later work (Muffin, 2003c) shows that there is a measurable functionality between the degree of strategic fit of a merger and the post-merger attitude of employees. Muffin’s work (Muffin 2003c) has been criticised by Ryan (Ryan, 2002) on the grounds that her sample size was restricted and the measurement method used was flawed. Muffin’s counter (Muffin, 2003d) was that her research was intended to be indicative rather than definitive, and was intended to act essentially as a pilot study for later more definitive work.
Other researchers have suggested that strategic fit, either through internal initiative or through mergers and acquisitions, can act as a damper on pre-implementation speculation and the development of group conflict (Belcher, 1999; Blucher, 2001). Belcher reviewed earlier work by Khan (1997), Rosenberg (1998) and Schultz and Schultz (1999) in pointing out that company cultures frequently undergo a period of turmoil preceding a major organisational change. Belcher suggested that examples of such changes could include (a) major internal reorganisations and (b) mergers and acquisitions. Belcher reviewed a series of human resource team meetings and reports from 25 different companies in the process of undergoing either internal reorganisations or mergers. Belcher reported that, in every case, the companies undergoing the change to improve the degree of strategic fit of long-term strategic objectives exhibited lower levels of internal turmoil.

Belcher went on to cite Plum (1995) and Mustard (1995) in asserting that the degree of turmoil within an organisation pre-change is directly related to the potential for the generation of conflict within the workforce. The work of Plum (1995) and Mustard (1995) has been criticised on the grounds that their methodologies ignored established approaches. Puffin (2000), however, supported the two, arguing that the methodologies used were both scientifically rigorous and replicable. On the balance of published opinion, it seems reasonable to conclude that there may be a link between the degree of strategic fit achieved through change and cultural positivity. Siskin (2000) made more or less the same assertion in his study of conflict propagation in strategically focused and diversified companies, agreeing with the results given by Puffin (2000).

7.3.2.3 Summary

The literature on strategic alignment suggests that this is an important research area, growing in popularity. The degree of strategic alignment generated, through either mergers or non-merger initiatives, appears to be a key driver of long-term success. Companies, as well as researchers, are starting to realise this and there has been a significant switch from unrelated mergers and acquisitions towards related ones. Change generating a high degree of strategic alignment reduces the overall range and variability of the risk profile facing an organisation and encourages the development of cultural positivity. The next section of the literature review considers the literature on mergers and acquisitions. The research is concerned with the strategic alignment generated in mergers, and the strategic alignment literature should be viewed in the context of the general literature on mergers and acquisitions.

7.3.3 The Literature on Mergers and Acquisitions

7.3.3.1 Introduction

The previous section considered strategic alignment and the impact that enhanced strategic alignment can have on the prospects for long-term success. This section considers mergers and acquisitions from a general point of view.

There is an extensive and varied literature on mergers and acquisitions. This is due largely to the relative age of the subject area. The first large-scale mergers took
place in the US in the nineteenth century when the railroad system linked the east and west coasts. The railroad system allowed companies to trade across the length and breadth of the country for the first time. This led to a relative reduction in the importance of geographical separation between different companies located in different cities, and companies, for the first time, could consider effective mergers that would open up new markets and customer bases far away from where these had previously existed. Mergers and acquisitions have continued in a series of waves ever since, and researchers have been covering the subject with varying degrees of interest.

7.3.3.2 The Literature

Mergers as a driver

Mergers take place for a number of different reasons. Groucho (1970) identified four primary underlying reasons for mergers. These were: (a) to enhance strategic alignment; (b) to speculate; (c) to spread risk; and (d) to achieve growth in a stagnant market. Groucho argued that the only valid reason of these four was that of strategic alignment, although the other reasons were in widespread use. Reilly (1975) considered that mergers intended to speculate were associated with a high degree of failure, and Cole (1985) argued that diversification, as a means of reducing the overall risk profile of an organisation, was in fact a fallacy. Simba (1995) has asserted that mergers, to achieve growth in a stagnant market, do not in fact create growth at all other than on paper.

Reilly’s (1975) work was supported by a number of researchers (Gimli, 1995; Peacock, 1998; Teaspoon, 1999; Warlock, 1999a). Speculative mergers occur where a company merges with, or acquires, another company with the intention of increasing the value of that company before selling it off at a later time at a profit. Speculative financiers and venture capitalists classically use this approach. There is no doubt that there have been some recent successful speculative mergers, such as the UK Go Airlines and Homebase deals, but there have also been some classic failures. The key to success is to acquire companies in a growth sector where that growth is highly likely to continue for a number of years (Doppler and Dunker, 2002).

Reilly’s (1975) founding paper on the overestimation of the ability to reduce risk by spreading it through diversification has received a great deal of attention in the literature. Reilly argued that although diversification does, indeed, distribute risk across a wider base, it also increases the overall size and scope of the risk profile. In addition, as management becomes diversified to cover the increasing number of diverse companies, its specialist ability to react to an incident in one particular field diminishes. Cole (1985) strongly endorsed these views, and this has been reinforced by numerous researchers over the years since Reilly’s (1975) publication (Rasta, 1980; Dork, 1984; Dork and Dockendorff, 1986; Rivers, 1990; Bakewell, 1992).

Simba’s (1995) assertion that mergers in a stagnant market do not necessarily generate growth has received widespread support in the literature. Oiler (1996) supports Simba’s assertion, citing international oil companies as examples. Dripper
(1997) and Heckler and Grubb (1998) both discussed the issues of market stagnation and options for growth. Dripper (1997), in particular, showed that although stagnant market mergers increased the size of the merging companies, in most cases they did not generate any net growth. The primary variable appears to be the overall growth in the market itself rather than individual merging companies (Gaseous, 1998).

The only one of Groucho’s (1970) four classifications that receives positive support from the literature is that of strategic alignment. Mergers designed to enhance strategic alignment have a higher probability of being successful than those aimed at any of the other three of Groucho’s classifications (Nancho, 1985; Raisin, 1990; Nadir, 1992; Box, 1995).

**Mergers and strategic alignment**

As discussed above, mergers designed to enhance strategic alignment tend to have the greatest likelihood of success when compared with the other objectives stated by Groucho (1970). In addition, companies do appear to be moving towards strategic alignment as the primary objective in mergers and acquisitions (Sumptner, 1999; Riballd, 2000; Ruffin, 2000; Jeraboam, 2001; Steerpike, 2001).

Glorfindel (2000) carried out a survey of 20 retail companies in an attempt to measure the degree of strategic alignment achieved through mergers and acquisitions. Glorfindel attempted to classify different levels of strategic alignment using a methodology based on earlier work by Proton (1997), Refill (1999) and Larsson (2000). Glorfindel was able to show that there is a long-term relationship between the degree of strategic alignment offered by organisational change and the success of the organisation. It is worth noting again that Woodstock (1997) and Clinker (1998) used different classification systems but basically arrived at the same conclusions. Glorfindel (2000) also claimed that mergers and acquisitions should be based primarily on achieving enhanced strategic alignment over and above all other considerations. This assertion was questioned by Thomas (2000a), who suggested that enhancing strategic alignment could not be regarded as the only success criterion for mergers and acquisitions. Stobart (2000) agreed with Thomas (2000a), citing cases where speculation and growth could be primary factors. Cycle (2001) took a longer-term view, partially supporting Glorfindel, in saying that speculative mergers and acquisitions can provide only a short-term or tactical solution whereas strategically focussed mergers and acquisitions address the long-term success, or otherwise, of the subject company.

The concept of long-term versus short-term success, resulting from mergers, appears to be neglected in the literature. Brando and Pacino (2000) distinguished between the two outcome criteria in their paper in the *Chubb Business Review*. Brando and Pacino suggested that current measurement systems for merger success or failure did not succeed in differentiating between the two timescales in terms of success evaluation. Credo (2000) supported this view, suggesting that short-term measures of failure may, in fact, have been hiding potential long-term measures of success. Credo’s assertion was, to some extent, borne out by Carnacki’s (2001) study of 10 mergers. Carnacki reported that, in terms of short-term measures of success,
eight of the mergers studied would be classified as failures, whereas in terms of longer term success, specifically measured over five years or more, the failure rate dropped to 20 per cent. Tinsley (2000) and Hogg (2000) both criticised Carnacki’s results on the grounds of small sample size, although Hogg (2000) suggested essentially similar results in her study of 25 US companies.


Based on the literature, it seems reasonable to suggest that mergers designed to enhance strategic alignment should be considered from both a short-term and a long-term viewpoint. It may be misleading to consider successful outcomes based on one or other basic approaches (Hodgson and Eurovan, 2002). Strategically focused mergers should concentrate on long-term measures of success rather than short-term equivalents (Cave and Mars, 2003), and should be balanced against the other outcome criteria required of the merger (Hope and Hodgson, 2003).

A number of researchers have looked directly at the issue of cultural fit and strategic alignment in mergers. In merging any two organisations, the issue of fit will arise (Joiner, 2002). ‘Fit’ is the term used to describe the extent to which the two merging organisations blend together to produce the final merged organisation (Blender, 2001). In some mergers the strategic fit may be good, whereas in others it may be bad. In most cases there will be areas where capabilities are duplicated, and others where capabilities will be deficient or missing entirely (Blender, 2001). Blender developed a system for mapping and evaluating pre-merger fit patterns. Using this approach companies – in theory – can map not only their own capabilities but also those of the potential merger partner or acquisition target. The maps can then be overlaid to show strengths and weaknesses in the strategic fit of the proposed merger or acquisition. The approach was basically the same as that used by Juicer and Pulp (1995). The research of Blender (2001), Joiner (2002) and Juicer and Pulp (1995) was all based on the underlying assumption that the strategic fit engineered in a merger or acquisition is a direct driver of the degree of strategic alignment enhancement available through the merger or acquisition process.
Grinder and Mill (2003) used a similar approach to that adopted by Blender (2001) in their strategic fit analysis of 30 US companies undergoing mergers. Grinder and Mill (2003) found that 60 per cent of strategic planners were making decisions on the strategic fit of mergers and acquisitions by using subjective appraisal techniques that mirrored the mapping process described by Blender (2001). In 55 per cent of cases, proposed mergers or acquisitions were rejected because of the potential mismatch in strategic fit offered by the details of the move. Baker (2003) reported on similar research carried out in government supply companies in the US. Baker’s results suggested that the degree of strategic fit offered by potential target companies was the largest single determinant of whether or not a proposed acquisition went ahead.

**Mergers and success**

Between 1995 and 2003 a large amount of literature evolved around the issue of why mergers fail. Researchers became increasingly interested in the background to the apparently high number of ‘failed’ mergers and acquisitions that occurred, especially in the last few years of the twentieth century. Some obvious examples were the disastrous mergers of AOL Time Warner and the former GEC Marconi with a number of US dot.com companies. Within less than two years of merger, AOL Time Warner was losing staggering sums of money.

Ballcock (2000) suggested a number of common reasons why mergers fail. Ballcock suggested that the main reasons were: (a) lack of strategic alignment; (b) poor implementation; (c) poor cultural integration; and (d) unreasonable timescale for evaluation. Ballcock’s assertion that a lack of strategic alignment was fundamental in driving merger failure directly supports the findings and assertions of Nancho (1985), Raisin (1990), Nadir (1992) and Box (1995), and is compatible with Groucho’s (1970) classification system. In terms of strategic alignment, Ballcock (2000) suggested that, as companies lose strategic alignment, the overall strategic and operational objectives of the organisation also become unfocused. Duckworth and Baggins (2000) drew similar conclusions from their research of mergers in the microelectronics industry, as did Champitt and Neep (2001) in their comparable study based on the UK financial sector. Champitt and Neep also related the loss of strategic and operational focus to a reduction in organisational positivity amongst stakeholders.

This link between loss of strategic alignment and adverse effects on cultural positivity has been explored by Cakebread (2002). Cakebread conducted extensive surveys among stakeholders at all levels within the UK food production industry. She found that cultural positivity was significantly affected by employees losing touch with what the organisation was trying to achieve. Cultural integration appears to be a particularly important issue in merger success. In his survey of over a 100 medium-to-large-scale mergers, Morrissey (2003) concluded that cultural integration was second only to the degree of strategic alignment in determining whether most mergers are successful.

Poor implementation has been cited as a common cause for merger failure. Researchers including Pool and Ball (1997), Rickett (1998) and Musket (1999) have all
cited poor implementation as a key element in explaining why the mergers they used as samples failed. Rickett (1998) suggested that senior managers are often actively involved in merger negotiations and in planning the organisational structure of the merged organisation, but they often appear to lose interest once the merger enters the more mechanistic implementation phase. Garden and Jacobs (2001) and Hall and Oates (2002) have both made the same assertion.

**Mergers and cultural positivity**

The literature suggests that mergers generally have a negative effect on employee staff attitudes (Crabbe, 1997; Springstein, 1998; Winkle, 1999). The primary reason for this negative effect appears to be uncertainty about the effects the proposed merger will have on employees (Carapace, 2000). Boomer (2001) suggested that cultural positivity usually fluctuates in the period leading up to the merger deal, followed by a negative period immediately after the deal is signed. Depending on the success of the implementation process, cultural positivity generally increases thereafter as a function of time. If the implementation process is effective and the merger has been properly planned, positivity will eventually reach equilibrium at a point equivalent to or greater than it was before the merger negotiations began (Pepper, 1998; Condiment, 1999).

Most researchers in this area agree that fluctuations in cultural positivity can be either amplified or damped by different variables (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001; Cakebread, 2002). Doderer (2001) suggested that cultural positivity can be increased by mergers and acquisitions provided the change can be effectively communicated to all staff as being positive. The issue of communications appears again and again in the mergers and cultural positivity literature (Hackett, 1997; Stoitir, 1998; Glaikit, 1999). Most researchers agree that the key to nurturing cultural positivity in mergers and acquisitions is the design and implementation of an effective organisation-wide or enterprise-wide communication system. Even with such a system there will still be cultural negativity, for example among employees about to be made redundant as a result of the merger (Murray, 1998), but provided the change is shown to be in the best interests of the organisation, and of the workforce as a whole, cultural positivity generally follows (Bligh, 2001; Christian, 2002).

In the case of acquisitions and, in particular, hostile acquisitions the picture can be different. Employees of target companies can often feel at a considerable disadvantage (Hannibal, 2002). A number of researchers (Druze, 1996; Cumberland, 1997; Stuart, 1998) have referred to the conqueror–conquered mindsets that tend to permeate the workforces of acquirer and target companies. Nomad (2000) has shown that cultural positivity is much higher in the acquirer company mindset than in the target company mindset, and that, in the case of target company mindsets, the normal dampers on cultural negativity may not apply. Nomand’s results have been challenged in the social psychology literature on the grounds that the basic methodology was flawed (Sutcliffe, 2001) and the sample size was too small (Neilson, 2001). Other researchers have expanded Nomad’s work to consider specific sector samples such as mergers in the pharmaceutical (Pill, 2001) and chemical industries (Cadmium, 2002).
Orville (2000) has shown that the achievement of cultural positivity is related to the scale of the merger or acquisition concerned. Orville’s results indicated that the larger the merger or acquisition, the more difficult it was to achieve cultural positivity. Keith (2000) has suggested that this functional relationship could be because larger companies have more difficulty in developing a truly effective enterprise-wide communication system because of the scale of the operation involved. Gossip (2002) and Heresay (2002) both stressed the importance of informal communication systems acting over and above any formal enterprise-wide communication system. Gossip’s results suggest that a significant proportion (as high as 80 per cent) of cultural positivity relevant communication in mergers actually takes place through informal rather than formal channels. Heresay (2002) replicated Gossip’s results in the same mobile telecommunications sector in the UK in the period 1998–2001.

Wimsey (1999) reported that, in most acquisitions, there is a relationship between cultural positivity and seniority. Wimsey’s results suggested that senior managers in target companies become uneasy about their post-acquisition prospects at an early stage and often initiate possible moves as soon as the target interest becomes apparent. Wimsey suggested that senior managers become more concerned earlier because acquiring senior management may perceive them as a threat. This assertion has been borne out by the findings of Boss (2001) and Leader and Grubb (2001). Greer and Freud (2002) have questioned all three sets of results, saying that the authority levels in each case were insufficiently defined. There may be some justification in this assertion, although Wimsey’s (1999), Boss’s (2001) and Leader and Grubb’s (2001) assertions were all based on the authority assessment system used by Master (1970) in his pioneering foundation work in this area. Based on the evidence, the balance of doubt suggests more in favour of Wimsey (1999), Boss (2001) and Leader and Grubb (2001) than in favour of Greer and Freud (2002).

The literature also suggests that there is an important cultural issue relating to positivity as a driver of long-term merger success. Mitchell (1998) reviewed the literature on cultural integration in mergers and reported that problems in achieving cultural integration accounted for the majority of merger failures. Butcher (1998) contested Mitchell’s (1998) findings because he felt the methodology used was not sufficiently sensitive to allow the full complexity of the various integration drivers to be measured. Fowler (1999) took cognisance of Butcher’s (1998) critique when designing his own research methodology. Fowler reported that cultural integration starts from an initial point based on the extent to which there has been pre-merger speculation and a reduction in pre-announcement cultural positivity. Thomson (2000) supported Butcher’s (1998) findings, developed a similar research programme, and published similar findings.

7.3.3.3 Summary

This section of the literature review has considered the general literature on mergers and acquisitions, building on the first section of the literature review on strategic alignment. Mergers and acquisitions are used widely by companies in the pursuit of success. It is apparent that many mergers and acquisitions fail to meet their initial objectives, and it is also clear that the degree to which strategic alignment and the extent to which resulting cultural positivity are achieved is a key driver in merger
success. Good strategic fit and strategic alignment may act as dampers on the classic
cultural disruption caused by mergers and acquisitions and internal non-merger
reorganisation initiatives. The issue of strategic fit is, clearly, closely related to the
issue of strategic alignment: both are important determinants in merger success or
failure.

The final section of the literature review considers the literature on cultural posi-
tivity and the development of human capital. This area forms the third and final
subject area within the title of this research.

7.3.4  The Literature on Cultural Positivity and the Positive Development
of Human Capital

7.3.4.1  Introduction

This section reviews the literature on cultural positivity and the development of
human capital. It builds on the previous literature review sections on strategic
alignment and mergers and acquisitions. This section extends the literature to review
the connections between cultural positivity and the development of human capital
as drivers of merger success or failure.

