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Creating effective learning environments in print: A guide for lecturers and designers of independent study materials

Jan Herrington

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Creating Effective Learning Environments In Print

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Jan Herrington

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UNIVERSITY
PERTH WESTERN AUSTRALIA

Creating

Effective

Learning Environments

In

Print

A guide for lecturers and
designers of independent study materials

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Creating effective learning environments in print:
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Designing for independent study

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Introduction

If you are a teacher, then in many ways you are also an instructional designer. Whenever you plan a lesson, or prepare a lecture or seminar you are consciously designing a learning environment.

This book will provide you with guidelines on how to prepare study materials which will be used by students essentially in your absence. This includes distance education materials and self-contained, self-study modules. Of course, if you are there to provide a supportive, coaching role, either in person or using communication technologies, then the learning will be even more effective and productive.

The pressure is on print to perform. Electronic forms of communication are threatening to replace the traditional paper-based forms of teaching. Any paper-based materials you produce should be of the highest quality. If you apply the guidelines provided in this book to the design of your study materials, you are likely to find that the interactions you have with students will be on content-related matters rather than working practices or on their attempts to find their way around the material. And most importantly, students will be more assured and self-directed in their approach to study.

Is this book for you?

Creating Effective Learning Environments in Print is for you if you are:

■ A university lecturer or teacher preparing self-study material or modules for students to use either on-campus or off-campus

■ A lecturer or teacher writing a distance education unit

■ A desktop publisher given responsibility for designing a page layout for study materials.

What this book is about

This book is about providing the assistance that you need to create effective printed learning materials. It focuses on the needs of the writer of a distance unit, but the principles apply equally to any self-directed study materials. The book has been developed to assist you with the preparation of your study materials, and to describe some of the many support services available to you.

It also provides guidelines on non-discriminatory writing and a useful editorial style, sometimes described as a 'house style'. Above all, *Creating Effective Learning Environments in Print* will help to ensure that documents you produce are of the highest quality.

Terminology

Different people use different terminology to refer to essentially the same kind of instructional document. For example, the term *Study guide* is known to have very different meanings across institutions. For some, it refers to the planning and administrative document; to others it means the central instructional document which covers the content of the unit. The terminology adopted here is listed below, together with its meaning:

- Plan: the document which outlines the unit structure and administrative details.

- Guide: the document which creates the learning environment and structures opportunities for learning. The principles relating to the Guide also relate to self-study materials and modules.

- Reader: the document which contains articles, chapters and documents relevant to the unit.

These three documents usually comprise the print components of a distance education unit. Each part is described in detail in this book, and guidance is given on how to write effectively for the distance learner.

Of course, there may be additional non-print components to your external package, such as video and audiotapes, computer or multimedia disks, slides or photographs, charts and maps.

How to use this book

Ideally, you should read this book at your leisure, pausing frequently to reflect on the various strategies and suggestions, taking time out to read some of the suggested readings, and stopping periodically to articulate your thoughts to your colleagues.

However, if your distance unit is due in the hands of the editors in two weeks, and to date you have not written a word, concentrate on Chapter 2: *Designing the Guide*. Here you will find a quick and easy lesson on instructional design, together with examples, and before

and after transformations. Once you've mastered the Guide, you can move on to Chapters 3 and 4 for advice on writing the Plan and compiling a Reader of articles and published book chapters.

Off-campus students

If you are writing a distance unit, you must learn as much as you can about the students you will teach—your target group. Off-campus students as a group are generally quite different to internal students. For example, they are usually older (around 65% are over 30), many have full-time jobs, some have children, and around 10% drop out before their first assignment is due!

Clearly, their needs are different, and you must give some thought to ensuring your materials meet those needs. When planning your study materials, keep in mind the importance of establishing and maintaining effective communication with the student.

The role of the author

The diagram overleaf summarises all the steps and procedures of the writer's involvement in the production of a distance unit. You will be involved from the planning stage right through to the implementation, and beyond!

Before you begin you must also have determined the scope and sequence of your unit—what you will teach, and the order of topics. You must also analyse the resources available to you, and any constraints, such as budget limitations.

