Thesis Writing: Teaching the Genre
A Workshop Plan

This workshop plan is designed to help supervisors explain the structure of a typical research report or thesis to their students. The basic plan is for a seminar and discussion session covering the major sections of an extended research report (or thesis). Suggestions for offering this material plus writers' workshop activities for supervisors and/or students are included in the plan.

The materials were drawn from a booklet "Writing Your Project Report" which was produced for students enrolled in Environmental Health in Practice at the University of Western Sydney.

These and other resources can be found on the fIRST website were provided to fIRST by Associate Professor Carolyn Webb, Director of Educational Development, University of Western Sydney.

Dr Peggy Nightingale helped develop this workshop plan.

Contents

Aims

This workshop will enable participants to:

1) explain with confidence the overall shape of a major research report/thesis to their students;

2) discuss in some detail the purposes and elements of the sections of a thesis; and

3) improve their ability to counsel students on editorial changes to thesis drafts.

The workshop may also help supervisors increase their own self-confidence and efficiency as writers.

Introduction

While most supervisors have become successful writers of research reports themselves, they often find it difficult to make explicit what they have learned about writing in their own fields. This workshop will help supervisors teach the genre of the major research report (or thesis) to their students. Taking a "genre approach" to teaching writing skills simply means explicitly explaining the structure and style of a type of writing. In the case of supervisors of research students, the thesis is the genre students need to understand.

We suggest conducting this workshop as a writers' workshop with supervisors bringing drafts of their own work to be considered in comparison with the materials provided. Our hope is that, having had this experience, some supervisors might choose to conduct similar sessions with their students. However, it would be possible to study the materials provided in a seminar and discussion mode.

Who, when and why?

This workshop would be appropriate for both experienced and inexperienced supervisors. However, it will probably appeal most to relatively inexperienced supervisors. A group could include students as well.

These materials will be most appropriate for researchers in the sciences and technology and the social sciences. Probably discussion will work best if the participants come from related disciplines.

This workshop could be run at any time during the academic year.

It is important to encourage supervisors to discuss the structure of a typical thesis within their discipline because:

1) Students often engage in trial-and-error strategies in drafting sections of their theses. These are time-consuming for both student and supervisor and can be minimised if students clearly understand their goals as writers.

2) Written language is at the heart of researching. Not only is it the means of communicating the researcher's contribution to knowledge, it also helps the researcher clarify and discover what their contribution actually is.

Program overview

The basic program we offer here is for a single long session that will introduce the major sections of a substantial research report or thesis. There are many handouts and some overheads to assist a facilitator in leading this session. It would run as a seminar with some discussion, but would not be a genuine workshop in which people have time to explore concepts and study examples of student text. As a seminar and discussion it would take about 3 hours.

One problem with such a session is the danger of information overload. However, since participants may access this workshop plan with all of the materials and the detailed advice to facilitators, there is always the opportunity for them to review the content.

Another drawback is being superficial, and especially failing to address discipline differences adequately. If you were to offer this material in two sessions, you could allow more time for discussion, especially of discipline requirements.

The advantage of a content-rich session like this is that supervisors will immediately feel that they have something to say to students about the overall structure of a thesis, and also about the major elements of the thesis. They may also feel encouraged to use the resources on fIRST for helping student writers and supporting literature reviews.

One can imagine dozens of variations to this program, and we have suggested only a few to stimulate facilitators to consider other ways of approaching the task of helping supervisors understand the genre of thesis-writing.

For instance, you could invite supervisors to bring draft journal articles to a writers' workshop, and work through the major sections of a research report. Colleagues could exchange drafts and critique each other's work. A thesis is, of course, much longer and may have more elements, but the major sections are very similar. Supervisors would be introduced to some of the basics of explaining how to write research reports, gain some experience in giving structured feedback, and have the opportunity to get some feedback on their own work. If you were to use all the materials from the seminar/discussion session and add time to "workshop" drafts, you would need to schedule a 5-hour session. Probably, it would be better to drop some sections from the full session.

Another possible alternative: you could invite supervisors and their students to bring draft thesis chapters to a series of writers' workshops. You would use the various resources of this site - tools, workshop plans and online sessions - to structure the feedback and discussion between supervisors and students.

Preparation

To successfully run this workshop the facilitator should:

- [ ] Study the detailed advice for facilitators;
- [ ] Look at the resource 'Supporting Literature Reviews' on the fIRST web site;
- [ ] Print and photocopy the handouts;
- [ ] Prepare the overheads.

There are additional readings listed in the fIRST bibliography (Thesis Writing).

Which type of workshop?

This workshop plan requires you to make more choices than most plans offered by fIRST (see also program overview).

You will need to decide whether to run a writers' workshop in which participants use their own draft writing as resources or whether to conduct a seminar and discussion session. There are probably two main considerations in this decision:

- [ ] Who do you want to attract to the session?
- [ ] How much time do you think they will be willing to commit?

In our experience, inexperienced supervisors are often still struggling with their own writing. Though they may have completed theses, or been published, many lack confidence and are "reluctant" writers. They may welcome the opportunity to work on their own drafts. It is possible that more experienced people will not feel it necessary to do so.

If you wish to include students in the group, the writers' workshop format would be especially useful. It would allow students to get some feedback on work in progress, and it would assist supervisors in structuring the feedback they give. If the supervisors were also to bring drafts of their own current work, students could get some sense of how more experienced writers work.

How long a session? How much to cover?

The time factor is always an issue in staff development. Supervisors have very little, if any, time for "extras" in their schedules. A writers' workshop will take much longer to run than a seminar. On the other hand, it would be possible to break this session up into a series of shorter workshops offered over a period of time.

