Accounting Research A Practical Guide

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About the Author

Niamh Brennan, BSc, PhD (Warwick), FCA was awarded a first class honours science degree from University College Dublin, following which she joined Stokes Kennedy Crowley (now KPMG) where she qualified as a chartered accountant. In 1980 she joined the Department of Accountancy, UCD where she teaches financial accounting and financial reporting at both undergraduate and postgraduate levels. She is Programme Director of the Master of Accounting degree in the Graduate School of Business. She obtained her PhD from the University of Warwick and received the 1994 Bass Leisure/British Accounting Association Doctoral award based on her doctoral studies. Author/co-author of a number of books on financial reporting, she has also published papers on a variety of topics in leading accounting journals. She is a member of the Editorial Management Committee of the *European Accounting Review*, of the Executive Council of the International Association for Accounting Education and Research and has served on the Council of the Irish Accounting and Finance Association. She has served on many committees of the Institute of Chartered Accountants in Ireland and is a past Chairman of the Leinster Society of Chartered Accountants. She is a non-executive director of Co-Operation North and is a former non-executive director of the Irish state forestry company, Coillte Teoranta and of the Bank of Ireland's life assurance subsidiary, Lifetime Assurance.

Foreword

This book is based on my experiences in completing my PhD thesis in 1995 and as Programme Director of the Master of Accounting at University College Dublin. I have prepared, evolved and used these notes as part of the Master of Accounting Research Methodology course. They are now being published for a wider audience, thanks to generous funding from the Irish Accountancy Educational Trust.

The Irish Accountancy Educational Trust was established in 1981 by the Institute of Chartered Accountants in Ireland as an independent charitable trust. Its objectives are to promote and facilitate the development of accountancy. The policy of the Trustees is to act as a catalyst for activities which would otherwise not be feasible. The author gratefully acknowledges the generous support received from The Irish Accountancy Educational Trust in respect of this publication. This book would not have been published but for its support.

This is an introductory text. The complexities of many of the topics introduced here are left for more specialist and advanced publications. The book aims to be a concise, practical guide to the basics of doing research in accounting and preparing a research report – usually a dissertation. The primary audience for the book is undergraduate and masters-level students, although PhD students starting off may find some topics useful. Examples, references etc. are taken from the accounting literature, but students in other business disciplines may find some of the material applicable to their subject.

I received helpful comments on this material from my colleagues in the Department of Accountancy, UCD, Frank O'Brien, Aileen Pierce and Breda Sweeney. Tony Farmar of A & A Farmar, and William Meaney of Athlone Institute of Technology made invaluable suggestions on ways of improving the material. I thank Elaine Brownlee for helping me check accounting resources on the world wide web in Appendices 3 and 4.

Finally, I am grateful to my students for their enthusiastic advice in the preparation of this book.

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1
Introduction

This book provides guidance for accounting students on how to complete a research project and prepare a research report (usually a dissertation) on an accounting topic. The book is primarily aimed at undergraduate and masters-level students, although PhD students may also find it useful. Masters-level theses in accounting vary from minor dissertations required as part of a taught master's programme, to major dissertations for a master's degree by research only. The extent to which the suggestions in this book are adopted depends on the type of masters thesis. The term thesis refers to the research activity on a scholarly topic whereas a dissertation is the written report describing the research.

The purpose of research is to produce findings that add to our knowledge through exploration, description and explanation of social reality. Research in accounting is social scientific research, which involves collecting and analysing data on social/human phenomena and forming conclusions based on the data.

There are many useful books on doing research generally (for example, Rudestam and Newton 1992; Booth, Colomb and Williams, 1995). Brannick and Roche (1997) focus on business research methods while Ryan, Scapens and Theobald (1992) deal specifically with research in accounting and finance. Further details of introductory material on accounting research, on resources for accounting research and on methods of accounting research are included in the bibliography at the end of this book.

1.1 What is a dissertation?

A dissertation is <u>not</u> an essay or an encyclopaedia article. It must go beyond mere description and include a level of critical evaluation.

A dissertation requires the researcher to identify a problem or issue for resolution in a manner that adds original knowledge to the subject area. The extent of new original

knowledge depends on whether the thesis is a minor or major component of the degree. The work should be carried out and documented in a rigorous and systematic manner. All statements should be supported by reference to previous research. There should be no unsupported conjecture in a thesis. An example of unsupported conjecture (which appeared as the first paragraph in a Master of Accounting dissertation) is as follows:

> "*It has long been claimed that Ireland lags behind the rest of the developed world in terms of encouraging an enterprise culture. In fact this is actually something of a myth. The 1993 Report of the Government task-force on Small Businesses found that the number of Irish start-ups and number of businesses overall is, indeed, proportionate to the European average*."

This opening paragraph has been re-written below. The source for making the first sentence is now shown. The second sentence has been re-worded for clarity. The third sentence has been completely re-written, now has more substance, and a source for the information is provided.

> "*It has long been claimed that Ireland lags behind the rest of the developed world in terms of encouraging an enterprise culture (Irish Small and Medium Enterprises Association (ISME), 1997). This, however, may be something of a myth. In 1997 alone, it is expected that 16,000 new small businesses will be registered, generating 51,000 new jobs (John Lattimore, 1997).*

It is important that the dissertation represents the student's own work. Some universities and colleges require a signed statement to that effect to appear at the beginning of the dissertation. The following is an example:

> *"I hereby certify that the material which I now submit for assessment is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of the work."*

Completing a dissertation involves a number of distinct stages or phases. As shown below, this book deals with each of these stages. Research students are required to:

- Identify a problem or issue for research / select a topic (chapter 2);
- Identify the objectives of the study;
- Review the literature previously written in the area (chapter 3);
- Develop hypotheses for testing the problem/issue being researched (chapter 5);
- Devise appropriate research designs and methodology to test researchable hypotheses (chapters 4 and 5);
- Collect data (chapter 5);
- Apply appropriate methods of analysis to analyse data (chapter 5);
- Present results of the research (chapter 6);
- Summarise the research project and make final concluding comments (chapter 7).

Expressing this in another way, the research should be able to clearly answer the following questions:

- What was the problem? (chapters 1 and 2);
- What have other researchers found/concluded about this problem? (chapter 3);
- How did you study the problem? (chapters 4 and 5);
- What did you find? (chapter 6);
- What do these findings mean? (chapters 6 and 7).

The research and resulting dissertation should contribute to the total knowledge relating to the issue or problem researched.

1.2 Starting out

Start writing immediately, building up the dissertation from the beginning. When you begin to write, you will gain a better understanding of the problem you are trying to address. Write every day. A good starting point is to draft a table of contents. This will force you to develop and maintain a logical structure in your dissertation. It will evolve and change many times as you progress and develop your work.

Write creatively, tell an interesting story and at the same time maintain a clear structure. Develop your ideas in a logical way and make sure the reader can follow and easily observe such development. Support arguments with references to previous literature.

Evolve a working paper which should include a draft table of contents, beginnings of chapters, especially chapter 1 and chapter 2, and references. This working paper should form the basis of all discussions with your supervisor - you will get better advice and guidance from your supervisor if you can present your thoughts in written (typed) format.

Updating the table of contents, writing and reading the literature should all be done simultaneously, in an iterative process i.e. read articles, prepare table of contents, read more articles, write one or more sections, update table of contents, write section, etc.

1.3 Planning the research

Start by first preparing a timetable/schedule for yourself setting deadlines, leaving some allowance for overrun. An outline of the steps required for completion of a dissertation or research report is shown in Table 1.1. This could be used as a basis for a schedule by writing in completion dates for each of the steps.

Table 1.1: Steps in completing a dissertation/research report

Activity	W	**Complete by**
Preliminary library research	R	I
Select thesis topic	I	N
Identify supervisor	T	S
Prepare outline proposal	E	E
Agree outline proposal with supervisor		R
Draft table of contents and begin working paper	C	T
Literature review completed and written up	O	
Research design	N	D
Data collection	T	A
Analysis of results	I	T
Complete writing up	N	E
Proof-reading (at least twice)	U	S
Binding	O	
Submission	U	
	S	
	L	
	Y	

It is important to adhere as closely as possible to your timetable. Students commonly spend a lot of time reading material in the library and do not leave enough time to carry out the research. There is no limit to the amount of reading material available and students must try to focus their reading as much as possible – this requires some discipline!

1.4 Liaison with supervisor

Students should liaise closely with their supervisor during the period of their research. Arrangements to meet should be made in advance, especially if the research is being conducted out of term. Supervisors may be able to provide useful advice on many of the issues dealt with briefly in this book.

1.5 Keeping records

This book is based on the philosophy (outlined in section 1.2) that students should start writing (on computer i.e. word-processing) immediately. This has two benefits: (i) to assist students in structuring their work and (ii) as a means of keeping a continuous record of work done during the period of the research. Students should evolve a working paper which records all the work they have done (e.g. summary of articles read). At the

end, irrelevant material can be taken out of the working paper in producing the dissertation.

A record of all books and articles read should be kept. Advice on how to keep such records is provided in chapter 3.

1.6 Benefits of writing a dissertation

Students benefit in many ways from writing a dissertation. Benefits include:

- Learning how to conduct a comprehensive analysis of an accounting issue;
- Analysing the theory and implications of an accounting issue more thoroughly than before;
- Understanding and appreciating the complexity and importance of accounting issues;
- Understanding and experiencing the research process;
- Appreciating the role of theory and concepts learnt in research and applied to the real world;
- Examining and judging the quality of accounting and business research and comment - the world is full of unsubstantiated assertions, dubious logic in arguments, biased discussions etc.;
- Learning to critically analyse what others say and write;
- Learning to improve your work by avoiding such errors and refining your ability to find weaknesses in other researchers' arguments;
- Learning to access a variety of information sources in libraries, including electronic databases.
- Developing report writing skills including marshalling thoughts in a coherent way and putting forward arguments logically;

1.7 Regulations for completing a dissertation

Most universities and colleges have regulations and guidelines for completing a dissertation. These regulations will specify matters such as the deadline for completion of the dissertation. They may also contain instructions on style of the dissertation including the format, layout, referencing system to be followed.

The guidelines for UCD's Master of Accounting dissertation are reproduced in Appendix 1 by way of illustration.

1.8 Assessment of a dissertation

The way in which dissertations are assessed and marked varies from university to university and from individual lecturer. In order to give students some idea of how their work is likely to be assessed, two example marking schemes for a masters dissertation are shown in Appendix 2.

1.9 Summary and conclusions

Much business research is conducted outside universities. Managers, auditors, journalists, bankers, investors, financial analysts, unions, consultants, government agencies and regulatory groups do accounting research. Good academic research is distinguished by being more rigorous and frequently involves statistical analysis. This book introduces students to the general approach and basic techniques in completing academic research in accounting.

2

Identifying the research question

Deciding on a problem or issue for research can be the most difficult part of the research process. Although you are required to produce original work that adds to the existing body of knowledge, you are not expected to produce anything as earth shattering as Einstein's Theory! Adding one small 'brick' to the growing 'wall' of knowledge is all that is required – especially for an undergraduate or masters thesis.

The process of finding a research question or problem for research involves a number of stages, each a refinement of the previous stage. As a first step, students should select a general area of interest. In this context, Ryan, Scapens and Theobald (1992) summarise research traditions in management accounting and financial accounting research.

Students should then focus on a specific topic in the area selected. Try and narrow or focus the topic as sharply as possible, as early as possible, otherwise you will end up reading a lot of irrelevant literature. Possible general areas and topics to choose from are listed in Table 2.1.

Many students find the third stage very difficult - to refine the topic chosen to one or more researchable questions. Section 2.2 provides some advice on refining and focussing the topic chosen.