Help available

What kind of help is available in developing these teaching materials?

The most useful 'resource' in the creation of your teaching package is the assistance given by your university's resource development staff. They will assist in the coordination of the whole project, from planning to printing. You will also have access to the skills of video producers, graphic artists and cartoonists, word-processor and desktop publishing operators, photographers and copyright experts.

Style guidelines

The suggested points of style and layout described in Chapters 9, 10 and 11 are offered as an appropriate style in the absence of a house style already in existence at your university. Styles will generally be applied to documents by the desktop publishers and editing staff. They are used to ensure that all material is of a consistently high standard, and that the presentation utilises the most effective features of modern desktop publishing.

The role of the author

Determine
scope and sequence, resources
and constraints

Draw up timetable

Plan unit structure

Write
Plan

Write
Guide

Order graphics

Organise
audio/video

Prepare other
resources

Assemble articles for
Reader, prepare
cover sheets and
contents page

Check copyright
not infringed

Submit articles
for compilation

Submit drafts for word processing
(keep a copy)

Check and amend document

Seek comments from colleagues

Resubmit for corrections
and proofing and editing

Check final copy and
approve for printing

Check printed copy

Delivery of unit

Administer student evaluation sheet

Keep a record of all errors and amendments
for next version

Tasks listed in thick
boxes indicate that
assistance is usually
given by University staff

Tasks included in
double boxes are part
of your formative
evaluation of the unit
(see p. 55).

It must be stressed that the style presented here is in no way mandatory. While you are encouraged to follow this manual, you may in some circumstances, adopt a style more in keeping with your discipline, or present a layout more appropriate to your work.

The house style presented in this book is based on:

■ The Australian Government Publishing Service (AGPS) Style Manual (AGPS, 1994)

■ American Psychological Association (APA) style guidelines (APA, 1994), where appropriate. This style is commonly used in educational writing

■ Instructional design principles

■ Desktop publishing and word processing capabilities (as opposed to type-setting) where necessary.

Applying the guidelines

Do not feel that you must become familiar with, or indeed apply, the style features described in detail. Formatting, layout, cover design and desktop publishing will usually be done by advisers and competent desktop publishers familiar with the layout requirements.

When preparing your materials, keep in mind the following points:

■ If you wish to write and produce your material on computer, please keep formatting to a minimum. It is often more time consuming for the desktop publisher to remove inappropriate formatting devices, such as tabs, multiple returns and spaces, than to type the entire document. When presenting your disk for editing or publication, please provide a hard copy of the document as well.

■ If you wish to produce your own finished material on disk, 'templates' are often available. A template provides the styles for the headings, standard paragraphs and formatting.

■ If your document is not on disk, please, provide a clear typed or handwritten copy for processing. It should be complete and to your satisfaction, as it is not appropriate to make major changes at the proofing stage of production.

■ Any subject-specific symbols, such as the mathematical symbol π (pi), should be written carefully with explanation in the margin, if required.

■ All pages of the manuscript should be numbered.

■ All manuscripts and revisions should be dated so that you do not confuse an earlier version with the most recent copy.

■ Keep a copy of the original version of your work, as well as any further proofs returned to you, at least until it is in print. It may be helpful to return to an earlier version to check details such as wording and formatting.

A note for desktop publishers

The most important sections of this document for you are Chapters 9, 10 and 11 which describe the layout and formatting of the three component documents of external units. You are also encouraged to become familiar with the Editorial Style Guidelines presented in Chapter 6. Matters referred to in the remaining sections, such as the removal of gender bias if present, will generally be dealt with before the document reaches the desktop publishing stage.

A note about the example

This book is designed to assist you to write an effective external unit. You will find many examples of activities and procedures, and the chapters on the Plan, Guide and Reader use central examples of units called *Research Methods: An Introduction* and *The Individual: Personality*. Note that these are fictitious units which have no integrity beyond that of exemplars.

A problem often mentioned is that lecturers find it difficult to relate to examples given in this book which are not specific to their own subject areas. If this applies to you, try to extract the *principles* behind the examples and apply them to your own area. You can always obtain assistance with this from Instructional Designers and other appropriate personnel at your university.

