



SWANSEA METROPOLITAN UNIVERSITY

PRIFYSGOL FETROPOLITAN ABERTAWE

Swansea Business School

MBA

Research Methodology

Workshop

Welcome to the Research Methodology Workshop. The workshop is an intensive programme that starts Part II of the programme. It prepares you to undertake independent research on a topic of your choice in the area of Business and Management.

Not all the exercises in this booklet will be undertaken in the classroom. Some will be completed for homework and if there are exercises that have not been completed it is advised that you do these in your own time.

You should use the workshop in conjunction with the module information on Blackboard (Research Methods Workshop and Dissertation). Blackboard contains a considerable amount of information on the subject and you should make use of this while doing your research.

Also, it would be useful if you purchased the recommended textbook. Recommended textbooks:

Collis, R. and Hussy, J (2009) Business Research: A Practical Guide for Undergraduate and Postgraduate Students, London: Palgrave

Cameron, S. and Price, D. (2009) Business Methods Research: A Practical Approach, London: CIPD

The outcome of the workshop is to produce a Research Proposal that will be used to undertake your dissertation.

In addition to this workshop, Dr Stephen Hole will be undertaking a workshop on Document Construction. It is advised that you attend this too.

Dr Glen Jenkins

Head of Postgraduate Research

Many of the student activities found in this booklet are from Cameron and Price (2009)

Research Methodology Workshop Schedule

1. Academic Focus and Topic of Research

- 1.1. Practical business research: Choosing a topic of research
- 1.2. The investigative process
- 1.3. The context, complexity and ethical considerations of research
- 1.4. The importance of concepts and theory(theories) in research
- 1.5. Research questions and rationale
- 1.6. Research paradigms and research aims and objectives.

2. Towards a research proposal

- 2.1. Exploring and writing the literature review
- 2.2. Data evidence and sampling
- 2.3. Choosing a research method: Strengths and limitations

3. Data Collection and Analysis

3.1. Data Collection

- 3.1.1. Primary and Secondary data
- 3.1.2. Data collection methods
 - Case study research
 - Action-oriented research
 - Surveys and Questionnaires
 - Interviews
 - Focus groups and workshops

3.2. Data Analysis

- 3.2.1. Qualitative analysis
 - Grounded theory
 - Content analysis
- 3.2.2. Quantitative analysis

4. Presentation

- 4.1. Managing the project
 - Produce a time plan
- 4.2. Writing up your research
 - Plagiarism
 - Referencing

The assessment for this workshop is as per the Research Methodology Workshop Assignment and the end of this booklet. Also attached is the assessment criteria that can be used as a guide to structure your proposal.

To submit your research proposal you should send your proposal to

glen.jenkins@smu.ac.uk

You are required to submit the research proposal by a specific date. Therefore, it is very important that you meet this deadline. You will be unable to submit or amend your work after that date.

On successful completion on the assignment you will be eligible to supervision for the dissertation. Supervision is dependent on passing this assessment.

Each section of the assignment will be assessed and your performance will receive a mark (Pass/Fail)

You must successfully complete all stages of the assignment to pass the workshop assignment.

STUDENT ACTIVITIES

The Investigative Process

Student activity 1

Working individually:

- 1 Think about whether you feel most comfortable talking about your proposed work as 'research', 'inquiry' or 'investigation', and the reasons for your preference (in terms of the different implications of these words and/or the nature of the issue you are hoping to look at).
- 2 Think in a similar way about whether you see yourself as collecting 'data', 'information' or evidence.

In a small group:

- 3 Discuss your preferences and reasons.

Student activity 2 a

Working in a small group, agree where to put an X on the scale beneath each statement below.

- 1 **Research needs to be scientific. You should therefore always seek objective measures and use statistical tests to determine the significance of your results.**



- 2 **For any research to be valid it is essential that all variables other than those you are interested in are carefully controlled so that they do not contaminate the results.**



- 3 **Most of the things that managers are interested in are not capable of being objectively measured. If you want to understand them, you will need to use subjective measures.**



4 What is really important in understanding management problems is the way in which different people are interpreting the situation. The important thing to investigate is therefore stakeholders' assumptions and interpretations.



5 It doesn't make sense to think of knowledge as something separate from action. Managers addressing practical issues need to focus on the usefulness of a concept, and its consequences



6 It would be foolhardy to ignore the complexities of business situations in the interests of rigour.



7 Different research methods are needed for different types of problem. Some may be more 'scientific' than others, and you may sometimes need to combine methods.



8 Whatever the nature of the problem, it is important to use a research method that is acceptable to your client.



9 Whether you are working with objective or subjective data you need to be careful about the trustworthiness of the conclusions you draw, and guard against bias.



10 Practical business research needs to proceed in a series of cycles of activity – if you design every feature of your research at the outset you will be unable to benefit from what you learn during the process.



11 It is really important to capture your own thought processes as they change during a research project. The way you are 'making sense' of the issue will have a strong influence on your findings.



If you have time consider the following:

Student activity 2 b

Individually:

- 1 Look at the chair you are sitting on.
- 2 How would you describe it? (Consider its construction, materials i.e. the objective features of the chair.)
- 3 Now describe the chair as a piece of art. (What emotional thoughts come into your head; what are your feelings about the chair; what adjectives would you use to describe it, etc?)

In a small group:

- 2 Discuss the range of views you have about the chair from each perspective.
- 3 Revise your list in the light of discussion.

Choosing a Topic

Student activity 3

Working in small groups (ideally of four), go through the following scenario, each group member taking it in turn to play 'you', a questioner or the observer:

- 1 You describe briefly the area in which you are considering a project, and if you already have an idea of an issue you want to explore with the project, describe the issue. (Maximum 5 minutes; others remain silent.)
- 2 Others ask questions for clarification (Maximum 3 minutes.)
- 3 Two others ask carefully phrased questions about:
 - stakeholders and their likely position(s)
 - how research in this area would further your career objectives
 - the benefits to the organisation
 - the risks you might encounter
 - the feasibility of research in this area.
- 4 The group member who has been observing the questioning now gives feedback on the effectiveness of the questioning in terms of helping 'you' think constructively about key issues.
- 5 All try to identify any new ideas/issues about either the topic choice or the questioning.

Student activity 4

Working in the same group as for Activity 1,

- 1 Identify the potential topic which is furthest developed.
- 2 Discuss possible research questions related to this topic.
- 3 Identify sources of information/data/evidence that could help you answer these questions.
- 4 Discuss the feasibility of obtaining this information, and any risks to a project of this nature.

Writing Your Research Question

Student activity 5: Surfacing your ideas

Working individually:

- 1 Think about two or three potential research questions that you might wish to focus your business research project on. Write each of them down in the top space of one of the boxes provided.

Potential research question No.1

My intentions:

The context:

Potential research question No.2

My intentions:

The context:

Potential research question No.3

My intentions:

The context:

- 2 Now make notes in the other spaces provided about your intentions behind doing that research and the context in which that research will be carried out.

Student activity 6: Feasibility

Working individually, and taking each of your potential research questions in turn:

- 1 Consider the feasibility of doing the research on this research question by noting down in the spaces provided the influential strengths and the limitations of a) the interest that there is in the subject, b) the literature on the subject that is available, c) your stakeholders and their requirements, d) the resources that are required and are available, and e) the methods you intend to use and the skills that are required and that you have.

Potential research question No.1		
	<i>Strengths</i>	<i>Limitations</i>
Interest		
Literature		
Stakeholders		
Resources		
Methods/skills		

Potential research question No.2		
	<i>Strengths</i>	<i>Limitations</i>
Interest		
Literature		
Stakeholders		
Resources		
Methods/skills		

Potential research question No.3		
	<i>Strengths</i>	<i>Limitations</i>
Interest		
Literature		
Stakeholders		
Resources		
Methods/skills		

- 2 Having completed this list, an analysis of it should enable you to see just how feasible each of your potential research questions is. Decide whether you wish to discard one or two of them forthwith, or whether you wish to hold on to them all for now and wait for feedback from your colleagues to help you to choose the one you will go with.