The following example illustrates this process:

Research area: Accounting education

Research topic: Accounting ability of male and female accounting students

Research question: Are male accounting students better at accounting than female students?

A research design for this project is outlined in Table 4.1.

Table 2.1: Suggested areas and topics for research in accounting

General area	Example of a topic
Financial accounting	• Accounting for goodwill, pensions, employees, the environment etc. • Differences in accounting methods in different industries • Relationship between accounting and share prices
Financial reporting	• Financial reporting for small companies - Little GAAP vs. big GAAP
International accounting	• Comparative studies of accounting systems of different countries • Individual country studies
Management accounting	• Implementation of the balanced scorecard in a company
Taxation	• Influence of government tax incentives
Auditing	• Auditors' decision processes • Role of audit committees in companies • Effect of internal audit on the incidence of fraud in companies
Business ethics	• Teaching of business ethics to professional accountants • Standard of business ethics in different industries
Accounting history	• History of the accounting system and methods in an individual company • History of the accounting profession
Accounting education	• Influence of study of accounting at second level on performance at third level
Gender issues in accounting	• Decision processes of female vs. male chartered accountants • Job satisfaction of female vs. male chartered accountants
Accounting profession	• Remuneration of accountants in different industries • Relationship between remuneration and job performance of accountants • Self regulation in the accounting profession

2.1 Factors influencing choice of topic

The most important consideration in selecting a topic is whether it is of interest to the student. As the research will extend over a number of months it is vital that the student finds the general area chosen and the specific topic interesting and stimulating. The supervisor's research interests may also influence and guide your choice.

Researchers are advised to choose a topic that plays to their strengths. For example, a good starting point might be previous research (done, say, for the purposes of a final year essay or project). Note, however, that it is unacceptable to repackage project work done as part of an undergraduate degree and present it as part of a master's dissertation. The undergraduate project can be the starting point but must be significantly added to and developed for it to be considered as adding new knowledge to the subject area.

Alternatively, students with good language skills might consider doing research in the general area of international accounting, focussing on the country of their language expertise.

Connections in the business world might suggest opportunities for access to data sources not available to the average researcher. This, in turn, may suggest issues for research. Consider firms where you, a relative or friends work.

Another good starting point might be to replicate a piece of research done elsewhere (e.g. UK, US). What starts out as a replication study will end up as a unique and original piece of research. Be careful not to replicate a bad piece of research (such as another student's dissertation!). Choose research published in a reputable academic journal which has been through a rigorous review process.

Practical considerations in choosing a research topic include:

- Time and effort of student;
- Library facilities;
- Computing facilities;
- Data sources;
- Access to data (e.g. for case studies etc.).

2.2 Characteristics of a good research topic

The topic selected should be narrow in scope. It is easier to write a good dissertation on a narrow, focused topic than on a broad, general topic. The narrower the topic, the more in-depth the treatment of the topic permitted given the length constraints of the research project/dissertation.

A good topic should be capable of expression in the form of one or more questions (in many instances, this is what distinguishes a dissertation from an essay). It is essential for a good dissertation that the objectives of the study and the questions that need to be answered must be explicitly and concisely stated and systematically presented.

The topic should be interesting to you and to other researchers - it shouldn't beg the question "so what?". You should be able to justify why the topic is important and why it is of interest to readers of your dissertation.

The topic selected and the research question for testing should have a symmetrical outcome i.e. a reasonable chance of being disproved as proved. For example, there is as good a chance of a positive or negative research finding to the research question *Are females better at accounting than males?*. Conversely, a negative finding to the research question *Do students prefer to pass rather than fail their examinations?* is unlikely - consequently this would not be a good question to research.

The research question should be amenable to research. The elements in the research question (variables) should be measurable. For example, the research question *Are dogs friendlier than cats?* would be difficult to research as a measure of friendliness would be difficult to devise. The research question should be researchable in the time available for the thesis. Data should be readily available (for this reason much company research is based on publicly quoted companies as information on private companies is not readily available).

Table 2.2 summarises the characteristics of a good research topic.

Table 2.2: Characteristics of a good research topic
Well focused research question Objectives and aims of research can be concisely and clearly articulated Interesting to readers of the research project/dissertation Symmetrical as to outcomes Researchable topic Data readily available Capable of being researched in the time available

2.3 Writing a research proposal

Many universities require students to prepare an initial research proposal in advance of undertaking the main body of research, which may have to be approved. This should be short (maximum three pages) and should cover the following:

- Clear statement of the research questions and research objectives;
- Brief discussion of the reasons and justification for selecting the topic;
- Brief introduction to the literature on the topic;
- Research methodology in outline;
- Initial references;
- Outline of chapter contents.

2.4 Summary and conclusions

For many students finding a topic is the most difficult part of the research project. This chapter has tried to help students avoid the "flounder factor" by suggesting ways of getting an appropriate topic as quickly and efficiently as possible.

Nonetheless, even after considerable work and time in the library, some students find it impossible to decide on a topic. In such circumstances, lecturers and supervisors can be helpful in suggesting topics amenable for research (they may have aspects of their own research which could benefit from student research projects).

A final word of caution: As early as possible, students should ensure that (i) the topic chosen meets with their supervisor's approval; (ii) that they are interested in the topic chosen and (iii) that they are comfortable in working in the research area chosen. It is very difficult to try to find a new (more suitable) topic with (say) six weeks to go before the deadline date for submission.

3
Literature review

The ability to carry out a literature review is an important skill for a researcher. Researchers need to find out what work has already been done in the area and how previous research compares with the project on hand. In addition, the literature review will provide a framework for the current research project.

3.1 Nature and purpose of a literature review

The purpose of a literature review is to summarise clearly and critically previous research, and to put your research in the context of previous work in the field. Stevens, Schade, Chalk and Slevin (1993) list four functions of a literature review:

- To give reasons why the topic is of sufficient importance for it to be researched;
- To provide a brief up-to-date account and discussion of literature on relevant issues;
- To provide a conceptual and theoretical context as background;
- To discuss relevant research the same or similar topics.

The literature review is not a compilation of facts but is part of a coherent argument leading to a description of the study. It should therefore be presented as part of a logical argument or debate.

Only include material specifically and directly relevant to your research topic. The material should be summarised concisely and students should avoid quoting chunks of material from someone else's work (the dissertation is meant to be the student's own work). Quotes should be used sparingly and only where they do an excellent job reinforcing a point. Students should avoid the temptation to show how much they have read by referring to all articles examined. Evidence of unnecessary padding, and of material in the dissertation not really relevant to the topic, is irritating to the reader (primarily the examiner of the report or dissertation).

It is easier to organise the literature review into a coherent framework if the research is well structured from the outset. In chapter 1 I referred to the importance of preparing a draft table of contents at the start of the research in an effort to impose some structure on the process. As the literature review proceeds the table of contents will change and evolve.

The importance of ordering and classifying information in a dissertation into a coherent structure cannot be overemphasised. As you read, bear in mind how other researchers have categorised and organised their data. You may start out copying another author's structure but, as your project progresses, you are likely to change and adapt it to suit your own particular needs.

Most of the literature review will take place at the earlier stages of the research. The design of your research project depends on how well you review previous literature. Previous literature will suggest research questions and hypotheses for testing and methods of testing them. However, research is an iterative process with a number of activities taking place at the same time. The researcher will find him/herself moving backwards and forwards between different aspects of the research. Consequently, some of the reading will take place during the data collection, data analysis and writing up phases.

As mentioned earlier, a literature review is not a compilation of facts but is part of a coherent, logical, structured argument. Bell (1993: 35-38) provides some excellent examples of good and bad literature reviews. She quotes Haywood and Wragg (1982) in recommending that students avoid the '*furniture sales catalogue*' approach to literature review such as in the following example:

> '*Bloggs (1975) found this, Smith (1976) found that, Jones (1977) found the other, Bloggs, Smith and Jones (1978) found happiness in heaven*'.

Bell (1993) also reproduces an example of a good literature review which is well worth looking at.

3.2 What constitutes the literature?

A wide variety of publications are suitable for inclusion in the literature review. These range from academic journals to professional journals, professional regulations, articles in the business press, textbooks, case studies, conference papers etc.

Try to avoid using too many non-academic articles (such as from the professional accounting magazines) in an academic research project unless the article is particularly apposite (however, this depends to a certain extent on the topic chosen for research). Many students spend considerable time reading professional accounting journals such as *Accountancy Ireland*, *Accountancy*, *Accountancy Age*, *The Accountants' Journal* etc. These are what academics refer to as 'non-refereed' journals (i.e. the articles are not subject to review by another academic prior to being accepted for publication). Articles in these journals contain technical material or opinion unsupported by rigorous academic research. Unless you find a particularly appropriate article (with, say, a good quote or a good practical insight on the topic you are researching), articles in these journals for the most part should be included in a limited way in a piece of academic research such as a dissertation. Similarly most textbooks are not refereed and should only be used selectively.

Your literature review should be up to date. It is important to include the most recent academic papers / articles on your topic. A useful approach is to start with a recent paper / article in the area and work backwards. Focus on academic papers published in the previous ten to 15 years. Papers published in the 1970s or early 1980s are less important (but this depends on the topic as some areas (such as inflation accounting) may require consideration of quite old material). In addition, some older papers or books are considered seminal and are therefore essential to include e.g. Ball and Brown (1968) on capital markets research or Watts and Zimmerman (1978) on positive accounting theory.

You should conduct a thorough examination of the literature. If you leave out a key paper in the subject area examiners familiar with that area will notice and penalise you accordingly.

3.3 Literature and information sources

It is outside the scope of this book to provide detailed notes on different literature sources and on how to use a library properly. However some practical suggestions follow.

Information sources are described in research as 'primary' or 'secondary'. Primary sources of information involve the researcher generating the data. Examples of collection of data by researchers include data obtained by survey, interview or experiment. Collection of data from primary sources is dealt with in more detail in chapter 4.

Secondary sources are where the information has been collected, organised and structured by someone else. Libraries contain secondary data sources such as annual reports of companies, stockbrokers' reports and publications by banks, estate agents, government departments, etc. Students will rely on the following main sources of information for secondary data:

- Databases;
- Libraries;
- World Wide Web.

3.3.1 Libraries

Students should familiarise themselves with the facilities available in their university/college library. Many universities and colleges hold information tours of their library each academic year. Students should take the opportunity of finding our what the library holds and where the material is located by going on one of these tours. Some libraries provide helpful introductory guides to available services. Alternatively, the librarian may, on an individual basis, demonstrate how best to use the library facilities.

Most students know that libraries hold books and professional and academic journals. However, in addition, students should find out what directories, trade directories, indices, abstracts, microfiche and microfilm material are available in their subject area.

Directories can be useful for students interested in a particular industry or in a particular company. Examples of useful directories include:

- *Kompass* is an annual directory with information on suppliers and products, companies and brand and trade names. A separate edition is produced for each country including one for Ireland;
- Dun & Bradstreet's *Marketing Guide to Ireland* contains information on over 4,000 Irish companies. Dun & Bradstreet also produces a guide to over 60,000 European companies *D&B Europa*;
- The Institute of Public Administration (IPA) *Annual Administration Yearbook* contains information on public organisations in Ireland (e.g. legislature, judiciary, diplomatic representatives, civil service, hospitals, state-sponsored bodies etc.), on financial institutions, major companies, newspapers and publishers and trade and professional organisations;
- *The Macmillan Stock Exchange Yearbook*, edited by Martin Timbrell and Diana Tweedie, is an annual publication with information on all companies and securities listed on the London and Dublin stock exchanges;
- Trade directories such as *Irish Computer Yearbook*, *Retail News*, *Irish Printer*, *Checkout Yearbook* etc.