Designing the Guide

▪ ▪
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▪
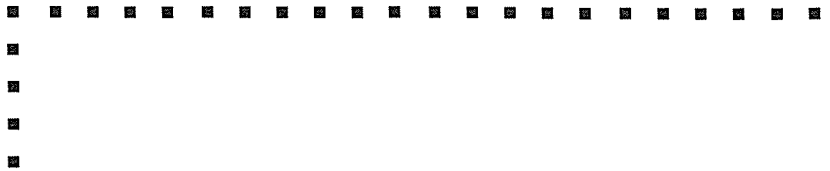
Getting started on the Guide

If you are hesitant about writing study materials for distance students or for independent study, you are not alone. Even lecturers with many years teaching experience on campus, take exception at the thought of writing such materials. The Guide is often the most difficult document to compile, not because you do not know what to write, but because of the difficulty in providing, on paper, all those elements of the teaching situation that you cover almost intuitively when you are there on the spot.

The temptation is to write down, in essay form, all the facts, information and theories you want the students to know. Add a few readings and you are almost there. But you are still not able to anticipate the students' questions, or to know whether students are simply learning your material almost by rote and regurgitating it to you in the assignments.

The process of instructional design can be extremely useful to new writers of study materials because it can provide a framework for the design of individual modules. Gagné, Briggs, & Wager (1992) describe the 'events of instruction', the external elements that can be arranged by the teacher to activate the internal processes of learning that the student employs. They contend that if these elements are present in any learning environment then meaningful learning is more likely to occur.

The Gagné, Briggs, & Wager model of instructional design is an example of a systems approach. Another popular systems approach has been presented by Dick and Carey (1990) in their book: *The Systematic Design of Instruction*. Such approaches require the

teacher to systematically provide the events and to place them in a logical order in the lesson or study materials.

The events of instruction

Gagné, Briggs, & Wager (1992) define nine essential events of instruction. These are listed in the table below, together with some questions for you to consider in relation to each event as you write the module.

Event of instruction	Useful questions for writers of external units
Gaining the attention of the learner	How can I capture the learner's interest and motivate learning?
Informing the learner of the objective	What will the student know and be able to do by the end of the course?
Recalling pre-requisites which may be relevant	What am I assuming that the learner knows?
Presenting the content	How can I best present the content to promote learning with understanding? What media is best for each task?
Providing learning guidance	How can I ensure that the learner doesn't get lost in the material, and always knows what he or she should be doing?
Providing opportunities to demonstrate understanding	What activities can I provide, and what strategies can I promote to give the learner the opportunity to interact with the materials?
Providing feedback	How can I provide feedback to the student on his or her progress?
Assessment	How will I evaluate the student's learning?
Enhancing retention and transfer	How can I ensure the student remembers and applies skills in new situations?

All these elements can be provided in each module of the Guide, or each independent study module. In the section that follows, each of these instructional events will be considered with examples. Finally, there is a 'before' and 'after' example—a module from our fictitious unit on the Ethics of Research which undergoes a transformation from ordinary to effective.

Gaining attention

It is important to put some thought into the introduction of each module to ensure that the learner wants to continue. Pictures, graphics and illustrations can be extremely effective in this role, and relevant quotations are also a thoughtful and possibly provocative way to engage students' attention. Introductions can be used to motivate and emphasise key concepts, and ultimately answer the learner's question: 'Why should I study this?'

Informing the learner of the objective

Gagné, Briggs, and Wager (1992) maintain that it is important to inform students of the objectives, so that teachers and students know when learning has been accomplished, and to help prevent students getting 'off track.' The objectives can be listed formally in behavioural terms, and placed close to the beginning of the module, before or after the introduction.

Example 1: Formal objectives

After completing this section, you will be able to:

- Explain the policy of multiculturalism and the reasons for its implementation in Australia.

- Recognise the ways in which Australia's non-discriminatory policy could become a source of friction with other countries.

- Evaluate arguments for and against Australia's immigration policy.

Objectives can also be written informally and included as part of your introduction.