It would also be possible to skip over some elements of the workshop plan. You could simply distribute the handouts with some notes taken from the detailed advice to facilitators. For example, you may not think it necessary to spend time discussing layouts for the Table of Contents or alternative styles for Titles. If you do decide not to put workshop time into such matters, we encourage you to emphasise how important such elements are to the overall impression a thesis makes and to make sure that supervisors are well prepared to assist their students with them.

Program

Total time for a seminar/discussion style session: Allow 3 hours.

You will need at least an hour more if you decide to offer a writers' workshop style session for supervisors who bring draft journal articles. In that case you would drop consideration of some sections of research reports, e.g., the table of contents.

If you choose to include students and work on draft theses, you will want to offer a series of workshops.

1. Introduction (10 minutes)

Open this session by stressing the importance of writing as one of a researcher's tools.

See detailed advice to facilitators for suggestions. You may wish to use Overhead 1, Overhead 2 and Overhead 3.

2. The overall shape of a thesis (15 minutes)

Distribute Handout 1 and discuss the questions at the top of the page (see detailed advice, point 2).

Writers' workshop option: (additional 10 minutes)

Many of these sections will be found in a journal article or shorter research report as well as in a thesis. Have participants review their own work and mark the sections they have included. Ask if they think they have missed anything important. Ask if they believe a reader would be able to identify the sections easily, or are some a bit jumbled?

3. The table of contents (10 minutes)

Distribute Handout 2 and point out why this example is very effective (see detailed advice, point 3).

Writers' workshop option: (no additional time)

If you are working with journal articles, obviously this material is not relevant.

If you are working with draft theses or long reports, there is little point in trying to finalise the table of contents until the report is in final editing stages. However, it is worthwhile introducing the material about effectiveness sooner, so writers have ideas about what they may want to try. Even quite early in the process, students can have a rough outline of the main shape of a thesis from which they are working.

4. The title (10 minutes)

Option: (additional 5 minutes)

Ask participants: what are the characteristics of effective titles? List their responses on whiteboard.

Distribute Handout 3 (see detailed advice, point 4, for some points to make about titles if participants have not already covered them).

Writers' workshop option: (additional 15 minutes)

Ask participants to try rewriting their title in different ways, as in the example. They may not be able to complete the exercise if they are still processing data.

5. The introduction (25 minutes)

Distribute Handout 4, pages 1 and 2. Have participants read the handout. There is probably no need to discuss it, but you should ask if anyone wants clarification.

Distribute Handout 5, pages 1 and 2. Ask participants to cover the comments in italics (on the right-hand side of the pages) with a sheet of paper.

On page 1 is the first part of an introduction to a project report. Ask participants to read the material. Which stages appear here? What are the weaknesses of this brief passage? Review the comments in the right margin.

On page 2 is a rewritten version of this first part of an introduction to a project report. Ask participants to identify the stages in this passage. Review the comments on the right-hand side that indicate some of the reasons for its increased effectiveness.

Writers' workshop option: (additional 30 minutes - 1 hour depending on length of texts)

Ask participants to indicate the passage they consider to be their introduction. Exchange drafts and ask the partner to try to identify the four stages. Give each other feedback on clarity and "reader-friendliness".

6. The review of literature (25 minutes)

Distribute Handout 6. Use Overhead 4 and Overhead 5 to stress that the literature review changes over the course of a project (see detailed advice to facilitators, point 6).

Refer participants to the fIRST site where there are a number of resources that will assist students with literature reviews.

□ Supporting Literature Reviews

Option: (additional 1 hour)

The literature review is a very important element of a thesis, and it would be possible to spend a great deal of time on it. If you have decided to offer a series of sessions on the sections of a thesis, you could devote one whole session to the literature review. A possibility would be to book a computer lab and guide participants through the resources on the fIRST site.

Writers' Workshop option: (additional 30- 90 minutes, depending on length of texts)

Use the resource from the fIRST website Supporting literature reviews.

Ask participants to attempt to complete the sentences in the prompts under "How can I design a structure for my literature review?" Then ask them to review their own writing to see if they believe the structure is so clear a reader new to the material will find it easy to read.

Of course, participants could exchange drafts and critique each other's work. Handout 2, Characteristics of strong and weak literature reviews, Supporting Literature Reviews, and Tools could be useful.

7. The methodology (25 minutes)

Distribute Handout 7. Stress the purposes of the methodology section - use Overhead 6 (see detailed advice for facilitators, point 7).

Discuss which elements are most likely to be required in the discipline(s) of your participants.

Writers' Workshop option: (additional 30 minutes - 2 hours, depending on length of texts)

You may wish to devote substantial time to the methodology section of shorter reports or the thesis chapter on methods. You could ask participants to go through their work and note in the margin each of the possible elements that appear there. Then they could consider whether the list identifies anything else that should be there.

Partners could read for each other and offer feedback.

8. The results (20 minutes)

It is not possible to say a lot about the results section of a thesis without knowing something about the findings of the research. However, you can make a couple of points about what to include (see detailed advice, point 8.)

Distribute Handout 8 and discuss.

Writers' workshop option: (additional 30 minutes - 1 hour, depending on length of texts)

Ask partners to explain to each other what decisions they had to make about including or leaving out findings. In the course of describing the decisions, participants may find that they included material which was not directly relevant to their research objectives. (This is more likely than leaving out something important.) Ask them to mark any such material in their texts for future editing or discussion with their supervisors or collaborators.

9. The discussion (30 minutes)

Distribute Handout 9. Allow participants time to study it.

Use Overhead 7 and detailed advice, point 9, to describe the common pattern within a discussion section.

Ask the group to comment on difficulties they have had in writing discussion sections, or problems they have observed in student writing.

Writers' workshop option: (1 hour)

Partners who are reading article drafts will probably be able to comment on the discussion section's logic and coherence.

If participants are working on thesis drafts, it is going to be difficult for partners to offer good feedback unless they are familiar with the project. You could ask writers to study their own drafts and see if they can identify a statement of result followed by some or all of the moves from the common cycle you have just described. Ask them to make notes in the margins where the different types of moves occur. This may help them identify places where their text tries to cover too many things at once or skips from issue to issue.