A useful index in the accounting area is the *Accounting and Tax Index* (formerly *Accountants' Index*). This is an annual index (with three quarterly supplements) to all articles published in the period in accounting journals, and to accounting books. The citations are organised alphabetically by subject area and by author. Other useful resources for accounting research are listed in the bibliography at the end of this book.

Students should find out which academic journals in their subject area are taken in the library. Articles from other journals can only be obtained either through CD-ROM (see

section 3.3.2 below) or through inter-library loan. Inter-library loan applications should be submitted as soon as possible (and only if the article is absolutely necessary) as these may take three to four weeks to process. Some libraries charge for inter-library loans.

Useful material may be available in libraries outside your university or college. For example, the Institute of Chartered Accountants in Ireland has material of interest to the accounting profession not available in other libraries. The Dublin Corporation library in the Ilac Centre has a specialist business section which has information not available elsewhere. For example, it maintains cuttings from the Irish national newspapers on various business topics (e.g. on Irish markets/sectors, on Irish companies, on Irish business personalities). The Ilac Centre library also subscribes to the *Financial Times* EXTEL database which is a rich source of information on UK and Irish listed companies.

Students can usually gain access to other libraries by getting a letter of introduction from their university/college.

3.3.2 Databases

Students should find out what electronic databases are available in their library. The use of CD-ROM systems can speed up research by providing access to abstracts of articles and, in some cases, full text of articles from a wide range of journals.

Accessing information on databases usually involves doing a search of the database based on key words. Selection of appropriate, well-chosen and well-focused key words will make all the difference in giving rise to a good or bad search.

Examples of CD-ROM services include:

- *Social Science Citation Index*: Index to literature in the social and behavioural sciences (which includes accounting related material);
- *ABI Inform*: Abstracts from business and management periodicals (mainly US). Full text articles are available for approximately half the journals on this database;

- *FT-McCarthy*: Press cuttings relating to business from major Irish and UK newspapers;
- *The Economist*: Articles from the Economist magazine;
- *Financial Times*: Newspaper cutting service;
- *DPLNET*: Index of Irish business magazines;
- *Factfinder*: Business index of Irish business and trade magazines. Contains abstracts from Irish newspapers;
- *FT Predicasts*: Abstracts of international trade journals;
- *F & S Predicasts*: Abstracts of international business journals.

In addition, electronic databases may be available. Examples include:

- *Investext*: Brokers' reports for European listed companies;
- *F & S Index Plus*: Trade and current marketing information;
- *FT Information*: Equity research, company research and company analysis;
- *FT Graphite*: Financial information.

Shaoul (1996) provides a good summary of information sources in accounting and finance, while Stevenson and Ryan (1997) provide information on Irish financial data sources. For a guide to databases suitable for accounting research refer to Board, Pope and Skerratt (1991).

3.3.3 The World Wide Web

The World Wide Web is becoming an increasingly popular method of find information useful for accounting research. Whelan and Thomas (1997) provide some practical advice on using the Internet.

Useful sites for accounting information are shown in Appendix 3. Some of the sites listed are more useful for research than others. For example, CAROL (Company Annual Reports On Line) is a site for accessing annual reports and accounts and other financial information. It has links to all the *Financial Times* Stock Exchange (FTSE) company annual reports on the Internet. The US stock quotes and financial information home page

Yahoo Finance is a vast source of information. It has the 'latest market news', features on 'stock chat' and seven reference sites on various categories of financial information.

3.4 Academic accounting journals

Table 3.1 lists academic journals in accounting published in Britain.

Table 3.1: British academic accounting journals

Journal	Comment
• Accounting and Business Research	Longest surviving academic accounting journal in the UK. Good, readable, often practical
• Accounting Education	
• Accounting, Business and Financial History	
• Accounting, Organisations and Society	Emphasis on organisational, sociological, behavioural and critical aspects of accounting
• British Accounting Review	
• Financial Accountability and Management	Public sector accounting
• Journal of Applied Accounting Research	
• Journal of Business Finance and Accounting	High quality journal - More orientated towards finance than accounting
• Management Accounting Research	
• Research in Accounting in Emerging Economies (formerly called Research in Third World Accounting)	

Source: Adapted from Wallace (1996)

Table 3.2 lists academic journals in accounting published in North America.

Table 3.2: North American academic accounting journals

Journal	Comment
• Accounting Historians Journal	
• Accounting Horizons	Good easy to read academic articles
• Accounting Review	Highly regarded journal
• Advances in Accounting	
• Advances in International Accounting	
• Advances in Public Interest Accounting	
• Auditing: A Journal of Practice and Theory	
• Contemporary Accounting Research	Good, readable Canadian journal
• Critical Perspectives on Accounting	
• International Journal of Accounting	Good on international accounting topics
• Issues in Accounting Education	
• Journal of Accounting and Economics	Very mathematical
• Journal of Accounting and Public Policy	Deals mainly with public sector issues
• Journal of Accounting Auditing and Finance	Good easy to read articles
• Journal of Accounting Education	
• Journal of Accounting Literature	Excellent 'state of the art' articles on individual accounting topics
• Journal of Accounting Research	The 'top' academic accounting journal
• Journal of International Accounting Auditing and Taxation	
• Journal of International Financial Management and Accounting	
• Research in Government and non-profit Accounting	

Source: Adapted from Wallace (1996)

There is only one Irish academic accounting journal *The Irish Accounting Review*. The journal commenced in 1990 and until recently was only published once a year so its coverage of topics is limited. Articles are readable. This journal should be reviewed briefly to see whether anyone else in Ireland has done research in the area you are interested in.

IBAR - Irish Business and Administrative Research is a refereed general management journal published out of the Department of Business Administration in UCD. If the topic you have chosen encompasses more general management issues it might be worth looking at *IBAR*. *IBAR* includes some papers on accounting issues (mainly before the *Irish Accounting Review* was published).

Other academic journals in accounting published outside Ireland, Britain and North America are listed in Table 3.3.

Table 3.3: Other international academic accounting journals

Journal	Comment
• Abacus (Australia)	
• Accounting and Finance (New Zealand)	
• Accounting, Auditing and Accountability (Australia)	
• Asia-Pacific Journal of Accounting	
• Australian Accounting Review	
• European Accounting Review	Strong focus on international accounting

Source: Adapted from Wallace (1996)

Appendix 4 lists the world wide web addresses for as many as possible of the journals in tables 3.1, 3.2 and 3.3.

3.5 How to read an academic article

This book should be read in conjunction with a paper from one of the main accounting journals such as *The Accounting Review,* which will illustrate many of the points mentioned below.

Table 3.4 lists suggested headings to be used for summarising an academic article. Applying these headings will help to make academic articles more digestible and understandable. Although it is time consuming to summarise articles, good summaries will pay dividends in the end. If the summary has been word-processed it can easily be slotted into the dissertation in the appropriate place when you are putting the literature review chapter together.

It is worth keeping a note of subsequent researchers comments on an article or paper – these can add valuable insights to your understanding of the article or paper and may draw your attention to flaws in the research.

Table 3.4: Outline headings for critique of academic article

1	Introduction Motivation for the study Statement of the problem/issue for investigation Why is it important/interesting Brief outline of project
2	Theory construction/the model/literature review State of knowledge before research project Should indicate expectations prior to research study Should point to conflicts/gaps in the literature
3	Explicit hypotheses or research questions Use prior literature to justify hypotheses or research questions
4	Research method/research design Methodology (Survey, in depth interviews etc.) Data base Population and Sample Measurement of variables - Dependent variable - Independent variables Statistical tests Control in design Validation (Survey/measurement instruments may be included as an appendix to paper)
5	Results, findings and discussion Should be directly linked to research questions/hypotheses Were the research questions/hypotheses supported or not?
6	Discussion and conclusions Brief summary of research project Highlight paper's main contribution - what does it tell us that we did not know Limitations of the study Suggestions for further research
7	Comments in other articles What have subsequent researchers said about this paper

3.6 Use of citations

A literature review is not a grouping of unacknowledged quotations. Previous research findings should be put in your own words and be used to support the issues specific to your thesis.

Statements should be supported by references. If possible, do not make unsupported statements, and try to avoid including personal opinion, as this would not be considered appropriate to rigorous research methods. Material should not be taken from published papers without acknowledgement. Such material can either be paraphrased or be direct quotations (which should be distinguished from your own text by quotation marks and possibly a different font style such as italics).

There is a format or convention for citing material from other publications in a dissertation. Citations should give the surname (only) and year of publication. No additional details need be shown as these can be in the full reference in the list of references at the end of the dissertation.

Examples are shown in Table 3.5. The citation convention used is that of *The Accounting Review* (see Appendix 1). Other journals have small variations on this convention, usually relating to punctuation. The first two examples (1a and 1b) cite the same material in alternative ways. Example 2 shows the convention of using '*et al.*' where there are three or more authors. Two references by the same author in the same year should be distinguished by using lower case letters after the year in the citation in the text and in the list of references at the end of the dissertation. This is illustrated in Example 3.

Table 3.5: Examples of citations in text

1a. Forecast disclosure in UK new issue prospectuses has been studied relatively recently (Ferris 1975; Ferris 1976; Keasey and McGuinness 1991; Firth and Smith 1992).

1b. Forecast disclosure in UK new issue prospectuses has been studied relatively recently by Ferris (1975 and 1976), Keasey and McGuinness (1991) and Firth and Smith (1992).

2. Ruland, Tung and George (1990) and Frankel, McNichols and Wilson (1995) find that the incidence of management earnings forecasts increases prior to securities offerings. Ruland et al. (1990) test the hypothesis that forecast reporting firms show a greater tendency than other firms to issue new capital.

3. Bradbury (1992a) tested size for this reason but did not find any relation between it and voluntary disclosure of interim earnings. Leftwich, Watts and Zimmerman (1981) and Bradbury (1992b) included size to proxy for agency costs of capital held by outsiders.

Although usually not shown, the page number may be referred to where appropriate. Citations for direct quotations in the text should always include the page reference.

Any articles or papers referred to in your dissertation must be articles or papers you have read. If you could not get the article or paper but know of its findings from another article or paper this should be made clear in the way you write your literature review. Here is an example from my own dissertation. I was unable to get a copy of Spero (1979) in the time available as it was an unpublished doctoral dissertation.

> *'Marston and Shrives (1991) quote Spero (1979) as reporting that attaching weightings to disclosure scores is irrelevant, as firms that are better at disclosing 'important items' are also better at disclosing 'less important items'.'* (Brennan, 1995)

The following are examples of material incorrectly cited from Masters of Accounting dissertations. The corrected versions cite sources properly and, in addition, are more concisely written (as shown by the word count).

In example 1, there is no need to use the phrase "*in his book*" – this will be obvious from the full reference in the list of references. The year (1991 in this case) of the source cited must be shown. In example 2, there is no need to give the author's first name and no need to show the title of the newspaper as this information will be contained in the list of references. The year of the publication (1995) should be shown.

Example 1: Incorrect citation

"*As Timmons notes in his book, one of the most important considerations for any venture capital company in assessing a proposition is the quality of the firm's management team.*" (29 words)

Example 1: Correct citation

"*An important consideration for any venture capitalist is the quality of the firm's management team (Timmons, 1991).*" (17 words)

Example 2: Incorrect citation

"*Before looking at the various sources, it is best to briefly outline some of the issues that*

Example 2: Correct citation

"*Before looking at the various sources of finance, issues surrounding investing in the*

surround the issue of taking on outside equity holdings in the small business (Source: Niall O'Shea of the Sunday Business Post)." (38 words)

equity of small businesses are considered (O'Shea, 1995)." (21 words)

3.7 References/bibliography

The dissertation should finish with a list of references relating to articles or papers etc. quoted therein. A bibliography (as opposed to a list of references) cites additional reading on the topic. A dissertation should generally only include a list of references. If a publication is important enough for the bibliography, it should be referred to in the dissertation and therefore in the references. This book includes a bibliography of additional resources for accounting research.