Example 2: Informal objectives

In this module, you will be introduced to consumer behaviour, and relate it to the broader field of human behaviour. You will define and explain the role of consumer behaviour in marketing decisions, and you will analyse practical applications of consumer behaviour theory.

Recalling pre-requisites

Before you start on the content of your module, it is useful to remind the learners of previously covered concepts, theories or facts that they may need to recall to understand the instruction.

Example 3:General
pre-requisites

> Before you begin to study this section on teaching approaches
> designed to effect conceptual change, review the following
> Piagetian concepts encountered in Module 1:
>
> • Assimilation
>
> • Accommodation
>
> • Reflexive abstraction

You can be much more specific than this example demonstrates. For example, you can ask learners to revise or read specific articles or chapters relevant to their understanding of the module.

You can also use this 'pre-instructional' section of your text to advise learners to collect items they will need to complete the module.

Example 4: Items required to
complete the module

> To complete this section on the analysis of your data, you will
> need:
>
> • The textbook
>
> • Cassette player
>
> • Cassette No. 2
>
> • Questionnaire results
>
> • Graph paper

Don't bother to do this unless a variety of items is required. It is redundant to list the usual study materials.

Presenting the content

In this section of the module, you present the content that will enable learners to achieve the objectives. In the Guide, the content is in print form, but you are not restricted to print. Consider using other complementary media (with permission from the copyright owner) such as:

■ Computer-based programs and interactive multimedia

■ Videotapes

■ Audiotapes

■ Case study packages

■ Other print resources such as pamphlets, brochures, articles, books, and so on.

The important point to remember is to use the most appropriate medium for the task, not just for its own sake. Remember too that in text, photographs, diagrams, figures, tables, drawings and cartoons (used with permission) can often illustrate a point much more effectively than print.

Providing learning guidance

A well-designed unit of instruction guides the learners through the material, and ensures that they know **what** to do **when**. Don't have all your readings and activities at the end of the module. Put them at the most appropriate place in the text, but separate them, so that students know they are required to do something at that point. In the examples provided, the learner guidance sections are distinguished from the text by lines, headings and icons.

You can provide instructions in the unit to:

- Read articles
- Complete computer-based exercises
- Watch video programs and listen to audiotapes
- Think about set problems
- Consult other sources or interview people
- Complete activities.

Example 5: Reference to a video resource

> ... it is important that the signs associated with gambling are identified and checked in association with other, more obvious problems.
>
> ---
>
> **Video**
>
> On the video supplied, you will find a short segment on problems associated with gambling entitled *The Game and its Consequences*. Watch it now. As you do, consider the implications of the ideas for health professionals.
>
> ---
>
> The emphasis on the video, and the earlier reading, has been on the necessity to question the client on the possibility . . .

Note in the following example the additional comments which put the reading into some context. It is always useful to give the learners some information on why you think the article or chapter is worthwhile reading.

Example 6: Reference to a
reading in a textbook

> . . . and in spite of the fact that the original claim was widely disputed, it had widespread repercussions in the Parliament, press, and society in general at the time.
>
> ---
>
> **Reading**
>
> Before you proceed, read 'The Call of Patriotism', Chapter 2 in your textbook. It is perhaps one of the best summaries of the political background to conscription in the First World War. Note particularly the arguments put forward in the article in the Melbourne Argus (page 57).
>
> ---
>
> The political climate in 1913 is of particular relevance here . . .

Providing opportunities to demonstrate understanding

It is important to provide opportunities for the learners to interact with your teaching material. You can include such activities as an integral part of the module, at the most appropriate points in the text. Consider using:

- Tables to fill in
- Hypothetical situations
- Short answer questions, and questions that integrate areas of knowledge
- True/false tests or multiple choice tests
- Classification of data
- Development of summaries

Example 7: Using information
from a variety of sources

> List and evaluate arguments advanced by Professor Blackwell using the newspaper accounts, the article provided in your Reader, and the cassette tape.
>
> | Professor Blackwell's Argument | Evaluation |
> |---|---|
> | | |
>
> Now read on.

This kind of exercise helps students to organise and consolidate arguments from various sources.