Student activity 7: Refining your question

Working individually, and taking each of your potential research questions in turn:

- 1 Consider and note down in the spaces provided how you might re-word each of your potential research questions so that it clearly conveys a) a central theme, b) a location, and c) a means of investigation.

Current wording of potential research question No.1:

Re-worded research question to convey a) a central theme, b) a location, and c) a means of investigation:

Current wording of potential research question No.2:

Re-worded research question to convey a) a central theme, b) a location, and c) a means of investigation:

Current wording of potential research question No.3:

Re-worded research question to convey a) a central theme, b) a location, and c) a means of investigation:

- 2 Decide which of these revised research questions you wish to take forward as the basis for your business research project.

Student activity 8: Research objectives

Working individually, and having selected your proposed research question:

- 1 Think about the research objectives you would need to set to help you answer the research question. Use the space provided to write down perhaps up to five of such objectives, and then try to structure them in the same logical order that you would address them in.

Selected research question:

Research objectives to help answer the research question:

in no particular order:

1

2

3

4

5

in logical sequence:

1

2

3

4

5

Literature review

Student activity 9

Working individually:

- 1 Consider and write down what you think are the *strengths* and the *limitations* of each of the following types of literature:

BOOKS	
<i>Strengths</i>	<i>Limitations</i>

ACADEMIC JOURNALS	
<i>Strengths</i>	<i>Limitations</i>

PROFESSIONAL JOURNALS	
<i>Strengths</i>	<i>Limitations</i>

ORGANISATIONAL DOCUMENTS/INFORMATION	
<i>Strengths</i>	<i>Limitations</i>

GOVERNMENT REPORTS	
<i>Strengths</i>	<i>Limitations</i>

THESES AND DISSERTATIONS	
<i>Strengths</i>	<i>Limitations</i>

CONFERENCE PAPERS	
<i>Strengths</i>	<i>Limitations</i>

2 Discuss your answers with your group.

Then:

3 See if there are any further answers you had not thought of in the list produced via your lecturer. Discuss them too if there are any.

Writing the Literature Review

Student activity 10

Below are two pairs of extracts from literature reviews. One of each pair would be characterised as good, the other would be characterised as poor.

- 1 Read through the first pair, making notes in the spaces provided of which you think is the good and which the bad, *and why*.

1 Transformational leadership and knowledge management

Extract A

'Leadership is an influence relationship among leaders and followers who intend real changes that reflect their shared purposes' (Daft, 1999: 5). Leadership has been thought about in a number of ways. First, the traits school of thinking claimed that leadership was something that an individual was born with – that people either were or were not a leader (Daft, *ibid*) – and if you were not born with the correct attributes, then you would simply never be a leader. Others (Blake and Mouton cited in Daft, 1999) see leadership as being a balance between a focus on task and a focus on relationships. That in order to influence people to achieve the goals that you have set them you need to balance a concern for the person with a concern for the job. Daft also notes a range of 'contingency approaches' in which features such as the nature of the follower group, the situation and the leader's style of decision-making all have an influence on the leader's ability to lead. Lastly, Daft talks about visionary leadership and the ways in which a vision can inspire people and create commitment. This commitment may include the sharing of knowledge within the organisation.

Extract B

Transformational leaders are often described as charismatic (Bass and Avolio, 2000), providing inspiration, motivation and a shared vision for those within the organisation. However, this vision is thought to do more than simply inspire and motivate the workgroup – it is seen by many as a means of creating a mechanism through which knowledge management (Nonaka and Takeuchi, 1995) can be introduced. Where people share in a vision, they share a vested interest in seeing that vision become a reality. Transformational leaders encourage people to share both their explicit and their tacit knowledge (Argyris and Schon, 1996), helping people to contribute more effectively to the organisation's goals. Although the human motivational aspects of this knowledge-sharing are important, Garcia-Morales *et al* (2008: 312) recognise a much more practical benefit, with their claim that 'Tacit knowledge enables the firm to obtain competitive advantage'. The benefits of knowledge management are therefore not simply altruistic; rather they are clearly intended to be of value to the success of the organisation as well as of value to the people who work within.

I think Extract A is good / poor because:

1

2

3

4

I think Extract B is good / poor because:

1

2

3

4

- 2 Read through the second pair, making notes in the spaces provided of which you think is the good and which the bad, *and why*.

2 The culture of the organisation

Extract 1

Culture is something that everybody is familiar with. It is something that people talk about at work, something that we read about in the newspapers and something that every organisation has. But culture has not always been a part of organisations. In the 1980s academics started writing about culture and suggesting that it might be used by managers as a means of controlling the workforce. Deal and Kennedy, Handy and Schein all produced models of culture which demonstrated how they characterised the concept. There was some criticism of these models – in particular, Handy's model. Many academics thought that the model that he produced was more a model of structure than a model of culture. As such this was not of use because managers wouldn't be clear which was which.

Extract 2

Culture is thought to be a borrowed concept (Reichers and Schneider, 1990; Sackman, 1992), existing for many years only in the academic fields of anthropology and sociology. However, by the 1980s, many people studying organisations (Pettigrew, 1979; Deal and Kennedy, 1982) had suggested that culture might be of value to the practice of management. The concept was transferred into the realms of management (Price, 2006), and a number of debates emerged. First was the debate regarding definition. Authors such as Schein (1984) were quite happy to offer definitions of the concept and to defend the usefulness of definitions, while others, such as Alvesson (1993: 2), noted that 'definitions seldom succeed in giving such concepts any crystal-clear meaning'. The second debate related to the difference between organisational culture and corporate culture. Although some writers (Hofstede, 1986; Kotter and Heskett, 1992) use the terms interchangeably, others, such as Linstead and Grafton-Small (1992), are keen to make a distinction between the two. Corporate culture they see as being that directed by management, whereas organisational culture is that which emerges from the workgroups within the organisation. It is therefore beyond the control of management. The third debate is closely linked with the distinction between corporate and organisational culture. Where culture is to be a value to managers it needs to be consistent across the organisation. The third debate highlights two schools of thought, one which sees culture as being homogenous and consistent across the organisation, and the other which characterises culture as being fragmented or differentiated (Parker, 2000; Martin, 2002).

I think Extract 1 is good / poor because:

1

2

3

4

I think Extract 2 is good / poor because:

1

2

3

4

- 3 Discuss your answers and your reasons with others of your group, noting down in the spaces provided above anything significant you might have missed the first time.
- 4 Discuss your group's responses in a plenary session.

Data, Evidence and Sampling

Student activity 11

Working in small groups:

- 1 Discuss why you cannot prove anything about a population from a sample.

Notes:

- 2 Consider what might make you more or less sure about any conclusions you drew from your sample.

Notes:

Student activity 12

Jack is in charge of a team (22 members) which carries out a range of marketing-related projects for a large number of very different internal and external customers. There have recently been an increasing number of complaints about the quality of service his team delivers, from both internal and external customers. Jack has decided that for his dissertation project he would like to do something about this.

In a small group, and including in your discussion ideas about types of data and sampling,

- 1 Discuss the sorts of data/information that Jack might consider collecting and analysing at different stages in his project, and how each type might help him achieve his overall purpose of improving the service provided by his team.

Notes:

- 2 Discuss how Jack might go about deciding which data might be of most use to him.

Notes:

Choosing a Research Method

Student activity 13

Referring to the methods and approaches you have just looked at [on the PowerPoint slides], use this activity to decide which methods are appropriate for your research. You will need to refer to the recommended textbook to complete this activity.

- 1 In the spaces provided write down what you think are the strengths and weaknesses of each *in relation to your particular research*.