The list of references should be in the correct format - see paragraph 3.8.

3.8 Referencing systems

As material is being collected and read, a careful note of the exact reference should be made. Students should decide on a referencing system at the outset. It is very time consuming to have to retype references into a standard style at the end. This can be avoided by deciding on a referencing system at the beginning and by applying it to all references from the outset. Once the referencing system is chosen it should be applied consistently to all references in the dissertation.

Some universities and colleges have their own 'house' style for references. Otherwise choose a referencing system from one of the main academic journals. Most academic journals include style guidelines. Get a copy of the university's/journal's style guidelines. These should be applied exactly as specified.

Table 3.6 summarises the information you should record for each article read. The title of a book or journal is usually shown underlined or in italics. The title of an article is often put in inverted commas.

Table 3.6: Details to record in respect references

Book	**Article in book**	**Article**
Author(s) surname, initials	Author(s) surname, initials	Author(s) surname, initials
Year of publication	Year of publication	Year of publication
Title of book	Title of article	Title of article
Place of publication	*Title of book*	*Title of journal*
Publisher	Editor(s) surname, initials	Volume and issue number
	Page numbers	Page numbers
	Place of publication	
	Publisher	

References should follow the style guidelines of your chosen journal. Follow the format exactly as laid out in the style guidelines. Be careful to note exact punctuation etc. – capitals, punctuation and the sequence of information are important. To illustrate, the referencing system in *The Accounting Review* is summarised in Table 3.7. Appendix 1 reproduces the style guidelines of the *Accounting Review* which include examples of the application of the guidelines to a selection of references.

Table 3.7: Application of *Accounting Review* referencing style

Authors' names	**Year**	**Title of article**	**Title of book**
• In alphabetical order by author	• No brackets	• No quotation marks	• Title in italics
• First author surname first, followed by initials	• Ends with full stop	• Words generally not in capitals	
• Full stops after initials		• Ends with full stop	**Journal**
• Subsequent authors initials first followed by surname			• Title in italics
• Ends with full stop			• Followed by volume number, issue number (in brackets)
			• Brackets followed by colon
			• Page numbers
			• Ends with full stop

All citations in the text should be included in the list of references at the end of the dissertation. A useful way of ensuring that you have not omitted a reference from the list is to use your computer to "search and find" the number "19" as all citations in the text will refer to the year of publication.

3.9 Summary and conclusion

One of the most important elements in completing a research project / dissertation is demonstrating to the examiner competence in conducting and writing up a literature review. Examiners will want to see that a review of appropriate literature relevant to the research topic has been conducted. With so many electronic aids available nowadays, examiners will expect the review to be thorough. In addition, students should also demonstrate that they have learnt to cite material correctly and to properly reference any articles, books and other resources cited.

4
Methods of accounting research

This chapter *briefly* introduces students to some of the methods commonly used in accounting research. Accounting research is becoming increasingly rigorous and scientific. Many research studies start with a theory about a phenomenon or behaviour. The method chosen is affected by the nature of the research question and the researcher's theoretical perspective. For example, some researchers (such as economists) will use mathematical and analytical techniques to solve a particular problem, whereas others will collect data and subject it to empirical testing.

Research methodology refers to the way problems are approached with a view to seeking answers. The methodology describes how an individual piece of research is conducted. The terms 'research methodology' and 'research design' are often used interchangeably.

Students interested in one particular method of research should read specialist material for more details on its application. Some research techniques (such as observation research, action research) are not often found in accounting research and are therefore not referred to here.

Accounting research can be categorised as either qualitative or quantitative. Qualitative research is often suitable for datasets that are too small to allow generalisations of results from the sample to the population as a whole. Such research is likely to lead to an in-depth understanding of a process rather than making predictions about the causal relationships between sets of variables.

Quantitative research involves statistical analysis of large datasets. Generally, the aim is to assess the extent to which changes in one variable (the dependent variable) are caused by changes in the other variables (independent variables). Information on the dependent and independent variables must be collected by the researcher either directly (primary sources) or from sources generated by others (secondary data). Such quantitative research

may allow for generalisations from the dataset to the population as a whole, depending on how representative the dataset.

4.1 Descriptive research

Descriptive research includes detailed analysis of accounting problems by focussing on accounting theory, published research, accounting regulations (current and proposed) and current practice. Care must be taken with this type of research that the subject matter is dealt with rigorously and logically and that the resulting report is a dissertation and not an essay.

Descriptive research may include sample statistics describing reported accounting items, for example:

- Financial reporting practices, trends, levels;
- Management accounting practices;
- Sample average of accounting amounts such as sales, total assets etc.

For more advanced academic research, description is usually insufficient – explanation is also needed which requires additional research methods.

4.2 Behavioural research

Behavioural research examines the way people behave - for example, people's decision processes and the impact of organisations and systems on behaviour. Some of this research derives from psychology. This kind of research is suitable in many areas of accounting. For example, it is common in studies of behavioural aspects of auditing such as building expert systems and group versus individual decisions. Behavioural research is suitable for experimental work in which subjects are used to simulate real life decision-making (see 4.6 below).

4.3 Questionnaires

Questionnaires are used extensively in business research and by research students. They are a convenient way of obtaining views of large numbers of individuals quickly and economically.

All respondents are asked the same questions. Question wording has to be chosen carefully. A good questionnaire will have been pilot tested in advance on a small number of people to ensure the questions are well drafted, unambiguous, not prone to multiple interpretations and obtain the information required by the researcher. Bell (1993) has a short readable chapter on designing and administering questionnaires. A more comprehensive guide to questionnaire-based research is Moser and Kalton (1985).

Questionnaires can be administered in different ways. Many researchers distribute questionnaires by post. Response rates from mailed questionnaires are often poor. An alternative approach is to have an interviewer administer the questionnaire. This generally provides a higher response rate but the interviewer may inadvertently introduce bias into the responses.

Many questionnaires are poorly designed:

- Questionnaires may be biased in advance;
- Questionnaires may not ask the right questions;
- Questions may not be clear and are consequently prone to multiple interpretations;

- The response rate to mailed questionnaires is generally extremely low (often less than 20%) which could lead to biased results;
- Nowadays people in business are inundated with these research instruments and are irritated with the number they are asked to complete.

Completion of a questionnaire takes a long time, involving preparing the questionnaire, identifying the sample to be surveyed, copying the questionnaire, preparing the mail shot, following up non-respondents etc.

Questionnaires are an effective means of collecting facts from subjects but are less successful at collecting opinions/value judgements such as views on the relative importance of a particular item of accounting information. It should be noted that causal relationships are rarely proved conclusively by questionnaires.

Questionnaires have some advantages over interview research. Respondents can answer questions freely unhampered by considerations of the views of the interviewer. Conversely questionnaires have limitations. Only simple straightforward questions can be asked which significantly reduces the depth of the analysis that can be undertaken. The researcher cannot be sure the questionnaire will be completed. The validity of the results can be seriously impaired by low response rates. The researcher cannot follow up responses to questions.

4.4 Interview research

Interviews aim to find out the views of individuals such as investors, analysts and auditors. They allow more in-depth discussion of individuals' views than questionnaires but are limited by the number of individuals that can be interviewed. Also interviewees may react to the presence of the interviewer and change their responses to the questions.

There are three basic approaches to collecting data through interview. Unstructured interviews follow an informal conversational approach. They have the advantage of flexibility but it can be difficult to aggregate and report the results as each interview takes

its own unique path. In accounting research interviews will generally be semi-structured or structured. In such cases an interview outline / guide (semi-structured) or interview questionnaire (structured) is prepared in advance. As the interview outline or questionnaire addresses the research questions being examined in the thesis, it should therefore be structured in a way that is complementary to the structure of the dissertation.

Interviews should be carefully recorded either in writing or by tape and should be typed up immediately afterwards. The recording process should be sufficiently accurate to enable the researcher to include quotations from interviewees in the dissertation.

Results of interviews should be summarised, possibly in a table. The main, most interesting, points coming from interviews should be emphasised by quotes (put in inverted commas and/or italics) from interviewees.

Bell (1993) and Moser and Kalton (1985) provide additional guidance on interview research.

4.5 Survey research

Surveys in this context are distinguished from questionnaire-based research (sometimes called survey research) whose purpose is to find out views of individuals. Surveys in accounting frequently refers to surveys of accounting practices such as:

- Financial accounting treatment as evidenced in, say, published accounts;
- Management accounting techniques;
- Practices in internal audit departments;
- Operation of audit committees.

Such survey research can be very suitable for a minor dissertation. However, students should be careful to add new knowledge and not just replicate a survey done before which might result in an uninteresting and banal dissertation.

4.6 Laboratory experiments

In this kind of research subjects are used to simulate decision-makers. Subjects are presented with information on which they are asked to make decisions similar to real life decisions.

Students are often used in this type of research as cheap accessible surrogates for real decision-makers. Results from such research are only valid if the students behave in the same way as the decision-makers they are simulating.

4.7 Field work and case studies

Fieldwork is usually taken to mean studies of social practices in the field of activity in which they take place. A case study implies a single unit of analysis. Both these techniques enable study of accounting in its practical setting.

A case study involves researching a problem, focussing on a single case such as an individual company. A case study allows in-depth study of issues in a small number of cases or firms. This type of research is not as rigorous as other types but it can provide insights into the real world not possible using other research techniques. It is vital that case study data is collected systematically and that the study is methodically planned.

Case study research involves selecting cases and gaining access to them. The firms selected must be described and put into their organisational and social context. Record keeping, interpretation and reporting of case studies in an objective manner are essential to the quality of the research findings.

Yin (1993) deals with case study methodologies in more detail. Ryan, Scapens and Theobald (1992) describe the application of case study methodology in accounting research.

4.8 Accounting models

Some studies are highly theoretical, deriving from economics, and try to develop mathematical models to explain events. Most of these mathematical models use very simplistic assumptions and are difficult to apply to real world situations. There is a trade-off between simplicity of these models and their validity.

4.9 Empirical research

Social scientific research (such as accounting) is more difficult than scientific research (chemistry, physics) in that it is difficult to set up controlled experiments. For example, it is not easy to vary treatment across subjects. Frequently accounting research examines what occurs after the event in an uncontrolled environment. Many variables are difficult to measure.

Empirical studies use a more scientific approach to accounting research. Empirical research adapts the problem being researched into a proposition testable by available research methods. Testable research hypotheses are developed and specified in advance, usually based on, and derived from, firm theoretical foundations. A hypothesis specifies a relationship, or no relationship (referred to as null hypotheses), between two or more variables - the dependent variable and independent variables. Hypotheses are better stated in positive than in null form. The research design/methodology attempts to confirm or reject these hypotheses. It is difficult, if not impossible, to prove a hypothesis – to do so you would need to observe the complete population of events. However, research can provide evidence rejecting a hypothesis or confirming it for the sample examined.

Empirical research methodology requires dependent, independent and control variables to be measured quantitatively. Statistical techniques must be applied to determine the significance of the results. This type of research needs a large amount of data and clear causal relationships to enable statistically valid conclusions to be drawn.

The research design has to be sufficiently well specified to enable another researcher to replicate the study. Thus the population, sample and measurement of variables must be described in exact detail.

Table 4.1 provides an example of a research design that could test the hypothesis *H: The examination performance of male accounting students is better than that of female accounting students*. The table starts by showing the stages (being continuously refined) from choosing an area for research to articulating a hypothesis for testing.

Table 4.1 illustrates that many choices can be made in measuring the population, sample and variables. The population is (say) all possible examination results in a sector in a specified period. The sample is only the examination results selected for testing by the research which may be a smaller number than the population as a whole. The sample should be (but in practice often is not) representative of the population from which it was drawn.