7.3.4.2  The Literature

Cultural positivity and the positive development of human capital as a
driver

This link between loss of strategic alignment and adverse effects on cultural
positivity has been explored by Cakebread (2002). Cakebread conducted extensive
surveys among stakeholders at all levels within the UK food production industry.
She found that cultural positivity was significantly affected by employees losing
touch with what the organisation was trying to achieve.

Human capital development has been widely researched (Ross, 1998; McIntosh,
2000; Smith, 2001). The general consensus is that human capital can best be
improved in an environment characterised by positive perceptions. There is no clear
evidence in the human capital literature to contradict this view.

Muffin (2000) and Ryan (2000) both suggest a link between cultural positivity and
the potential for the development of increased human capital values. The findings
of Muffin (2000) and Ryan (2000) have been supported by McIntosh (2001) and
Tivity (2002), and seem to be fairly reliable. Muffin’s results indicate a functional
relationship between cultural positivity and the positive potential to develop human
capital. Organisational members appear to be more receptive to internal develop-
ment when they operate in a positive cultural environment. As negative influences
and variables are introduced, the potential range and extent of human capital
development decrease (Ryan, 2000). Ryan’s results appear to match those of Muffin
(2000), even though the data sources were entirely different. Muffin’s (2000) results
were based on a data set comprising 10 US financial companies, whereas Ryan’s
(2000) sample was UK local government departments. The similarity of the results
profile, given the considerable difference in the data sources, is striking (McIntosh,
2001). The fact that Tivity (2002) generated similar findings, using airline companies as the data source, suggests that Muffin’s (2000) findings are generally applicable.

Skylark (2000) expressed cultural positivity in terms of the degree of observed conflict within the organisation. Using a major bank as a data source he measured the occurrence of conflict over a one-year period and expressed this against human capital development using scales first designed by Chalker (1996). Chalker’s scales have been widely used in human resources research (Manpower, 1997; Toil and Labour, 1998; Fellah, 1990; Slave, 2000), and are widely respected (Overseer, 2001). Skylark (2000) was able to show that there was a relationship between fluctuations in cultural positivity and corresponding fluctuations in human capital development. Skylark (2000) used his own scale for measuring human capital development, although the same scale has since been used by Pramm and Pusher (2001) and Bodkin and Brace (2001). There appears to be no major criticism of Skylark’s (2000) results in the literature.

Jofis (2000) attempted to demonstrate the relationship between cultural positivity and human capital development using measures first used by Schofield (1990). Jofis (2000) included in his study one company that had recently undergone merger. Although Jofis did not comment on the possible impact of the merger, it appears from his results that cultural positivity fell immediately post-merger, with a corresponding fall in human capital development.

**Cultural positivity and the positive development of human capital and success**

There is considerable evidence in the literature that cultural positivity and the development of human capital are central to the long-term success of an organisation. Krebs (1997) conducted a large-scale survey over several years clearly showing that organisations enjoying cultural positivity and fully exploiting their human capital are likely to be more successful than companies that do not. Krebs’s (1997) work has been extensively cited in the literature, including Holtz (1997), Schumacker (1997), Saruman (1998), Gloin (1999), Bree and Bee (2000), Ring (2001) and Doom (2002).

Schumacker (1997) was able to show that there was a relationship between cultural positivity and financial performance. In his study, Krebs plotted the correlation between measured differences in cultural positivity over a number of years. His results indicated that financial performance diminished as cultural positivity diminished. Schumacker’s (1997) results suggested that (a) there is a time lag between a change in cultural positivity and a corresponding change in company financial performance, and (b) this relationship is self-amplifying in that a change in financial performance acts as a direct driver of cultural positivity. Orion (1998) replicated Schumacker’s (1997) work. Rigel and Antares (1999) used Schumacker’s (1997) methodology in their study of the long-term success of three US retail organisations. Rigel and Antares reported that both the conditions for, and the achievement of, long-term success increased as initiatives were put in place to increase cultural positivity and exploit the value of the companies’ human capital resources.
Coulthard (1998) suggested that the development of human capital is crucial in terms of a company achieving long-term success. Coulthard reported a measurable link between cultural cohesiveness and long-term human capital development. Other researchers such as Trulli (1999) reported a link between cultural cohesion and long-term likelihood of success. Trulli used financial performance as one measure of success but also recognised others, including innovation and ability to respond to change. Thak and Nabonidas (2000) suggested that innovation is directly related to the development of human capital because employees can contribute fully to strategic innovation only when they have been with the company long enough to appreciate the detail of how it operates. Belit (2000) and Amra (2000) both agree with this reasoning. Juma (2001) attempted to support Thak and Nabonida’s work in his two-year longitudinal study of a US computer component manufacturer. Juma (2001) reported that as internal initiatives for increasing the development of human capital were designed, implemented and began to take effect, the conditions for long-term success were improved. Juma stressed that his research identified the conditions for long-term success rather than long-term success itself. Zarono (2002) reported similar findings, although he carried out a validation study in an attempt to (a) measure actual long-term success and (b) show that his results were general. Zenobia (2002) criticised Zarono’s validation study on the grounds that the validation sample was not compatible with the main study. Zenobia’s criticisms appear to be in order, as the validation study used government suppliers whereas the main study focused on an arms manufacturer.

Ripley (2000) carried out a long-term longitudinal study of six automobile manufacturing companies. She developed a subjective measurement system that allowed data to be collected and analysed to show the relationship between cultural positivity and the long-term success of different parts of the company structure. Ripley (2000) adopted the approach taken earlier by Alien (1987) in equating cultural positivity with cultural approval. Other researchers including Nostromo (1988) and Marine (1990) have made the same assumption. Ripley (2000) was able to show that cultural positivity and approval improved the operational performance of all levels of the subject organisations. Ripley also asserted that this effect was more pronounced towards senior management levels of the organisation than at the lower operational levels. Ripley hypothesised that this could have been because the senior managers were instrumental in introducing measures to include cultural positivity, and therefore were more closely associated with the effort. Ripley (2000) suggested that initiatives to improve cultural positivity and approval are imposed more at lower levels, and are therefore less immediately attractive, although this attractiveness tends to increase as a function of time. These are interesting suggestions, and are partially borne out by the works of Jester (2000), Trencher (2000) and Docker and Dyke (2001).

Clampitt (1998) suggested that individual motivation and commitment tend to increase as cultural positivity increases. Clampitt (1998) justified her results by citing examples from the world of competitive sports. For example, football teams tend to play better when the individual players are happy with team performance (Ferguson, 1996). If performance falls, confidence also falls and cultural positivity decreases as a result (Venables, 1997). The net effect is a diminishing level of
commitment and motivation as the position of the team becomes less clear and certain. In such cases, the manager may have to make an extra effort to motivate the team and re-instill confidence (Houlier, 1998). As there is an established link between motivation and commitment and success (McCleish, 2001; McNeill, 2001) it seems reasonable that these elements and the cultural positivity they generate are, indeed, drivers of overall success.

**Cultural positivity and the positive development of human capital and strategic fit**

There is a small but very interesting literature on cultural positivity and the development of human capital and the degree of strategic fit offered by a merger or acquisition. Holmes (1988) first suggested a link between the degree of strategic fit offered by a merger or acquisition and the degree of cultural positivity likely to accrue from the proposed change. Holmes conducted an extensive survey of hundreds of employees at all levels within organisations both before and after mergers or acquisitions took place. His results suggested that cultural positivity was greatest where the degree of strategic fit offered by the merger or acquisition was high. Cracker (1990), building on Holmes’s (1988) results, found, in his study of UK engineering companies, that there was a linear appositive functional relationship between strategic fit and cultural positivity.

Minder (2000) considered the relationship between strategic fit and strategic alignment in his study of UK clothing manufacturers. Minder’s (2000) results suggested that companies that could achieve high levels of strategic fit or compatibility were more likely to develop long-term strategic alignment enhancement. These results were later supported by Mason (2001) and Columbo (2002). Quincy (2002) took an opposite view, arguing that strategic fit is a subjective concept that cannot be actually measured in practice, and therefore cannot be taken into consideration in objective strategic decision-making. Most of the relevant literature appears to disagree with Quincy (2002). Starsky (2002) and Bill (2002) both took the view that strategic fit can be mapped in a form that makes informed analysis and evaluation possible. Hutch (2002) and Kojak (2002) both reported that they had generated validated results showing that strategic alignment can be engineered through the selection of mergers and acquisitions based on the optimisation of strategic fit.

**Cultural positivity and the positive development of human capital and strategic alignment**

There is very little published work linking the positive development of human capital with strategic alignment. Pioneering work by Eilidh (2003) suggests there is a link between the degree of strategic alignment in mergers and the development of a positive attitude within the organisational culture leading to amplified potential for human capital development. At the time of writing, this research area was in its infancy. To date, there has been only one published critique of Eilidh’s work. Aill (2003) reported similar findings in her research study of over 50 mergers in the UK retail sector.
Pikelet (2002) and Aill (2001) both suggest that there is a relationship between the degree of strategic alignment in a merger and the generation of cultural positivity within one or both merging organisations. This view has been supported by John (2001). Given the established link between cultural positivity and enhanced potential of human capital, it seems reasonable to conclude that there is likely to be a link between strategic alignment, cultural positivity and the positive potential to develop human capital. There is at present, however, no published work linking strategic alignment with the positive potential to develop human capital. Extensive and exhaustive searches of the literature indicate a gap in the literature in this linking area.

It is understood that pioneering work in this area is currently being conducted by Williams and Gallagher at Pencil-Vania University and Reeves and Mortimer at Mont Blanc University in the US. These researchers have reached pilot study stage, but there has as yet been no publication: therefore online searches of the literature do not detect the presence of this work. None of this work is likely to reach publication stage before the completion of this research. Reference will be made to any results published by Williams and Gallagher and Reeves and Mortimer as soon as they are made available.

7.3.4.3 Summary

This section of the literature review has considered the literature on cultural positivity and the development of human capital. Increased strategic alignment encourages positivity and the conditions for the positive development of human capital. Cultural positivity and the effective development of human capital are important drivers of long-term success and both are functions of strategic fit, which is itself a function of strategic alignment. There is no literature at present directly linking strategic alignment with the development of human capital, although pioneering work is under way in the US.

7.3.5 The Literature on Optimisation

7.3.5.1 Introduction

This final section of the literature review considers the literature on optimisation. There is a large and varied literature base on optimisation in the context of strategic alignment, mergers and the positive development of human capital. There is considerably less published work on the extent to which companies attempt to optimise the increased strategic alignment generated through mergers in order to increase the positive development of human capital. This section reviews the literature, such as it is, and attempts to establish the link between strategically focused mergers and the potential to enhance the positive development of human capital.
Optimisation and strategic alignment

Strategic alignment appears to be accepted as a primary driver in the development of organisational, technological and support function optimisation (see below), as suggested by Fundin (1998), Balin (1999) and Gloin (2000). There appears to be a clear link between the degree of strategic alignment engineered in an organisation and the degree of general optimisation that is achievable (Carc, 1999; Dale, 2000; Smaug, 2000; Bard, 2001). In many cases, however, this potential for optimisation is not realised (Balin, 2000; Thorin, 2000; Bilbo, 2001; Bolg, 2002). The primary reason for this lack of realisation appears to be the general lack of a realisation strategy (Lake, 2000; Arrow, 2001). A number of researchers have reported that this lack of optimisation planning results from a lack of awareness within organisations as to how to plan through change for optimisation (Chaos, 1998; Revo, 1999), whereas other researchers have suggested that planning and implementing optimisation strategies are two different functions but they tend to be approached using similar assumptions (Coup, 2000; Takeover, 2000; Buyout, 2001).

Bunn (1998) conducted a survey of 50 UK financial institutions in an attempt to establish a link between strategy optimisation and performance optimisation. Bunn’s (1998) results largely substantiated the earlier findings of Roll (1990) in that strategy optimisation appeared to be linked to performance optimisation. Companies that were good at optimising strategy and, in particular, the strategic alignment of the organisation were also successful in terms of optimising long-term performance. There results were later supported by Baguette (1999) and Doughnut (2000). Bagel (2001) reported similar findings in her study of UK hospital trusts in the North of England between 1999 and 2000. Bagel (2000) suggested that companies that achieve a higher degree of strategic alignment are also successful in terms of achieving long-term technological and cultural optimisation. Bagel (2000) identified a number of critical performance factors that included individual and group alignment (Bridie, 2000), individual and group focus (Slice, 2000) and individual/group and strategy combined alignment (Pie and Pastie, 2000).

There is some evidence to suggest that strategies for increased strategic alignment also generate (sometimes unconsciously) drivers for organisational optimisation. Dogg (1995) found that companies that have formalised and tested procedures for the achievement of strategic fit also generally have more structured approaches to organisational optimisation. Catt and Goldfish (1997) reported similar findings in their survey of IT companies in Germany between 1990 and 1995. Budgie and Parrot (1998) made similar assertions following their investigations of UK food processors in 1996. Rabbit and Coney (1999) found that companies with diversification strategies tended to have less formalised optimisation strategies, and Mouse and Hare (2000) suggested that companies that were undergoing divestiture of non-related subsidiaries tended to institute formal optimisation strategies at the same time. Lizard (2000) attempted to replicate Mouse and Hare’s (2000) results but was unable to do so, suggesting that Mouse and Hare’s sample size was too small to allow replication. Macaw (2001) and Leveritt (2001) both suggested that Mouse and
Hare’s (2000) sample was indeed too small, but nevertheless reported compatible findings.

There has been some research to suggest that some companies combine strategic alignment optimisation and general optimisation strategies to great effect. Branch (1995) reported that approaches that combined strategic alignment enhancement and overall organisational optimisation were more effective than approaches that considered each approach separately. Leaf and Bark (1996) supported Branch’s (1995) findings in their analysis of the US fashion industry. Root and Twigg (1996) corroborated Leaf and Branch’s (1996) findings, although they argued that combined strategic planning and optimisation strategies were difficult to achieve – a result echoed by Knot (1997).

Watt (2000) suggested that cultural and technological optimisation were best achieved under conditions of primary (focused) strategic objectives. Watt’s (2000) research, which has been supported by Volta (2001) and Ampere (2002), suggested that organisations can achieve maximum overall optimisation where all parts of the organisation have the same clearly defined objectives that are limited in scope (Faraday, 2002; Ohm, 2002). As scope expands (and therefore strategic alignment diminishes) the potential for overall optimisation decreases (Newton, 1990; Ohm, 1995).

Wagner’s (2000) research found that UK retail companies tend to make attempts to optimise a range of performance measures through increased strategic alignment. Although not looking specifically at mergers, Wagner’s (2000) results provide a very valuable insight into the extent to which companies seek to optimise through strategic alignment. Wagner (2000) used earlier research by Chopin (1995) to show that organisational and technological optimisation is regarded as a valid target by companies when exploiting internal initiatives that develop enhanced strategic alignment. These findings were supported to some extent by Beethoven (2000a), Verdi (2001) and Mozart (2002). Recent work by Schubert (2003) has provided further support for Wagner’s (2000) findings. Interestingly, Schubert (2003) included mergers and acquisitions as one element in corporate consideration when aiming at increased optimisation.

Lambert (1999) suggested that the degree of strategic fit in corporate initiatives including mergers has a direct impact on cultural optimisation. This assertion was supported by Connery and Kargan (2000). As the linkage between strategic fit and strategic alignment has already been established (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Skesom, 2002, 2003; Davie, 2003a), and as the literature recognises the study of strategic alignment and strategic fit as being one and the same (Juicer and Pulp, 1995; Minder, 2000; Blender, 2001; Mason, 2001; Bill, 2002; Columbo, 2002; Hutch, 2002; Joiner, 2002; Kojak, 2002; Quincy, 2002; Starkey 2002; Baker, 2003; Grinder and Mill, 2003), it seems reasonable to conclude that the degree of strategic alignment achieved in mergers or by other initiatives acts as a direct driver on cultural optimisation.

Note: The section above establishes a clear cross-reference between the current review on optimisation and the earlier review on strategic fit and strategic alignment. The literature review should be cross-referenced wherever possible. This is particularly important in this example, where any cross-
referencing between optimising the strategic alignment produced and promoting human capital should be emphasised and exploited as much as possible.

**Optimisation and mergers**

Numerous studies have been concerned with the optimisation of a range of organisational factors resulting from mergers. Currie (2001) considered optimisation strategies in the context of organisational change and the potential organisational synergies that can be generated from the change. Organisational synergies have received considerable attention in the literature (Dalry, 1999; Gorgie, 1999; Gyle, 2000; Juniper, 2000; Slateford, 2000). Haymarket (2002) suggested that the majority of organisational optimisation approaches are based on the identification and development of potential organisational synergies. This view was supported by Hermiston (2002) and Balerno (2002a).

The literature on the issue of mergers generating cultural positivity has already been reviewed. It is clear that cultural attitudes can be used as a source of optimisation (Ross, 1998; McIntosh, 2000; Smith, 2001), and that where enhanced cultural positivity is exploited there is real potential for organisational optimisation (Fellah, 1990; Schofield, 1990; Chalker, 1996; Manpower, 1997; Toil and Labour, 1998; Jofis, 2000; Muffin, 2000; Ryan, 2000; Skylark, 2000; Slave, 2000; Bodkin and Brace, 2001; McIntosh, 2001; Overseer, 2001; Pramm and Pusher, 2001; Tivity, 2002).

An increasing number of companies are developing merger optimisation plans (MOPs) and/or strategies in order to try to fully optimise during mergers. Mocket (1999) reviewed 10 such plans or strategies as part of his doctoral research at Chubb University. Mocket identified a number of key elements in MOPs, including synergy identification, synergy classification and synergy exploitation. Rancid (2000) drew on Mocket’s work in his survey of merger optimisation strategies in the US car manufacturing industry. Rancid argued that more or less the same synergy classification could be used across a range of different industries. This view was partly supported by Clinker and Grott (2000) and Fagg and Ash (2001) in later surveys using the same basic classification method. Scrubb (2001) argued that Rancid’s classification system was somewhat restrictive. This view was echoed to some extent by Sponge and Soap (2002). Irrespective of the sector considered it appears that Mocket’s (2000) classification system seems to be supported by most of the researchers active in the area. In addition, Mocket’s conclusions that merger-dependent optimisation should be engineered (rather than being left to happen) appear to be supported by the literature.

developments at different rates as their technological requirement and demand change. These variables are specific for each organisation considered and therefore lead to different technological outcomes in each organisation. This view was supported by Fillet and Butt (2001) and by Seal and Gromet (2001) in research on common platform development in mergers. Both pairs of researchers suggested that merger optimisation plans tended to underestimate the complexity and risk involved in the development of joint production platforms in mergers.