Provide space for the learner to write responses in the Guide itself. (Note that the spaces allowed in these examples are merely an indication that space has been allowed. You will probably need to leave larger blocks for practical exercises.)

Example 8: Classifying and ordering information

Activity

Write down as many characteristics of a professional as you can. Ask two or three other people to do the same.

Compare the lists and then classify each point as predominantly:

1. Belonging to a profession—focus on culture, authority.

2. Being a professional—focus on occupation.

3. Acting professionally—focus on behaviour, standards of actions, and so on.

Characteristic	Belonging	Being	Acting
On time for appointments			✔

If you have included a table or list, as in the example above, consider filling in one or two gaps yourself. This can start the learner off on the right track, when instructions alone may be ambiguous.

Example 9: Activity to promote an investigation
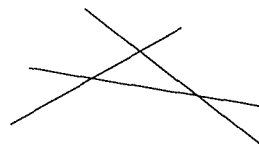
3 lines: 3 crossings
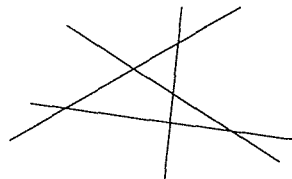
4 lines: 6 crossings

Investigate.

Example 10: Activity with audiotape

> Listen to Tape 1: 'Introduction'. As you listen, take brief notes under the following headings:
>
> • Content:
>
> • Approach:
>
> • Themes:

Example 10 is an example of an interaction with audiotape. The learners are encouraged to listen actively, by responding to the content under various headings.

Example 11: Authentic project

> The siting of a house on a suburban block is an example of a real-world problem. Show how this problem can be 'modelled' using the stages of modelling given above. Remember to consider:
>
> • Aspect
>
> • Prevailing winds
>
> • Land gradient
>
> • Orientation of the sun

Example 12: Authentic problem

> You are the Child Health Nurse on telephone duty on a night when a mother rings for advice at 2.15 am. Her 15 month old baby has a temperature of 39.4°, has vomited and is very distressed. In the spaces below, note down the questions you would ask the mother, and give reasons. What are you attempting to diagnose or eliminate?
>
> | Questions | Reason |
> |---|---|
> | Does the baby have a rash? | |
>
> Now read our thoughts at the end of the module.

Example 13: Comparing and summarising information

Activity

Several of the procedures followed in response to a bomb threat are quite different to those followed for a fire or chemical spill.

Summarise the differences in the table below:

	Action for fire	Action for bomb threat
Evacuation	Immediate evacuation	Evacuation after searching stairwells, assembly areas, etc
Assembly areas		
Doors and windows		
Personal possessions		

Providing feedback

When planning opportunities for the student to interact with the material, remember to include feedback. Most questions cannot be answered in black and white, but you can provide some discussion, or list some of the ideas students may have offered, or you could direct students to another source where the issue is addressed. You can include feedback in the text immediately after the exercise, or in a section at the end of the module or unit.

Assessing the performance

You can assess the performance of the learners through the assignments you require them to submit. The assignments should be detailed in the Plan unless they form an integral and unchanging part of the Guide. Ensure that the assessment is directly related to the objectives specified for the unit or module. Remember too, that assignments do not always have to be in written form. You can allow students to present their work in the form of:

■   Audiotapes and videotapes

■   Case studies

■   Portfolios and journals

■   Projects

■   Packages of different media

■   Computer disk.

Enhancing retention and transfer

Retention requires material to be learnt meaningfully, that is, with understanding. Techniques described in this chapter and others, such as concept mapping, enhance retention. Transfer is assisted by giving students different examples of novel situations to apply the knowledge they have learnt.

A useful technique is to prompt students to reflect on their learning by asking questions which change the situation slightly, and ask whether the procedure would still apply. For example, in discussing a teaching strategy suitable for Year 7, ask the students: Would this be an appropriate technique to use with Year 1s? Or if you are describing a medical technique to use in certain situations you could ask: What if the patient is over 70? What if the patient is pregnant? Such prompts assist the student to approach the knowledge from multiple perspectives.

Before and after example

Look now at the example of a very poorly prepared module: *The Ethics of Research*. When some of the principles described above have been applied, it becomes a much more effective teaching document, as you will see in the 'transformed' version.