The dependent variable, examination performance, can be measured by reference to second level, third level or professional accounting examinations. In measuring this variable, a decision has to be made about the time period to be covered. Choices about the measurement level of this variable must also be made. For example examination performance could be measured as (i) Pass/Fail, (ii) Honours/Pass/Fail, (iii) Result in ranges e.g. 0-10%, 11-20% etc. or (iv) the examination marks.

Control variables included in the model for testing depend on the dependent variable. For example, if the dependent variable is examination performance at third level, whether the student studied accounting at school would need to be controlled for as this would influence performance in accounting at third level.

The population, sample, variables and statistical technique must be sufficiently well described to enable the study to be replicated.

Table 4.1: Example of empirical research design

Research area: Accounting education

Research topic: Accounting ability of male and female accounting students

Research question: Are male accounting students better at accounting than female Students?

Hypothesis: *H: The examination performance in accounting of male students is better than that of female students*

Population: Accounting examination results of all professional accounting (or second level or third level) students in a specified period

Sample: Accounting examination results of selected professional accounting (or second level or third level) students in a specified period

Variables:
Dependent variable
Examination performance in x examination(s) for past x years

Independent variable
Gender - Dummy variable 1 Male; 0 Female

Control variables
Prior study of accounting: – Dummy variable 1 Studied at school; 0 Not studied at school
Third level university - 1 UCD; 2 UCC; 3 UCG; etc.
Degree result - 1 First class honours; 2 Second class honours; 3 Pass degree

Model tested: Professional accounting = f(Gender, Prior study of accounting, examination performance University attended, Degree result)

Statistical test: Ordinary least squares regression

To summarise, the empirical approach to accounting research involves:

- Specifying hypotheses for testing;
- Designing models to test hypotheses;
- Operationalising and measuring variables for examination in the model;
- Controlling for other factors;
- Applying statistical tests to the model examined.

An example of a rich vein of empirical research in accounting is capital markets research which tests for a relation between share prices and accounting information such as

earnings, its components (revenues, depreciation, asset write-offs, pension liabilities etc.). This research is based on the Efficient Markets Hypothesis and on the Capital Assets Pricing Model from Finance Theory. The relationships between firms' share returns and their earnings can be statistically tested.

4.10 Summary and conclusions

Many research projects and theses (especially PhD theses) will use more than one method of research. For example, it is not unusual in a quantitative empirical study to also see some qualitative research such as interview research. A thesis might include some descriptive statistics, some survey/interview material and some empirical statistical analysis. These methodologies are not mutually exclusive. Survey data, for example, can be analysed using descriptive as well as empirical techniques. Using more than one research method can be useful in re-enforcing the findings of one research technique with another.

A word of caution - before embarking on questionnaires, interviews or case studies make sure you know what you are doing, that you have good contacts that will ensure a good response and your supervisor supports your approach.

5
Research questions and methodology

5.1 Research questions

A thesis requires identification of a problem or issue for research. Examples include:

- Do Irish accounting standards comply fully with international accounting standards?
- Are Irish accounting regulations as comprehensive as US accounting regulations?
- What are the differences in accounting treatment of goodwill in Ireland compared with the rest of the world?

A good research project will contain a clear statement of the research problem or issue for research. This should be capable of being expressed in the form of a question. The issue of finding a topic and generating research questions was dealt with in chapter 2.

5.1.1 Converting research questions into hypotheses

Not all research projects will contain hypotheses for testing. In most instances, testing of hypotheses requires large-scale projects with large amounts of data amenable to statistical analysis. In smaller scale projects, clearly articulated problems for research may be more appropriate than explicit hypotheses.

A hypothesis is a tentative proposition which is subject to verification through subsequent investigation. Hypotheses make statements (conjectures or 'hunches') about the relationship between variables. If you are using hypotheses (a good thesis will specify clearly the hypotheses or propositions being tested by the research), your methodology should be able to prove/disprove the hypotheses. Thus, hypotheses must be capable of being tested. There should be good linkage between research questions and hypotheses. As mentioned earlier, this linkage should form the structure for the dissertation. Paragraph 4.9 includes an example of an empirical research design involving testing hypotheses.

Hypotheses should be presented in a manner that distinguishes them from the main text - in a new paragraph and in italics/bold. Hypotheses should be numbered and the number should be shown as a subscript e.g.

H_1: The examination performance in accounting of male students is better than that of female students

Some justification for the hypothesis should come beforehand. Accounting theory and previous findings in the literature should be referred to. These should point to the direction of the hypothesis (or the null hypothesis if no direction is pointed to e.g. *H_0: There is no difference in the examination performance in accounting of males and females*). Hypotheses are better put positively than in the null form.

Wallace (1991) discusses a number of desirable attributes of hypotheses. They should be:

- Testable;
- In harmony with existing knowledge;
- Parsimonious;
- Relevant to the research problem or question of interest;
- Susceptible to quantification;
- Yield a large number of consequences;
- Logical and simple;
- General in scope.

5.2 Data for research

Data for research may be collected or generated by researchers (primary data) or may be generated by others (secondary data sources). Section 3.3 briefly introduced the many sources of data available to researchers and Chapter 4 outlined some methods for generating primary data.

The source of data used in the research must be specified (a person reading the dissertation should be able to replicate the research). If, for example, company accounts

are surveyed, the list of companies and the year-ends of the accounts should be included in an appendix to the dissertation.

The nature of the data should be specified (for example, the units of measurement).

5.3 Research methodology

Different topics and issues being researched require different research methodologies (some of which were discussed in chapter 4 on different methods of accounting research). A practical approach to research design and research methodology, particularly for students doing research for the first time, is to copy what other researchers have done. This is particularly the case for measurement of variables and for choosing appropriate statistical techniques. It is important therefore when reading the literature to carefully note the research methodology used by other researchers, while asking yourself the question "Would this be appropriate/do-able in my thesis?"

Regardless of the research method chosen it is advisable to pilot test your design in advance on a small sample to ensure the design is satisfactory.

5.4 Statistical analysis

Statistical analysis is only feasible when there are sufficient data points to enable statistical conclusions to be validly made. Use of statistics is therefore often inappropriate in a minor dissertation.

Specific assumptions on the behaviour of data underlie each statistical test. Researchers must be familiar with these assumptions and must ensure that the chosen statistical technique is appropriate to the data being tested. Consideration of the statistical techniques used in other similar research is a good starting point to choosing an appropriate statistical method.

The applicability and suitability of any statistical test depends on the nature of the data/variables to be analysed. Data/variables can be categorised as follows:

Categorical (in categories)

- *Nominal*: Data classified into categories e.g. Industry analysed into three categories Manufacturing, Non-manufacturing and Financial;
- *Ordinal*: Data ordered or ranked e.g. Small, Medium, Large;

Continuous (measured as a continuous number)

- *Interval*: Data for which physical unit of measurement in numerical terms is possible e.g. length in feet, heat in degrees centigrade/Fahrenheit etc.
- *Ratio*: Continuous numerical measure with absolute or non-arbitrary zero point e.g. profits measured in £s.

There are broadly two types of statistical test. Non-parametric tests make no assumptions about the behaviour of the data; parametric tests assume the data are distributed normally.

Table 5.1 shows some of the main statistical tests used in research. Univariate statistical tests examine a single variable on its own e.g. company size. The univariate statistical test chosen depends on how the variable, company size (say), is measured – whether as a continuous numerical variable (e.g. net asset value in £s) or as a categorical variable (Small, Medium, Large).

Bivariate tests examine the relationship between two variables. Multivariate tests examine the relationship between a dependent variable and more than one independent variable. The test chosen depends on the behaviour of the data (whether normally distributed or not) and on the measurement level (categorical, ordinal, interval, ratio).

Table 5.1: Statistical tests commonly used in research

	Nature of data
Basic descriptive univariate statistics	
Means, medians, modes, minimum, maximum	Continuous variables
Standard deviation	Continuous variables
Frequency	Categorical variables
Proportions, Percentages, Ratios	Categorical variables
Bivariate non-parametric tests	
Mann-Whitney U test	Comparison of means of continuous variables for two or more groups
Crosstabulation - chi-square	Tests independence of categorical variables
Spearman rank order correlation	Correlation between the ranks of two variables
Analysis of variance (ANOVA)	Test for difference of means of more than two samples
Bivariate parametric tests	
Pearson product moment correlation	Measure of association between continuous variables
Multivariate non-parametric tests	
Discriminant analysis	Classification of cases into two or more groups
Logit analysis	Dependent variable dichotomous
Probit analysis	Dependent variable dichotomous
Multivariate parametric tests	
Ordinary Least Squares (OLS) regression	Many assumptions underlie this technique – diagnostics are required to ensure assumptions are not violated

Computer software is now available to carry out most statistical tests used in research. The most common packages are SPSS (Statistical Package for the Social Sciences), SAS (Statistical Analysis Software) and Minitab. There are many books and manuals available for these packages. It is important to obtain guidance on the Windows version of the manuals and not the earlier PC versions of the software. Good introductions to the windows version of SPSS include Babbie and Halley (1995), Kinnear and Gray (1994) and Norusis (1993).

5.5 Summary and conclusions

The methodology followed in conducting research must be described in sufficient detail to enable another researcher to exactly replicate the study, such that the replicated research produces the same results. Researchers frequently forget to describe what they did with sufficient accuracy to facilitate replication. It is therefore advisable that the research methodology chapter is written up as the research work is being done to ensure that all activity is properly recorded and described. If this is left to the end, it is possible the researcher will have forgotten the details of the work done.

6
Results

Students often spend considerable time and effort in collecting raw data. Unless this is well recorded, analysed and interpreted the reader may not fully appreciate the research done. In presenting the results of the research, the researcher needs to look for similarities, differences, groupings, patterns and items of particular significance. The information needs to be organised, understood and presented in such as way as to allow conclusions to be drawn.

It can considerably assist the design of your research if you conduct a small pilot study and write up the results in advance of the larger data collection exercise. There is nothing worse than finding at the analysis of results stage that there is a vital piece of information you omitted to collect.

It is important to distinguish between results and conclusions. Results are the raw information from the research project. Conclusions are what can be deduced, inferred and argued from the results. Discussion may include some speculation about the reasons and causes for the results. The quality of the discussion and argument of the results, and inferences therefrom, will make the difference between a good and bad dissertation.

6.1 Analysis of data

The method of analysis depends to a large extent on the nature of the research project. Regardless of the method of analysis, a certain amount of trial and error is required in trying out different approaches to analysing the data. Experimentation is required until you find the approach that best presents the data to the reader. Try and keep the analysis as simple as possible.

A useful starting point in analysing data is to adapt the approach taken in a similar piece of research reported in an article (or a selection of articles) from a reputable journal.

Results of some of the data analysis will contribute little to the project and should probably not be included in the results chapter.

6.2 Presentation of results

Excessive use of un-interrupted narrative is boring for the reader and an inefficient way of presenting results. Where possible use tables and possibly other visual methods of presenting results. Tufte (1983) provides excellent guidance on presenting data pictorially. Tables and other illustrations should be integrated with the text – placed near to the relevant text and referred to in the text itself.

6.2.1 Tables

You should make good use of well laid out tables. Tables may be suitable for verbal as well as numerical data. For example, a two-column table might be an efficient way of comparing and contrasting two phenomena. Booth, Colomb and Williams (1995) contains a good chapter on communicating evidence visually.

Tables should be introduced to the reader by a concise commentary in the text. The table number should be referred to in the text. The commentary should state what the table is about and briefly refer to the significant findings. Numerical tables should be accurate and should not contain totting errors.