A third area often addressed in the merger optimisation literature is that of support function optimisation. To some extent this area includes elements of both organisational/cultural and technical optimisation (Gro, 1998; Daha, 1999). The importance of support function optimisation is considerable (Brandoch, 2000), and is just as important in terms of long-term merger success as organisational/cultural and technical optimisation (Foliot, 2000; Red, 2000; Demon, 2001; Kothering, 2002). Research by Gorice (2000) suggests that support function optimisation tends to evolve as a function of the effort put into securing organisational/cultural and technical optimisation in mergers. This assertion has been supported by Blusco (2000), Goldry (2000), Corsus (2001) and Gallandrus (2002). Corund (2002) suggested that technical optimisation in mergers is limited by the technology of the merging organisations – a view supported by Moruna (2002) and Mantichore (2002).

There have been a few studies that have linked organisational/cultural, technical and support function optimisation. Foremost of these is the work by Gregor (1998). In his research Gregor attempted to develop an overall model for merger optimisation linking the three key areas of organisational, technical and support optimisation. Gregor reported that the three areas were interlinked, with optimisation in one area being a function of optimisation in each of the other areas. Gregor’s (1998) research was supported by Aksinia (1999) and Stephan (2000). Litinsky and Pantaleimon (1999) criticised Gregor’s (1998) work on the basis that it was based on an oversimplification of the interdependent complexities involved. This view was partly supported by Stockman (1999) and Buchnuck (1999), who both developed more complex and interdependent models. The literature overall suggests that organisational/cultural, technical and support function optimisation should be considered collectively and intrinsically (Aksinia, 2000; Fomin, 2000; Novocharrask, 2001).

Other researchers have concentrated on financial optimisation in mergers. Dollar (1999) found that efforts to optimise financial performance often had a negative impact on one or more of the optimisation areas covered by Gregor (1998). Dollar suggested that there may be a breakpoint where financial optimisation starts to seriously compromise cultural optimisation. This point appeared to be where stakeholders become disillusioned about the impact of financial optimisation on their own positions and security. This finding was also reported by Pound (2000) and Lira (2001). Coin (2001) suggested that cultural and financial optimisation must be treated as one consideration in optimisation strategies. A slightly less radical opinion was provided by Buck (2001) in suggesting that financial and cultural optimisation should be treated as independent trade-off variables. Buck (2001) argued that these two variables are inverse functions of each other, and it is impossible to optimise both. This view was to some extent supported by Quid (2002) and Tenner (2002), who both reported that trade-off analysis was appropriate in
considering financial and cultural optimisation. Pony and Grand (2002) found that financial optimisation tended to compromise technological optimisation in their small-scale study of UK engineering company mergers.

**Optimisation and human capital**

The literature has established that human capital can be optimised using appropriate cultivation techniques (Fergusson, 1996; Venales, 1997; Clampitt, 1998; Houlier, 1998; Jester, 2000; Trencher, 2000; Docker and Dyke, 2001; McLeish, 2001; McNeill, 2001). There is some evidence to suggest that cultivation techniques work better in some organisational structures than in others (Judah, 2000; Messala, 2000; Balthasar, 2001). Algol (2000) suggested that human capital optimisation could be achieved more readily in less formal organisations than in more formal ones. Algol related the applicability of cultivation techniques to the communications systems that operate within organisations. Algol’s (2000) research has been supported in the literature (Altair, 2000; Antares, 2000; Castor and Pollux, 2000; Sirius, 2000; Vega, 2001), although Deneb (2001) suggested that organisational communication systems themselves may evolve as a direct result of the degree of optimisation that has been achieved by a given organisation, and should themselves be regarded as optimisation drivers.

Human capital optimisation has received extensive attention in the literature (Talker, 1985; Soft, 1986, Soft and Wimpit, 1989; Gas, 2000; Wind, 2000; Blower, 2001; Licker, 2001; Zero, 2001; Nil, 2002). Most research appears to suggest that while human capital optimisation can be stimulated by appropriate cultivation techniques, a key driver is that of cultural attitude (Flatline, 2000). The degree of human capital optimisation possible appears to be directly linked to the degree of cultural positivity that is present in the employee base (Friend, 1998; Pal, 1999; Buddy, 2000; Hinnie, 2000; China, 2001).

Various researchers have attempted to research human capital optimisation in relation to a range of different drivers including motivation (Grubb, 2000), ambition (Creep, 2001), self-esteem (Poser, 2000) and security (Limpet and Tick, 2000).

Grubb’s (2000) approach involved the simultaneous measurement of organisational optimisation and the development of motivation in individuals and teams, building on earlier work by Dosh (1991), Cash (1992), Packet (1992) and Wad (1995). Grubb (2000) was able to show that where organisations made attempts to improve overall optimisation, measured in terms of organisational, technological and support function orientations, the overall optimisation of individuals and teams was increased (Squander, 1998).

Creep (2001) asserted that organisational optimisation was intrinsically linked to the ambition of individuals within the organisation. Licker asserted that, where organisational optimisation can be linked to the ambitions of individuals and subordinates, the degree of organisational optimisation that is achievable increases. This was to some extent supported by Smarmy and Groveller (2002) and Crawler (2002). Steadfast (2002) refuted Creep’s (2001) assertion on the grounds that individual and group dynamics are entirely different. There has been some debate in the psychology literature on this issue (Shrink, 1998; Perkins, 1999; Sutel, 2000;
West, 2002), but the general consensus appears to be that where organisational optimisation can be linked to individual and group development (Team, 2000; Partner, 2001) and individual and group ambition (Leeson, 2000) the overall level of organisational optimisation that is achievable increases.

Poser (2000) raised the apparently important issue of individual self-esteem in human capital optimisation. Poser suggested that individuals within organisations are more naturally aligned to optimisation where the individual ambitions of people are addressed (Dandy, 1998; Bo and Brumel, 1999). Poser’s (2000) research also indicated a relationship between individuals and subordinate behaviour in this respect (Creeper, 1996; Groveller, 1998). Poser’s research suggests that subordinates have an immediate and direct influence on the self-esteem traits of managers.

Limpet and Tick (2000) examined the interrelationships between human capital optimisation and the perceived levels of security felt by employees. Limpet and Tick’s (2000) study showed that human capital optimisation increased as a function of perceived security (Flea, 2000; Scratcher, 2000; Howk and Howker, 2001; Itch, 2001). Where perceived security levels change, both the potential and the actual human capital optimisation appear to change correspondingly, but to a proportionately larger extent (Dole, 1998; Brew, 1999; Dosser, 2000; Deal, 2001; Package, 2002).

7.3.5.3 Summary

This section has summarised the literature on optimisation in relation to strategic alignment, mergers and human capital. The literature suggests that optimisation generally, and specifically in terms of organisation, can be achieved more readily where there is a significant level of strategic alignment within an organisation. The literature suggests that optimisation in mergers is dependent on the outcome requirements of the companies concerned. In some cases a drive for optimisation in one area may lead to optimisation in other areas being more difficult to achieve. The literature also suggests that cultural optimisation can best be achieved where there is a high level of cultural positivity. It has already been established that cultural positivity is linked to both the degree of strategic alignment evident within an organisation and that organisation’s potential to develop human capital. It therefore seems reasonable to conclude that there is indeed a relationship between the optimisation of strategic alignment and the development of human capital.

7.3.6 The Literature on Optimisation Drivers

7.3.6.1 Introduction

There has been some published research on the various drivers that power optimisation efforts in organisations. In measuring the extent to which companies optimise strategic alignment arising from mergers in the positive development of human capital it is important to understand the drivers that power this optimisation and the tools and processes used within organisations. This section reviews these drivers, tools and processes.
7.3.6.2 The Literature

Clam (1980) produced an early definitive work on optimisation drivers. This work has remained in place as a benchmark for other researchers in this area. Clam (1980) suggested that companies achieve optimisation of any endeavour or initiative involving planned or imposed change through the use of their own internal processes. In most cases these processes can be classified as management, production, people, support and interface.

Management covers all aspects of management, from senior management to lower-level functional and project managers (Haddock, 1988). Clam (1980) suggested that the primary management optimisation drivers under planned or imposed change are direction, coordination, leadership and communication (Chowder, 1985). These drivers are applied directly to company processes in order to optimise the opportunities offered by change. The concept of change opportunities, rather than purely negative effects such as disruption and cultural negativity, has been explored by a number of other researchers (Biscuit, 1990; Butter, 1998; Pepper, 2000). The general consensus appears to be that managers should seek to optimise the opportunities provided by change through direct management initiatives (Ahab, 1995; Ishmael, 1998; Quikwez, 2000).

Production drivers cover all aspects of the company production processes (Clam, 1980). Optimisation opportunities resulting from change include the opportunity to introduce new technology (Virus, 1999; McAfee, 2000), the opportunity to upgrade outdated plant and processes (Line, 1999; Rule, 2000; Target, 2001), the opportunity to increase production rates (Counter, 1999; Rota, 2000), and the opportunity to develop production synergies (Blend, 2000; Mixer, 2000).

According to Clam (1980) the optimisation of the people element is the most complex and difficult to achieve, although the potential benefits achievable from partial or full optimisation are the most striking. This assertion has been supported by numerous researchers (Rose, 1985; Daisy, 1990; Flower, 1995; Tulip, 1999; Crocus, 2000). Other researchers have cited Clam (1980) in suggesting that the optimisation of the people element should be the primary concern of companies that are using initiatives in response to imposed change or in support of planned change (Bobbin, 1998; Cotton, 2000; Thread, 2001; Mills, 2002). The literature suggests that, where optimisation of the people element is shown to be a priority, cultural positivity tends to increase (Happy, 2000; Laff, 2000; Smile and Grin, 2001). As the link between cultural positivity and human capital has already been established (Ail, 2001; John, 2001; Pikelet, 2002), and given that pioneering research by Reeves and Mortimer and Williams and Gallagher linking strategic alignment with the positive development of human capital is under way, it seems reasonable to conclude that the optimisation of the people element arising from focused mergers may well be used in the development of human capital.

Note: The subsection above attempts to establish the first real literature link between optimising the strategic alignment resulting from mergers and the positive development of human capital. Like the link in the example type A (hypothesis-based) literature review submission, the link is tenuous and is suggested by the literature rather than established by the literature. It is this tenuous area that forms the basis for the research question.
Clam’s (1980) support and interface elements have also received some attention in the literature. Mallard (1990) suggested that support function optimisation was the primary single sub-driver of production optimisation – a view shared by Widgeon (1992) and Teal (1994). Pintail (1998) and Tufted (2000) both supported Mallard’s (1990) view that the interface element was the most important single element for management concentration (Coot, 1995; Merganser, 1997) in attempting to achieve overall company optimisation under conditions of change. Grebe (2000), drawing on Coot (1995) and Merganser (1997), suggested that Clam’s (1980) management and people elements were functions of the relative strategic alignment or diversification of the organisation under conditions of change. The assertion was later supported in work by Dabchick and Eider (2000) and Smew (2001).

The concentration on processes and procedures as optimisation drivers was first mooted by Beech (1975). Beech suggested that exploratory research on optimisation in management and business should be based on an examination of the processes involved in all aspects of production. Beech carried out a survey of 20 major financial companies in the US between 1972 and 1974. Beech reported that attempts at optimisation in virtually all aspects of operations were dependent on organisational processes and subprocesses. This approach was adopted by Oak and Birch (1980) in their study of US manufacturing companies in 1979. Oak and Birch concluded that companies should be considered using an organisational breakdown structure approach in order to identify processes and subprocesses that can be engineered for optimisation. Other researchers subsequently adopted the same approach (Yew, 1985; Hornbeam, 1997; Aspen, 1998; Cherry, 2000; Walnut, 2001).

Willow (2002) reported that the breakdown and optimisation processes were enhanced where the degree of strategic alignment in an organisation was high. Willow suggested that as companies diversify and reduce overall strategic alignment, the overall ability to optimise across processes diminishes (Holly, 2000; Maple, 2000; Ash, 2001).

7.3.6.3 Summary

The literature suggests that optimisation drivers operate within definable fields of an organisation’s processes. The primary fields appear to be management, production, support, interface and others. An impact in one field may have a corresponding impact in one or more other fields. Optimisation should be treated as a potential positive consequence of change, whether the change is planned or imposed. The optimisation of the people element is particularly important, and where this is promoted, cultural positivity – and hence the potential for the development of human capital – also increases.

7.3.7 Literature Review Summary

The literature review has covered strategic alignment, mergers, cultural positivity and the development of human capital, optimisation and optimisation drivers. The literature suggests that: (a) there is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success; (b) there is a functional relationship between strategic alignment and cultural approval;
(e) there is a functional relationship between cultural approval and the positive development of human capital; (d) there is a functional relationship between the degree of strategic alignment offered by merger and the potential for the positive development of human capital; and (e) the strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.

It seems that strategic alignment and cultural positivity are both important drivers of long-term success, and that cultural positivity and the positive development of human capital are functionally related. It therefore seems reasonable to assert that strategic alignment and the potential for the positive development of human capital are related, and that both variables are drivers of long-term success. It follows that increased strategic alignment acts as a driver for the positive development of human capital as a determinant of long-term success. It therefore seems reasonable to base the research question on whether or not companies optimise the increased strategic alignment generated by mergers in the development of human capital in order to achieve long-term success. It seems likely that companies that do optimise the increased strategic alignment effects are more likely to develop human capital and achieve long-term success than companies that do not.

7.4 The Issue of a Pilot Study

7.4.1 Introduction

Note: Previous modules have made it clear that a pilot study is not always necessary, as the main objective of a pilot study is to assist in the development of a formal research theory and hypotheses. Type D exploratory-based research may have no requirement for a pilot study, as it is based on exploration rather than hypothesis testing.

This section makes a case for the development of a research question without the development and execution of a formal pilot study. This research is exploratory-based, and so the research question is developed from the literature and the sample company. The research itself is based almost entirely within the sample company in order to address real issues and problems within that company. The generalisability of the findings will be assessed by a validation study.

7.4.2 The Assertion that a Pilot Study Is Unnecessary

This research is concerned with the optimisation of the strategic alignment produced by mergers on the positive development of human capital in Company X. This company has been chosen as a sample because the candidate is a senior executive within the company. The company itself is about to embark on a series of mergers and acquisitions in order to strengthen its competitive advantages within its area of expertise. The company operates within a stagnant market where there is considerable overcapacity. One of the strategic objectives of the company is to achieve growth within this market, and the company strategic planners have identified strategic alignment and the development of human capital as primary drivers within the desired success envelope within the mergers and acquisitions growth strategy.
The research question is concerned with whether or not companies use the strategic alignment generated by mergers to exploit the positive development of human capital. This is an important question for Company X because competitors within the market are also using the mergers and acquisitions approach in order to achieve growth. The senior managers of Company X have detected that competitors are adopting the same growth strategy and it is therefore important for Company X to develop a series of substrategies within the mergers and acquisitions approach that will generate added value. These substrategies must provide added value, over and above standard merger synergies, in order for Company X to outperform the competition.

Company X is committed to using the strategic alignment generated by the forthcoming mergers and acquisitions in order to improve the development of its human capital. Company X has not attempted to do this in the past, although the literature suggests that such an approach is both possible and workable. The question of whether or not Company X optimises strategic alignment is therefore irrelevant. Company X considers that it does so, and has processes and procedures in place in order to make sure that it does so. The important questions are:

- How well does Company X achieve this?
- Does the competition do it and if so how well?

A pilot study within Company X would therefore prove nothing. It would show only that the necessary processes and procedures are in place within the company. The real issue is whether or not Company X optimises strategic alignment better or worse than the competition. If Company X optimises strategic alignment better than the competition, then it is in a good position to maintain and increase its competitive advantage. If Company X optimises strategic alignment worse than the competition, the chances are that Company X is in a position where its competitive advantage is static or being eroded. In this case, immediate additional actions are required by Company X in order to avoid an overall deterioration in market position. Such a deterioration could be potentially catastrophic when considered in the context of the large sums of money to be spent on mergers and acquisitions.

It should be clear that under such circumstance a pilot study is not necessary as there is no requirement for a separate formal research theory and associated research and operational hypotheses.

7.4.3 Summary

This section has made a case for the non-inclusion of a pilot study. This method is often used where the research is based on a single company using a type D (exploratory-based) approach. In this case the issue is whether or not companies in the same market or sector as Company X optimise strategic alignment in the development of human capital. In analysing this research question, much of the analysis element will consist of detailed examination of the policies and procedures operating in Company X that determine whether or not it is able to optimise strategic alignment.
7.5 Literature Synthesis and the Development of a Basic Research Question

7.5.1 Introduction

This section synthesises the preceding literature review chapters with the objective of developing the primary outcomes of each section. These outcomes are then used as the basis for developing the basic research question. The research question is then used in the development of the research methodology and analytical sections of the research, which are covered in detail in Introduction to Business Research 3.

7.5.2 The Literature Synthesis

The literature synthesis suggests the following underlying observations in relation to mergers.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
- There is a functional relationship between cultural positivity and the positive development of human capital.
- Optimisation can best be achieved where there is a high degree of cultural positivity.
- The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.
- Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

These headings are now considered individually in the literature synthesis.

1. There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
   Companies have long used mergers and acquisitions in the search for long-term success. As early as 1970, strategic alignment was identified as a key strategic objective in mergers and acquisitions (Groucho, 1970; Reilly, 1975; Cole, 1985). The literature clearly indicates that mergers that are aimed at enhancing strategic alignment have a greater likelihood of success than those aimed at other strategic objectives (Nanco, 1985; Raisin, 1990, Nadir, 1992, Box, 1995; Ballecock, 2000; Glorfidel, 2000; Champitt and Neep, 2001; Cycle, 2001).
   Companies are increasingly viewing strategic alignment as a driver in strategic planning (Larsson, 2000). The literature suggests that there appears to be a functional relationship between the degree of strategic alignment present in an organisation and the likelihood of long-term sustainable competitive advantage.
This growing awareness has been characterised by a shift towards strategically focused mergers and acquisitions (Ribald, 2000) and away from non-related mergers and acquisitions (Sumptner, 1999). Strategic alignment can be achieved or enhanced by internal reorganisation and initiatives (Bloggs, 1994; Glencoe, 2000; Ruffin, 2000; Jeraboam, 2001; McKinder and Reefer, 2001; Steerpike, 2001; Muffin, 2003) as well as by mergers and acquisitions, but strategic alignment is increasingly becoming the primary consideration in deciding on whether or not to proceed with a proposed merger or acquisition (Ryland, 1998; Fletcher, 1999; Asfaloth, 2003; Halbarad, 2003; Strider, 2003). This approach appears to be general across a range of sectors (Fletcher, 1999; Donaghue and Stevenson, 2000; Bearne and Boadle, 2001; Calill, 2001; Halbarad, 2003).