PHILOSOPHIES	
Case study research	
<i>Strengths</i>	<i>Weaknesses</i>
Grounded Theory	
<i>Strengths</i>	<i>Weaknesses</i>
Action Research	
<i>Strengths</i>	<i>Weaknesses</i>

DATA COLLECTION TECHNIQUES	
Questionnaires	
Strengths	Weaknesses
Interviews	
Strengths	Weaknesses
Focus groups	
Strengths	Weaknesses
Observations	
Strengths	Weaknesses

METHODS OF ANALYSIS	
Quantitative methods	
<i>Strengths</i>	<i>Weaknesses</i>
Qualitative methods	
<i>Strengths</i>	<i>Weaknesses</i>

Quantitative Analysis

Student activity 14

What type of scale are the following:

1. On a scale of 1 to 5, how happy are you? _____

2.

	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
		(4)	(3)		
Current pay					
Working conditions					
Benefits					

3. Weight _____

4. Fahrenheit scale for temperature

5. Exam marks _____

Describe the techniques used in exploratory analysis:

Techniques:

1.

2

Student activity 15

1 Identify two ways that you would present each of the following

a. Univariate data

i.

ii.

b. Bivariate data

i.

ii.

2 Explain the difference between the following:

i. Parametrics (P)

ii. Non-parametrics (NP)

Student activity 16

1 What type of analysis uses?

Pearson's coefficient (r) (P)

Spearman's rank coefficient (r_s) (NP)

Chi squared (X^2) test (NP)

2 In groups, discuss the types of data you would have in your research and describe the most appropriate representation of the data.

3 Compare two of your representations, and decide on their relative advantages and disadvantages as ways of communicating your findings.

SWANSEA METROPOLITAN UNIVERSITY
Swansea Business School
MBA
University of Wales
2010-11
Dissertation Research Methodology Assessment

Workshop:	Research Methodology (M6X9163)
Title/Question:	Research Proposal
Hand Out Date:	31 st -3 rd June (available on Blackboard)
Hand In Date:	4 th July 2011

Background/Rationale

The research methodology workshop is a requirement of Part II of the MBA - the dissertation and is assessed prior to the start of the dissertation. Student must pass this assessment to commence the Dissertation. The workshop is designed to inform you of the methods of research for your chosen dissertation topic. It is essential when embarking on research to choose a research topic and design a framework that provides a clear structured approach to research, recognises the research process, the time scales involved and skills and knowledge needed to choose the best method for that research.

The assessment of the Research Methodology workshop will require the student to produce a viable research proposal that provides a persuasive and convincing argument for the research to be undertaken, clear aims and objectives and an understanding of research design and project management. The student will be required to submit an initial 2000 word research proposal.

Learning Outcome

On completion of this workshop the student should be able to:

1. Prepare a research proposal that provides evidence that the topic to be studied is worth addressing; that the way the proposal addresses the topic is both appropriate and feasible in terms of intended activities, outcomes and resources and thus establishes its importance to both academic and professional communities.

Requirements

Students are required to produce a 2,000 word maximum Research Proposal.

Blackboard

Students should submit their Research Proposal to the Assignment Blog on Blackboard by the required date and a copy of the submission should also be submitted to Turnitin.

Key Objectives

1. *Choose a research topic and discuss your research rationale*
2. *Present key literature/key issues/debates (Contextual issues) and references*
3. *Discuss your research aims and objectives and research question*
4. *Discuss your chosen/proposed paradigm and methodology*
5. *Evaluate the advantages and disadvantages of your methods*
6. *Present and evaluate effective methods/tools for data collection.*
7. *Discuss resource implications and needs (costs/time etc)*
8. *Present a time plan for the research process*
9. *Bibliography*

Name _____

Swansea Business School MBA Research Proposal Marking Scheme			
Assessment Criteria	Indicative content	Completed	Grade Awarded
Provides a persuasive and convincing research rationale and aims and objectives and, identifies the context, boundaries and ethical and resource considerations of the research.	1. Academic Focus and Research Rationale a. State you chosen topic of research b. Define the context, boundaries and ethical considerations of your topic c. Provide a justification for your topic choice based on a review of previous research in the topic area. d. Define the concepts and theory(theories) that will inform your research e. State the primary research question f. State the aims and objectives of the research.		
Identifies the research paradigm and evaluates and justifies the choice of research methods.	2. Research Paradigm and Method a. Identify the research paradigm you will use to research the topic b. Identify the research methods that you will use to gather the data c. Critically evaluate the advantages and disadvantages of the chosen research methods d. Summarise the methodological limitations of the research		
Understands the employment of data collection methods and can justify their use	3. Data Collection a. Select the appropriate data collection techniques for your topic b. Identify the respondent population and sample if required c. Explain how you will analyse the data collected d. Specify the research limitations in terms of both reliability and validity		
Evaluates the methods of analysis of data and how the data will be presented	4. Methods of Data Analysis a. Qualitative analysis and/or b. Quantitative analysis		
Identifies how the research is to be managed in terms of budget, time management and other resources.	5. Resource and Time Management a. Evaluate the resources needed b. Produce a time plan for the research c. Budget considerations		
TOTAL			

Assessments will be graded PASS or FAIL.

Research Methodology

1 ACADEMIC FOCUS AND TOPIC OF RESEARCH

Doing research?

- Whether you are doing research for the first time or have engaged in the process before, you will need some guidance on how to go about it.
- You are about to embark on a *research project* that will, if done well, make you a member of a growing number of people - the *research community*.

Doing research?

- Before you start doing research you need to ask yourself a question:
- Do you have the right skills, knowledge, aptitudes and personal qualities to undertake such a project?
- Some of the skills required in research are *generic* i.e. can be used elsewhere but some are *specific* to the research community.

Generic research skills & aptitudes

Skills

- Communication
- Analysis
- Evaluation
- Information Technology
 - Word processing
 - Database management
 - Literature research
- Project Management
 - Plan, organise and manage own time
 - Gain support and cooperation from others

Aptitudes

- For learning
 - Knowledge
 - Comprehension
 - Critical outlook
- Motivation
- Independent thinking
 - Reflective – learn from experience
 - New ideas

Specific research skills

- Do you have sufficient knowledge and skills to undertake the research? For example,
 - Do you know how to structure and argue a case in writing
 - Able to defend and argue views orally
 - Do you know how to design a questionnaire?
 - Do you understand statistical analysis?
 - Do you know how to interpret the results?
 - Are you familiar with Edexcel, Survey Monkey or SPSS?
 - Do you know how to interview?
 - Do you know how to analyse qualitative and quantitative data?

Knowledge

- Aware of different assumptions about the world
- Aware of the methods of data collection
- Aware of different methodologies
- Knowledge of immediate subject of study
- Knowledge of related subjects/disciplines
- Knowledge of key networks and contacts in chosen field of study

(Adapted from Easterby-Smith *et.al.* (1991:17))

Personal Qualities

- Awareness of own strengths and weakness and values
- Clarity of thought
- Sensitivity to events and feelings
- Emotional resilience
- Flexibility
- Creativity

What type of research?

Type of research

- Exploratory research, Descriptive, Analytical or Predictive
- Quantitative or qualitative
- Deductive or inductive
- Applied or basic

Basis of research

- Purpose of the research
- Process of the research
- Logic of the research
- Outcome of the research

Where do you start?

- Philosophy
- Choose a topic
 - Why do you want to research this topic?
 - What is your reason or rationale?
- Review the literature
- Determine the research question
- Develop a hypothesis
- Operationalization

Where do you start?

- A good research-undertaking starts with the selection of the topic, problem or area of interest, as well as the paradigm (Creswell, 1994; Mason, 1996).

Words matter . . .

- 'Research' or 'investigation' or 'inquiry'?
 - – All are words for a process of finding out
- 'Data' or 'information' or 'evidence'?
 - – All are words for something you collect as part of this process

Student Activity 1

What is reality?

- Does reality exist independent of an observer?
- Can/should you extend your knowledge of this reality by collecting only objective observations?
- Should researchers investigate only those things which can be objectively measured?

Student Activity 2

Possible philosophical preferences

- Epistemology:
 - An area of philosophy concerned with questions of what can be known, and how.
- Key questions:
 - Is there an objective reality independent of the human observer (realism, objectivism)?
 - If there is, can we ever know it?