10. Conclusion (10 minutes)

Conclude the session by asking supervisors to reflect on what use they might make of these materials with their students.

Make sure they have the URL of fIRST, the relevant username and password. Encourage them to explore the resources of the site.

Detailed advice for facilitators

1. Introduction

Open this session by stressing the importance of writing as one of a researcher's tools. You may wish to use Overhead 1, Overhead 2 and Overhead 3.

Suggested remarks

Highly developed skills in using written language are absolutely fundamental to the conduct of research. The process of becoming a researcher is as much a process of becoming a "wordsmith", a master of language, as it is of becoming an expert in your field. Written language is at the heart of researching, and plays the following different roles in the process of grappling with your research:

Written language helps you in your *discovery* of knowledge through:

- ☐ Clarifying your understanding through reading;
- ☐ Gathering written material that is relevant to your research interests;
- ☐ Discovering how knowledge in a particular field has been developed and accumulated;
- ☐ Identifying what is still unknown;
- ☐ Confirming that your own research is worthwhile to do;
- ☐ Discovering what methods have been used by others to make their discoveries.

Written language helps you in the *communication* of your knowledge through:

- ☐ Consolidating your understanding through explaining what you know to others through writing about it;
- ☐ Contributing to the pool of knowledge generally through disseminating your discoveries.

Written language becomes the *currency* of knowledge through:

- ☐ Persuading others of a particular point of view;
- ☐ Changing the world through this persuading;
- ☐ Presenting yourself as an expert in a particular field of knowledge.

Writing is just thinking captured at a particular point in time. It is like a snapshot of your thinking at that time. Sometimes what you write might be fairly immediate thoughts and reflections, for example, your lab notebook. Other times, you might be writing about things as they happen, for example, making notes during an interview you are conducting, or while you are observing something. Sometimes you might be writing very considered thoughts long after the events that might have prompted them, for example writing your final research report.

This workshop will provide some examples to help you explain to your students the structure of a thesis.

Written language is the researcher's *versatile toolkit* without which the research cannot come alive. One of your tasks as a supervisor of research students is to help them develop their skills as writers of research.

2. The overall shape of a thesis

Distribute Handout 1 and discuss the questions at the top of the page. Remember that not all research projects will have the section headings of Method/Results/Discussion. This is because not all research is of a type that collects original data (for example, through surveys or through experimentation). There are many other types of research which are based on pre-existing data. For example, some projects are based entirely on published literature. For such projects, there is no need to outline a specific methodology: the research method involves essentially reading and thinking, and the major tool is the pen or the word processor.

Stress that students may have trouble keeping the sections clearly separated. Readers rapidly become confused if, for example, results drift into methods, or discussion appears in the reporting of results.

Writers' workshop option:

Many of these sections will be found in a journal article or shorter research report as well as in a thesis. Have participants review their own work and mark the sections they have included. Ask if they think they have missed anything important. Ask if they believe a reader would be able to identify the sections easily, or are some a bit jumbled?

3. The table of contents

Distribute Handout 2 and point out why this example is very effective.

There are two main reasons why this Table of Contents is so reader friendly:

Reader-friendly lay-out

Sections are distinguished by different layout settings:

- bold face;
- all upper case;
- larger initial capitals;
- italics;
- two layers of indents from the left margin.

This makes it very easy to see the structure of the contents, so it helps the reader to understand at a glance how the parts of the report fit together.

Reader-friendly section headings

There are two types of section headings. Some have structural titles such as:

> 1.0 INTRODUCTION
> 1.1 AIM, OBJECTIVES AND STRATEGIES

These titles are not controversial. They must be in a particular sequence (with minor possible variations), and they appear in most research reports. They serve the important purpose of helping the reader see where the structural breaks come between major sections of the thesis.

Other headings have meaningful titles that give one or more main keywords such as:

These sub-headings are meaningful in that they capture the essential meaning of the content within the sub-sections. The choices of keywords depend utterly on the content of the research.

Often a combination of these two types of section titles is the best way to help a reader come to understand a thesis, both through getting the feel for its structure, and getting a foretaste of its key topic areas and substantial content.

Supervisors should encourage students to show their Table of Contents to someone else, preferably someone who doesn't know much about their research project, to see if it makes sense to them.

4. The title

(*Optional*) Ask participants: what are the characteristics of effective titles? List their responses on whiteboard.

Distribute Handout 3.

It is important to keep in mind some key characteristics of effective titles:

☐ Effective titles are not so brief that they are almost meaningless; nor are they too long that they become an effort to read.

☐ The title must include at least the main key words that indicate the topic area of the research project.

☐ But instead of simply containing key words indicating the topic area, effective titles often include words that tell something more about the research project. The title might indicate something about the objectives of the project, the methodology undertaken, the findings and their significance. You might think of this as the difference between saying *what* the project was about, and saying *why* it was undertaken, *how* it was carried out, and *so what* - that is, why the findings are interesting or important. Often the title for your project proposal will simply indicate the *what* because, at the beginning, you don't know what you're going to find. But your title for the completed report will be able to indicate much more about how you did it, and what you found out, because by the end you'll know what the significant points are that you want to highlight.

☐ Often it is useful to have a double-barrel title with the first part giving the topic area (*what*) and the second part giving the *so what*. Usually, the two parts are separated by a colon.

☐ Whilst it is good to have a title that can capture your reader's interest, it is also advisable to avoid titles that depend on the reader's local knowledge of highly topical events or issues. A title that is amusing or highly topical now may not continue to be so in a few years' time.

Look at the way the title in Handout 3 has been changed to make it increasingly focused on the *so what*. The first title is very much just about the broad topic area. The next versions are becoming more focused on the particular aspect of the topic area that was looked at. But the final title is much more focused on the message that the writer wants to get across.