Several researchers have shown a positive functionality between the degree of strategic alignment achieved by an organisation and the likelihood of long-term success in specific industries or sectors (Ronson, 1990; Proton, 1997; Woodstock, 1997; Clinker, 1998 Refill, 1999; Fountain and Penn, 2000; Larsson, 2000; Cartridge, 2001; Nib, 2001; Scheaffer, 2001). One school of thought suggests that this increased likelihood of long-term success is due to the diminished and more focused risk profile offered to a strategically focused company (Refill, 1999; Lupin, 2000; Daisy, 2001; De Boer, 2001). Another school of thought has attributed the enhanced likelihood of long-term success to the cultural approval more likely in the case of a strategically focused move (Smith, 1996; Skeeker, 2001). The link between cultural approval or positivity and strategic fit has been established in the strategic alignment literature (Johnson, 1998, 1999, 2001; McIntosh, 2001; Beeford, 2002; Skeesome, 2002, 2003; Davie, 2003a) and in the psychology literature (Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000). Cultural positivity is, clearly, a driver in determining long-term merger success (Holtz, 1997; Krebs, 1997; Schumacker, 1997; Saruman, 1998; Gloin, 1999; Bree and Bee, 2000; Ring, 2001; Doom, 2002).

A third line of reasoning has attributed the effect to the degree of strategic fit (as opposed to focus) that can be achieved through the move (De Boer, 2001; Holly, 2002; Muffin, 2002; Jurana, 2003; Skeesome, 2003). There is clearly a link between strategic fit in mergers and acquisitions and cultural positivity (Holmes, 1988; Cracker, 1990; Minder, 2000; Mason, 2001; Columbo, 2002).

The literature suggests that the relative success of strategically focused or unfocused mergers has to be defined in terms of either long-term or short-term measures of success (Branso and Pacino, 2000; Credo, 2000; Hogg, 2000; Tinsley, 2000; Carnacki, 2001). Strategically focused mergers tend to generate success in the longer-term rather than the shorter-term (Hodgson and Eurovan, 2002; Cave and Mars, 2003; Dion and Tilsley, 2003; Flay and Fluke, 2003; Gazolbal and Bird, 2003).

**Conclusion:** The literature suggests that there is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
2. **There is a functional relationship between long-term success and cultural approval.**

There can be little doubt that cultural approval is necessary in virtually any organisation if long-term success is to be achieved (Holtz, 1997; Krebs, 1997; Schumacker, 1997; Butcher, 1998; Coulthard, 1998; Nostrono, 1998; Rigel and Antares, 1998; Saruman, 1998; Trulli, 1998; Goin, 1999; Bree and Bee, 2000; Ripley, 2000; Thomson, 2000; Ring, 2001; Doom, 2002).

Ballcock (2000) cited difficulties in cultural integration as one of the primary reasons why mergers fail. The summary discussed above indicates a clear link between strategic alignment and long-term success. A number of researchers have indicated a clear relationship between strategic alignment and cultural attitudes (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Pikelet, 2001; Aill, 2002; Skeesome, 2002, 2003; Davie, 2003a). It is also clear that a good strategic fit, either through internal initiatives or through mergers and acquisitions, acts as a damper on the development of cultural disapproval (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher 2001).

Internal initiatives and mergers and acquisitions generally have a negative impact on cultural positivity (Crabbe, 1997; Springstein, 1998; Winkle, 1999). The primary reasons for this negative effect appear to be uncertainty about the effects the proposed merger will have on employees (Carapace, 2000). Cultural positivity effects tend to be strongly time-related (Pepper, 1998; Condiment, 1999; Boomer, 2001). The literature suggests that cultural positivity can be either amplified or damped by different variables (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001, Cakebread, 2002). The literature suggests that the damping effect is particularly significant in the case of enterprise-wide communication systems (Hackett, 1997; Stoatir, 1998; Glamkit, 1999; Dodderer, 2001). The literature also suggests that cultural positivity is measurably different under the same universal conditions in the case of acquirers and targets in acquisitions (Druze, 1996; Cumberland, 1997; Stuart, 1998).

The success drive capacity of cultural positivity is also related to the size of the merger or acquisition (Keith, 2000; Orville, 2000), in relation to the communication systems existing within the merging or acquiring companies (Gossip, 2002; Heresy, 2002) and in relation to the authority level considered (Wimsey, 1999; Jester, 2000; Trencher, 2000; Boss, 2001; Docker and Dyke, 2001; Leader and Grubb, 2001; Freud, 2002; Grubb, 2002).

**Conclusion:** The literature suggests that there is a functional relationship between long-term success and cultural approval.

3. **There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.**

The literature in this area is sparse. Relatively few researchers have directly linked strategic fit with strategic alignment. The primary reason for this appears to be that researchers often use the two terms interchangeably. Other researchers clearly refer to strategic fit when they refer to strategic alignment engineering (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a).
Some researchers have specifically considered the relationship between strategic fit and strategic alignment (Juicer and Pulp, 1995; Minder, 2000; Blender, 2001; Mason, 2001; Bill, 2002; Columbo, 2002; Hutch, 2002; Joiner, 2002; Kojak, 2002; Quincy, 2002; Starsky, 2002; Baker, 2003; Grinder and Mill, 2003). The findings of these research programmes all clearly indicate a direct relationship between strategic fit and strategic alignment.

Other researchers have measured the degree of relatedness between strategic fit and strategic alignment (Jones, 2003; Jurana et al., 2003). Both research programmes concluded that that strategic fit in mergers and acquisitions is a direct driver of strategic alignment. Other research programmes have identified the link between strategic fit and long-term likelihood of success (Be Boer, 2001; Mols, 2001; Holly, 2002; Muffin, 2002; Ryan et al., 2003a; Skeesome, 2003).

Strategic fit has been stated as being beneficial in the development of cultural positivity (Cracker, 1990; Homes, 1998; Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000), which is, itself, a function of strategic alignment.

There has been no reported opposition to any of these links in the literature. Given the established link between strategic alignment and success, and Jones’s (2003) link between strategic alignment and strategic fit, it seems reasonable to assert that there is, indeed, a functional relationship between strategic fit and strategic alignment.

**Conclusion:** The literature suggests that there is a functional relationship between the degree of strategic fit and strategic alignment in mergers.

4. There is a functional relationship between strategic alignment engineering and cultural positive attitudes.


Numerous researchers have identified strategic fit as a function of cultural impact drivers (Johnson, 1998, 1999, 2001; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). Pracitioners have also detected the importance of this issue (Egbert plc, 2000; Challenger plc, 2001). Other researchers have stressed the importance of the link between strategic alignment engineering (strategic fit) and positive cultural attitudes (Pikelet, 2002; Davie, 2003a). The possible workforce speculative damper effect has been explored by a number of researchers (Mustard, 1995; Plum, 1995; Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Puffin, 2000; Blucher, 2001; Dodderer, 2001; Cakebread, 2002). In all cases the results indicated that a good strategic fit coupled with effective communication systems can minimise negativity effects (Hackett, 1997; Stoaar, 1999; Glaefit, 1999; Bligh, 2001; Christian, 2002). In such cases the relative position of acquirer and target must be recognised (Druze, 1996; Cumberland, 1997; Stuart, 1998; Nomad, 2000; Pill, 2001; Cadmium, 2002).

In some cases, specific analysis techniques have been developed to map strategic fit capabilities in relation to likely positive attitude propagation (Juicer and Pulp, 1995; Blender, 2001; Joiner, 2002; Baker, 2003; Grinder and Mill, 2003). In all cases, the research results indicated a clear link between strategic fit and the
propagation of cultural positivity. This is significant, as mergers and acquisitions typically generate cultural negativity (Crabbe, 1997; Springstein, 1998; Winkle, 1999) unless carefully managed, largely as a result of uncertainty generated by change (Pepper, 1998; Condiment, 1999; Carapace, 2000; Boomer, 2001).

Other researchers have supported the view of functionality between strategic fit and cultural positivity while focusing on different variables including scale (Keith, 2000; Orville, 2000), communications obstacles (Gossip, 2000; Heresay, 2000), seniority (Wimset, 1999; Boss, 2001; Leader and Grubb, 2001) and timescale (Butcher, 1998; Mitchell, 1998; Thomson, 2000).

**Conclusion:** The literature suggests that there is a functional relationship between strategic alignment engineering and cultural positive attitudes.

5. **There is a functional relationship between cultural positivity and the positive development of human capital.**

There is a large and varied literature on human capital and human capital development. All the literature suggests that human capital can best be improved in an environment characterised by generally positive perceptions (Ross, 1998; McIntosh, 2000; Smith, 2001). Other researchers have clearly established a link between cultural positivity and the potential for the development of increased human capital values (Fellah, 1990; Schofiled, 1990; Chalker, 1996; Manpower, 1997; Toil and Labour, 1998; Jofis, 2000; Muffin, 2000; Ryan, 2000; Skylark, 2000; Slave, 2000; Bodkin and Brace, 2001; McIntosh, 2001; Overseer, 2001; Pramm and Pusher, 2001; Tivity, 2002). There are virtually no contradictory views in the literature.

Researchers have also demonstrated a clear link between cultural positivity and increased potential for human capital development as key success drivers in organisations (Alien, 1987; Nostromo, 1988; Krebs, 1997; Schumacker, 1997; Coulthard, 1998; Rigel and Antares, 1998; Amra, 2000; Belit, 2000; Ripley, 2000; Thak and Nabonidas, 2000; Juma, 2001; Zarono, 2002; Zenobia, 2002).

Other researchers have concentrated on specific aspects of the relationship between cultural positivity and the development of human capital including commitment and motivation (Fergusson, 1996; Venales, 1997; Clampitt, 1998; Houlier, 1998; Jester, 2000; Trencher, 2000; Docker and Dyke, 2001; McLeish, 2001; McNeill, 2001).

The overwhelming evidence from the literature is that there is a clear link between cultural positivity and the potential for the positive development of human capital.

**Conclusion:** The literature suggests that there is a functional relationship between cultural positivity and the positive development of human capital.

6. **Optimisation can best be achieved where there is a high degree of cultural positivity.**

It is clear that cultural attitudes, especially positivity, can be used as a source of optimisation (Ross, 1998; McIntosh, 2000; Smith, 2001). In addition, where cultural positivity can be developed and enhanced, the potential for both cultural and organisational optimisation increases (Schofiled, 1990; Chalker, 1996; Manpower, 1997; Toil and Labour, 1998; Fellah, 1990; Jofis, 2000; Muffin, 2000;
Cultural optimisation is more readily achievable than technological optimisation (Dalry, 1999; Gorgie, 1999; Gyle, 2000; Juniper, 2000; Slateford, 2000; Balerno, 2002a; Haymarket, 2002; Hermiston, 2002) because it is more variable and flexible than the drivers of technological optimisation (Bracket, 1997; Pin, 1998; Joint and Weld, 1999; Noggin, 2000; Purlin, 2000; Strut and Tie, 2000; Fillet and Butt, 2001; Seal and Gromet, 2001).

The people (as opposed to culture) optimisation driver is relatively difficult and complex to achieve (Clam, 1980; Rose, 1985; Daisy, 1990; Flower, 1995; Tulip, 1999; Crocus, 2000). It is apparent that people issues should be treated as high priority where managers are seeking cultural and organisational optimisation under conditions of change (Bobbin, 1998; Cotton, 2000; Thread, 2001; Mills, 2002). Where people optimisation is made a priority, cultural positivity increases (Happy, 2000; Laff, 2000; Smile and Grin, 2001).

Conclusion: Optimisation can best be achieved where there is a high degree of cultural positivity.

7. The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.

Strategic alignment is widely accepted as being a primary driver of organisational, technological and support function optimisation (Fundin, 1998, Balin, 1999; Gloin, 2000). There is a functional relationship between the degree of strategic alignment engineered in an organisation and the degree of general optimisation that is achievable (Carc, 1999; Dale, 2000; Smaug, 2000; Bard, 2001).

In many cases this potential for optimisation is not realised (Balin, 2000; Thorin, 2000; Bilbo, 2001; Bolg, 2002), primarily because companies are not aware of it (Chaos, 1998; Revo, 1999; Lake, 2000; Arrow, 2001) or if they are aware of it, they fail to prepare adequate plans for its exploitation (Coup, 2000; Takeover, 2000; Buyout, 2001).

In the limited research that has been carried out on the optimisation of strategic alignment in developing positive human capital development, the results clearly indicate that such optimisation is clearly possible (Bunn, 1998; Roll, 1990). Generally companies that are good at achieving strategic alignment are also good at making the best use of it to enhance the positive development of human capital (Baguette, 1999; Doughnut, 2000; Bagel, 2001). There appear to be significant individual and group similarities in this respect (Bridie, 2000; Slice, 2000; Pie and Pastie, 2000).

Generally the more that strategic alignment and human capital optimisation are linked in a formal strategy, the more effective the optimisation process becomes (Dogg, 1995; Catt and Goldfish, 1997; Budgie and Parrott, 1998). The opposite effect appears to apply to companies that lack strategic alignment or which have adopted a diversification strategy (Rabbit and Coney, 1999; Mouse and Hare, 2000; Leveritt, 2001; Macaw, 2001).

There has been some research to suggest that some companies combine strategic alignment optimisation and general optimisation strategies to great effect (Branch, 1995; Leaf and Bark, 1996; Root and Twigg, 1996; Knott, 1997). Cul-
cultural and technological optimisation appears to be best achieved under conditions where strategic objectives are focused (Watt, 2000; Volta, 2001; Ampere, 2002; Faraday, 2002; Ohm, 2002).

Conclusion: The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.

8. Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

The human capital literature is well developed (Talker, 1985; Soft, 1986, Soft and Wimpit, 1989; Gas, 2000; Wind, 2000; Blower, 2001; Licker, 2001; Zero, 2001; Nil, 2002). It is clear that the positive development of human capital can be stimulated and encouraged by the use of direct techniques. Optimisation techniques based on cultural attitude have been shown to work (Flatline, 2000).

The degree of human capital optimisation that can be achieved has been shown to be directly linked to cultural positivity (Friend, 1998; Pal, 1999; Buddy, 2000; Hinnie, 2000; China, 2001), which is itself directly related to the degree of strategic alignment (Johnson, 1998, 1999, 2001; McIntosh, 2001; Currie et al., 2002; Gretna, 2002; Skeesome, 2002, 2003; Davie, 2003a) and has been shown to be the case in practice (Egbert plc, 2000; Challenger plc, 2001). Strategic fit, which is closely allied to strategic alignment has been shown to exhibit the same dependency (Beeford, 2000; Pikelet, 2002; Davie, 2003a). Specifically cultural positivity tends to act as a damper on pre-implementation speculation and the disruption to cultural attitudes that this can cause (Plum, 1995; Mustard, 1995; Khan, 1997; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001).

Human capital optimisation is driven by a number of different variables that can all be optimised by management. These include motivation (Dosh, 1991; Cash, 1992; Packet, 1992; Wad, 1995; Squander, 1998; Grubb, 2000), ambition (Creep-er, 2001; Groveller, 2002; Crawler, 2002; Steadfast, 2002), self-esteem (Dandy, 1998; Bo and Brumel, 1999; Poser, 2000) and security (Dole, 1998; Brew, 1999; Dosser, 2000; Fela, 2000; Limpet and Tick, 2000; Scratcher, 2000; Deal, 2001; Howk and Howker, 2001; Itch, 2001; Package, 2002).

Some companies appear to make great efforts to optimise strategic fit in the positive development of human capital (Chopin, 1995; Beethoven, 2000a; Wagner, 2000; Verdi, 2001; Mozart, 2002; Schubert, 2003). The underlying success factor again appears to be the degree of strategic alignment available to generate optimisation potential (Lambert, 1999; Connery and Kargan, 2000). This reinforces the research on the commonality between strategic alignment and strategic fit in terms of optimisation potential (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). As the literature recognises the study of strategic alignment and strategic fit as being one and the same (Juicer and Pulp, 1995; Minder, 2000; Blender, 2001; Mason, 2001; Bill, 2002; Columbo, 2002; Hutch, 2002; Joiner, 2002; Kojak, 2002; Quincy, 2002; Starsky, 2002; Baker, 2003; Grinder and Mill, 2003), it seems reasonable to conclude that the degree of strategic alignment achieved in mergers or by other initiatives acts as a direct driver on cultural optimisation.
Conclusion: Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

The literature review therefore suggests the following synthesised outcomes.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.
- There is a functional relationship between long-term success and cultural approval.
- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.
- There is a functional relationship between cultural positivity and the positive development of human capital.
- Optimisation can best be achieved where there is a high degree of cultural positivity.
- The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.
- Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

7.5.3 The Development of a Research Question

The use of strategic alignment in mergers in the development of long-term success is crucial to Company X. The strategic planners have identified strategic alignment and the development of human capital as the key drivers to this success. In addition, it is appreciated that competing companies are also embarking on merger and acquisition programmes as a medium-risk option for the achievement of growth in a stagnant sector that also suffers from overproduction. Given that the use of the strategic alignment and human capital strategy is vital for long-term success, the most important single consideration is whether or not companies (Company X and the competition) use this strategy in securing long-term success.

In terms of measuring success, strategic alignment and strategic fit are key drivers. It is clear that cultural positivity acts as a bridge between strategic alignment/fit and the positive development of human capital. It is also apparent that optimisation can best be achieved where there is a high degree of cultural positivity, implying a link between optimising strategic alignment and the positive development of human capital. Finally, companies can indeed optimise the strategic alignment generated by merger in order to encourage the positive development of human capital.

Both the conditions prevalent in Company X and the literature indicate that these are valid research areas and that the key element is the extent to which the strategic optimisation option is used by Company X and by the competition. The research question adopted for the analysis section of this research, therefore, is as follows.
• Do companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital in order to create long-term success?

  The aim of the research is as follows.

• To show whether or not companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital in order to create long-term success.

  The objectives of the research are as follows.

• To show that, where companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital, the likelihood of long-term success is higher.

• To show that, where companies fail to optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital, the likelihood of long-term success is lower.