Philosophical preferences

- Positivists believe that research demands impartial measurement of variables and analysis of these data.
- Social constructionists counter that if you are interested in a social reality, what matters is how it is constructed in a social context. This cannot be measured objectively.
- Critical realists seek a middle ground combining belief in an external reality with a recognition of the need for subjective measures.
- Pragmatists focus on the practical consequences of ideas and their inseparability from action.

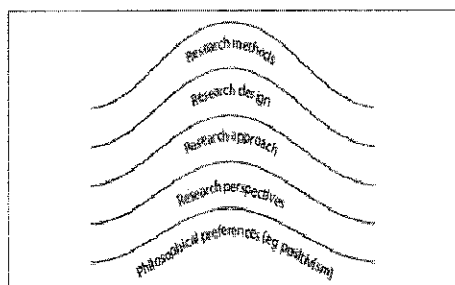
Possible research purposes

- Exploratory research – finding out what is going on, generating ideas for future research
 - Descriptive research – producing an accurate portrayal of persons, events or situations
 - Explanatory research – identifying and explaining (often causal) relationships between factors
 - Emancipatory research – creating opportunities and motivation to engage in social action
- (Robson, 2002)

Key points about the process

- Research has 'scientific' overtones whereas inquiry emphasises the exploring and discovering nature of the activity.
- Data tends to convey 'hard facts'; information may be data or something softer provided it helps reduce uncertainty.
- Both need interpretation, which will be context-dependent, if they are to become evidence to support a claim or argument.

Strata in thinking about research



Key research design choices

- Inductive or deductive?
- Fixed or flexible design?
- Choices must be consistent with your
 - research goal or purpose
 - philosophical preferences
 - context.

Useful Internet sites

- There are a number of internet sites on Blackboard that can help you to understand Research Methods. Some of these sites provide additional tutorials for Social Research Methods.
- Recommended textbooks:
Cameron, S. and Price, D. (2009) Business Methods Research: A Practical Approach, London: CIPD
Collis, R. and Hussy, J (2009) Business Research: A Practical Guide for Undergraduate and Postgraduate Students, London: Palgrave

Research Methodology

2 CHOOSING A TOPIC

The ideal topic . . .

- An ideal topic will:
 - be theoretically and personally interesting
 - be of value to you, a client or the wider research community
 - offer developmental opportunities
 - help advance your future career
 - allow you to obtain a good mark for your dissertation

Be clear about your goals

- Where would you like to be in your career in the next five years?
- What skills would help you achieve this?
- What experience would help?
- What knowledge and expertise would accelerate your progress?
- What contacts might it be useful to develop?
- What would help raise your profile?
- What project areas might serve any of these?

Activity 3

Understand the context

- What other stakeholders are involved?
- What are their likely views?
- What changes might take place?
- What threats are there to success?
- Are there likely to be difficult issues of confidentiality of any data?
- Does the organisation have its own ethics approval process?

Why think about several topics?

- Many potential topics are less promising than they initially look.
- Some are more promising.
- Progressing several topics may result in a better choice than your original.
- It gives you a fall-back position.
- Ideas from one possible topic can enrich your thinking about another.

Choose a topic

- Choosing a topic is a very important step. If you have a choice of topics, you want to pick one that interests you and to which you have at least some access to data.
- You want to pick a topic that is "narrow" enough that your research is focused, that you can complete in the time available but not so narrow that you can't find any information on the topic.

Activity 4

Review the literature

- This means reading other researchers' studies to learn how they did their research and what they found.
- Contemporary researchers are "great because they stand on the shoulders of those who have completed earlier research."
- This is very time consuming but reviewing the literature will help you decide.
 - which variables (i.e., factors) are important to study,
 - how to measure (i.e., assess) them, and what findings to expect.

Review the literature

- What literature you examine will help determine the context of the research. For example, you may wish to undertake a study of childcare but you could study this in a school, nursery, hospital, family, etc
- The context is important because it helps to define the boundaries of your research. For example, I want to study children between 5 and 11 years of age; children who are disabled, etc

Theoretical framework

- A theoretical framework is a selection of concepts, models or theories that you have found in your literature review that provides explanations of all or part of your research topic.
- Theoretical frameworks can be important in deciding on a research paradigm (more of that later). Concepts can be redefined in your research or a theory can be tested or a new hypotheses put forward as alternative or contradicting explanations.

Theoretical framework

- Framing your research topic in an existing theory can help to provide a structure to your research.
- It can also be useful to define your research question or hypothesis.

Review the literature

- Remember, you can "borrow" anything you want from other studies as long as you give the authors proper credit i.e. referencing.
- In fact, you are *expected* to use their work to make your study better.
- If you don't review the literature, you are missing out on a lot of good information and you will be considered "lazy" by other researchers.
- In short, make the library your friend!

Plagiarism and research

- Do you know what this is?
- At SMU we are continually engaged with other people's ideas: we read them in texts, hear them in lectures, discuss them in class, and incorporate them into our own writing.
- As a result, it is very important that we give credit where it is due.

Plagiarism

- Plagiarism is using others' ideas and words without clearly acknowledging the source of that information.
- See Blackboard for further information and SMU regulations on plagiarism.

Ethical responsibilities in research

Responsibilities to participants

Responsibilities to sponsors

Responsibilities to the wider research community

Responsibilities to participants

- Respect
- Think about the consequences of your research on them:
 - consequences of the process
 - consequences of the results
 - confidentiality issues

Informed consent

- Giving people sufficient accurate information about your research to ensure that they are able to make a well-reasoned decision regarding their participation:
- Deception: giving false or misleading information or a 'partial' truth
- Coercion: the use of pressure, threats or enticements to encourage people to participate

Responsibilities to sponsors

- Mutual respect
 - shared clarity about the research objectives
- Integrity
 - dealing with people, data and information in genuine and trustworthy ways
- Loyalty
 - discuss any necessary changes, meet obligations and recognise limitations

Responsibilities to the wider research community

- To retain academic integrity
 - reference properly
- To produce genuine and trustworthy findings
 - do not skew data or results
 - do not falsify data or results
 - do not misrepresent data or results

Ethic approval processes

- SMU require you to have been given ethical approval before you collect any primary data:
 - This protects you as a researcher
 - This protects your respondents/ sponsors
 - This protects the institution.
- (See Blackboard)

Research Methodology

3 THE RESEARCH QUESTION: AIMS AND OBJECTIVES

Determine the research question

- Your literature review will give you knowledge and familiarity with the topic and help you decide what questions are important.
- The research question is the question you hope to answer with your study.

Determine the research question

- For example, you might discover while reading about university drop out rates, that students leave universities that they perceive as culturally and socially "distant" from them, and that overseas students have lower retention rates than academically comparable 'home' students.
- Based on these two findings, you might decide to examine this research question:
 "Are overseas students more likely to leave universities they feel are unresponsive to their unique cultural needs?"

Develop a hypothesis

- An alternative to the research question is a 'hypothesis'.
- According to Vogt (1993) a hypothesis is:
 - "A statement of the relationships among the variables that a researcher intends to study."
- This definition brings out two important ideas.

Develop a hypothesis

- First, hypotheses are assertions about how two or more variables are related to or associated with each another.
 - Assume that we're again interested in studying why students leave university. One possible hypothesis is: Students drop out of university because they cannot afford to pay the high costs. This hypothesis posits that dropping out and personal finances are related, and suggests that those who can't afford the cost of university education will leave.

Develop a hypothesis

- It is testable, because we could see if students leave because they can't afford the cost (versus leaving for other reasons).
- Hypotheses should both say what we expect to find in our research and be testable.

Develop a hypothesis

- The second concept the definition illustrates is the idea that hypotheses are formulated for variables that we intend to study.
- In other words, the hypotheses are formulated before we do our research. It's not considered proper to do the research, poke around in the data, and then write up a hypothesis that "fits" what we found.