Writers' workshop option:

Ask participants to try rewriting their title in different ways as in the example.

5. The introduction

Distribute Handout 4, pages 1 and 2. Have participants read the handout. There is probably no need to discuss it.

These stages typically appear in most introductions to research reports of varying lengths, from journal articles to theses. Participants should also be able to identify them in introductions to research proposals. Of course, they are not always in the same order and sometimes the boundaries are blurred. However, it is a big help to inexperienced writers to have a template like this to guide them in constructing the introductions to their research reports.

Distribute Handout 5, pages 1 and 2. Ask participants to cover the comments in italics (on the right-hand side of the pages) with a sheet of paper.

On page 1 is the first part of an introduction to a project report. Ask participants to read the material. Which stages appear here? What are the weaknesses of this brief passage? Review the comments in the right margin.

On page 2 is a rewritten version of this first part of an introduction to a project report. Ask participants to identify the stages in this passage. Review the comments on the right-hand side which indicate some of the reasons for its increased effectiveness.

Writers' workshop option:

Ask participants to indicate the passage they consider to be their introduction. Exchange drafts and ask the partner to try to identify the four stages. Give each other feedback on clarity and 'reader-friendliness'.

Suggest that partners agree simply to listen to feedback and not try to explain themselves or justify their approach. Suggest that they take notes while their partner is speaking and that they consider the feedback later, deciding whether rewriting is necessary then.

6. The review of literature

Distribute Handout 6. Use Overhead 4 and Overhead 5 to stress that the literature review changes over the course of a project.

The process of reviewing the literature is a fundamental, and usually preliminary, part of any research project. It serves a number of purposes in helping to set up a project in the first place.

In the *preliminary stages* of undertaking a research project, reviewing the literature helps you to:

- learn about knowledge in the particular field;
- gather material which may be useful for you in shaping your project;
- discover how knowledge in this field has been developed and accumulated over time;
- identify what is still unknown;

☐ confirm that your own research is worthwhile to do;

☐ discover how others have made their discoveries.

In the *final stages* when you write your final report, the literature review section is where you will establish for your reader the conceptual framework for your research. Whilst its purpose is to critically inspect the previous literature, the underlying goal is to justify to your reader that your own research has been worthwhile doing in the first place. It is here that you show how your research adds to existing knowledge, and it therefore captures, more than anything else, the argument on which your whole research depends.

The literature review section of your report then needs to do the following:

☐ demonstrate that you understand what is known in the particular field of your research topic;

☐ explain how different pieces of research in that field fit together;

☐ explain how knowledge has been developed and accumulated over time;

☐ explain how your own research is connected to what is already known;

☐ explain how your research is justified as needing to be done;

☐ acknowledge the work and achievements of others.

Different types of literature reviews

At different stages of your literature reviewing process, you might produce a written document to capture your review of the literature at that time. In the early stages, your reviewing process will simply start off as a bibliography, and then as you start making notes about each of the sources you read, you will be able to produce an annotated bibliography to summarise these individual sources. Gradually, as you get deeper into your reading, you should be aiming to understand the similarities and differences amongst all the sources, and critically interpret them in terms of their weaknesses and strengths.

The table in Handout 6 shows these different types of literature reviews progressively becoming more interrelated and probing of all the sources you are reviewing. At the final stage of the research when you complete your written report, the review of literature will be very different because you should now be looking at the published literature very differently, from the reflective stance of a researcher who has something worthwhile to add to knowledge.

From this retrospective stance of your final report, your task in presenting the literature review is to show where your research fits in to this big jigsaw puzzle. This means it is important to make sure you are presenting a critical analytical account of the literature you are referring to.

One of the most common weaknesses in final literature reviews is that they are more like a series of unconnected summaries of the different pieces of literature that might be relevant to the research, without any helpful analyses and critical interpretations of why and how they are relevant.

7. The methodology

Distribute Handout 7. Stress the purposes of the methodology section - use Overhead 6.

There must be an explicit link between the research objectives or questions and the methodology used for the study. This section will serve at least some of the following purposes:

- indicate the theories and principles underlying the approaches adopted in the research;
- outline the methods used for achieving the research objectives;
- highlight any ethical issues or dimensions raised by the research methods or process;
- indicate the sources of data used and how these were collected and analysed.

For many research studies, there is no particular research methodology since the research process is essentially one of reading, thinking and writing. For these types of studies, it may still be appropriate however to include a section here on general sources of data.

Ask participants whether there are other purposes commonly served by the methodology section in theses in their discipline.

Discuss which elements are most likely to be required in the discipline(s) of your participants.

Writers' Workshop option:

You may wish to devote a whole meeting to either the methodology section of shorter reports or the thesis chapter. You could ask participants to go through their work and note in the margin each of the possible elements that appear there. Then they could consider whether the list identifies anything else that should be there.

Partners could read for each other and offer feedback. One thing to look for is consistency in the use of past tense - student writing sometimes gets a bit tangled up in tenses, and such tangles are distracting for readers. The other thing to ask partners to look for is whether they think they could replicate the research: do they have all the information necessary?

8. The results

It is not possible to say a lot about the results section of a thesis without knowing something about the findings of the research. However, you can make a couple of points about what to include.

Although the content of the "results" or "findings" section is dictated by what is found in the research, writers still face the difficult task of deciding which findings to present. After all, not all that is found will necessarily be relevant to the research objectives. Student writers, in particular, find it very difficult to leave out any material, and examiners often criticise theses for lack of focus. Emphasise the importance of having a direct and obvious connection of all results reported to the stated objectives of the research. Similarly, keep in mind that one should present in the results section any findings that one intends to discuss in the next part of the report. This can include findings that you did not expect to discover, but only if you plan to explain more about them in the discussion section.