There may be circumstance where two tables presenting results might be easier for the reader to follow than putting a large amount of data into a single table. Alternatively, opportunities for efficiencies in presentation should also be sought, whereby data in a number of tables could be better summarised in a single table.

Section 7.2.6 deals with appropriate methods for presenting tables.

6.2.2 Other ways of presenting results

Other methods for presenting verbal and numerical data include family trees, algorithms, flow charts, graphs and histograms. Tufte (1983, p.178) advises strongly against the use of pie charts.

6.3 Interpretation of results

Themes and patterns across results should be identified. Likewise, any inconsistencies should be pointed out. Reasons for these themes, patterns and inconsistencies should be put forward. Comparison of the results with prior research findings should be made. The sources of any conflicts with expectations derived from the literature review, or with previous research findings, should be examined. The reasons for such differences need to be fully explored. Commentary should be succinct.

The results should make sense and should be intuitively appealing. Are they what you expected? If not, why? Could your research methodology be the problem? Be careful not to read more into the results than they are telling you.

Conclusions should be drawn by reference to the specific aims of the project. Conclusions need to be expressed clearly and unambiguously. Some recommendations should be derived from the research.

6.4 Summary and conclusions

The format adopted in presenting results will depend on the nature of the research project - for example, whether qualitative or quantitative. Results of the research should be included with a brief introduction and commentary on each. A decision will have to be made on the extent to which the results are discussed in the results chapter and in the final summary and conclusions chapter. It is likely that some preliminary discussion should be included in the results chapter with further interpretation left until the final chapter.

7

Writing the research report / dissertation

7.1 The report / dissertation

Research reports and dissertations generally have (subject to topic) a similar structure which is quite distinctive from other types of business reports. Students should follow this general structure, adapting it as appropriate to their specific research topic.

7.1.1 General structure

The structure of most academic research reports / dissertations is summarised in Table 7.1. A more detailed example table of contents is shown in Appendix 5. In minor dissertations it may be appropriate to combine chapters 3 and 4 into a single chapter.

Table 7.1: Components of a research report / dissertation

	Introductory material
	Title page
	Contents
	List of tables and figures
	Acknowledgements
	Abstract
	Chapters
1	Introduction
2	Literature review
3	Research Questions and Hypotheses
4	Research Methodology
5	Results
6	Summary and conclusions
	References
	Appendices

Research reports and dissertations contain introductory material followed by a number of chapters and ending with references and appendices. Page numbers in roman numerals (e.g. i, ii, iii..) often distinguishes introductory material from the main text.

The body of the text should all be in chapters, and the material should be organised in the appropriate chapter. For example, the literature review should be in the literature review chapter, the hypotheses in the hypotheses chapter etc. Material included should be directly relevant to the dissertation. Incidental material padding the dissertation will only confuse, if not irritate, the reader.

7.1.2 Preface material

The dissertation should commence with a title page. This should contain the title which should be clear and concise, including only essential words. All words in the title should be chosen with care, paying attention to syntax.

Examples of good and bad dissertation titles are shown in Table 7.2. In examples 1 and 2, words (as shown below by strikeout notation) were unnecessary and could have been dropped from the title. The third title is too general and not sufficiently focused and specific. The fourth title could have been improved by specifying the countries to be compared. Also the title does not make it clear whether the dissertation deals with pension accounting regulations or pension accounting practices in company accounts. The fifth example is far too long and wordy.

Table 7.2: Examples of dissertation titles

Good examples

1 Corporate governance (practices) in Irish public ~~companies~~ and semi-state companies

2 Environmental reporting: A survey ~~and analysis~~ of Irish practice

Bad examples

3 Departing from historical cost: An investigation into current value accounting

4 The evolution of accounting for pensions: An international comparison

5 Environmental reporting in Ireland. A case study on the change in the level of disclosures relating to environmental issues in three Irish companies, namely Coillte, Aer Rianta and Jefferson Smurfit

The title page should also contain, in the correct format, the submission details which include:

- Full title of the dissertation;
- Name of the author, followed, if desired, by any qualifications and distinctions;
- Qualification for which the dissertation is submitted;
- Whether the dissertation is being submitted in partial fulfilment for the requirements of the degree;
- Name of the institution to which the dissertation is submitted;
- Month and year of submission.

The title page may be followed by a dedication.

There should be a table of contents. It should contain some or all of the headings shown in Appendix 5. You should decide on the use of capitals in the table of contents and be consistent thereafter. As well as these general headings, it is important to breakdown the content in a logical manner, appropriate to your topic. Your dissertation will be more readable the more headings and sub-headings you use (provided they are in a logical progression). As well as the material in chapters, the table of contents should also show the introductory material, a list of tables, figures etc., references and appendices. The table of contents should include page numbers.

A page for acknowledgements may be included. This should be to the point, appropriately phrased, and not too informal or jocose (such as the example on page 53).

The dissertation should contain an abstract which should appear on one page and should not exceed the specified word length. An abstract is a condensation of the final report. It should clearly summarise:

- Problem being researched;
- Hypotheses or research questions;
- How the research was carried out (methodology);
- Results and main findings.

7.1.3 The first chapter

The most difficult, and some would say the most important, chapters are the first and last. First impressions are very important and create an initial reaction to your work which may be difficult to change thereafter. The last chapter is where you tell the final story - the findings and implications of your work.

These chapters should be written bearing in mind that some readers may only look at the first and last chapters. These chapters will therefore have to contain material that may be repeated elsewhere. Some repetition is necessary in a research report or dissertation. For most readers coming to the research for the first time, constant reminder of the project, the themes and objectives underlying the research, and the research methodology, is necessary.

7.1.4 Body of the report / dissertation

For the written report to hang together as a coherent story, there should be good linkages between each chapter. Every chapter should start with introductory paragraphs and should end with a summary and conclusions section.

The introductory paragraphs should introduce the reader to the chapter and briefly summarise the chapter contents. The chapter introduction may refer to material in previous chapters to emphasise the linkages between what has come before and the material in the current chapter.

The summary and conclusions sections should briefly summarise the chapter, following its structure and sequence. It should end with an introduction to the next chapter.

Text in chapters should be sub-divided as much as possible by headings and sub-headings. There should be a logical and obvious structure to the material which should be clearly evident by looking at the table of contents. Chapter 1 in the example table of

contents in Appendix 5 identifies three problems/issues for research. These three issues form the basis for the structure of chapters 2,3 and 5.

7.1.5 The final chapter

The final chapter is essentially a summary and conclusion of all chapters preceding it. It should briefly summarise the research project (i.e. issues addressed, methodology) and the research findings. The results should be compared with the findings of prior research. Try and draw sensible conclusions from your research and try to relate these to the real world we live in. Make sure that you have answered or addressed the questions you set yourself at the beginning of the dissertation. The significance of the results, and of the comparison with prior research findings, needs to be explored, discussed and generally teased out. Implications for research and for policy makers should also be set out. Point out any limitations of the research. Suggestions for future research should also be included.

7.1.6 References

The chapters should be followed by the list of references. This was dealt with in section 3.8 earlier. To summarise - References should be in alphabetical order and should consistently follow a referencing style. The list should only contain references cited in the research report or dissertation.

7.1.7 Appendices

Appendices generally contain detailed information which is not essential in the main chapters of the report but which need to be reproduced. Examples of material suitable for appendices include a copy of any questionnaire or interview outline used in the research, a full listing of the sample used (such as names of companies in the sample), background information on companies used in case study, list of abbreviations used in the report etc.

7.2 Methods of presentation

7.2.1 Writing style

As well as carrying out a piece of research competently you need to communicate the work to the reader. Remember you are telling a story - the more eloquently, logically and persuasively you tell that story the better you will persuade the reader that your research is good. No matter how well you carry out the research, if you cannot tell the story well you cannot expect the reader to believe the research is well done. Logical argument and structure are very important. A well-constructed table of contents is vital to this. Make sure to present information in a logical sequence. Start your story at the beginning. Move from the general to the particular.

Pay close attention to your writing style. Try and write as you would speak – avoid complex words and language that you would not use in everyday life. Language and tone should be professional/academic - overly personal remarks and jokes usually grate on the reader. The following is an example from the acknowledgements section of a dissertation of an excessively wordy writing style (e.g. one assumes the author is sincere when he thanks people – omit the word *sincerely*), and a very inappropriate jocose remark (as it was a poor dissertation!):

> "*I would like to sincerely thank the many people who gave their time so generously to assist me in my research - without them this thesis would not be half the masterpiece it is!*" (34 words)

The sentence reads better as follows:

> "*I thank the many people who helped me with this research. This thesis has benefited greatly from their assistance.*" (19 words)

Many academic journals include style guidelines for articles submitted to the journal (see Appendix 1 for the style guidelines of *The Accounting Review*. These can be used as a

model. Another very good, concise guide to usage and style is *The elements of style* by Strunk and White (1979). This guide is recommended to authors by the *Accounting Review* and is required reading for many US college students. Condren (1997) also provides some useful guidance on academic writing skills.

Examples of good writing styles follow. The first example was the first paragraph in the abstract to a dissertation. The sentence is interesting and provoking without being flippant, jocose or written in unprofessional language. The statement is also supported by academic sources. The second example, being the last sentence, provided a very appropriate and interesting ending to a dissertation.

> "*In 1979 Sterling wryly suggested that accountants may have anticipated the ecology movement by recycling issues rather than resolving them. This thesis is concerned with one of the most recycled issues of them all: the issue of tax-allocation (Wise, 1986).*"

> "*Paterson (1995) summed up the deferred taxation controversy when he stated that* 'deferred taxation is not a real liability rather an accountant's abstraction'."

Booth, Colomb and Williams (1995) provide some useful tips on opening and closing sentences.

Pay careful attention to grammar, errors in writing style and spelling mistakes. Bad grammar and spellings are heavily penalised. Do spell checks and proof-read the material at least twice before binding the dissertation. Nowadays, examiners of dissertations know that spell-checking can be done with the press of a button and severely penalise students for such errors. Sloppy presentation will also create the impression that the research was also carried out in a sloppy manner.

Table 7.3 provides a useful reminder of some common errors. Students should not rely excessively on spell checkers – most of the errors in Table 7.3 would not be detected by a

spell checker (*There are know miss steaks in this rapport cause hour soft wear spell cheque dint fined any*! (from the *New Statesman*).

Table 7.3: Writing errors to avoid

1	Don't use no double negative
2	Make each pronoun agree with their antecedent
3	Join clauses good, like a conjunction should
4	About them sentence fragments
5	When dangling, watch your participles
6	Verbs has to agree with their subjects
7	Just between you and I, case is important too.
8	Don't write run on sentences they are hard to read
9	Don't use commas, which aren't necessary
10	Try to not ever split infinitives
11	It's important to use your apostrophe's correctly
12	Proffered your writing to see if you any words out
13	Correct spelling is esential

Source: Evans (1972, p.182)

The following specific points about style are worth noting:

- The style of writing should be professional and business like. Avoid an excessively personalised style of writing;
- Generally use passive voice ("This dissertation was written.."). If using the active voice, use first person singular (I wrote this dissertation…). It is probably better to use the passive voice as some academics do not like the active voice in academic research;
- Numbers up to ten should be spelled out (e.g. eight), numbers greater than ten should be in figures (e.g. 18);
- Do not use too many abbreviations. Use the full phrase or word when first mentioned, followed by the abbreviation in parentheses e.g. Accounting Standards Board (ASB). If there are many abbreviations include a list as an appendix;

- Be careful about using capitals - my own rule is to generally avoid them e.g. 'Your research methodology should be well planned and designed in advance'

  not

  'Your Research Methodology should be well planned and designed in advance';
- Keep sentences short;
- Use plain language; Do not use jargon and avoid complex words which you would not normally use in everyday speech;
- Do not include words where their omission would make no difference to the meaning of the sentence e.g. '~~The~~ disclosure of profit forecasts provides useful information to ~~the~~ shareholders' - omitting 'the' twice improves readability;
- Avoid repeating the same word or phrase in a sentence; Similarly, avoid starting successive sentences with the same word or phrase;
- Footnotes should be kept to a minimum or not used at all.