  The research questions together with the associated research aims and objectives form the basis of the process-based research design.

Learning Summary

Note: this module has repeated considerable elements of material presented in Module 6 on type A (hypothesis-based) literature review submissions. The module summary and problems produced at the end of Module 6 are not repeated here.

Note: The following module summary would not appear in the type D (exploratory-based) literature review submission.

Candidates should by now appreciate the difference between a type A (hypothesis-based) and a type B (exploratory-based) literature review submission. The two forms of submission are similar in some ways and very different in others. In both cases the literature review and synthesis are similar, although the type D (exploratory-based) submission is often extended to include a wider range of literature sources. The main differences come after the synthesis. In a type A (hypothesis-based) literature review submission the candidate goes on to develop a pilot study and uses the results of the pilot study in association with the literature review to develop a formal theory that is then tested using hypotheses. In type D (exploratory-based) literature research the candidate develops a research question and states his or her research aims and objectives in relation to that research question.
Practice Final Examinations

These two papers are practice examinations. They are designed to give a basic appreciation of the level of detail and understanding that is likely to be required in the examinations.
Appendix 1 / Practice Final Examinations

Practice Final Examination 1

- Assume that an EBS DBA candidate has developed the following draft literature review synthesis and basic theory development theory chapter. He or she is now considering the content prior to submitting it as part of the literature review submission for consideration by the EBS Research Committee.

- This example chapter is shorter than would normally be expected for submission by the EBS Research Committee. This shortened example is used for examination purposes only.

- Question 1 is based entirely on the sample chapter and the answer should be fully applied to the sample research proposal.

- Questions 2 and 3 are general but should be applied in the context of the sample chapter as much as possible.

Consider the following sample literature synthesis.

The Literature Synthesis

The literature review (not shown) suggests the following underlying observations in relation to mergers.

- There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.

There is a functional relationship between long-term success and cultural approval.

- There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.

- There is a functional relationship between strategic alignment engineering and cultural positive attitudes.

- There is a functional relationship between cultural positivity and the positive development of human capital.

- Optimisation can be best achieved where there is a high degree of cultural positivity.

- The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.

- Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

These headings are now considered individually in the literature synthesis.

1. There is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.

Companies have long used mergers and acquisitions in the search for long-term success. As early as 1970, strategic alignment was identified as a key strategic objective in mergers and acquisitions (Groucho, 1970; Reilly, 1975; Cole, 1985). The literature clearly indicates that mergers aimed at enhancing strategic alignment have a greater likelihood of success than those aimed at other strategic objectives (Nancho, 1985; Raisin, 1990; Nadir, 1992; Box, 1995; Ballcock, 2000; Glorfidel, 2000; Champitt and Neep, 2001; Cycle, 2001).
Companies are increasingly viewing strategic alignment as a driver in strategic planning (Larsson, 2000). The literature suggests that there appears to be a functional relationship between the degree of strategic alignment present in an organisation and the likelihood of long-term sustainable competitive advantage (Woodstock, 1997; Clinker, 1998). This growing awareness has been characterised by a shift towards strategically focused mergers and acquisitions (Ribald, 2000) and away from non-related mergers and acquisitions (Sumpter, 1999).

Strategic alignment can be achieved or enhanced by internal reorganisation and initiatives (Bloggs, 1994; Glencoe, 2000; Ruffin, 2000; Jeraboam, 2001; McKinder and Reefer, 2001; Steerpike, 2001; Muffin, 2003) as well as by mergers and acquisitions, but strategic alignment is increasingly becoming the primary consideration in deciding on whether or not to proceed with a proposed merger or acquisition (Ryland, 1998; Fletcher, 1999; Asfaloth, 2003; Halbarad, 2003; Strider, 2003). This approach appears to be general across a range of sectors (Fletcher, 1999; Donaghe and Stevenson, 2000; Bearne and Boadle, 2001; Calill, 2001; Halbarad, 2003).

Several researchers have shown a positive functionality between the degree of strategic alignment achieved by an organisation and the likelihood of long-term success in specific industries or sectors (Ronson, 1990; Proton, 1997; Woodstock, 1997; Clinker, 1998; Refill, 1999; Fountain and Penn, 2000; Larsson, 2000; Cartridge, 2001; Nib, 2001; Scheaffer, 2001). One school of thought suggests that this increased likelihood of long-term success is due to the diminished and more focused risk profile offered by a strategically focused company (Refill, 1999; Lupin, 2000; Daisy, 2001; De Boer, 2001).

Another school of thought has attributed the enhanced likelihood of long-term success to the cultural approval more likely in the case of a strategically focused move (Smith, 1996; Skeeeke, 2001). The link between cultural approval or positivity and strategic fit has been established in the strategic alignment literature (Johnson, 1998, 1999, 2001; McIntosh, 2001; Beeford, 2002; Skeesome, 2002, 2003; Davie, 2003a) and in the psychology literature (Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000). Cultural positivity is, clearly, a driver in determining long-term merger success (Holtz, 1997; Krebs, 1997; Schumacker, 1997; Saruman, 1998; Gloin, 1999; Bree and Bee, 2000; Ring, 2001; Doom, 2002).

A third line of reasoning has attributed the effect to the degree of strategic fit (as opposed to focus) that can be achieved through the move (De Boer, 2001; Holly, 2002; Muffin, 2002; Jurana, 2003; Skeesome, 2003). There is clearly a link between strategic fit in mergers and acquisitions and cultural positivity (Holmes, 1988; Cracker, 1990; Minder, 2000; Mason, 2001; Columbo, 2002).

The literature suggests that the relative success of strategically focused or unfocused mergers has to be defined in terms of either long-term or short-term measures of success (Branso and Pacino, 2000; Credo, 2000; Hogg, 2000; Tinsley, 2000; Carnacki, 2001). Strategically focused mergers tend to generate success in the longer-term rather than the shorter-term (Hodgson and Eurovan, 2002; Cave and Mars, 2003; Dion and Tilsley, 2003; Flay and Fluke, 2003; Gazolba and Bird, 2003).
Conclusion: The literature suggests that there is a functional relationship between the degree of strategic alignment in an acquisition and the likelihood of long-term success.

2. There is a functional relationship between long-term success and cultural approval.
There can be little doubt that cultural approval is necessary in virtually any organisation if long-term success is to be achieved (Holtz, 1997; Krebs, 1997; Schumacker, 1997; Butcher, 1998; Coulthard, 1998; Nostromo, 1998; Rigel and Antares, 1998; Saruman, 1998; Trulli, 1998; Gloin, 1999; Bree and Bee, 2000; Ripley, 2000; Thomson, 2000; Ring, 2001; Doom, 2002).
Ballcock (2000) cited difficulties in cultural integration as one of the primary reasons why mergers fail. The summary discussed above indicates a clear link between strategic alignment and long-term success. A number of researchers have indicated a clear relationship between strategic alignment and cultural attitudes (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Pikelet, 2001; Aill, 2002; Skeesome, 2002, 2003; Davie, 2003a). It is also clear that a good strategic fit, either through internal initiatives or through mergers and acquisitions, acts as a damper on the development of cultural disapproval (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001).
Internal initiatives and mergers and acquisitions generally have a negative impact on cultural positivity (Crabbe, 1997; Springstein, 1998; Winkle, 1999). The primary reason for this negative effect appears to be uncertainty about the effects the proposed merger will have on employees (Carapace, 2000). Cultural positivity effects tend to be strongly time-related (Pepper, 1998; Condiment, 1999; Boomer, 2001). The literature suggests that cultural positivity can be either amplified or damped by different variables (Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001, Cakebread, 2002). It also suggests that the damping effect is particularly significant in the case of enterprise-wide communication systems (Hackett, 1997; Stoatir, 1998; Glaekit, 1999; Dodderer, 2001). The literature implies that cultural positivity is measurably different under the same universal conditions in the case of acquirers and targets in acquisitions (Druze, 1996; Cumberland, 1997; Stuart, 1998).
The success drive capacity of cultural positivity is also related to the size of the merger or acquisition (Keith, 2000; Orville, 2000), to the communication systems existing within the merging or acquiring companies (Gossip, 2002; Heresay, 2002), and to the authority level considered (Wimsey, 1999; Jester, 2000; Trencher, 2000; Boss, 2001; Docker and Dyke, 2001; Leader and Grubb, 2001; Freud, 2002; Grubb, 2002)
Conclusion: The literature suggests that there is a functional relationship between long-term success and cultural approval.

3. There is a functional relationship between the degree of strategic fit and strategic alignment in mergers.
The literature in this area is sparse. Relatively few researchers have directly linked strategic fit with strategic alignment. The primary reason for this appears to be that researchers often use the two terms interchangeably. Other researchers
clearly refer to strategic fit when they refer to strategic alignment engineering (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a).

Some researchers have specifically considered the relationship between strategic fit and strategic alignment (Juicer and Pulp, 1995; Minder, 2000; Blender, 2001; Mason, 2001; Bill, 2002; Columbo, 2002; Hutch, 2002; Joiner, 2002; Kojak, 2002; Quincy, 2002; Starsky, 2002; Baker, 2003; Grinder and Mill, 2003). The findings of these research programmes all clearly indicate a direct relationship between strategic fit and strategic alignment.

Other researchers have measured the degree of relatedness between strategic fit and strategic alignment (Jones, 2003; Jurana et al., 2003). Both research programmes concluded that strategic fit in mergers and acquisitions is a direct driver of strategic alignment. Other research programmes have identified the link between strategic fit and long-term likelihood of success (De Boer, 2001; Mols, 2001; Holly, 2002; Muffin, 2002; Ryan et al., 2003a, Skeesome, 2003).

Strategic fit has been stated as being beneficial in the development of cultural positivity (Cracker, 1990; Homes, 1998; Shrink, 1998; Perkins, 1999; Reebok, 1999; Hussein, 2000), which is, itself, a function of strategic alignment. There has been no reported opposition to any of these links in the literature. Given the established link between strategic alignment and success, and Jones’s (2003) link between strategic alignment and strategic fit, it seems reasonable to assert that there is, indeed, a functional relationship between strategic fit and strategic alignment.

Conclusion: The literature suggests that there is a functional relationship between the degree of strategic fit and strategic alignment in mergers.

4. There is a functional relationship between strategic alignment engineering and cultural positive attitudes.


Numerous researchers have identified strategic fit as a function of cultural impact drivers (Johnson, 1998, 1999, 2001; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). Practitioners have also detected the importance of this issue (Egbert plc, 2000; Challenger plc, 2001). Other researchers have stressed the importance of the link between strategic alignment engineering (strategic fit) and positive cultural attitudes (Pikelet, 2002; Davie, 2003a). The possible workforce speculative damper effect has been explored by a number of researchers (Mustard, 1995; Plum, 1995; Khan, 1997; Rosenberg, 1998; Belcher, 1999; Schutz and Schultz, 1999; Puffin, 2000; Blucher, 2001; Dodderer, 2001; Cakebread, 2002). In all cases the results indicated that a good strategic fit coupled with effective communication systems can minimise negativity effects (Hackett, 1997; Stoatir, 1998; Glaektit, 1999; Bligh, 2001; Christian, 2002). In such cases the relative position of acquirer and target must be recognised (Druze, 1996; Cumberland, 1997; Stuart, 1998; Nomad, 2000; Pill, 2001; Cadmium, 2002).
In some cases, specific analysis techniques have been developed to map strategic fit capabilities in relation to likely positive attitude propagation (Juicer and Pulp, 1995; Blender, 2001; Joiner, 2002; Baker, 2003; Grinder and Mill, 2003). In all cases, the research results indicated a clear link between strategic fit and the propagation of cultural positivity. This is significant, as mergers and acquisitions typically generate cultural negativity (Crabbe, 1997; Springstein, 1998; Winkle, 1999) unless carefully managed, largely as a result of uncertainty generated by change (Pepper, 1998; Condiment, 1999; Carapace, 2000; Boomer, 2001). Other researchers have supported the view of functionality between strategic fit and cultural positivity while focusing on different variables including scale (Keith, 2000; Orville, 2000), communications obstacles (Gossip, 2000; Heresay, 2000), seniority (Wimset, 1999; Boss, 2001; Leader and Grubb, 2001) and timescale (Butcher, 1998; Mitchell, 1998; Thomson, 2000).

Conclusion: The literature suggests that there is a functional relationship between strategic alignment engineering and cultural positive attitudes.

5. There is a functional relationship between cultural positivity and the positive development of human capital.

There is a large and varied literature on human capital and human capital development. All the literature suggests that human capital can best be improved in an environment characterised by generally positive perceptions (Ross, 1998; McIntosh, 2000; Smith, 2001). Other researchers have clearly established a link between cultural positivity and the potential for the development of increased human capital values (Fellah, 1990; Schofield, 1990; Chalker, 1996; Manpower, 1997; Toil and Labour, 1998; Jofis, 2000; Muffin 2000; Skylark, 2000; Slave, 2000; Ryan, 2000; Bodkin and Brace, 2001; McIntosh, 2001; Overseer, 2001; Pramm and Pusher, 2001; Tivity, 2002). There are virtually no contradictory views in the literature.

Researchers have also demonstrated a clear link between cultural positivity and increased potential for human capital development as key success drivers in organisations (Alien, 1987; Nostromo, 1988; Krebs, 1997; Schumacker, 1997; Coulthard, 1998; Rigel and Antares, 1998; Amra, 2000; Belit, 2000; Ripley, 2000; Thak and Nabonidas, 2000; Juma, 2001; Zarono, 2002; Zenobia, 2002). Other researchers have concentrated on specific aspects of the relationship between cultural positivity and the development of human capital including commitment and motivation (Fergusson, 1996; Venales, 1997; Clampitt, 1998; Houlier, 1998; Jester, 2000; Trencher, 2000; Docker and Dyke, 2001; McLeish, 2001; McNeill, 2001).

The overwhelming evidence from the literature is that there is a clear link between cultural positivity and the potential for the positive development of human capital.

Conclusion: The literature suggests that there is a functional relationship between cultural positivity and the positive development of human capital.

6. Optimisation can best be achieved where there is a high degree of cultural positivity.

It is clear that cultural attitudes, especially positivity, can be used as a source of
optimisation (Ross, 1998; McIntosh, 2000; Smith, 2001). In addition, where cultural positivity can be developed and enhanced, the potential for both cultural and organisational optimisation increases (Schofiled, 1990; Chalker, 1996; Manpower, 1997; Toil and Labour, 1998; Fellah, 1990; Jofis, 2000; Muffin, 2000; Ryan, 2000; Skylark, 2000; Slave, 2000; Bodkin and Brace, 2001; McIntosh, 2001; Overseer, 2001; Pramm and Pusher, 2001; Tivity, 2002).

Cultural optimisation is more readily achievable than technological optimisation (Dalry, 1999; Gorgie, 1999; Gyle, 2000; Juniper, 2000; Slateford, 2000; Balerno, 2002a; Haymarket, 2002; Hermiston, 2002) because it is more variable and flexible than the drivers of technological optimisation (Bracket, 1997; Pin, 1998; Joint and Weld, 1999; Noggin, 2000; Purlin, 2000; Strut and Tie, 2000; Fillet and Butt, 2001; Seal and Gromet, 2001).

The people (as opposed to culture) optimisation driver is relatively difficult and complex to achieve (Clam, 1980; Rose, 1985; Daisy, 1990; Flower, 1995; Tulip, 1999; Crocus, 2000). It is apparent that people issues should be treated as high priority where managers are seeking cultural and organisational optimisation under conditions of change (Bobbin, 1998; Cotton, 2000; Thread, 2001; Mills, 2002). Where people optimisation is made a priority, cultural positivity increases (Happy, 2000; Laff, 2000; Smile and Grin, 2001).

**Conclusion:** Optimisation can best be achieved where there is a high degree of cultural positivity.

7. **The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.**

Strategic alignment is widely accepted as being a primary driver of organisational, technological and support function optimisation (Fundin, 1998, Balin, 1999; Gloin, 2000). There is a functional relationship between the degree of strategic alignment engineered in an organisation and the degree of general optimisation that is achievable (Carc, 1999; Dale, 2000; Smaug, 2000; Bard, 2001).

In many cases this potential for optimisation is not realised (Balin, 2000; Thorin, 2000; Bilbo, 2001; Bolg, 2002), primarily because companies are not aware of it (Chaos, 1998; Revo, 1999; Lake, 2000; Arrow, 2001) or if they are aware of it, they fail to prepare adequate plans for its exploitation (Coup, 2000; Takeover, 2000; Buyout, 2001).

In the limited research that has been carried out on the optimisation of strategic alignment in developing positive human capital development, the results clearly indicate that such optimisation is clearly possible (Bunn, 1998; Roll, 1990). Generally companies that are good at achieving strategic alignment are also good at making the best use of it to enhance the positive development of human capital (Baguette, 1999; Doughnut, 2000; Bagel, 2001). There appear to be significant individual and group similarities in this respect (Bridie, 2000; Slice, 2000; Pie and Pastie, 2000).

Generally the more that strategic alignment and human capital optimisation are linked in a formal strategy, the more effective the optimisation process becomes (Dogg, 1995; Catt and Goldfish, 1997; Budgie and Parrott, 1998). The opposite effect appears to apply to companies that lack strategic alignment or which have
adopted a diversification strategy (Rabbit and Coney, 1999; Mouse and Hare, 2000; Leveritt, 2001; Macaw, 2001).

There has been some research to suggest that some companies combine strategic alignment optimisation and general optimisation strategies to great effect (Branch, 1995; Leaf and Bark, 1996; Root and Twigg, 1996; Knott, 1997). Cultural and technological optimisation appears to be best achieved under conditions where strategic objectives are focused (Watt, 2000; Volta, 2001; Ampere, 2002; Faraday, 2002; Ohm, 2002).

**Conclusion:** The strategic alignment offered by merger can be optimised in terms of its potential to lead to the development of human capital.

8. Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

The human capital literature is well developed (Talker, 1985; Soft, 1986, Soft and Wimpit, 1989; Gas, 2000; Wind, 2000; Blower, 2001; Licker, 2001; Zero, 2001; Nil, 2002). It is clear that the positive development of human capital can be stimulated and encouraged by the use of direct techniques. Optimisation techniques based on cultural attitude have been shown to work (Flatline, 2000).