Distribute Handout 8 and discuss. Perhaps a results section will comprise mostly tables, figures, graphs, and so on. That is perfectly appropriate, as it makes it easier for a reader to see findings at a glance. However, it is still important to write some text around this graphic material, as a guide to the reader. For example, you should make sure that your results section introduces each item of graphic material, referring to it clearly by its table or figure number, and summarising what the data it contains is about.

Writers' workshop option:

Ask partners to explain to each other what decisions they had to make about including or leaving out findings. In the course of describing the decisions, participants may find that they included material which was not directly relevant to their research objectives. (This is more likely than leaving out something important.) Ask them to mark any such material in their texts for future editing or discussion with their supervisors or collaborators.

9. The discussion

Distribute Handout 9. Allow participants time to study it.

Use Overhead 7 to describe the common pattern within a discussion section.

The stages of the discussion described in the handout do not all have to occur, nor do they have to occur in that sequence. However, there is often a pattern within a discussion section with a number of cycles of these stages coming throughout the discussion. The following is a common cycle of moves:

- Statement of Result
- Reference to Previous Research (Comparison)
- Explanation (of Unexpected Outcome)
- Exemplification
- Deduction
- Reference to Previous Research (Support)
- Hypothesis
- Recommendation

In a thesis this common cycle could be repeated a number of times. One thing for a supervisor to look for when s/he is advising a student is whether there is the direct relation of research objective to statement of result to comments on the result in the discussion.

Ask the group to comment on difficulties they have had in writing discussion sections, or problems they have observed in student writing.

Writers' workshop option:

Partners who are reading article drafts will probably be able to comment on the discussion section's logic and coherence.

If participants are working on thesis drafts, it is going to be difficult for partners to offer good feedback unless they are familiar with the project. You could ask writers to study their own drafts and see if they can identify a statement of result followed by some or all of the moves from the common cycle you have just described. Ask them to make notes in the margins where the different types of moves occur. This may help them identify places where their text tries to cover too many things at once or skips from issue to issue.

Handout 1: The Sections of a Thesis

Here is a list of sections commonly found in theses.
Are there some sections that are not usually found in theses in your discipline?
Are there any additional sections commonly found in your discipline?
Is this the usual order?
What variations have you seen from your discipline's 'norm'?

SECTIONS	
Title	❏
Disclaimer	❏
Acknowledgements	❏
Abstract or Summary	❏
Table of contents	❏
Table of figures	❏
Abbreviations	❏
Glossary of terms	❏
Introduction	❏
Literature review	❏
Research objectives	❏
Methodology	❏
Results	❏
Discussion	❏
Conclusion	❏
Recommendations	❏
References	❏
Bibliography	❏
Index	❏
Appendices	❏

Handout 2: Table of Contents

Here is a sample of a section from a very effective Contents page from a previously submitted research report at the University of Western Sydney (Lisa Bricknell, "Personal Health Records: the perspective of service providers").

Table of Contents

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Handout 3: Example Progressive Working Titles and Final Report Title

The Queensland Personal Health Record	Focus on *what* the project is about
An Evaluation of the Queensland Personal Health Record	Focus on *why* the project is being done—its purpose is to evaluate
An Evaluation of the Queensland Personal Health Record: The Perspective of Service Providers	Focus on *which* group the project is interested in—and suggesting a type of methodology
Using Service Providers' Perspectives to Improve the Queensland Personal Health Record	Focus on *what was done* in the project—its goal is to improve practice
Using the Queensland Personal Health Record to Create Partnerships to Improve Children's Health	Focus on *so what*— specifically how the project's results could be used to improve practice

Handout 4/1: The Stages of an Introduction

The introduction to the report is critical in grabbing and holding your reader's attention. The following table sets out the usual stages in setting out the introduction. Keep in mind that the introduction is basically an argument - it's where you justify that your research project has been worthwhile to do.

Stage	Function of this stage	Brief explanation	Basic argument structure
1	Establishing the field by: a) asserting centrality; or b) stating current knowledge	This stage introduces the topic of the project by showing that the field is significant, and/or that the research is relevant by stating what is known.	*What is it about?* and *So what?*
2	Summarising previous research	This stage provides a more detailed summary of previous research, presented from the frame of reference of this research.	*What do we already know about this?*
3	Preparing for present research by: a) indicating a gap; or b) raising a question	This stage justifies the need for this research by showing that there hasn't been enough research in this area yet, or that there have been problems with the previous research.	*What do we still not know?*
4	Introducing present research or this research report by: a) stating purpose; or b) stating outline of report	This stage clarifies what the present research is about, either by stating its purpose as a logical consequence of the argument preceding, or by outlining the structure of the report.	*What am I going to do to find out?*

Note: There are some things that an introduction does *not* include. For example, an introduction is not the place to make recommendations, nor is it the place to give away any of the findings of your research.

Handout 4/2: The Stages of an Introduction

Example short introduction to a short article

The following paragraph represents the complete introduction section of an article in a professional journal. Note how the introduction structure develops across its four main stages. Try covering up the right-hand column again to see if you can identify the four stages first.

The perceptual and conceptual abilities of very young children between 1 and 3 years of age have received little attention in comparison to the abilities of pre-schoolers and, more recently, newborns and infants under a year of age (cf. Siegel, 1967).

Stage 1
Introductory statement about current understanding in the topic area, from the perspective of significant gaps in understanding.

Among the deterrents to research on learning with 2-year-olds is a general suspicion that such children are highly distractable and will display a variety of error factors (eg. Harlow, 1950, 1959) or task-irrelevant behaviours. Successful discrimination learning in children under 2 years of age has been relatively difficult to demonstrate (e.g. Hill, 1965; Weisber & Simmons, 1966; Welch, 1939), and many investigators report children over 3 display various response and stimulus biases (e.g. Berman, Rane && Bahow, 1970; Greene, 1964; Levinson & Reese, 1967). But research on a limited number of 2-year-olds suggests that under appropriate conditions, discrimination learning may proceed with very few errors, particularly after the initial discrimination has been acquired (cf. Gellerman, 1933; Hayes, Thompson & Hayes, 1953; Welch, 1939).