7.2.2 Styles of presentation

Text should be properly paragraphed. As stated earlier, text is more readable the more headings and sub-headings used. Headings should be properly numbered. For example, in chapter one headings might be numbered 1.1, 1.2, 1.3, etc. and subheadings 1.1.1, 1.1.2, 1.1.3 etc.

You should decide whether to use capitals, bold, underlining or italics in headings - once you decide, be consistent throughout the dissertation. Text should be right and left justified to improve readability.

Vary your presentation (not font styles – see later comment) to make the dissertation more interesting and readable. Use of bullets, tables, and diagrams etc. helps to summarise issues and focus the readers' attention, especially where there is a lot of text to be read.

Use the most up-to-date technology available i.e. word processor (e.g. Microsoft Word) and a good quality printer. Limited and appropriate use of colour can improve appearance.

7.2.3 Length and format

Maximum length, in terms of number of words, is usually specified in the dissertation guidelines. There is no necessary relationship between quality and length of dissertation. However, there is a trend towards concise, brief dissertations. Briefer dissertations are more likely to reflect sharp and clear thinking (Allen, 1973). Padding is very irritating for lecturers with up to 20 dissertations to read!

Choice of font and spacing (single, space and a half, double spacing) will influence the number of pages e.g. 10,000 words, space and a half, in *New Times Roman* 12 point font will be approximately 45-50 pages.

The dissertation should include page numbers. The introductory material should be numbered using lower case roman numerals (i, ii, iii etc). The first page of chapter 1 should be numbered page 1. Page numbers should be centred at the bottom of the page and look best in 10 point.

7.2.4 Layout and presentation of main text

Modern computers have a wide range of font styles and sizes to chose from. You should choose a font that is plain and not too fussy (for example, *New Times Roman*). Font size for normal text should be 12 point but larger font sizes might be used on (say) the title page, whereas smaller font sizes can look well for text in tables. Do not use too many font sizes/types as this can irritate. Text should be well spaced. Space and a half is usually adequate, but some researchers use double spacing. Text should also be centre justified.

Use plenty of headings and sub-headings to divide up text so that the reader is not presented with un-interrupted pages of narrative. Headings might be presented in bold or

in italics for emphasis (but don't over do this – for example, headings in capitals, bold and underline can be excessive on the eye). Similarly, use bullets where appropriate to list points especially where an overview or summary is provided. This can add to the readability of your dissertation. Headings and sub-headings should be concise. For example, they should generally be no longer than one line and should not wrap over to a second line. You can prevent headings appearing on a different page to the related text by using the *Keep with next* command on the Format Paragraph menu on your computer.

Quotations should be framed by using inverted commas. Use of italics to distinguish quoted material from normal text can be helpful, as can left and right indenting a quote (especially if the quote is long).

7.2.5 Presentation of tables and figures

Tables in dissertations can be used for two purposes: (i) to summarise the literature / regulatory framework and (ii) to summarise results of research. Some dissertations include tables and figures at the end of the dissertation (this is also the format required for articles submitted to journals). However dissertations are more readable if tables are integrated with the main text.

Commentary should come before (not after) tables and figures. There are occasions where, to avoid large amounts of white space, comments may follow rather than proceed tables and figures. For clarity table and figure numbers should be included in the commentary.

Tables and figures should start with a number and title. Formats are a matter of personal choice. The *Irish Accounting Review* has a good format for tables. Regardless of the format you choose, be consistent with format in all tables. I find 10 point in tables (12 point in main text) is readable and distinguishes tabular material from the main text.

Headings and captions should briefly explain the numbers and other data in tables and figures. If a table or figure relies on data from another publication the source of that data should be acknowledged at the bottom of the table.

Inserting a frame or textbox around a table prevents the table from appearing on more than one page. You can format the frame or text box to centre tables which looks better than the normal default left alignment format.

Colour can be attractive (can also be used to good advantage in tables and figures). However colour printing is slow and expensive. Tufte (1983) warns that 5-10% of the population is colour-deficient or colour blind. Use colour selectively. Avoid gimmicky methods of presentation.

7.3 Producing the final document

Leave plenty of time at the end for the production process. Dissertations need to be carefully proof-read - at least twice, by calling it over with another person - preferably someone experienced and with a good eye for detail. You should print out the final version excluding the table of contents. Only then can you put in page numbers (and be certain they won't change!) and print the table of contents.

7.5 Summary and conclusions

A poor piece of research well presented, well structured and well written will be more favourably viewed than a good piece of research poorly presented, structured and written. It is therefore vital that the advice in this chapter be carefully followed if students are to reap the rewards for all the work they have done. It is not enough to carry out the research to the highest of standards. You must be able to communicate this to the examiner in the final product – the report or dissertation. Remember, this is the only basis on which the reviewer of the report can make a judgement on the quality of the research carried out.

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Appendix 1

Regulations for UCD Master of Accounting dissertations

Students are required to submit a dissertation in part fulfilment of the requirements for the Master of Accounting degree. A dissertation is an ordered, critical and reasoned exposition of knowledge in an approved field. It should provide evidence of the student's knowledge of the relevant literature, and be submitted in accordance with these guidelines.

These guidelines set out basic procedures to be followed by all Master of Accounting students in preparing their dissertations. They will be supplemented by a series of lectures during the year on Research Methodology. Comprehensive notes will be made available providing additional information on how to complete a dissertation.

All Master of Accounting students must have a supervisor who will be a member of the academic staff of the University. Each supervisor will have a limit on the number of students s/he can supervise. Students will be accepted by supervisors on a '*first come, first served*' basis. To assist students in choosing a supervisor, a list of research interests of staff follows these guidelines.

Students shall submit a proposal no later than the end of the second term, including a provisional dissertation title for approval by his/her supervisor. It shall be the student's responsibility to find a dissertation topic. However, supervisors will assist students in this process. The final title of the dissertation may be changed subsequently with the approval of the supervisor.

The role of supervisors is to guide students in identifying a dissertation topic and in planning and presenting the dissertation. Students are expected to initiate contact with the supervisor as often as the student feels advice is needed. Supervisors are not responsible for student research projects. This responsibility rests with students themselves.

Students are expected to use their own initiative in finding materials and in progressing the dissertation. Students should type their work and make sure it is carefully proof-read. Students should pay careful attention to issues of presentation. Supervisors need a reasonable time to read and comment on students' work. Students should not expect supervisors to read and comment on work presented less than three weeks before the due date for submission.

The dissertation should be clearly and concisely written, show evidence of originality in knowledge and in interpretation, and shall also be judged on its scholarly presentation. In addition it shall contain a full list of references.

Submission of dissertation

Three copies of the dissertation must be submitted for examination by 1 September. Dissertations may be in hard-bound or soft-bound format.

Students whose dissertation fails to reach an adequate standard may petition the Faculty of Commerce for permission to resubmit the dissertation by 1 December 1998. Alternatively, students who choose not to submit a dissertation may apply to the Faculty of Commerce to be awarded a Diploma in Professional Accounting (subject to achieving appropriate grades in all subjects).

Typing of dissertations

Dissertations should be typewritten on A4 good quality paper with a margin of at least 1.5" (4 cm) on the left hand side. Adequate margins should also be left on the other three edges. Pages should be typed on one side only and in space and a half or double spacing.

Candidates are warned that they will be required to correct any typographical errors to the satisfaction of the internal examiners before the award of the degree is approved. Candidates should carefully proof-read their dissertation for typographical errors and correct them before submitting the dissertation. Dissertations submitted in word-

processed form must be clearly legible and candidates are advised to use a good quality printer when preparing their dissertation.

Title

The title should describe the content of the dissertation accurately and concisely.

Title Page

The title page shall give the following information in the order listed:

(a) The full title of the dissertation;
(b) The full name of the author, followed, if desired, by any qualifications and distinctions;
(c) The qualification for which the dissertation is submitted;
(d) Whether the dissertation is being submitted in partial fulfilment for the requirements of the degree;
(e) The name of the institution to which the dissertation is submitted;
(f) The month and year of submission.

Table of Contents

The table of contents shall immediately follow the title page. It shall list in sequence, with page numbers, all relevant subdivisions of the dissertation, including the title of chapters, sections and subsections, as appropriate; the list of references; the list of abbreviations and other functional parts of the whole dissertation; any appendices.

List of tables and illustrations

The list of tables and illustrations shall follow the table of contents and should list all tables, photographs, diagrams, etc., in the order in which they occur in the text.

Acknowledgements

Any acknowledgements shall be on the pages following the table of contents and list of tables and illustrations.

Abstract

There shall be an abstract of the dissertation, not exceeding 300 words, bound in at the beginning of the dissertation. The summary should not extend beyond a single A4 page.

The abstract provides a synopsis of the dissertation and should concisely inform the reader of:

- Dissertation topic, indicating clearly the nature and scope of the research undertaken and of the contribution made to the knowledge of the subject treated;
- Principal arguments and theoretical background to the study;
- Method(s) of investigation where appropriate;
- Findings; and
- Summary of any conclusions reached.

Abbreviations

Where abbreviations are used a key shall be provided. Abbreviations may be used at the discretion of the author. For an abbreviation not in common use, the terms shall be given in full at the first instance followed by the abbreviation in brackets.

Length of dissertation

The dissertation (inclusive of appendices, footnotes, tables and references) shall not exceed 10,000 words without the express approval of the student's supervisor.

Page numbers

All pages, including tables, appendices and references, should be serially numbered except for the title page. The first section of the dissertation (i.e. Table of contents, List of tables and illustrations, Abstract, Acknowledgements etc.) should be numbered using roman numerals (i.e. i, ii, iii iv…). Commencing with chapter one, page numbers should start with page 1 and be numbered using Arabic numerals (i.e. 1, 2, 3..). Major sections and subsections in each chapter may be numbered in Arabic numerals.

References

Dissertations shall contain a full list of references. Candidates should follow the style guidelines of a reputable academic accounting journal.

The Department of Accountancy recommends that the style guidelines of *The Accounting Review* are followed in presenting Master of Accounting dissertations. If the style guidelines of an alternative journal are followed, students should specify in a footnote at the end of the list of references which style guidelines on presentation they have used.

Extracts from the *Accounting Review* style guidelines (with some adaptations) are summarised as follows:

Extracts from the style guidelines of *The Accounting Review* (adapted)

The *Accounting Review's* manuscript preparation guidelines follow (with a slight modification) the B-format of the *Chicago Manual of Style* (14th ed.; University of Chicago Press). Another helpful guide to usage and style is *The Elements of Style* by William Strunk, Jr., and E.B. White (Macmillan).

Numbers
Spell out numbers from one to ten, except when used in tables and lists, and when used with mathematical, statistical, scientific, or technical units and quantities, such as distances, weights and measures. For example: *three days; 3 kilometers; 30 years*. All other numbers are expressed numerically. Generally when using approximate terms spell out the number, for example, *approximately thirty years*.

Percentages and Decimal Fractions
In non-technical copy use the word percent in the text; in technical copy the symbol % is used.

Hyphens
Use a hyphen to join unit modifiers or to clarify usage. For example: a *well-presented analysis; re-form*. See *Webster's* for correct usage.

Tables and figures
1. Each table and figure (graphic) should be numbered and include a complete title indicating the exact contents of the table or figure.
2. A reference to each table and figure (graphic) should be made in the text.
3. Tables should be reasonably interpreted without reference to the text.
4. Sources should be included as necessary
5. Tables should be well presented - the method of presentation on tables in the *Irish Accounting Review* is recommended.