Develop a hypothesis

- Hypotheses should preferably be based on theory and what previous researchers have found; they are not just made up "off the cuff".
- Hypotheses are scientifically reasonable predictions.
- Remember, all good hypotheses are testable, and make specific predictions about what the researcher expects to find in his/her research.
- The development and testing of hypotheses is one of the important things that makes research positivistic or scientific

Operationalization

- Operationalization is how we measure our concepts.
- Remember, concepts are seldom easy to measure.
- Let's say I want to study how satisfaction with life affects performance in university.
- How would I recognize high "satisfaction with life" when I saw it?
- How could I make sure that other people would agree with me when I said that a certain person was or was not satisfied with his/her life?

Operationalization

- One way would be to read the literature and see what other people have done.
- Chances are that someone else out there has studied satisfaction with life and might have written up how to measure it.
- If so, I could use their measures or alternatively, make my own based on their ideas.

Operationalization

- The next question is how to measure "school performance."
- Do I use
 - grades,
 - teacher recommendations or evaluations,
 - level of extra-curricular activities,
 - or something else?
- You can see that operationalization requires a lot of thinking.

Aims and Objectives

- Depending on your philosophical position e.g
- Positivistic aims and objectives include:
 - Variables
 - Theory
 - Methods to be used
 - Sample population
- Social Constructionists aims and objectives include:
 - Method being used
 - Phenomenon being studied
 - Location
 - Reference to social construction of reality

Is your research question/topic feasible?



- This is a very important issue and cannot be avoided.
Central questions are:
 - Can you generate sufficient data to analyse?
 - Do you have sufficient time to do the research?
 - How much will it cost?
 - What data is available (secondary)?

Activities 5-8

Research Methodology

4 LITERATURE REVIEW: EXPLORING AND WRITING

Exploring the literature

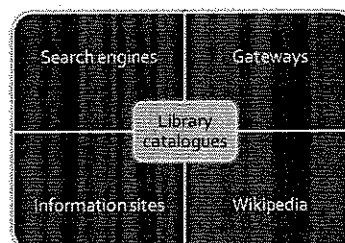
- What is 'the literature'?

Literature is the body of knowledge which has been accumulated around a particular theme or subject area.

Sources of the literature

- Literature comprises secondary data, of which there are three sources:
 - Primary sources – where data or findings appear for the first time
 - Secondary sources – some form of digest produced from primary sources (e.g. a book chapter which mentions the prior work of a number of people)
 - Tertiary sources – organised lists or summaries (e.g. indexes and catalogues, subject encyclopedia)

How can you access the literature?



The perils of Wikipedia!

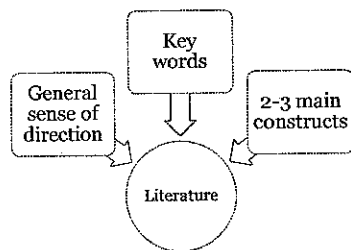
- No academic control
- No proof of accuracy or reliability
- Not accepted as valid by most universities
- But . . .
- Wikipedia can be a good way to find bona fide academic references.
- Be sure to verify them by reading the original.

Different types of literature

- Books
- Academic journals
- Professional journals
- Organisational information
- Government reports
- Theses and dissertations
- Conference papers

Activity 9

Where do you start?



Key steps in a literature search

1. Start with a broad topic (eg working title)
2. Decide which type of literature to start with
3. Draw ideas/direction from this literature
4. Use these to refine your focus
5. Search again with new focus words



Reading skills to help you with your review

- Scanning
 - use finger as with telephone directory
- Skimming
 - level 1 skimming
 - ✱ Read the abstract
 - ✱ Read the subheadings
 - ✱ Read the conclusions
 - level 2 skimming
 - ✱ Read first paragraph of each section
 - ✱ Read first line of each paragraph

Writing skills to help you with your review

- Structural note-taking
 - produces an independent review of each piece of literature
- Thematic note-taking
 - draws together themes across the literature and so produces a more integrated set of notes
- Three-minute essays
 - Write down short notes of what you have learned
- Annotating papers/books
 - Comments, notes, underlining text, etc
 - ✱ Do not do this on SMU library books! Only photocopies.

Plagiarism

- A main cause of plagiarism is sloppy referencing when taking notes.
- Make sure that:
 - you record the full bibliographical reference for everything
 - you clearly indicate in your notes where words have been taken from
 - all quotes are referenced as such
 - paraphrasing is properly referenced.

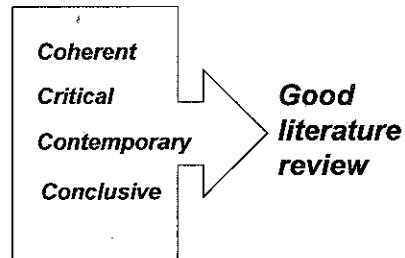
Writing a literature review

- What is a literature review?
- An extensive critical discussion of a body of work in a particular academic or theoretical area.

Why is a literature review important

- It informs your research question
- It informs your research method(s)
- It demonstrates that you understand the relevant theories and concepts
- It demonstrates that you understand the theoretical landscape

The characteristics of a literature review



Coherent

- **Coherent**
 - Logical flow
 - Development of arguments
 - Evidence for claims
 - Clear connections between themes/ sections
- **Avoid:**
 - A random series of assertions
 - Too many quotations
 - Using language you don't understand

Critical

- **Critical**
 - Draw on the strengths of the literature
 - Recognise and comment on the limitations
 - Identify the conclusions that you draw from these
 - See how the context affects usefulness or relevance
- **Avoid:**
 - Simply being destructive
 - Presenting a one-sided discussion
 - Unjustified opinion

Contemporary

- **Contemporary**
 - Show a good understanding of the older theories
 - Show a good understanding of the newer theories
 - Show the relationship between these
 - Show where there are gaps
- **Avoid:**
 - Presenting a descriptive 'list' of theories
 - Using just textbooks
 - Using non-academic web sources

Conclusive

- **Conclusive**
 - Build your arguments towards the reason for your research
 - Present your own well-reasoned views and opinions
 - Conclusions should draw only from the previous discussions (no new ideas 'dropped' in)
- **Avoid:**
 - Unsupported claims
 - Exaggerated claims
 - Pre-empting the outcome of your research

Referencing

- Referencing is crucial.
 - You must acknowledge the work of others properly.
- Quotations
 - should be in inverted commas ('.....')
 - should cite the name, year and page in text. There should be a full bibliographical reference
- Paraphrasing
 - should represent a significant alteration of the original author's words
 - should cite the name and year in text. Full bibliographical reference

Activity 10
homework

The structure of a literature review



The structure of a literature review

Introduction

- Introduce general topics
- Define the boundaries of the literature review
- Explain why this literature has been chosen
- Stress the importance of the topic

The structure of a literature review

Main body

- Chronologically structured
- Thematically structured
- Avoid description – make this brief where needed
- Be critical but not destructive
- Use quotes to support or refute arguments

The structure of a literature review

Conclusions

- The main points of agreement
- The main points of disagreement
- Any problems, tensions or contradictions
- Any gaps in the literature

Research Methodology

5 DATA, EVIDENCE AND SAMPLING

Primary data or secondary?

- Primary data is what you gather for yourself
 - likely to be more relevant, but more expensive to collect
- Secondary data has been gathered by others
 - usually cheaper, but difficult to judge how much weight to place on such data

Quantitative or qualitative?

- Quantitative: data in numerical form
 - Less labour intensive to collect, often allows statistical analysis and generalisation from sample, appears 'scientific'
- Qualitative: non-numerical data
 - Richer but more labour-intensive. Some research questions may only be answerable by qualitative data
- Although different philosophical preferences favour different types, it is often advisable to collect both forms.

Measure or indicator?

- Measures
 - are directly linked to the thing measured, indicators more tenuously related.
- Indicators
 - may be influenced by a range of other factors. Using several different indicators may help compensate for this.
- Note:
 - Sometimes neither measures nor indicators are appropriate.