Stage 2
Summarising the main findings from previous research

Stimulus and response biases have been reported for this group as well as older children (e.g. Gellerman, 1933; Graham, Erhart, Craft & Berman, 1964), but it remains unclear whether these biases dominate and generally interfere with cue-guided behaviour or whether they are simply initiated because of inadequate understanding of instructions or other aspects of the learning task.

Stage 3 "...but it remains unclear..."
Indicating a gap in present understanding, and thereby preparing for the objective of this research

Thus, one purpose of the present study was to determine how rapidly two-choice discrimination learning tasks can be solved by 2-year-olds and how pervasive stimulus and response biases are in performances on such problems.

Stage 4
Introducing this research's objective

As you are reading articles and research reports, look closely at the structure of their introductions to see if they follow this same pattern. Then try looking at longer research reports to see if they also follow this pattern in their structure.

Handout 5/1: Example Beginning to an Introduction

First part of a longer introduction section

Personal Health Records (PHRs) or similar documents have been introduced throughout Australia (Queensland Health, 1994) and in other countries including the United Kingdom and New Zealand gradually over recent years (Macfarlane & Saffin, 1990). The premise behind a client held record is to provide the parent with an easily accessible source of information to allow them to take responsibility for their child's health (Charles, 1994; Macfarlane, 1992; Dauncey, 1991; Volkmer, Gouldstone & Ninnes, 1993). It is clear, however, that for a Personal Health Record (PHR) to be effective, it must serve as more than a simple documentation of immunisation and development for the parent. PHRs therefore must be redesigned to ensure that they support a better partnership between parents and health professionals.

No broad statement(s) to establish what the general field is; no statements to indicate the significance of this topic within the general field.

The introduction is not an appropriate place to make recommendations; there has been no justification leading up to such a recommendation.

Handout 5/2: Example Beginning to an Introduction

Rewritten first part of a longer introduction section (written by Lisa Bricknell, UWS)

Trends in the health care system in recent years have been moving away from the traditional consultative "medical" model towards a more flexible community based approach where communities are encouraged to take responsibility for their own health. It has now become the responsibility of health providers to forgo the practice of "owning" clients (Jackson, 1991) and move towards a partnership or team approach between individual and health professional to further health.

General field of "health care system" is introduced.

General interest in "community based approach" within this system is introduced.

Particular philosophy of "partnership" is introduced.

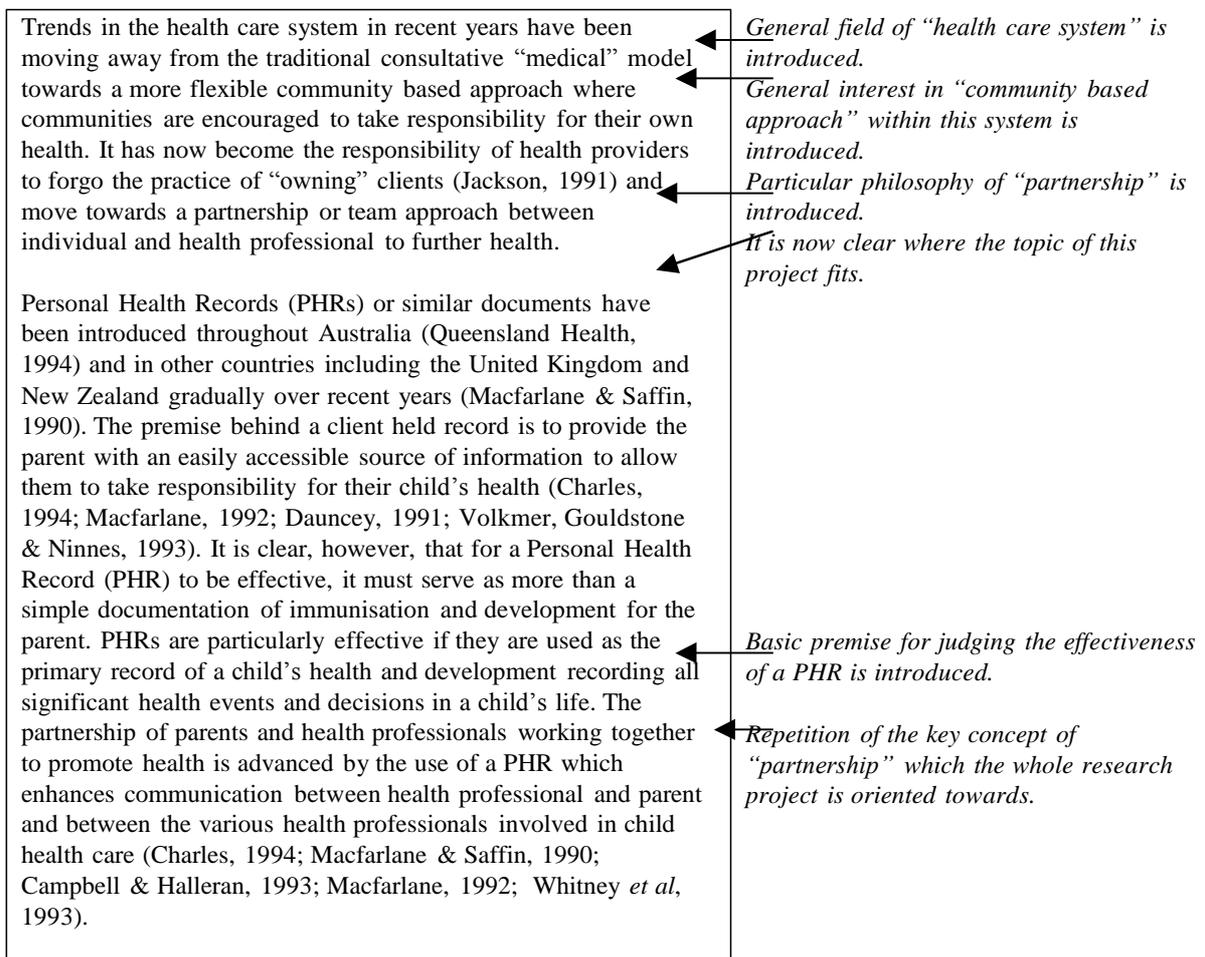*It is now clear where the topic of this project fits.*