Citations
Work cited should use the "author-date system" keyed to a list of works in the reference list (see below).

1.In the text, works are cited as follows: authors' last name and date, without comma, in parentheses: for example, (Jones 1987); with two authors (Jones and Freeman 1973); with more than two authors (Jones et al. 1975); with more than one source cited together (Jones 1987; Freeman 1986); with two or more works by one author: (Jones 1985, 1987).
2. When the reference list contains more than one work of an author published in the same year, the suffix a, b, etc. follows the date in the text citation: for example, (Jones 1987a) or (Jones 1987a; Freeman 1985b).
3. Where a specific quote is used, or reference is made to a specific comment in a paper, students should include the relevant page number in the cited works. If an author's name is mentioned in the text, it need not be repeated in the citation; for example "Jones (1987, 115) says..."

Extracts from the style guidelines of *The Accounting Review* (adapted) (continued)

List of references

Every dissertation must include a list of references containing only those works cited. Each entry should contain all data necessary for unambiguous identification. With the author-date system, use the following format recommended by the *Chicago Manual*:

1. Arrange citations in alphabetical order according to surname of the first author or the name of the institution responsible for the citation.
2. Use author's initials instead of proper names.
3. Dates of publication should be placed immediately after author's name.
4. Titles of journals should not be abbreviated.
5. Multiple works by the same author(s) should be listed in chronological order of publication. Two or more works by the same author(s) in the same year are distinguished by letters after the date.
6. Inclusive page numbers are treated as recommended in *Chicago Manual* section 8.67.

Sample entries are as follows:

American Accounting Association, Committee on Concepts and Standards for External Financial Reports. 1977. Statement on Accounting Theory and Theory Acceptance. Sarasota, Fl: AAA.

Demski, J.S. and D.E.M. Sappington. 1989. Hierarchical structure and responsibility accounting. Journal of Accounting Research 27 (Spring): 40-58.

Dye, R., B. Balachandran, and R. Magee. 1989. Contingent fees for audit firms. Working paper, Northwestern University, Evanston, IL.

Fabozzi, F., and I. Pollack, eds. 1987. The Handbook of Fixed Income Securities. 2d ed. Homewood, IL: Dow Jones-Irwin.

Kahneman, D., P. Slovic, and A. Tversky, eds. 1982. Judgment Under Uncertainty: Heuristics and Biases. Cambridge, United Kingdom: Cambridge University Press.

Porcano, T.M. 1984a. Distributive justice and tax policy. The Accounting Review 59 (October): 619-36.

----------. 1984b. The perceived effects of tax policy on corporate investment intentions. The Journal of the American Taxation Association 6 (Fall): 7-19.

Shaw, W.H. 1985. Empirical evidence on the market impact of the safe harbor leasing law. Ph.D. Dissertation, University of Texas at Austin.

Sherman, T.M., ed. 1984. Conceptual Framework for Financial Accounting. Cambridge, MA: Harvard Business School.

Appendix 2

Assessment of dissertations

Example 1 Assessment of dissertation

		%
1	Statement of purpose including problem definition	10
2	Background research including literature review, visits, surveys etc.	20
3	Research methodology including design	10
4	Presentation of research findings	15
5	Discussion, interpretation and implications of findings including limitations	15
6	Physical presentation and order of work	20
7	Discretionary mark including originality of subject; topic difficulty, initiative shown and guidelines for future research including recommendations	10
		100

(Source: Master of Accounting Programme, University College Dublin. The assistance of Prof. Peter Clarke in preparing this assessment is acknowledged)

Example 2 Assessment of dissertation

A. Introductory Chapters

1. Was the problem *area* defined?
2. Was research and writing relevant to the problem area (a) well covered, (b) accurately described, (c) demonstrated as relevant to the problem?
3. Was the research or thesis question handled well?
   (a) Was its relevance to the problem area stated?
   (b) Were the questions and subsidiary questions clearly stated?
   (c) Was the scope of the questions clearly defined?
4. Was the intended approach of the study clearly defined?
   (a) Was the methodology briefly stated?
   (b) Were hypotheses as derived from the research questions set forth?
   (c) Were definitions presented where needed?
5. Were the statements of the problem, the question, and the approach logical and internally consistent?
6. Were alternative solutions or approaches briefly suggested and discussed? Was their exclusion from the thesis justified?

B. Methodology Chapters

1. Did the methodology description follow a logical sequence?
2. Were steps clearly delineated?
3. Were relationships of methodology to the research questions clearly demonstrated?
4. Were controls in the research adequately handled?
5. Were assumptions about uncontrollable factors stated?
6. Were appropriate materials appendixed?

C. Results Chapters

1. Was the success of the data collection discussed?
2. Were the appropriate analytical methods chosen and described?
3. Were the results clearly presented?
   (a) Were tables neat, logical, and self-explanatory?
   (b) Did discussions of tables include not merely descriptions of results but also interpretations?
4. Were hypotheses restated (or research questions) to ease the reader's burden?
5. Were adequate statements made regarding the support or rejection of hypotheses?

Writing the Research Report

6. Was the sequence of presentation of results in consonance with the sequence of research questions and/or hypotheses?
7. Were appropriate data, tables, charts appendixed?

D. Discussion and Conclusion Chapters

1. Were the thoughts presented in a logical sequence, also consonant with the preceding chapters? Were reference to tables made?
2. Were discussions logical, critical, analytical?
3. Were alternative explanations for the results offered?
4. Were conclusions within the limits of the results obtained; were they sound and based upon the body of the thesis?
5. Were recommendations (if at all necessary) soundly derived from the results and conclusions? Were limitations delineated?
6. Was the contribution to the field (or the problem area) defined adequately?

E. Overall Thesis Questions

1. Was the title relevant, descriptive, adequate?
2. Did the table of contents reflect the most logical method for organizing the report?
3. Were all areas of the thesis well handled?
4. Was the bibliography adequate, up to date, complete but not padded?
5. Were tables and appendixes in the order referred to in the body of the thesis? Were all appendixes referred to in the body of the thesis?

Source: Allen (1973, pp. 77-79)

Appendix 3 Accounting research and the world wide web

Listed below are some world wide web addresses which may be useful for accounting research:

Home page	WWW address
Professional accounting bodies	
Institute of Chartered Accountants in Ireland	http://www.icai.ie
Chartered Institute of Management Accountants	http://www.cima.org.uk
Chartered Association of Certified Accountants	http://www.acca.co.uk
Institute of Chartered Accountants in England and Wales	http://www.icaew.co.uk
Institute of Chartered Accountants of Scotland	http://www.icas.org.uk
American Institute of Certified Public Accounting	http://www.aicpa.org
Standard setting bodies	
Financial Accounting Standards Board	http://www.fasb.org
International Accounting Standards Committee	http://www.iasc.org.uk
International Federation of Accountants	http://www.ifac.org/
Academic accounting bodies	
Irish Accounting and Finance Association	http://www.ucd.ie/~account/iafa/home.html
British Accounting Association (BAA)	http://www.bham.ac.uk/BAA
BAA-Special Interest Group Accounting Education	http://www.qub.ac.uk/mgt/alans/sig/baasig.htm
European Accounting Association	http://www.bham.ac.uk/EAA
European Finance Association	http://www.bwl.univie.ac.at/efa
American Accounting Association	http://www.AAA-edu.org
Financial Executives Research Foundation	http://www.fei.org
Accounting research sites	
SUMMA project, UK	http://www.summa.org.uk
Rutgers Accounting Web (RAW), US	http://www.rutgers.edu/Accounting
Nordic Accounting Network (NAN), Finland and Sweden	http://www.nan.shh.fi/
Centre for Accounting and Auditing Research (CAARNet), Singapore	http://caarnet.ntu.edu.sg/
Anet, Australia	http://www.csu.edu.au/anet/
University of Hawaii, US	http://www.hawaii.edu (O/S to be completed at page proof stage)
Databases on line	
Datastream	http://www.datastream.com
SEC EDGAR database	http://www.sec.gov/edgarhp.htm

Note of caution: While web addresses are accurate at the time of publication, they may subsequently change

Appendix 3 Accounting research and the world wide web (continued)

Listed below are some world wide web addresses which may be useful for accounting research:

Home page	WWW address
Other resources	
Wall Street Journal	http://wsj.com/
US Stock quotes and financial information	http://quote.yahoo.com/
Statistics on the web	http://yahoo.com/science/mathematics/statistics/
Social Science Information Gateway (SOSIG)	http://sosig.ac.uk
Financial Markets Centre, London School of Economics	http://cep.LSE.ac.uk/fmg/
Kaplan's AuditNet Resource List (KARL)	http://users.aol.com/auditnet/karl.htm
Center for Research on Security Prices (CRISP)	http://www.crsp.com
Company Annual Reports On Line (CAROL)	http://www.carol.co.uk
IASC bibliography on international accounting	http://www.iasc.org.uk/frame/cen1_8.htm
Business education on the network	http://bized.ac.uk
Association of Investment Managers	http://www.stockex.co.uk/aim
Electronic Share Information	http://www.esi.co.uk

Note of caution: While web addresses are accurate at the time of publication, they may subsequently change

Appendix 4: Web sites for academic journals in accounting

	WWW Address
• Abacus	http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=00013072
• Accounting and Finance	http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=008105391
• Accounting Education	http://www.journals.routledge.com/aed.html
• Accounting Historians Journal	http://draco.som.cwru.edu/Accounting/pub/journal.html
• Accounting Horizons	http://www.rutgers.edu/Accounting/raw/aaa/pubs/horizons.htm
• Accounting Review	http://www.rutgers.edu/Accounting/raw/aaa/pubs/review.htm
• Accounting, Auditing and Accountability	http://www.mcb.co.uk/cgi-bin/journal1/aaaj
• Accounting, Business and Financial History	http://www.journals.routledge.com/abfh.html
• Accounting, Organisations and Society	http://www.elsevier.nl/inca/publications/store/4/8/6/
• Asia-Pacific Journal of Accounting	http://www.cityu.edu.hk/ac/apja/index.htm
• Auditing: A Journal of Practice and Theory	http://www.indiana.edu/~audsec/newjc.html
• British Accounting Review	http://www.hbuk.co.uk/www/ideal/journals/ba.htm
• Contemporary Accounting Research	http://www.tcel.com/~car/index.htm
• Critical Perspectives on Accounting	http://www.hbuk.co.uk/www/ideal/journals/pa.htm
• European Accounting Review	http://www.bham.ac.uk/EAA/ear or www.journals.routledge.com/ear.html
• Financial Accountability and Management	http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=02674424
• Issues in Accounting Education	http://www.rutgers.edu/Accounting/raw/aaa/pubs/issues.htm
• Journal of Accounting and Economics	http://www.elsevier.nl/inca/publications/store/5/0/5/5/5/6/index.htt
• Journal of Accounting and Public Policy	http://www.elsevier.nl/inca/publications/store/5/0/5/7/2/1/index.htt
• Journal of Accounting Auditing and Finance	http://www.stern.nyu.edu/acc/journals/jaaf.html
• Journal of Accounting Education	http://www.elsevier.nl/inca/publications/store/8/4/0/
• Journal of Accounting Research	http://gsbwww.uchicago.edu/research/journals/jar/
• Journal of Business Finance and Accounting	http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=0306686X
• Journal of International Financial Management and Accounting	http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=009541314
• Management Accounting Research	http://www.hbuk.co.uk/ap/journals/mg

Note of caution: While web addresses are accurate at the time of publication, they may subsequently change

Appendix 5 Example table of contents

Appendix 5 Example table of contents (continued)

References

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