What distinguishes 'good' data?

- Data needs to support your conclusions.
- Good quantitative data is:
 - relevant: It has the potential to contribute to answering your research question.
 - valid: It measures what it purports to measure.
 - reliable and/or replicable: It is stable over time; there is internal consistency between items and/or independent of the observer.
 - representative: It is derived from a sample which is representative of the population in which you are interested.

Sampling

- You may wish to draw conclusions about a larger group than you can possibly study directly.
 - If so, you will need to work with a sample.
- When sampling, 'population' refers to the whole group to which your question relates.
- A sample is the subset of the population from which you collect data.
- You can never 'prove' anything with a sample.

Student Activity 11

Stages in sampling

- 1 • Define the population
- 2 • Decide on the sample size
- 3 • Decide on the sampling method
- 4 • Apply the method

Sample size

- The necessary sample size will depend upon
 - the degree of variation in your population
 - the sort of analysis you intend to carry out
 - the type and 'strength' of the conclusions you are seeking.

Note:

- Size is the sample you get, not all those that you approach.
- In planning a sample you may need to consider the likely response rate.

Response rate calculation

$$\frac{\text{Number of usable questionnaires you receive back}}{\text{Number of suitable people receiving questionnaires}} \times 100$$

Types of sample

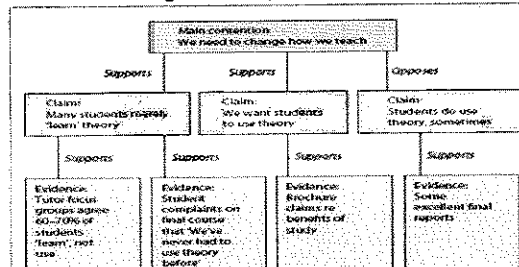
- Driven by informational potential rather than representativeness:
 - Convenience
 - Snowball
 - Theoretical
- Designed to be representative of a parent population:
 - Random probability
 - Stratified probability
 - Cluster or multistage

Be careful about the conclusions that you draw

Student Activity 12

Mapping arguments

Part of an argument map in relation to teaching



Logical links in an argument

- The links are between evidence (E) and the claim or sub-claim (C) that it is being used to support (or between claims and sub-claims). Links can be:

- E proves C
- E suggests C is likely
- E is consistent with C
- E is inconsistent with C
- E suggests C is unlikely
- E disproves C

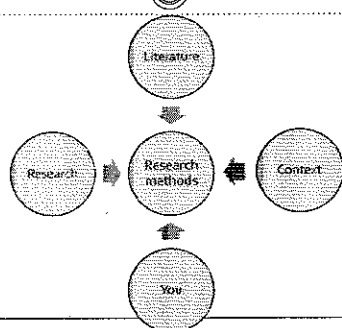
Research Methodology

6 CHOOSING A RESEARCH METHOD AND DATA COLLECTION

Choosing a research method

- What are research methods?
 - Research methods are means through which you undertake the investigative aspects of your business research.
 - They involve the over-arching approaches to research as well as the means of data collection.
 - Can take to forms:
 - × Primary research: involves the collection of data that does not already exist. It is research to collect original data.
 - × Secondary research: involves the collection of data that already exists.
 - We are primarily concerned here with Primary Research

Factors that need to be taken account of when choosing a research method



Research Methods

- | | |
|---|--|
| <ul style="list-style-type: none"> • <u>Qualitative</u> • Goal: To Understand • Descriptive accounts • Similarities and Contrasts • Applied and Theoretical • Research questions • Field study • Natural conditions | <ul style="list-style-type: none"> • <u>Quantitative</u> • Goal: To Predict & Control • Measure and Evaluate • Generalize to population, reproduction • Basic and Theoretical • Hypothesis testing • Lab study • Controlled, contrived |
|---|--|

A continuum rather than "either/or"

Methodology types

- | | |
|---|---|
| <ul style="list-style-type: none"> • <u>Qualitative</u> • Ethnography, • Case Study, • Grounded Theory, • Autobiography, • Participatory Action Research, • Phenomenology (each grounded in a specific discipline and philosophical assumptions) | <ul style="list-style-type: none"> • <u>Quantitative</u> • Survey methods, experimental • Mixed Methods • Draw from qualitative and quantitative methods • Sample selection • Related to methodology and study design |
|---|---|

Data Collection

- | | |
|--|---|
| <ul style="list-style-type: none"> • <u>Quantitative</u> • Emphasis on numerical data, measurable variables • Data is collected under controlled conditions in order to rule out the possibility that variables other than the one under study can account for the relationships identified | <ul style="list-style-type: none"> • <u>Qualitative</u> • Emphasis on observation and interpretation. • Data are collected within the context of their natural occurrence. |
|--|---|

Data collection methods

- *Philosophies rather than single methods*
- Case study research: Can be used successfully in carefully planned and crafted studies of real-life situations, issues, and problems (Yin, 1984, p. 23). Reports on case studies are widely available in the business and management literature.
- Grounded Theory: Highly complex and emergent strategy that generates theory from data.
- Action Research: Deals with practical and problem solving issues in a way that involves both researcher and those being researched. There is a co-learning experience.

Data collection techniques

Main Data Collection Techniques

- Critical incident technique
- Diaries
- Questionnaires
- Interviews
- Focus groups
- Observation

Data collection techniques

- Critical incident technique:
 - Flexible method where data is collected from the respondent's perspective and in his or her own words
 - BUT
 - Critical incidents often rely on memory, incidents may be imprecise or may even go unreported.
- Diaries/Interviews
 - The potential of the 'diary-interview' method to accommodate different response modes (Elliot, 1997, p. 7)
 - BUT
 - participants may not comply with the requirements of the diary regime

Data collection techniques

- Questionnaires:
 - Good for gathering large quantities of data relatively cheaply
 - BUT
 - Must be properly designed
- Interviews:
 - Good for gathering rich data and exploring themes
 - BUT
 - Need robust interviewing/interpersonal skills

Data collection techniques

- Focus groups:
 - Good for allowing the respondents to develop and elaborate on themes
 - BUT
 - Need to be able to control discussions so that you get the information you need
- Observations:
 - Good for gathering data and information in natural settings
 - BUT
 - Need to make sure the data and information produced is trustworthy

Methods of analysis

- Never collect data before you have planned how you will analyse it!
- Quantitative methods + - ÷ / ×
 - Statistical analysis can be used to describe or predict relationships or trends
- Qualitative methods *words*
 - Based on the use of words; can be used to explain or discuss issues

Mixed methods

- This is the best of both worlds – but you need the skills to do both types of analysis.
- Triangulation: The mixing of data or methods so that diverse viewpoints or standpoints cast light on the topic of research.
- You need to think about how to synthesise both sets of results.

Mixed methods

- Data triangulation: used in validating the data.
- Methodological triangulation e.g. the mixing of surveys and interviews.
- Interdisciplinary triangulation: use of several disciplines to broaden the understanding of phenomenon e.g. researcher team from psychology, anthropology, sociology.
- Investigator triangulation: involves multiple researchers in an investigation.
- Theory triangulation: involves using more than one theoretical scheme in the interpretation of the phenomenon.