Personal Health Records (PHRs) or similar documents have been introduced throughout Australia (Queensland Health, 1994) and in other countries including the United Kingdom and New Zealand gradually over recent years (Macfarlane & Saffin, 1990). The premise behind a client held record is to provide the parent with an easily accessible source of information to allow them to take responsibility for their child's health (Charles, 1994; Macfarlane, 1992; Dauncey, 1991; Volkmer, Gouldstone & Ninnes, 1993). It is clear, however, that for a Personal Health Record (PHR) to be effective, it must serve as more than a simple documentation of immunisation and development for the parent. PHRs are particularly effective if they are used as the primary record of a child's health and development recording all significant health events and decisions in a child's life. The partnership of parents and health professionals working together to promote health is advanced by the use of a PHR which enhances communication between health professional and parent and between the various health professionals involved in child health care (Charles, 1994; Macfarlane & Saffin, 1990; Campbell & Halleran, 1993; Macfarlane, 1992; Whitney *et al*, 1993).

Basic premise for judging the effectiveness of a PHR is introduced.

Repetition of the key concept of "partnership" which the whole research project is oriented towards.

Handout 6: The Progress of a Literature Review

	Literature Review Type	Brief description of this type
Preliminary stages of the researching process	bibliography	a collection of relevant sources
©	annotated bibliography	a summary of relevant sources
©		
©	survey of literature (including "state of the art" surveys)	a critical analysis of relevant sources showing inter-relationships amongst them, and intended to *encompass* the existing knowledge in this field
©		
©		
©		
©	research or thesis literature review	a critical analysis of relevant sources showing inter-relationships amongst them, and intended to *extend* the knowledge in this field
©		
Final written report		

The table shows these different types of literature reviews progressively becoming more interrelated and probing of the sources. At the final stage of the research, when you complete your written report, the review of literature will be very different because you should now be looking at the published literature very differently, from the reflective stance of a researcher who has something worthwhile to add to knowledge.

From this retrospective stance of your final report, your task in presenting the literature review is to show where your research fits in to this big jigsaw puzzle. This means it is important to make sure you are presenting a critical analytical account of the literature you are referring to.

One of the most common weaknesses in final literature reviews is that they are more like a series of unconnected summaries of the different pieces of literature that might be relevant to the research, without any helpful analyses and critical interpretations of why and how they are relevant.

Handout 7: Possible Elements in the Methodology Section

Which of the following elements do you expect will need to be included in your methodology section? Which other ones not listed here?

assumptions ❑

procedures ❑

method of data collection ❑

ethical considerations ❑

safeguards ❑

calculations ❑

precautions ❑

techniques ❑

characteristics of target participants ❑

sample size ❑

sampling procedures ❑

survey format ❑

interview format ❑

control groups ❑

data management processes ❑

analytical tools ❑

The methodology section is usually written in the past tense, with its purpose being to outline clearly and succinctly exactly how the research was done. The most important sign of success of a methodology section is that another researcher could carry out the same research project based on the description given in this section. One of the common weaknesses of methodology sections is if they include any of the findings of the research. These must be saved up for the results section.

Handout 8 - Example from Results Section of Journal Article

Here are some of the things that research reports typically do in the results section, using an example from the results section of a journal article. This section has been adapted from Beth Murison and Carolyn Webb (1991) *Writing a Research Paper*, Learning Assistance Centre Publications, University of Sydney.

Results

Description of the seven brands of Australian rice available on the retail market is given in Table 1. The samples of rice marketed by Ricegrowers Co-operative Mill were grown in New South Wales, and those marketed by Riviana were grown in Queensland. Sunwhite, long grain rice available in Western Australia, is produced from the IR661 cultivar grown in the Ord River region.

table is about.

Background information: about data presented in the Table.

Data on the nutrient composition of the three types of rice was not markedly different (Table 2), the main difference being a small decrease in starch and increases in fat, sucrose and ash from white to parboiled brown rice. The changes are consistent with the known differences in composition of the bran and endosperm of rice (Araullo, de Padua & Graham, 1996).

Reference to table

Comparison between these results: *compares results found in this study*

The overall composition is in the order of that reported for white rice (Item C310) and brown rice (Item C300) in the Australian food tables (Thomas & Corden, 1977).

Comparison with other results*: compares results found in this study with other*

Comparison with other results*: compares results found in this study with other*

Handout 9 - Stages in a Discussion Section

Here are some of the things that research reports typically do in the discussion section. They are presented as stages, but remember they may not necessarily all occur in a discussion, and nor might they necessarily occur in this order. For each stage, an example is given. This section has been adapted from Beth Murison and Carolyn Webb (1991) *Writing a Research Paper*, Learning Assistance Centre Publications, University of Sydney.