Original guide: Page 1

Presented below is a module of instruction which, if presented to students in this format, would be inadequate for many distance education students.

This is an example of how *not* to present a unit of instruction to students.

Text uses terminology with gender bias. The subjects and researchers are always referred to as 'he'.

There is no learner guidance. Students have no direction on how to use the material.

The material is not visually pleasing. Solid blocks of text do not invite the reader.

Lecture 3: Ethics

In research, the subject must be made aware of the purposes, procedures and risks of the experiment or research if true 'informed consent' is to be given. He must know the duration, the data gathering techniques to be used and the possible consequences of the research. He must not be coerced into agreeing to take part in the research, and know that he has the option of refusing to participate or of terminating his part in the research at any time.

The notion of informed consent has been extended in recent years to incorporate the ethics which guide the particular research. The subject should be assured that confidential information would not be misused, trusted communications would not be misrepresented, informants would not be identified if this would prove embarrassing, and the civil rights of subjects would be recognised. Du Toit (1980) also makes the point that consent to take part in research is not always 'informed' consent.

He gives the example of the assumption that the return of a questionnaire implies consent. He questions this assumption as the respondent has not necessarily been informed of the purpose of the research.

Many research designs are such that it would be impossible to implement informed consent of participants. For example, if a sociologist was observing crowd behaviour at a football match, it would be absurd to announce to the crowd that a sociologist was present making observations and to explain his purpose and methods. It has been argued that any activity occurring in a public place should be considered open to systematic observation for research purposes just as they are to unsystematic observation by curious bystanders.

The major positions held by social scientists have been identified. The first is that 'deception is an inadmissible affront to individual autonomy and self

Original guide:
Page 2

There are no opportunities for the learner to interact with the material or to practice what is being learnt.

No headings or objectives have been provided. Students have to guess the requirements of the exercise by reading through the whole lecture.

respect and is inconsistent with the scientific objective of discovering the truth'.

This position is adopted by Baumrind (1964) who writes 'procedures which involve loss of dignity, self-esteem and trust in rational authority are probably most harmful in the long run and require the most thoughtfully planned preparations, if engaged in at all'. (p. 423).

The second position is the more widely held view that deception may be justified and a legitimate tool to be used in the development of a science of human behaviour. In these cases informed consent is violated totally. Many sociologists see this as an integral part of their work, and feel that the research could not be done in any but a clandestine manner, for example, observing groups such as the Ku Klux Klan. When the researcher assumes a false identity to observe and be part of a group for research purposes, he must be aware of the damage that can be done when the research findings are published. If subjects read the findings they must then come to terms with the fact that they have been cheated and misled by someone they trusted and took into their confidence.

Deliberate deception is in direct contrast to the ideal of informed consent. Yet often the choice appears to be an element of deception on the abandonment of the research. Some considerations which prevents the stipulation of informed consent into firm guidelines for research practice are questions such as 'How long does consent apply?' 'Is informed consent reversible?' If a subject withdraws from an experiment, does this mean the researcher may not use information supplied by this subject to date?

These sorts of questions are being asked as the political and social mood of society changes. The kind of research design employed in the early days of social inquiry may no longer be appropriate in an age where the rights of the 'subject' are known and considered.

While there exists considerable difficulty in translating 'informed consent' into firm guidelines for research practice, the debate has contributed much to

Original guide: Page 3

The readings are incorrectly referenced and have all been put together at the end of the module without annotation, rather than at the most appropriate place in the text.

The assignment has been placed in the Guide, rather than the Plan. Students do not know what is expected in the assignment, and there is no guidance on length.

the practice of social research in that researchers are more aware of the position of the subject in the research, and can identify and account for factors detrimental to their welfare.

Assigned Reading:

Judd, Smith & Kidder, Ch. 15.
APA - 'Ethical Principles in the Conduct of Research'.
Du Toit - 'Ethics, Informed Consent and Fieldwork'.
Milgrim - 'Behavioural Study of Obedience'.
Baumrind - 'Some thoughts on the ethics of research'.