Student Activity 13

Research Methodology

7 QUALITATIVE ANALYSIS

Problems with qualitative analysis

- Difficult to distinguish between methods of collection and methods of analysis (Morse, 1994)
- Limited consensus on how to analyse the data (Robson, 1993)

Approaches to analysis

Two basic approaches to analysis:

- Quantify the output
 - Turn qualitative data into quantitative data
- Non-quantification
 - More appropriate to the phenomenological paradigm

Main Methods

Quantify

- Informal
- Formal
 - Content Analysis
 - Repertory grid

Non-quantify

- General analytical procedure
- Cognitive mapping
- Data Displays
- Grounded Theory
- Quasi-judicial methods

Quantify: Informal

- Here the researcher is looking for repetition in behaviour
- Tends to measure the frequency of something happening
- Measurement of normality or rarity
- Some form of scaling (limited explanation of how the scale is used)

Quantify: Formal - Content Analysis

Definition	Seeks to analyze texts in terms of the presence and frequency of specific terms, themes, concepts, etc.
Mode of analysis	Coding Frame
Key concerns	Keywords, categories, counting,
Typical applications	Studies of communications or media content, political documents, public speeches, ad campaigns, etc.
Validity issues	• Samples of representative texts • Manifest vs. Latent content • Inter-coder reliability
Paradigm	Positivism

See Collis and Hussey (2009:164-6)

Quantify: Content Analysis

Advantages

- Texts or transcripts can be easy to access
- It is inexpensive
- Can allow for both quantitative and qualitative methods to be employed
- Can provide valuable historical/cultural insights over time through analysis of texts. These can be re-examined later.
- Can be used to interpret texts for purposes such as the development of expert systems
- An unobtrusive means of analyzing interactions. Does not involve the subject.
- provides insight into complex models of human thought and language use

Quantify: Formal - Content Analysis

Disadvantages

- Can be extremely time consuming
- Is subject to increased error of interpretation
- It is often devoid of theoretical basis (Silverman, 1993)
- It is inherently reductive, particularly when dealing with complex texts
- It tends too often to simply consist of word counts
- It often disregards the context that produced the text, as well as the state of things after the text is produced
- It can be difficult to automate or computerize

Quantify: Formal - Repertory grid

Definition	A framework for the patterning of subjective experiences
Mode of analysis	Hypothetical construct
Key concerns	Elements, Constructs, Linking mechanisms
Typical applications	Where formulating questionnaire is difficult in a interview or interviewee is unable to structure his/her views clearly
Validity issues	Problems of aggregating individual grid matrices may lead to loss of validity
Paradigm	Positivism

See Collis and Hussey (2009:150-2)

Quantify: Formal - Repertory grid

Advantages

- Does not constrain the cognitive maps to representations and attributes predetermined by the researchers
- Bias from the researcher's own frame of reference avoided; rather data is generated from the interviewee's constructs of the social reality, situation or interaction
- Quantitative and qualitative analysis can be undertaken

Quantify: Formal - Repertory grid

Disadvantages

- Time consuming
- Interviewee articulation is not always possible (elements, constructs)
- Comparing constructs can be difficult with large numbers of interviewees.

Non-Quantifying Methods

- Associated with the phenomenological approach
- Lindof's (1995) classification is useful
 - Process
 - × Continual analysis of the data as new data becomes available
 - Reduction in data
 - × Data coding
 - × Conceptualization of data
 - Explaining
 - × Research attempts to explain how participants makes sense of their actions, goals and motives
 - Theoretical context
 - × Gives structure to the interpretation.

General analytical procedure

- Miles and Huberman (1994) identified a general analytical procedure that could be applied to phenomenological research.
- He provided a method by which it can be managed and controlled.

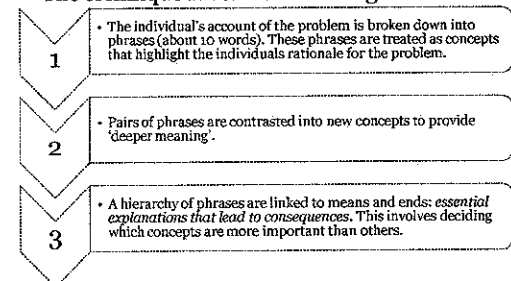
(For more detail see Collis and Hussey, 2009:169-171)

Cognitive mapping

- Cognitive mapping is a method which is used to structure, analyse and make sense of written or verbal accounts of problems
- This makes use of what Kelly (1995) calls personal constructs i.e.
 - 'we make sense of the world in order predict how, all things being equal, the world will be in the future, and to decide how we might act or intervene in order to achieve what we prefer with that world – a predict control view of problem solving' (Ackerman, Eden and Cropper, 1990:1)

Cognitive mapping

- The technique involves three stages:



Cognitive mapping

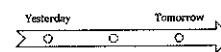
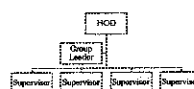
- Used to identify particular strategies that people have employed.
- Also useful in action research studies
- Cope and NUD.IST software can be used to undertake cognitive mapping.
- See Collis and Hussey (2009:177-8)

Data Displays

- A display is 'a visual format that presents information systematically, so the user can draw valid conclusions and take needed action' (Miles and Huberman, 1994:91)
- Data displays include networks, matrices, charts and graphs.
- See Collis and Hussey (2009:171-4)

Data Displays: Networks

- Networks are a collection of points connected by lines which illustrate relationships.
- The most familiar network is an organisation chart.
- Other examples include an events flow network



Data Displays: Matrices

- Matrices are sets of rows and columns normally found in a worksheet or spreadsheet.
- Time-ordered display is the most common but also partial ordered displays are used.
- Effects matrices are useful for selecting and displaying data which represents the changed state of individuals, relationships, groups or organisations.

Grounded Theory

- Grounded theory is where the findings of the research constitute a theoretical formulation of the reality under investigation, rather than consisting of a set of numbers, or group of loosely related themes (Strauss and Corbin, 1990:24)
- See Collis and Hussey (2009:179-82)

Grounded Theory

- Collection, coding and analysis of the data are central to the approach.
- Central to the analysis is the coding of the data.
- Codes are labels that enable the qualitative data to be separated, compiled and organised.
- Coding arises from the data and is not predetermined as in positivist approaches.

Grounded Theory

- Coding takes a number of forms and can be
 - Open coding
 - × The process of identifying analysing and categorising the raw data.
 - Axial coding
 - × The process of connecting categories and sub-categories identified in open coding forming a conceptual framework
 - Selective coding
 - × The process of selecting the core category that can be used in theory development
- See Cameron and Price (2009) Chapter 18

Quasi-judicial methods

- This method is adopted from the legal profession and used to identify empirical evidence (Bromley, 1986)
- Concerned with the nature, source and quality of the evidence and the arguments it supports.
- See Collis and Hussey (2009:174)

Quasi-judicial methods

- Provides a continuous process where the researcher asks the following questions:
 - What is at issue?
 - What other relevant evidence might there be?
 - How else might one make sense of the data?
 - How were the data obtained?

Bromley's Rules

- Bromley (1986) identified six rules when adopting this approach:

- 1 • Investigator reports results truthfully
- 2 • Aims and objectives of the investigation are stated explicitly
- 3 • Assessment of the achievement of aims and objective
- 4 • Investigator is properly trained
- 5 • The person is placed in his or her ecological (physical, cultural, social, symbolic) context.
- 6 • The account is written in good plain English.

Bromley's Rules

- In applying these rules the researcher should construct a multi-perspective account of the particular event under investigation drawn from the explanations of the primary participants.
- See Collis and Hussey (2009:174)

Research Methodology

8 QUANTITATIVE ANALYSIS

Introduction

- If you are analysing quantitative data then there are specific skills that you need
 - A good understanding of statistical methods
 - Experience of spreadsheets e.g. Excel or of SPSS (Statistical Package for the Social Sciences) or another suitable computer package.
- Without this knowledge and experience you will find the process very difficult

Introduction

The data analysis you undertake depends on *how many variables* you will be analysing and the *type of data (scale)* you are using.

- Univariate – single variable
- Bivariate – two variables
- Multivariate – more than two variables

Type of Data (Scale)

Nominal (named) scale	Statements of equality or difference but nothing else e.g. variable 'occupation'. Simple count of directors, managers, administrators, etc. in the sample. Very few statistical techniques can be applied to such data.
Ordinal (ordered) scale	Statements of order and rank, e.g., employee grades of A, B and C, or choices ranked as first, second or third. Arithmetic mean cannot be calculated.
Interval scale	Statements of equal intervals e.g. the interval between an assignment mark of 50% and 55% is the same as the interval between 60% and 65%.
Ratio scales	Statements of equal intervals and ratio e.g. height, weight and time. Ratio scales allow ratio as well as interval decisions to be made, thus allowing us to say that something is so many times higher, heavier or longer etc. as another.