The degree of human capital optimisation that can be achieved has been shown to be directly linked to cultural positivity (Friend, 1998; Pal, 1999; Buddy, 2000; Hinnie, 2000; China, 2001), which is itself directly related to the degree of strategic alignment (Johnson, 1998, 1999, 2001; McIntosh, 2001; Currie et al., 2002; Gretna, 2002; Skeesome, 2002, 2003; Davie, 2003a) and has been shown to be the case in practice (Egbert plc, 2000; Challenger plc, 2001). Strategic fit, which is closely allied to strategic alignment, has been shown to exhibit the same dependency (Beeford, 2000; Pikelet, 2002; Davie, 2003a). Specifically cultural positivity tends to act as a damper on pre-implementation speculation and the disruption to cultural attitudes that this can cause (Plum, 1995; Mustard, 1995; Khan, 1997; Belcher, 1999; Schultz and Schultz, 1999; Blucher, 2001).

Human capital optimisation is driven by a number of different variables that can all be optimised by management. These include motivation (Dosh, 1991; Cash, 1992; Packet, 1992; Wad, 1995; Squander, 1998; Grubb, 2000), ambition (Creeper, 2001; Groveller, 2002; Crawler, 2002; Steadfast, 2002), self-esteem (Dandy, 1998; Bo and Brumel, 1999; Poser, 2000) and security (Dole, 1998; Brew, 1999; Dosser, 2000; Flea, 2000; Limpet and Tick, 2000; Scratcher, 2000; Deal, 2001; Howk and Howker, 2001; Itch, 2001; Package, 2002).

Some companies appear to make great efforts to optimise strategic fit in the positive development of human capital (Chopin, 1995; Beethoven, 2000a; Wagner, 2000; Verdi, 2001; Mozart, 2002; Schubert, 2003). The underlying success factor again appears to be the degree of strategic alignment available to generate optimisation potential (Lambert, 1999; Connery and Kargan, 2000). This reinforces the research on the commonality between strategic alignment and strategic fit in terms of optimisation potential (Johnson, 1998, 1999, 2001; Beeford, 2000; McIntosh, 2001; Skeesome, 2002, 2003; Davie, 2003a). As the literature recognises the study of strategic alignment and strategic fit as being one and the same (Juicer and Pulp, 1995; Minder, 2000; Blender, 2001; Mason, 2001; Bill, 2002; Columbo, 2002;
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Hutch, 2002; Joiner, 2002; Kojak, 2002; Quincy, 2002; Starsky, 2002; Baker, 2003; Grinder and Mill, 2003), it seems reasonable to conclude that the degree of strategic alignment achieved in mergers or by other initiatives acts as a direct driver on cultural optimisation.

**Conclusion:** Companies can optimise the enhanced strategic alignment generated by merger to encourage the positive development of human capital.

**The development of a research question**

The use of strategic alignment in mergers in the development of long-term success is crucial to Company X. The strategic planners have identified strategic alignment and the development of human capital as the key drivers to this success. In addition, it is appreciated that competing companies are also embarking on merger and acquisition programmes as a medium-risk option for the achievement of growth in a stagnant sector that also suffers from overproduction. Given that the use of the strategic alignment and human capital strategy is vital for long-term success, the most important single consideration is whether or not companies (Company X and the competition) use this strategy in securing long-term success.

In terms of measuring success, strategic alignment and strategic fit are key drivers. It is clear that cultural positivity acts as a bridge between strategic alignment/fit and the positive development of human capital. It is also apparent that optimisation can best be achieved where there is a high degree of cultural positivity, implying a link between optimising strategic alignment and the positive development of human capital. Finally, companies can indeed optimise the strategic alignment generated by merger in order to encourage the positive development of human capital.

Both the conditions prevalent in Company X and the literature indicate that these are valid research areas and that the key element is the extent to which the strategic optimisation option is used by Company X and by the competition. The research question adopted for the analysis section of this research, therefore, is as follows.

- Do companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital in order to create long-term success?

The aim of the research is as follows.

- To show whether or not companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital in order to create long-term success.

The objectives of the research are as follows.

- To show that, where companies optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital, the likelihood of long-term success is higher.

- To show that, where companies fail to optimise the increase in strategic alignment generated by mergers to enhance the positive development of human capital, the likelihood of long-term success is lower.
The research questions together with the associated research aims and objectives form the basis of the process-based research design.

1. 
   a. Identify the strengths and weaknesses of the literature synthesis and provide a rational for each.
   b. Do the strengths compensate for the weaknesses as the literature synthesis stands?
   c. Suggest how the major weaknesses you have identified should be addressed.
   d. Appraise each step in the chain of logic that has been used in developing the research question from the literature synthesis.
   e. Based on the preceding analysis, comment on the suitability of the research question.
   (15 marks)

2. Set out an alternative format based on a hypothesis-based approach (research orientation A or B).
   (10 marks)

3. Assume that the candidate wishes to undertake a pilot study to generate a formal research question. What issues should the pilot study report address and how should the report be structured?
   (25 marks)

4. Assume the pilot study suggests that companies focus on the short-term impact of mergers on human capital development. How could this finding be accommodated within the overall research programme?
   (25 marks)
Consider the following sample literature review.

**Literature review chapter**

The demand for manufacturers in Scotland and South East England for key strategic business services during the three years 1988–1990 within the framework of the flexible firm paradigm

**Introduction**

This chapter analyses the demand for manufacturers in Scotland and South East England for key strategic business services during the three years 1988–1990 within the framework of the flexible firm paradigm. A series of hypotheses concerning the demand for business services is developed and tested. Evidence suggests that expansion of demand is the primary cause of increasing business service output and not restructuring strategies as predicted by the flexible firm model. Both externalisation and internalisation of business services are occurring simultaneously; the net balance is consistent with a marginal trend towards vertical integration in manufacturing and a stronger one in business services.

Recently, demand from manufacturing firms for business services such as market research, advertising, consultancy, computer software and graphic design has grown considerably. The value added in manufacturing generated by strategic business services has been rising as manufacturers move away from mass production systems to more customised production, which requires a greater input of strategic services such as design, quality control, and consultancy. Manufacturers have a choice between ‘making’ or ‘buying’ such services, except where regulations prescribe that external firms must be hired to provide them (for example, auditing). Hence, for the majority of business service functions, enterprises may choose whether to allocate the work to their own employees, with coordination of supply carried out by internal direction, or to have recourse to external firms with service provision carried out through the market. The vast majority of applications of the flexible production approach have been restricted to the analysis of manufacturing activities, especially dealing with the vertical disintegration of material inputs (parts and components) among a network of subcontractors. In this paper I explore how the notion of flexible production framework can be extended to include business services activities. I shall focus upon the forms and determinants of externalisation at the level of the individual manufacturing plant. Specifically, the analysis addresses a series of hypotheses concerning the use of business services by manufacturing plants during the three years prior to a survey in 1990. The evidence was supplied by a sample of 443 manufacturing plants – 233 in Scotland and 210 in the South East of England.

Section 1 considers the concept of the flexible firm as a framework within which to analyse the dynamics of the shifting frontier between internal and external provision of business services, with its prediction of the growing vertical disintegration of manufacturing companies. This leads on to a discussion of changing business practices and the ‘unbundling’ of business service demand. I specify a range of hypotheses to be addressed in the empirical analysis relating, inter alia, to: the use of business services;
the source of supply of the services used; the relationship between externalisation of
supply and plant size for 12 discrete services; the location of external service suppliers
for manufacturers based in Scotland and England; the relationship between both
internalisation and externalisation and various plant level factors; and the nature of
services being unbundled onto the market, and those being integrated into the
manufacturing enterprise. Finally, evidence of internalisation and externalisation by
business service firms is examined.

The Flexible Firm and Vertical Disintegration

A flexible system of production, as proponents of this paradigm argue, is the antithesi-
sis of the rigidities inherent in the Fordist regime. The basis of the former is flexibility
of production processes and labour markets, as well as the search for greater
external economies of scale in the organisation of the production system. Its principal
dimensions include: (i) programmable, and hence flexible, forms of production
automation; (ii) socially fragmented, but interconnected and organisationally pliable,
units of economic activity; and (iii) more fluid labour market structures (Coffey and
Bailly, 1991, p. 97). The functioning of this type of production system relies upon the
social division of labour: production becomes more externalised and, in organisational
terms, more flexible as relationships of cooperation and trust are developed among a
network of interacting establishments.

Much of the flexibility literature is concerned with strategies in the use of the labour
force by which the firm can adjust the labour it employs, the way the labour is
utilised, and the wages paid to current levels of output and price (Rubery et al., 1987).
Three routes to greater flexibility have been identified: functional, numerical and
financial (Rubery et al., 1987). More generally, Sayer (1989) has defined seven forms of
flexibility: functional flexibility; numerical flexibility in output and employment; flexible
labour markets; flexible working practices; flexible machinery; flexibility in restructur-
ing; and flexible organisational forms. In these contexts, ‘flexibility’ is used essentially
as a modifier in order to describe changes in the economy (Gibbs and Jenkins, 1991,
p. 1430). There is also the notion of the flexible firm which is concerned with the
response of the firm at the level of intra-corporate organisation (Gibbs and Jenkins,

The concept of flexible production can conceal a highly heterogeneous set of phe-
nomena and processes. In applying the notion of flexibility to the analysis of modern
production systems, it must be recognised that there is a hierarchy of flexibility
ranging from the individual machine to the basis of economic organisation: flexible
machines (e.g. robots or computer numerically controlled machine tools); flexible
manufacturing systems (i.e. aggregation of machines using CAD/CAM processes); and
flexible specialisation (a competitive strategy involving a firm’s ability to respond to
demand fluctuations) (Gertler, 1988). Given this complexity, it is no surprise that the
binary taxonomy of Piore and Sabel (1984) – either rigid Fordist mass production or
flexibility – has been severely criticised. Sayer (1989), for example, holds that capitalism
has always combined rigidities and flexibilities, and what is currently emerging are
new permutations of each rather than a new trend towards greater flexibility.
Emerging development trends are too complex to be designated simply as flexible specialisation. Furthermore, the appearance of flexible methods does not represent a revolutionary change: the key elements of all forms of flexibility have long been present in developed economies. As Gertler (1988, p. 423) points out, the key question is ‘how pervasive have these kinds of changes been throughout the rest of the economy?’ One of the shortcomings of the debate on the notion of flexibility is that it has centred around evidence drawn almost exclusively from emerging patterns in manufacturing industry (Holmes, 1986; Scott, 1986; Schoenberger, 1987; Gertler, 1988), notably cars, apparel, petrochemicals and motion picture production (Gibbs and Jenkins, 1991). The manufacturing orientation has shaped analyses in several ways: (i) more emphasis on coordination of inputs to production than on distribution of outputs; (ii) more attention has been devoted to inter-firm material linkages rather than services; and (iii) the use of a core–periphery model with a ‘skilled core’ labour force and less skilled ‘peripheral’ workforce as a conceptual framework has limitations (Christopherson, 1989, p. 132).

There is a clear link between the notion of flexibility and vertical dis(integration). Indeed Coffey and Bailly (1991, p. 97) have suggested that the ‘hallmark of flexible production is vertical disintegration’. An inter-firm, inter-plant, transaction structure emerges in which a network of small and medium-sized specialist enterprises supports the core activities in the main plant or plants. A manufacturing establishment’s substitution of externally purchased service inputs for internally provided services may be seen to represent a form of organisation by which the establishment in question is able to increase the degree of flexibility of its production process. Technology plays an important role in conditioning the balance between internalisation and externalisation, and the major effect has been to increase the options available to companies. New technology, therefore, has enhanced the potential flexibility of the firm. The economics of computer technology, for example, initially encouraged subcontracting out to bureau services; but with the cheapening and simplification of computer technology, firms are now more likely to use in-house facilities (Weil, 1992). At present we know little of the ways in which new technology has facilitated either internalisation or externalisation of major business services: whether it requires in the first instance an extension of contracting-out practices, followed by a degree of re-internalisation when relevant skills have been constituted in-house, is an important future research theme that is beyond the scope of this paper.

Business service activities are increasingly marked by a social division of labour: firms are becoming more specialised as the range of services available becomes more diversified (Coffey and Bailly, 1991, p. 105). Furthermore, the business service sector is characterised by high rates of new firm formation and of small firm growth (Keeble et al., 1991a; O’Farrell et al., 1992). The externalisation of service functions causes internal economies of scope to be replaced by external economies of scale as manufacturing firms obtain increased labour market flexibility, substitute variable costs for fixed costs, and spread risks. The main drawback is the transaction costs associated with searching, negotiating, managing and monitoring subcontract relationships. The analysis, therefore, is concerned with vertical dis(integration) by manufacturing
companies – a process of ‘productive decentralisation’ involving the increased use of subcontracting. This is one dimension of numerical flexibility. How widespread is this latter phenomenon in the context of the mobilisation of business service inputs by manufacturing companies in this era of flexible specialisation? Our aim is to present some empirical evidence that will address this question, and to test the extent to which such changes can be explained within the flexible firm framework.

**Spatial Implications of Flexible Production**

The rise of flexible forms of production has changed the spatial organisation of economic activity (Scott, 1986). At the interregional level, it has been argued that the range of diversity of feasible locations has been greatly extended, resulting in the internal restructuring of industrial regions formed in the earlier phases of investment and the expansion of production activity into ‘new industrial spaces’. The new growth areas based on flexible production systems tend to be found in places such as Silicon Valley, the M4 corridor, Cambridge, and the Scottish new towns such as Livingston and Glenrothes, that are either socially or geographically isolated from the main loci of earlier Fordist industrialisation. However, the spatial behaviour of business services firms is somewhat different from that of manufacturing establishments. In the case of business services, a different dynamic process is occurring: rather than following manufacturing into the new industrial spaces, business services have generally remained concentrated in large metropolitan areas (Coffey and Bailly, 1991, p. 108). Business services require frequent face-to-face contact between supplier and client during the course of their creation; indeed, staff from the client organisation may be part of the production function helping to produce the service (O’Farrell and Moffat, 1991). Hence, at the interregional metropolitan level, the system of flexible production creates spatial clustering in various locations of functionally differentiated and organisationally distinct enterprises that exhibit close forward and backward linkages. Specifically, according to Scott (1986, p. 224), ‘vertical disintegration encourages agglomeration, and agglomeration encourages vertical disintegration’. Thus the social division of labour encourages spatial agglomeration as a means of lowering external transaction costs.

**Changing Business Practices and ‘Unbundling’ of Business Service Demand**

There has been considerable interest in whether the growth of business services should be interpreted as a shift of employment out of other sectors, especially manufacturing, into free-standing business service providers – the notion that ‘productive decentralisation’ is driving the rapid expansion of business services (Lewis, 1988). This issue has been difficult to evaluate quantitatively because of the lack of data at the level of the individual establishment. It has been suggested that changing business practices might explain the rapid growth of business services (Kutscher, 1988). Changing business practices refers to increased purchases of existing business services as inputs, either through ‘unbundling’ or through higher levels of open market purchasing, or through purchases of service innovations (Beyers, 1990, p. 1). Unbundling, a process of vertical disintegration, refers to the substitution of external market provision of services or goods for internal supply in order to enhance opera-
tional flexibility. Unbundling, therefore, is a dimension of numerical flexibility involving increased use of subcontracting. Howells and Green (1986) suggest three main motives for unbundling of services onto the market that were previously supplied in-house: potential cost savings; the ability to obtain an improved quality of service; and the increasing technical complexity and specialisation of service functions. The mechanism of unbundling involves a shift in business service activity location and occupations from other sectors to business services (Beyers, 1990, p. 6); it may even be accompanied by slight employment loss to the extent that service firms provide the function more efficiently (Howells and Green, 1986). Howells and Green (1986) distinguish three possible strategies: decentralisation to a subsidiary or associate company; devolution of the activity to separate enterprises via licence of franchise agreement; and disintegration, where no ownership links are retained.

Unbundling implies that: (i) the number of employees involved in business service activities within manufacturing would decline over time; (ii) the volume of business activity throughout the economy would not increase, but (iii) their location would change; and (iv) demand would increase for business service industries (Kutscher, 1988, p. 61) I argue that only (i), (ii) and (iv) are both necessary and sufficient for unbundling to occur. Hence, with respect to condition (ii), I suggest that the volume of business service activity throughout the economy could increase, and unbundling could still be occurring; business service demand by manufacturers may be rising while simultaneously they are adopting flexible practices and unbundling. Hence increased externalisation of services may be due either to unbundling or to needing additional business services, or both. Therefore increased contracting-out need not imply unbundling (if demand for services is rising), but unbundling does involve increased contracting-out. Unbundling therefore is a dynamic process of change involving flexible substitution of fragmented external market relations for internal provision, and must be differentiated from externalisation of services due to growth in demand.

In recent years there has been a lively debate in the literature over whether the growth of business services (both internal and external) is real or illusory. Several authors have alleged that business service growth during the 1980s was due principally to unbundling: the result was simply replacement of existing ‘producer service employment within enterprises … by contracting-in the required services from outside’ (Rajan and Pearson, 1986; Lewis, 1988). Wood (1991, pp. 165–6) argues that ‘an equally significant trend has been the externalisation of some of the most strategic corporate functions to specialist business service consultants … The burgeoning supply of competitive services has no doubt also influenced decisions to put more work out.’ This is an issue of major debate in the UK, as Rajan and Pearson (1986) estimated that out of 700,000 jobs created in retailing, finance and business services in the UK between 1979 and 1985, some 300,000 (43%) were due to contracting-out or ‘unbundling’ involving a simple transfer of work between sectors. This finding was derived from ambiguous survey evidence and a small number of case studies (Perry, 1990). The scale of this process as a stimulus to the development of information-intensive services has been challenged by recent research in the USA (Beyers,
1990) and New Zealand (Perry, 1990). American evidence for the 1977–1986 period shows that professional, para-professional and technical employees who predominate in producer services increased within manufacturing, suggesting that unbundling has been a small factor in the employment growth of producer services (Kutscher, 1988; Beyers 1990, p. 7). Similarly, in the UK the long-term trend has been for the share of administrative, technical and clerical jobs in manufacturing to increase (Perry, 1992). Hence output and employment growth have been achieved in internal and external producer services simultaneously. Illeris (1989) also draws this conclusion after reviewing a range of European research, whereas in the view of Pederson (1986) the growth of internal and external producer services is mutually reinforcing: the more internal services a firm has, the better equipped it is to define external service tasks and use the results. Perry (1990, p. 186) suggests that ‘intra-service sector reorganisation is the main form of externalisation, rather than shifts between enterprises in different sectors (i.e. manufacturing to services), but overall neither process is found to be a significant influence upon service sector employment growth.’