	Stage within the discussion	Example from journal articles
i)		
ii)	Background information *The writer presents information that the reader needs in order to understand the results and the comments on them.*	Several recent national surveys have shown that many Americans report having changed their diets (Brown, 1996; Johnson, 1998).
iii)	Statement of result *A generalised statement of result can be used in the Discussion to introduce an aspect of the discussion.*	Age-adjusted rates of myocardial infarction, stroke, hypertension, and cancer were typically lowest among never smokers.
iv)	Unexpected outcome *The writer comments on whether the result is expected or not.*	The lack of difference in accident risk among use levels within the DWI and high risk groups might be expected since these groups as a whole have elevated accident risk.
v)	Explanation of unexpected outcome *The writer suggests reasons for a surprising result, or one different from previous results.*	A review by Strecher et al. (1996) found that for all the health-related studies they examined – cigarette smoking, weight control, contraceptive behaviour, alcohol abuse and exercise – self-efficacy appeared to be a strong, consistent and independent predictor of both long and short term success of behaviour change. In the present study, the self-efficacy scale was correlated with the change status, but with a correlation coefficient of only .18 (p<.05). This finding may suggest that making everyday food choices according to the Dietary Guidelines, in contrast to smoking and weight, is really not very difficult to do. On the other hand, the result could also be due to the way the questions were framed: the respondents were asked if they felt confident they could eat "more of" and "less of" certain food categories, behaviours with no specific end-points and thus perceived as easy to do. Finally, the result could be because the variance in the data was less than for some of the other scales.
vi)	Exemplification *The writer gives an example to support the explanation.*	Another barrier to validity of our data is of a cultural nature. Immigrant groups such as Montrealers of Haitian origin include a disproportionate number of people who are illiterate or who have very little schooling.
vii)	**Reference to previous research (comparison)** *The writer compares the results with those reported in the literature.*	Recent data from the National Centre for Health Statistics (NCHS, 1996) indicate that 36% of men and 54% of women have never smoked cigarettes, 31% and 18% respectively are former smokers, and 32% and 28% respectively are current smokers. Among persons 65 years of age or older, 50%, 34% and 16% are never, former and current smokers, respectively. Our data indicate that elderly Iowans (especially women) were substantially less likely to have ever smoked than the NCHS samples.

viii)	**Reference to previous research (support)** *The writer quotes previous work to support the deduction or hypothesis of the research.*	The higher levels of depressive symptoms typically found among current smokers is consistent with recent reports of clinical depression in heavy smokers (Apa, 1998) and higher smoking prevalences in patients with depression (Thompson, 1997) and adults with histories of depressive symptoms during adolescence (Jorgensen, 1998).
ix)	Deduction *The writer makes a claim about the generalisability of the particular results.*	This finding suggests that nutrition education could emphasise perceived vulnerability, perhaps not by using general threat inducing messages, but by using health risk appraisal instruments or other strategies by which individuals come to recognise their own personal and specific health risks, based on their medical and dietary behaviours.
x)	Hypothesis *The writer makes a more general claim arising from the experimental results.*	The results of this study seemed to indicate that HBV infection can be a common cause of acute hepatitis in adults.
xi)	Recommendation *The writer makes suggestion for future work.*	Further studies should be done to identify the salient influencing factors in other populations.
xii)	Justification of recommendation *The writer justifies the need for the future work recommended.*	An awareness that certain driver groups, such as convicted impaired drivers and drivers with high accident and demerit point frequency, contain a disproportionate number of seat belt non-users may be useful to licensing agencies operating driver improvement systems. Clearly more research is required to determine what educational approaches are most likely to be successful with the seat belt non-users before embarking on any costly large-scale program targeted at this group.

Overhead 1: The Importance of Written Language (1)

Written language helps you in your discovery of knowledge through:

- ☐ **Clarifying your understanding through reading**

- ☐ **Gathering written material that is relevant to your research interests**

- ☐ **Discovering how knowledge in a particular field has been developed and accumulated**

- ☐ **Identifying what is still unknown**

- ☐ **Confirming that your own research is worthwhile to do**

- ☐ **Discovering what methods have been used by others to make their discoveries**

Overhead 2: The Importance of Written Language (2)

Written language helps you in the communication of your knowledge through:

☐ **Consolidating your understanding through explaining what you know to others through writing about it**

☐ **Contributing to the pool of knowledge generally through disseminating your discoveries**

Overhead 3: The Importance of Written Language (3)

Written language becomes the currency of knowledge through:

☐ **Persuading others of a particular point of view**

☐ **Changing the world through this persuading**

☐ **Presenting yourself as an expert in a particular field of knowledge**

Overhead 4 - The Progress of a Literature Review (1)

In the preliminary stages of a research project, reviewing the literature helps you to:

- ☐ **learn about knowledge in the particular field**

- ☐ **gather material which may be useful for you in shaping your project**

- ☐ **discover how knowledge in this field has been developed and accumulated over time**

- ☐ **identify what is still unknown**

- ☐ **confirm that your own research is worthwhile to do**

- ☐ **discover how others have made their discoveries**

Overhead 5: The Progress of a Literature Review (2)

In the final stages, the literature review needs to:

- ☐ **demonstrate that you understand what is known in the particular field of your research topic**

- ☐ **explain how different pieces of research in that field fit together**

- ☐ **explain how knowledge has been developed and accumulated over time**

- ☐ **explain how your own research is connected to what is already known**

- ☐ **explain how your research is justified as needing to be done**

- ☐ **acknowledge the work and achievements of others**

Overhead 6: Purposes of the Methodology Section

This section will serve at least some of the following purposes:

- [ ] **to indicate the theories and principles underlying the approaches adopted in the research**

- [ ] **to outline the methods used for achieving the research objectives**

- [ ] **to highlight any ethical issues or dimensions raised by the research methods or process**

- [ ] **to indicate the sources of data used and how these were collected and analysed**

Overhead 7: Common Cycle of Moves in Discussion Section

☐ **Statement of Result**

☐ **Reference to Previous Research (comparison)**

☐ **Explanation (of unexpected outcome)**

☐ **Exemplification**

☐ **Deduction**

☐ **Reference to Previous Research (support)**

☐ **Hypothesis**

☐ **Recommendation**