Scales, presentation and maths

- The mathematical operations that are allowable depend upon the scale :

Scale	Maths
Nominal	none
Ordinal	none – although averaging scores is common practice
Interval	addition and subtraction
Ratio	addition, subtraction, multiplication and division

Introduction

- Quantitative analysis is identified with the positivist paradigm.
- It involves collecting quantitative data which will take the form of numerical values which represent the total number of observations or *frequencies* for the variables that you are researching

Statistics

Statistical analysis of the data involves:

- Exploratory analysis
 - Used to describe or summarise the data obtained
- Confirmatory data analysis
 - Make inferences from a sample of a given population

Exploratory analysis

- Can be used as a preliminary or full analysis of the data
- Four techniques are used
 - Presenting frequencies
 - × Distribution, cross tabulations, charts, graphs and diagrams
 - Measuring location
 - × Mean, median and mode.
 - Measuring dispersion
 - × Range and standard deviation.
 - Measuring change
 - × Index numbers (simple and weighted) and deflating data.

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Exploratory analysis

Analysis	Statistical technique	Presentation (examples)
Univariate data	Presenting frequencies	Tables, Graphical forms
	Measuring location	Mean, Median, Mode
	Measuring dispersion	Range
	Measuring change	Standard deviation
Bivariate data		Index numbers
	Presenting frequencies	Cross tabulations
		Graphs
		Scatter diagrams

Student Activity 14

Confirmatory data analysis

- Techniques are referred to as inferential statistics. Some examples are below:
- Estimating from samples
 - Confidence intervals
- Forecasting
 - Time series analysis
- Measuring association
 - Pearson's coefficient (r)
 - Spearman's rank coefficient (rs)
- Measuring difference
 - Chi squared (X²) test
 - Student t-test

Confirmatory data analysis

- Confirmatory data analysis also considers:
 - Parametrics (P)
 - × Can only be used on data that has a normal distribution. It compares sample statistics within the population under study.
 - Non-parametrics (NP)
 - × Can be used on 'skewed' data (not a normal distribution)
 - × Can be used on 'ordinal' data (where arithmetic mean cannot be calculated)

Student Activity 15

Confirmatory data analysis

Analysis	Statistical technique	Presentation (examples)
Univariate data (Must be normally distributed)	Estimating from samples	Confidence intervals (P)
Univariate data (Must be available for several past periods of time)	Forecasting	Time series analysis

Confirmatory data analysis		
Analysis	Statistical technique	Presentation (examples)
Bivariate data (only suitable for ratio or interval data)	Measuring association	Pearson's coefficient (r) (P)
Bivariate data (Must be at least ordinal data)	Measuring association	Spearman's rank coefficient (r_s) (NP)
Bivariate data (Nominal data)	Measuring difference	Chi squared (X^2) test (NP)
Bivariate data (Must be at least interval status)	Measuring difference	Student t-test (P)
Student Activity 16		

Statistical analysis
A statistical software programme should be used for data analysis e.g. SPSS, Excel.

Research Methodology

1

9 PRESENTING YOUR RESEARCH PROPOSAL: KEY TASKS

Contents of research proposal

2

- | | |
|--|---|
| 1. Title of research | 9. Survey techniques & data collection methods |
| 2. Research question or hypothesis | 10. Sampling framework and selection criteria |
| 3. Aims of research | 11. Questionnaire design |
| 4. Objectives of research | 12. Pilot survey |
| 5. Research rationale | 13. data analysis tools |
| 6. Literature review/contextual analysis | 14. Research time chart |
| 7. Proposed research methodology | 15. Difficulties envisaged & research limitations |
| 8. Justification for methodology chosen | 16. Resources required |
| | 17. Research ethics |

Title of research

3

- What is the research about and what is it trying to do?
 - Clear and succinct title: 20 word max
 - ✕ Include both broad and focussed statements e.g. "An analysis of the impact of the Euro on the retail sector: A case study of retail outlets in Dublin City"
- Select appropriate level of 'cognitive' verbs or adjectives for example:
 - an evaluation
 - a synthesis
 - an analysis

Research rationale- main reason for the research

4

- Why and what reason did you choose this research topic?
- Main justification for the research :
 - contemporary issues in published literature
 - topical debates in published literature
 - current controversies in published literature
 - recent trends in published literature
- NB: Use some key references to support your justification

Research rationale – existing literature for the research

5

- What published material exists on the topic?
 - Highlight key issues and debates
 - Highlight major pieces of published work, journals, books, reports, studies, news articles
 - Highlight key writers and authors on the subject
 - Highlight case study material or examples
 - Develop a key-focused reference base and draft bibliography

Research question or hypothesis

6

- What are you trying to find out?
- What are you trying to prove or disprove?
- OR
- Statement regarding the focus of the research

Aims of research

7

- What is the general focus of the research?
- What is the purpose of the research?
- What is the general topic and focus of the research?
- State at least one clear aim

Objectives of the research

8

- What will the research look into?
 - What are you trying to find out?
 - What are the main research investigations?
 - Need to state 3-5 key objectives
 - Use analytical language such as to evaluate, to analyse, to synthesise

Proposed research methodology

9

- What research method are you going to adopt?
- Highlight –discuss methods chosen re: qualitative or quantitative methods
- Describe the characteristics of the method chosen i.e. the theoretical characteristics
- State your chosen preference-choice.
- Illustrate case examples of where your choice of method has been used before

Justification for research methodology

10

- Why did you choose this method?
 - Reasons for choice of method- theoretical justification
 - Highlight pro and cons of method chosen

Survey techniques and data collection methods

11

- How will you collect the data?
- Highlight survey and data collection techniques adopted- theoretical and applied techniques
- Highlight advantages and disadvantages of survey and data collection techniques - theoretical and applied techniques
- Illustrate the plan or process for carrying out the survey

Sampling framework

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- Who will you ask?
- Will a sampling framework be adopted?
- Where?
- When?
- How Many?
- The discussion needs to be 'framed' within a theoretical discussion relating to sampling frameworks for qualitative or quantitative methodologies

Questionnaire design

13

- How will you design your questionnaire?
- What criteria will be used in the design of your questionnaire

Pilot survey

14

- Will you carry out a pilot survey?
- What are the reasons for a pilot survey – theoretical justifications
- Details of applied pilot survey - Where? When? who?

Data analysis

15

- How will you analyse the data?
- quantitative analysis techniques? -Theoretical discussion
- qualitative analysis techniques? – Theoretical discussion
- i.e. examples of techniques, tools, equipment, analytical tests, evaluation criteria, software packages to be used

Research time chart

16

- How will you plan your time?
- How will you organise your time=time plan, Gantt Chart
- What are your research deadlines and interim deadlines
- What will you complete when?
- A diagrammatic time chart will suffice here

Difficulties envisaged – Validity and Reliability

17

- What are the research limitations?
 - What problems are envisaged for the proposed research? i.e. what are the advantages and disadvantages of the methods applied/chosen
 - How could the research be improved?
 - how can potential problems be off set?
- Define the theoretical perspectives on reliability and validity
- How reliable or valid is your research?
- You will need to 'frame' this discussion within the confines of research reliability and validity

Summary of key points

18

- Research Title
- Research question
- Rationale/justification for the research – 500-700 words
- Research aims and objectives – 200 - 300 words
- Chosen research method and justification – 500 words
- Proposed survey data collection techniques – 200 - 300 words
- Data Analysis methods – 200 words
- Perceived limitations-validity and reliability – 200-400 words
- All these discussions should make reference to both theoretical and applied perspectives for the research you have chosen.
- NB: Theoretical perspectives must be supported by sufficient academic references

Other Considerations- Resources required

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- What will you need to carry out the research ?
- Is it feasible? Or doable?
- Access to materials? People?
- Knowledge
- Equipment required?
- Money required?
- Time required?

Other Considerations- Research Ethics

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- Have you considered all the ethical implications of your research?