The Small Business Research Centre of Cambridge University (1992, p.17) in their study The State of British Enterprise, based upon a sample of 1073 manufacturing businesses, reported that between 1987 and 1990 the proportion of manufacturing firms undertaking more subcontracting exceeded the proportion undertaking less by 14.4%. Such results are not necessarily inconsistent with our findings, but there are several important caveats, which reduce comparability. First, the Cambridge survey included only small and medium-sized enterprises (SMEs) that were independent and employed less than 500 workers. Our manufacturing sample was not constrained by either ownership or size. Second, the research in this paper is concerned with internalisation/externalisation of business services only, whereas the Cambridge survey focused upon all subcontracting-out. Third, a net increase in the proportion of firms subcontracting does not constitute proof of unbundling – that is, the substitution of external market provision for a service or good previously supplied internally.

Keeble et al. (1991a), in a survey of small management consultancy and market research firms, asked respondents what proportion of their current business arose from unbundling activity. Only one-fifth of the firms reported a measurable current impact from such a process, suggesting that unbundling has been a major influence upon business service growth in the UK during the 1980s. Our perspective in this paper is different, namely to conduct a rigorous test based upon a large sample of whether, at a micro-level, unbundling – the shedding of service functions by existing manufacturing plants and their transfer to the business service sector through subcontracting – is occurring. We argue that only at plant level is it possible to conduct a valid test of the unbundling process. Keeble et al. (1991b, p. 45) have argued that ‘this is clearly an important issue for investigation in the UK case’; given the impressive expansion of this sector during the 1980s, resolution of this problem is of considerable policy relevance. Moreover, as Marshall (1989) argued correctly, it is too simplistic to view contracting out as the only change taking place in organisational boundaries; both internalisation and externalisation processes are at work and will be analysed in this paper.
Fluctuations in product markets, by changing a firm's demand for an activity, may
stimulate externalisation as firms may subcontract activities where demand is uncer-
tain to smooth out irregularities in their own production process. In addition, labour
demand and supply characteristics arising from differences in the costs, skills and
availability of labour may influence the dynamics of the internalisation/externalisation
decision (Marshall, 1989, p. 147). Other influential factors may be: (i) the importance
of the service to the company, with key services more likely to be internalised so that
the firm can ensure the quality of such services; (ii) the expertise necessary to
produce the service with more specialised services tending to be externalised because
of the unique knowledge and skills required to produce them; (iii) frequency of
demand, with infrequently used services being more likely to be subcontracted as the
firms could not justify the overheads of employing staff to supply them; (iv) the
predictability of a service contract, with more routine services – where quality
control is less problematic – tending to be externalised; and (v) the cost of a service
that may favour externalisation owing to scale economies of specialisation. Finally,
Illeris (1989) notes that medium-sized establishments externalise more service
demand than either their small or large counterparts; growing and exporting firms
make greater calls upon external services; and information technology facilitates
externalisation by making it easier to monitor suppliers (Ochel and Wegner, 1987, p.
86).

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Research Centre.


1 Evaluate the literature review chapter from the point of view of likely acceptability as part of an EBS DBA literature review submission. You should address the following questions in your answer.
   - What are the strengths and weaknesses of the sample literature review chapter?
   - Compare the magnitude of the strengths and weaknesses and assess whether or not the sample literature review chapter would be acceptable.
   (50 marks)

2 Discuss the alternative sources and levels of research publications that are available to candidates when preparing the literature review and evaluate the suitability of the references cited in the case study chapter.
   - Rate the references cited in the sample literature review chapter in terms of levels of research publication.
   - Overall, are the references cited in the sample literature review chapter suitable for the proposed research?
   (25 marks)

3 Identify where the sample literature review chapter is aligned on the continuum between exploratory-based and hypothesis-based research.
   - What changes would have to be introduced to make the proposed research more exploratory-based?
   - What changes would have to be introduced to make the proposed research more hypothesis-based?
   (25 marks)
Examination Answers

Practice Final Examination 1

1

(a) The general strengths and weaknesses of the literature synthesis are considered below.

The literature synthesis starts with summary of the main points that emerge from the literature. It is not possible to comment on this summary without being able to see the rest of the review, although the points do appear to be well aligned with the subsequent research question. The summary points appear to link together reasonably well, although the underlying chain of reasoning could perhaps be explained in more detail. The summary discussion under each heading appears to be sound although the level of critique could be increased.

The literature cited under heading 1 (strategic alignment and the likelihood of long term success) includes several old references (Groucho, 1970; Reilly, 1975; etc.). This is acceptable provided these references are relevant and still apply in relation to current research knowledge. There are ‘key’ or ‘founding’ publications in most fields and it may be that Groucho (1970) and Reilly (1975) fulfil this role in this example. Generally the number and range of references appears to be acceptable. The general shift away from diversified acquisitions towards more focused moves has been very well documented although only two direct references are cited.

The literature cited under subsequent headings could be more closely integrated, although this is, to some extent, limited by the degree of subject difference between the various headings.

A full reference list is not provided so it is not possible to comment on the general suitability of the references nor on the level of the sources.

The synthesised outcomes are reasonable based on the content of the synthesis and appear to be well supported by the literature. Again, an element of critique should be introduced.

The research question appears to adequately reflect the synthesis. Company X appears to be appropriate, based on the information provided. The various literature synthesis summary points appear to lead logically to the research question.

The question itself includes three main variables. These are:

- strategic alignment generated by mergers;
- positive development of human capital;
- long-term success.

These variables are all well supported by the literature synthesis. The suitability of each as a research variable is perhaps more questionable.

In terms of strategic alignment it should be possible to develop some kind of classification system so that the degree of focus of each merger or acquisition can be individually measured or valued. The classification system could relate the degree of strategic fit in relation to (for example) the core business activities (CBAs) of company X. Matching could be achieved by the development of sim-
ple matrices showing CBA against perceived importance for both companies. The closer the match the higher the degree of strategic fit. The same approach should also be workable for the pilot study.

The positive development of human capital should be measurable using simple competency profiling techniques. Simple matrices could again be used, showing individual and group competency profiles as measured against defined key competencies such as leadership, commitment, ability to innovate and solve problems etc. The individual and group competencies could be measured over a relatively long period of time (say a year or a year and a half) before, during and after acquisitions that offer varying degrees of strategic alignment. The candidate might have problems in determining the impact of specific mergers on human capital development, although it should be possible to address this with good research design.

Long-term success should be relatively straightforward. The most difficult area would be defining appropriate measures of success.

The aims and objectives of the research appear to be reflected in the research question.

Overall, the strengths of the literature synthesis appear to outweigh the weaknesses. Most of the weaknesses considered above are relatively minor and could be corrected relatively quickly. The issue of closer integration is a larger proposition and may take some considerable effort.

The overall logical development of the research question is adequate. The individual literature review headings mix together reasonably well in the development of the research question.

The development of the research question is reasonable in that it exploits a logical chain of reasoning.

The line of reasoning behind result 6 is as shown below.

\[
\text{Strategic alignment} = \mathcal{f}(\text{Long-term success})
\]

and

\[
\text{Long-term success} = \mathcal{f}(\text{Cultural approval})
\]

therefore

\[
\text{Strategic alignment} = \mathcal{f}(\text{Cultural approval})
\]

and since

\[
\text{Cultural positivity} = \mathcal{f}(\text{Positive development of human capital})
\]

then

\[
\text{Strategic alignment} = \mathcal{f}(\text{Positive development of human capital})
\]

The results of the pilot study indicate that there is a functional relationship between the degree of strategic alignment developed by a merger and the potential for the positive development of human capital. The nature of the functionality has not been established by the pilot study. The identification of the characteristics of the functionality will become a research aim of the main study.

There is no evidence in the literature that any work on the conjoined areas of strategic alignment and the potential for the positive development of human capital has been published. The functionality appears to represent a gap in the literature although it is fully supported by other literature in related sub-fields.

The research question appears to be suitable, based on the information provided and on the cited references.
(b) There is no single answer to this question as the response depends on assumptions made by the candidate. The basic format and rationale behind a hypothesis-based approach (research orientation A or B) should be something similar to that shown below.

1. **The development of the basic theory**
   The candidate could develop the basic theory and hypotheses using a number of different approaches. In any case, the most logical starting point is to summarise the primary points that emerge from the literature synthesis. It would also be useful to include a reference to a pilot study (if there is one) and to any outcomes generated by it.

   - **Strategic alignment is related to long-term success.** Companies that enhance strategic alignment tend to be more successful. This appears to apply in mergers and acquisitions and also in non-merger initiatives. The success factor may be due to the reduced scope of the risk profile and/or the cultural positivity that tends to be associated with strategically focused moves or moves with good strategic fit. Success in this context is defined in the longer term rather than the shorter term.

   - **Long-term success is related to cultural approval.** Companies that develop an environment of cultural approval tend to be more successful. The cultural integration problem is one of the main reasons why mergers and acquisitions fail. Cultural approval or positivity is one of the main drivers of long-term success. Cultural approval is linked to strategic alignment and cultural fit.

   - **Strategic fit is related to strategic alignment.** The degree of strategic fit offered by a merger or acquisition directly affects the degree of strategic alignment that can be achieved. Strategic alignment is desirable in terms of long-term success, so strategic fit becomes an objective in selecting merger partners or acquisition targets. Good strategic fit encourages cultural positivity.

   - **The degree of strategic fit (focus engineering) is related to cultural positivity.** Mergers or acquisitions exhibiting a good strategic fit tend to relate to higher levels of cultural positivity. Stakeholders feel happier when the range of strategic objectives is focused and clearly defined. The higher the degree of strategic fit in a merger, the greater is the likelihood of long-term success.

   - **Cultural positivity is related to the positive development of human capital.** Human resources can be developed more effectively in an environment of cultural positivity than in an environment of cultural negativity. People are more highly committed, and motivated to develop, where the environment is positive. The development of human capital is a key driver in the achievement of long-term success.

   These functionalities, in turn, suggest that in mergers, long-term success is dependent on:
   - strategic alignment;
   - strategic fit;
   - cultural positivity.
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- the development of human capital.
There is no unifying theory in the literature that embraces all of these areas. As already stated, work in progress in the US by Reeves and Mortimer and Williams and Gallacher had not published at the time this research was in progress.

2. **The basic theorisation**
Given that long-term success is dependent upon both strategic fit and the development of human capital and that:
- strategic alignment is a function of strategic fit;
- cultural positivity is a function of strategic fit;
- the development of human capital is a function of cultural positivity;
it seems reasonable to postulate a theory based on the derived functional relationship between strategic alignment and the positive development of human capital. It is therefore theorised that, in mergers:

\[
\text{the positive development of human capital is a function of strategic alignment.}
\]

3. **The basic research theory**
The result of the synthesis process is a potential research theory based on the literature. The basic research theory could be:

\[
\text{In mergers the degree of strategic alignment is a function of the potential to develop the positive development of human capital.}
\]

4. **The research question**
The research question could be:

\[
\text{In retail mergers, is the degree of strategic alignment a function of the potential to develop the positive development of human capital?}
\]

5. **The research aim and objectives**
The research aim could be:

\[
\text{To show that the degree of strategic alignment is a function of the potential to develop the positive development of human capital.}
\]

The research objectives are:
(a) ‘To show that where high levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also high.’
(b) ‘To show that where low levels of strategic alignment are present, the degree of potential to develop the positive development of human capital is also low.’

6. **The research and operational hypotheses**
The research hypothesis could be:

\[
H_0: \text{As the degree of strategic alignment increases, the potential to develop the positive development of human capital increases.}
\]
H1: As the degree of strategic alignment increases, the potential to develop the positive development of human capital does not increase.

The operational hypotheses could be:

**Hypothesis 1**
- H0: ‘Strategic alignment is not a function of long-term success.’
- H1: ‘Strategic alignment is a function of long-term success.’

**Hypothesis 2**
- H0: ‘Long-term success is not a function of cultural approval.’
- H1: ‘Long-term success is a function of cultural approval.’

**Hypothesis 3**
- H0: ‘Strategic fit is not a function of strategic alignment.’
- H1: ‘Strategic fit is a function of strategic alignment.’

**Hypothesis 4**
- H0: ‘The degree of strategic fit is not a function of cultural positivity.’
- H1: ‘The degree of strategic fit is a function of cultural positivity.’

**Hypothesis 5**
- H0: ‘Cultural positivity is not a function of the positive development of human capital.’
- H1: ‘Cultural positivity is a function of the positive development of human capital.’

**Hypothesis 6 (derived)**
- H0: ‘Strategic alignment is not a function of the positive development of human capital.’
- H1: ‘Strategic alignment is a function of the positive development of human capital.’

The operational hypotheses, with the exception of hypothesis 6, reflect the primary outcomes of the literature synthesis. Hypothesis 6 is derived from hypotheses 1–5 and forms the main research outcome.

There is no single answer to this question. Marks should be allocated according to the logic and reasonableness demonstrated by the candidate in suggesting an appropriate format. Most answers should address the following basic areas:

- Introduction.
- Subject details.
- Methodology.
• Results.
• Pilot study summary.

1. **Introduction**

The introduction should establish the basic aims and objectives of the pilot study and should clearly define the scope. An example introductory section is shown below. The candidate could make any assumptions required provided these tie in with the information provided in the case study.

The pilot study was designed to apply the main themes emerging from the literature synthesis to a real company in order to assess the applicability of the literature synthesis outcomes. The pilot study was conducted as a longitudinal study lasting just under six months, from June 2002 to January 2003. The subject used was company X. This company had already agreed to act as the subject for the pilot study. A letter of support is contained in the research proposal (see Introduction to Business Research 1). Data were collected using a combination of questionnaires, structured interviews and attendance at merger team meetings where the proceedings were recorded and transcribed.

The primary objective of the pilot study was to collect and process real data in order to assess the validity of the primary outcomes from the literature review synthesis. The validity of the literature synthesis outcomes is important as these are subsequently used as the basis for the formation of the formal theory.

A secondary objective of the pilot study was to assess the suitability of the longitudinal case study approach using questionnaires, structured interviews and attendance at merger team meeting as the primary data collection tools.

*Note:* The candidate should reinforce all sections of the pilot study with suitable references where appropriate.

2. **Subject details**

This section should provide sufficient information about the pilot study subject to allow the reader to understand the pilot study design and how the outcomes of the pilot study contribute to the main research. Typical details include the main characteristics of the company:

- size
- location
- core business activities
- number of employees
- type of data provided
- relevance to the research

The sample company is likely to be directly involved in strategically focused mergers and acquisitions as it has to provide this type of data in order to contribute to the main study.

3. **Methodology**

The candidate should briefly indicate either the assumed methodology used or the details that would appear in this section. Typically the candidate would outline the primary research paradigm adopted and the basic balance of quantitative and qualitative elements. In either case the candidate should summarise the main methodological tools that are available. In the case of a combined quantitative – qualitative approach the candidate may refer to:
structured and unstructured interviews
- questionnaires
- direct observation
- laboratory based observation
- participative observation.

Sub-methodologies such as action research could also be included. If the candidate assumes a basic background, a typical extract could be as shown below.

Individual staff members were issued with a structured questionnaire containing thirty questions. A copy of the questionnaire is shown in appendix 1. This questionnaire was subsequently modified and used in the main study data collection process. The questions related to the operational hypotheses and required the respondent to provide responses on a basic one to ten scale to indicate an outcome between ‘strongly agree’ and ‘strongly disagree’. Questionnaire responses were extracted and checked before being entered on the pilot study research database. The data were then analysed using simple statistical techniques to show the frequency of occurrence of different responses.

The candidate should stress that the methodology section should be fully referenced and linked to the development of the research question or operational hypothesis.

4. Results

The candidate should stress that the content of the results section depends on the nature of the sample and on the research methodology adopted. The results should ideally be presented in an order or sequence that matches the main components of the research question or hypothesis. In the context of the case study, the most logical presentation sequence would be:

1. Strategic alignment is a function of long-term success.
2. Long-term success is a function of cultural approval.
3. Strategic fit is a function of strategic alignment.
4. The degree of strategic alignment is a function of cultural positivity.
5. Cultural positivity is a function of the positive development of human capital.
6. Strategic alignment is a function of the potential for the positive development of human capital.

These section headings match the case study. The results should ideally be presented sequentially in this order with an increasing level of integration being demonstrated as the results are discussed. Quantitative results may be presented in tabular or graphic form etc. with suitable text development. Ideally the results should be integrated to an extent where they support the development of the research question or theory. In the case study, the logical thought process might run as follows:

Strategic alignment = f(Long-term success)

and

Long-term success = f(Cultural approval)

therefore

Strategic alignment = f(Cultural approval)

and since

Cultural positivity = f(Positive development of human capital)

then
Strategic alignment = \( f(\text{Positive development of human capital}) \)

In this case, the final functional relationship is derived from the preceding functional relationships, which themselves have been derived from the literature synthesis and tested in the pilot study.

The candidate should stress that the pilot study results are fundamental in the development of the formal research question or theory. They act to vindicate (or otherwise) the basic question or theory that was derived from the literature synthesis.

The candidate should also stress that the results act as a direct measure of the success (or otherwise) of the research methodology that will presumably act as the basis of the main study methodology.

5. **Pilot study summary**

   This section should clearly summarise the outcomes from the pilot study. In the case study, the summary might state that:

   The pilot study has generated the following primary results.
   – Strategic alignment is a function of long-term success.
   – Long-term success is a function of cultural approval.
   – Strategic fit is a function of strategic alignment.
   – The degree of strategic alignment is a function of cultural positivity.
   – Cultural positivity is a function of the positive development of human capital.
   – Strategic alignment is a function of the potential for the positive development of human capital.

   The summary should include a statement of any limitations that apply to the pilot study. Some examples are shown below.
   – The results were generated using relatively small sample sizes.
   – The source was limited to a single company.
   – As a result of time limitations, it was not possible to track the perceptions of individuals or groups over time.
   – The questionnaire survey and interview approaches worked well, but there is no guarantee they will do so with a larger sample size.
   – The generation of result six is based on a chain of reasoning that is not proven.

   Marks should be given for appropriate and reasonable limitations, whether these are evident from the case study or not.

3 The answer should clearly describe the role of the pilot study in the development of the research question or theory. The answer should be supported by a suitable diagram. One possible format is shown below.
The diagram and the descriptive text should make it clear that the pilot study is intended to provide an initial evaluation of the proposed research theory and a study methodology. The basic theory itself is derived from the literature review via the synthesis. The basic theory is then evaluated using the pilot study results. In some cases, depending on the outcomes of the pilot study, the basic theory may be modified before it becomes the formal theory. The formal theory itself is therefore a product of both the literature review and the pilot study. An alternative graphical representation is shown below. This layout shows the outcome of the pilot study acting as the primary gateway in assessing whether or not the basic approach suggested is appropriate.
At some point the candidate’s answer should make it clear that a pilot study is not always necessary. For example in a type D research orientation where a single sample is subject to exploratory research, there may be no direct requirement for a pilot study. In such cases, the single sample that forms the main study is effectively used as a pilot for larger-scale hypothesis-based research at a later stage.

The answer should stress that the pilot study may start at a number of different times within the overall research programme. Ideally the pilot study should be designed after the literature synthesis is complete. This timing allows the pilot study to be specifically designed to address the primary outcomes from the synthesis. In practice, time limitations preclude this ideal phasing, and the pilot study often has to be designed and implemented in parallel with the literature review. The candidate usually has a good understanding of the literature well before he or she actually synthesises it and this knowledge is often sufficient to allow the pilot study to be designed and at least partially implemented. The main problems arise when the pilot study outcomes clearly contradict the outcomes of the literature synthesis.

The candidate could also suggest the idea of a pilot validation study. This approach is sometimes advisable in particularly complex or highly-exploratory research. The
pilot validation could comprise a series of secondary cross sectional pilot studies that are specifically designed to question the outcomes of the main pilot study.

**Practice Final Examination 2**

1. The answer should make it clear that the draft chapter as it stands would not be of an adequate standard for inclusion within an overall literature review submission. The chapter should ideally be divided into areas that reflect the title of the research. In this case the title of the research is not given. Each division should address a specific area, although links between areas should be established wherever possible. It is also important to develop a central theme so that the literature review is used to develop a central argument that evolves and develops as the review proceeds.

The example literature review is very well written, and is obviously adequate for the application for which it was developed. The text is efficient and lucid. The citations are well balanced, and the text makes good use of the information provided by the literature. The review is general in some areas and more specific in others.

From a DBA point of view the shortcomings of the example literature review are as listed below.

- It is not sufficiently detailed.
- The format does not directly address the title of the research.
- The ratio of citations to explanatory text is low.
- Section linkages are poorly developed.
- The review mixes the literature with references to current research findings.
- There is no clearly emergent central theme.
- There is no clear summary or end point.
- There are examples of assertions that are not referenced, for example those in the final paragraph.

In terms of modifying the example literature review to make it suitable for an EBS DBA thesis, a considerable amount of work needs to be done.

- The literature review has to be expanded to include a wider range of references.
- The format of the review should be structured so as to more closely match the title of the research.
- The number of citations should be increased where possible.
- The various sections of the literature review should be more clearly linked where possible.
- All references to the results of the current research should be deleted. At DBA level the literature review is used for the development of the basic and formal theories in a hypothesis-based approach (see Module 5) or as the basis for the development of a research question in the case of an exploratory-based approach (see Module 5). In either case, there is no justification for the insertion of references to the results of the current research at DBA level.
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• A strong central theme should be developed. In particular, the text should be modified so that cross-referencing between sections is established.

• A summary should be included.

• Assertions or arguments that are not supported by the literature, or which cannot reasonably be inferred from the literature, should be reconsidered.

• The individual headings should be numbered.

The candidate could argue that the writing style could be improved. The word density is very high and the readability of the chapter could perhaps be improved by the inclusion of some linkages and some diagrams.

Suitable reference material can be identified and accessed using two primary sources. These are:

• Online sources.

• Offline sources.

Online sources

The answer should demonstrate a clear understanding of the more useful and popular online sources. Ideally the answer should refer to a national standard system such as the British National Bibliography, which is a compilation of all books published each year and deposited in the British Library by copyright. It is arranged by both author and subject (according to the Dewey Classification System). The Catalogue of the Library of Congress is the equivalent for the USA. There are also specialist bibliographies, often produced by professional bodies, that may be available in the chosen subject area.

Abstracts are a quick and systematic way of locating information and a search by key words will result in a list of references to documents containing these key words, either in the title or in the abstract. Abstracts, because they contain a summary of the article, are helpful when deciding whether to obtain a copy of the complete paper. It is common to use a combination of manual and electronic methods to conduct the literature search and it will be obvious when approaching the end as numerous repetitions of previous works cited will be located.

The Internet is a useful tool in accessing information. There are many bibliographic databases that can be accessed on the Internet as well as on CD-ROM. A bibliographic database usually contains the titles of papers, their authors, and some key words to describe the content as well as, in many cases, an abstract of the paper. A document delivery service is increasingly available with online systems, voice mail, fax and email. It is advisable to use a number of databases to ensure a wide coverage of available literature. The answer should refer to a number of standard systems such as:

• ABI/inform;

• Anbar;

• BIDS;

• British National Library for Report Literature;

• Business Periodicals Index;
Ideally the answer should demonstrate an understanding of the nature and type of each source.

The answer should demonstrate that the candidate understands that numerous academic journals are now available on the Internet. The Internet provides a huge range of resources and is expanding all the time. However, specific information is variable in quantity and quality. Search engines are the most useful method of Internet searching for the literature review as these will enable the location of the most current items. Search engines will access World Wide Web sites that have, either in their titles or in brief descriptions, key words specified as search parameters.

Most experienced researchers would probably agree that there is no substitute for browsing the recent issues of the most relevant important journals and checking other journals with similar class marks. These key journals should be monitored every few months in addition to new book displays in libraries. It will never be possible to include everything that has been read and candidates will have to be selective to produce a coherent review. It is at this point that the assistance of the supervisor is crucial. A subject specialist librarian should also be able to provide information about core references, leading journals and relevant abstracts. Many libraries now hold publications such as journals and newspapers in electronic form on CD-ROM or provide access via the Internet. It is useful to photocopy the most important papers and it is important to make notes that will prompt the ideas in the literature in relation to the research.

Other relevant sources include:

- **The Heriot-Watt University library.** The Heriot-Watt University library offers a full distance learning service to matriculated distance learning students and doctoral candidates.
- **Other university libraries.** Most good university libraries subscribe to a wide range of research journals. The universities tend to subscribe to the journals most related to their own areas of specialism. For example, a technological university specialising in the pure sciences, science and engineering will tend to subscribe to those journals most likely to meet the needs of its students. An EBS
DBA candidate might have difficulty in accessing economic and social science journals at such an institution.

- **Interlibrary loans.** Most Western university libraries and many university libraries across the world are subscribers to the interlibrary loans scheme. Under this system, libraries holding certain source materials agree to copy them, subject to copyright restrictions, and send them to other academic libraries.

- **Internet search engines.** The amount of academic material available over the Internet is increasing steadily. Most candidates will be aware of the major search engines and how to use them and will also, no doubt, be aware that most of the material on the Internet has little or no academic value in terms of doctoral research. It is possible to access a range of research journals online, although most publishers make a charge for access to their materials.

**Offline sources**

The main source of suitable offline material is libraries. Most large cities have central public libraries. These libraries may have limited amounts of material relevant to the doctoral researcher. In most countries there is also a national library carrying a much wider range of literature sources than a city library. It may be possible to access the national library through an interlibrary loans system.

University libraries usually still carry large amounts of offline materials such as textbooks and theses. Theses are currently not available online and have to be accessed as paper copy documents or, increasingly, in microfiche form. Microfiche was once widely used for the storage of archive records. Examples include the archival of banking transaction records and local authority maintenance records. Microfiche has the advantage of being quick and easy to produce, and it can be easily physically transported. The main disadvantage associated with microfiche is that the user needs to have access to a microfiche reader, which is often rather cumbersome and may be difficult to use. The quality of the reading image is also often poor.

The answer should demonstrate a clear understanding of the different levels of publication. High level sources include:

- Refereed research journals;
- Conference proceedings.

Mid-range sources include:

- Textbooks;
- Professional journal papers.

Low-level sources include:

- Newspapers;
- Non-refereed journal articles.

It should be clear that the candidate understands the difference between refereed and non-refereed sources and appreciates the difference that the refereeing element makes to the value of a particular publication. Most refereed research journals make use of a panel of peer reviewers who consider a paper carefully before recommend-
ing it for publication. A refereed research journal paper carries considerably more ‘weight’ than a non-refereed article because it has been reviewed and modified before publication. Non-refereed article may only have to satisfy an editor in order to be published. Newspaper articles may have been prepared by a journalist with little or no background research and may be factually incorrect.

The candidate may mention that a good thesis should contain a good balance of references across a range of different levels, but the main ‘backbone’ of the research should be supported by a core of high level refereed publications.

The case study literature review contains a good blend of different reference levels. Without a detailed knowledge of the specific filed considered it is difficult to say with certainty which references are from refereed sources, but it is likely that the works by the following authors are taken from refereed sources:


The refereed element represents around 65 per cent of the total references cited, which is a relatively high proportion. Most of the remaining references relate to textbooks. As a source, textbooks are often useful and interesting and are often subject to some form of peer review prior to publication. The review process is, however, generally much less rigorous and demanding than that applied to a paper presented to a top refereed research journal. The other obvious disadvantage associated with textbooks is that they are static and very quickly become out of date. Research journal papers tend to form part of a long term evolution of the literature knowledge base, and as such, date less quickly.

The references cited are reasonable although it would be preferable to increase the high level element if possible. Whether or not this is possible depends on the existing literature base in the research area.

3 The candidate should demonstrate an understanding of the continuum between exploratory-based and hypothesis-based research. The hypothesis-based approach is adopted in most traditional PhD research programmes. In this approach, the candidate conducts a literature review and synthesises it to form a basic theory, as discussed in Module 2. This theory is then evaluated using a pilot study, as discussed
in Module 3. Depending on the outcome of the pilot study, the basic theory is developed into a formal theory from which a set of aims and objectives, a research question and a set of research and operational hypotheses are developed. The hypotheses are then evaluated using quantitative or qualitative approaches or a combination of both.

The hypothesis-based approach is suitable for many forms of research. It is applicable to highly theoretical research such as the development of a new mathematical formula that extends an existing formula. The approach is also suitable for more applied research in situations where a considerable body of research exists.

It is important to understand that although the hypothesis-based approach is by far the most popular approach used in doctoral research orientation (and therefore forms the basis for Modules 2 and 3 of this text), it is not the only approach to research orientation. Other orientations can be used, and in some cases may be equally or more appropriate in the development of EBS DBA research.

Exploratory-based orientation assumes that the candidate wishes to make use of his or her own (or a suitable collaborating) company or other form of organisation as the primary data source. The candidate may wish to study one particular aspect of this company in great detail to address a specific issue, problem or potential development area. For example, Company X may have a specific problem in relation to the implementation of a new enterprise-wide risk management system (EWRMS) based on a substantiated risk interdependency field analysis. The company may be in a position to design most aspects of the EWRMS but is unable to determine some of the risk interdependencies that must be evaluated for the risk interdependency field to be fully specified.

In the case of the proposed research, the alignment is clearly towards a hypothesis-based approach. The sample chapter makes it clear that the research will make use of a series of hypotheses that will be assembled and tested using data collected from the contributing companies. The fact that hypothesis testing is mentioned rather than the generation and consideration of a research question clearly indicated a research orientation towards type A or B rather than towards C or D. The sample chapter also makes it clear that a number of sample companies will be used in order to gather a range of data. This indicates that the orientation is more towards type A (multiple sample hypothesis-based) than towards type D (single sample hypothesis-based). This basic rationale seems reasonably straightforward and the candidate should be able to arrive at this conclusion with relative ease.

If the research has to be realigned more towards a type D orientation, the sample size should be reduced and a single sample company should be examined in much greater detail using a primarily qualitative methodology and a phenomenological philosophy. If the research is to be further aligned towards a type A orientation, the sample size should be ideally increased further (although the research is clearly already of a type A orientation) and a wider range of quantitative methods should be introduced. A positivist paradigm should be adopted.
Appendix 2

Answers to Review Questions

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True/False Questions

What Has To Be Submitted?
1.1 False 1.2 True 1.3 False 1.4 True 1.5 True 1.6 True

The Aims and Objectives of the Literature Review
1.7 True 1.8 True 1.9 False 1.10 True 1.11 False 1.12 False 1.13 True

The Aims and Objectives of the Basic Theory
1.14 False 1.15 False

The Aims and Objectives of the Pilot Study
1.16 True 1.17 True 1.18 True 1.19 True

The Aims and Objectives of the Formal Theory
1.20 False 1.21 True 1.22 True

The Supervisor
1.23 False 1.24 False 1.25 True
Multiple-Choice Questions

What Has To Be Submitted?
1.26 B 1.27 A

The Aims and Objectives of the Literature Review
1.28 A 1.29 D

The Aims and Objectives of the Basic Theory
1.30 C 1.31 C

The Aims and Objectives of the Pilot Study
1.32 A 1.33 B 1.34 B

The Aims and Objectives of the Basic Theory
1.35 D 1.36 C

The Supervisor
1.37 A 1.38 D 1.39 C

Module 2

Review Questions

True/False Questions

The Literature Review
2.1 True 2.2 False 2.3 False 2.4 False 2.5 False
2.6 False 2.7 False

Sources of Literature
2.8 False 2.9 False 2.10 True 2.11 True 2.12 True
2.13 False 2.14 False 2.15 True 2.16 False

Planning the Literature Review
2.17 True 2.18 True 2.19 False 2.20 True

Referencing
2.21 True 2.22 False

Maintaining Focus
2.23 False 2.24 False
## The Literature Synthesis

2.25 True  2.26 False  2.27 True  2.28 False  2.29 False

### Multiple-Choice Questions

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<th>Answer</th>
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<tr>
<td>2.32</td>
<td>B</td>
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<td>2.33</td>
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<tr>
<td>2.38</td>
<td>C</td>
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#### Planning the Literature Review

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#### Referencing

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<td>B</td>
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<tr>
<td>2.44</td>
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<tr>
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## Module 3

### Review Questions

#### True/False Questions

##### Pilot Study Design

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##### Pilot Study Design Example

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<tr>
<td>3.23</td>
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</table>
Appendix 2 / Answers to Review Questions

**Pilot Study Report**
3.25 False 3.26 False 3.27 True 3.28 True

**Synthesis of the Pilot Study and the Literature Synthesis**
3.29 True 3.30 False

**Developing the Final Theory and Hypotheses**
3.31 False 3.32 False

**Multiple-Choice Questions**

**Pilot Study Design**
3.33 C 3.34 B 3.35 D 3.36 A 3.37 D

**Pilot Study Design Example**
3.38 C 3.39 C 3.40 C 3.41 C

**Pilot Study Report**
3.42 B 3.43 A 3.44 B

**Synthesis of the Pilot Study and the Literature Synthesis**
3.45 C 3.46 B

**Developing the Final Theory and Hypotheses**
3.47 B 3.48 C

**Module 4**

**Review Questions**

**True/False Questions**

**The Concept of Doctoral Supervision**
4.1 True 4.2 False 4.3 False 4.4 False

**The Supervisor–Candidate Relationship**
4.5 False 4.6 False 4.7 True 4.8 True 4.9 True

**Questions for the Supervisor**
4.14 False 4.15 False 4.16 False 4.17 True 4.18 False
Possible Problem Areas
4.19 True 4.20 True 4.21 False 4.22 False 4.23 True 4.24 False 4.25 True

Progress Reports
4.26 True 4.27 True 4.28 False 4.29 False 4.30 False 4.31 False 4.32 True 4.33 False

Multiple-Choice Questions

The Concept of Doctoral Supervision
4.34 B 4.35 C

The Supervisor–Candidate Relationship
4.36 C 4.37 D 4.38 C 4.39 A 4.40 A

Questions for the Supervisor
4.41 C 4.42 B 4.43 B

Possible Problem Areas
4.44 D 4.45 A

Progress Reports
4.46 A 4.47 C 4.48 B

Module 5

Review Questions

True/False Questions

The Hypothesis-Based Approach
5.1 False 5.2 True 5.3 False 5.4 True 5.5 False 5.6 False

The Exploratory-Based Approach
5.7 False 5.8 True 5.9 False 5.10 False 5.11 True 5.12 True 5.13 True 5.14 True 5.15 False

The Research Orientation Matrix
5.16 False 5.17 False 5.18 False 5.19 True 5.20 True
5.21 True 5.22 True 5.23 True 5.24 True 5.25 True
5.26 False 5.27 True 5.28 False 5.29 True

Research Orientation and Risk
5.30 True 5.31 True 5.32 False 5.33 True 5.34 True
5.35 False

Research Orientation and Phasing
5.36 True 5.37 True 5.38 True 5.39 True

Multiple-Choice Questions

The Hypothesis-Based Approach
5.40 A 5.41 A

The Exploratory-Based Approach
5.42 B 5.43 B 5.44 C 5.45 C

The Research Orientation Matrix
5.46 C 5.47 D 5.48 C 5.49 C

Research Orientation and Risk
5.50 D 5.51 D 5.52 B

Research Orientation and Phasing
5.53 A 5.54 D 5.55 C

Module 6

Review Questions

True/False Questions

The Context of the Development of the Formal Theory
6.1 True 6.2 True 6.3 False 6.4 True 6.5 True
6.6 True 6.7 False

The Literature Review
6.8 True 6.9 True 6.10 False 6.11 True 6.12 False
6.18 True 6.19 True 6.20 True
Appendix 2 / Answers to Review Questions

**Literature Synthesis and Development of a Basic Theory**
- 6.21 False
- 6.22 True
- 6.23 True
- 6.24 False
- 6.25 True

**Report on the Pilot Study**
- 6.26 False
- 6.27 False
- 6.28 False
- 6.29 True

**Synthesis of the Pilot Study Outcomes, the Literature Synthesis and the Development of a Formal Theory**
- 6.30 True
- 6.31 False

**Multiple-Choice Questions**

**The Context of the Development of the Formal Theory**
- 6.32 A

**The Literature Review**
- 6.33 C
- 6.34 B
- 6.35 B
- 6.36 C
- 6.37 A

**Literature Synthesis and Development of a Basic Theory**
- 6.38 C
- 6.39 A
- 6.40 B
- 6.41 C
- 6.42 D

**Report on the Pilot Study**
- 6.43 B
- 6.44 D
- 6.45 B
- 6.46 D

**Synthesis of the Pilot Study Outcomes, the Literature Synthesis and the Development of a Formal Theory**
- 6.47 D
- 6.48 A
- 6.49 B
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