Assignment

Evaluate Milgrim's research (see Assigned Reading) in terms of its ethical consideration.

Due: 20 May

While this module is inadequate for distance students, it is not beyond redemption. The next section shows how it is possible to use the same basic text and transform it into an effective unit of instruction.

**Revised guide:
Page 1**

Here, the original module has been transformed to provide much more effective study materials for the independent learner.

Notice immediately that the page is less cluttered, there is more white space, and the layout is visually pleasing.

An interesting introduction has been added giving some history of the ethics of research.

Formal objectives have been specified.

Gender bias has been removed by making the subject plural.

MODULE 3

The ethics of research

Many affronts to human dignity have been made in the name of research.

The medical experiments conducted by Nazi German doctors in concentration camps during World War II alerted researchers to the previously neglected rights of research participants, and codes of ethics were formulated. As a result, questionable practices are no longer endorsed, and research subjects must provide not only their consent to participate in the research, but also their informed consent.

Objectives

After completing this section you should be able to:

- Describe informed consent.
- Discuss the problems encountered in translating informed consent into firm guidelines for research practice.
- Examine the ethical considerations of research studies.

Informed consent

In research, subjects must be made aware of the purposes, procedures and risks of the experiment or research if true informed consent is to be given. Subjects must know the duration of the study, the data gathering techniques to be used and the possible consequences of the research. They must not be coerced into agreeing to take part in the research, and know that they have the option of refusing to participate or terminating their involvement in the research at any time.

The notion of informed consent has been extended in recent years to incorporate the ethics which guide the particular research. The subjects should be assured that confidential information would not be misused, trusted communications would not be misrepresented, informants would not be identified if this would prove embarrassing, and the civil rights of subjects would be recognised. Du Toit (1980) also makes the point that consent to take part in research is not always informed consent. He gives the example of the assumption that the return of a questionnaire implies consent.

He questions this assumption, as the respondent has not necessarily been informed of the purpose of the research.

Revised guide:
Page 2

This is a learner guidance section, separated from text by lines. The lines indicate that the student is required to respond in some way at this point. Icons can also be used, to indicate at a glance the nature of the activity.

Reading

Read Chapter 15 of your text book: Judd, Smith, & Kidder (1991): *Research methods in social relations* (6th ed.).

This is a good general reference on the ethical implications of research. It discusses questionable practices involving research participants, and the researcher's responsibility to the participants at the conclusion of the research.

Difficulties in implementing informed consent

Many research designs are such that it would be impossible to provide for informed consent of participants. For example, if a sociologist was observing crowd behaviour at a football match, it would be absurd to announce to the crowd that a sociologist was present making observations, and to explain the purpose and method of the research.

It has been argued that any activities occurring in a public place should be considered open to systematic observation for research purposes, just as they are to unsystematic observation by curious bystanders.

Readings have been specified at the most appropriate time rather than in a list at the beginning or end of the module. An annotation has also been provided to give students an idea of the reading's relevance.

Reading

Before you proceed with this section, read the American Psychological Association's position on ethical research: 'Ethical principles in the conduct of research into human participants' in your Reader.

These principles are used by many researchers in psychology and other behavioural and social sciences, and are revised regularly.

The two major positions of researchers

Two major positions held by social scientists have been identified.

Position 1: Deception is inadmissible
The first is that deception is an inadmissible affront to individual autonomy and self-respect, and is inconsistent with the scientific objective of discovering the truth.

Note that headings have been added. Text is basically identical but it has been broken up into smaller sections.

Revised guide:
Page 3

A wide left-hand margin has been added which allows students to make notes and annotate the material. This space can also be used for other instructional purposes, such as to provide definitions of words, to ask questions which might promote transfer, or to provide hints and tips as further learner guidance.

This view is adopted by Baumrind (1964) who writes: 'procedures which involve loss of dignity, self-esteem and trust in rational authority are probably most harmful in the long run and require the most thoughtfully planned preparations, if engaged in at all' (p. 423).

Position 2: Deception is justified

The second position is the more widely held view that deception may be justified and a legitimate tool to be used in the development of a science of human behaviour. In these cases informed consent is violated totally. Many sociologists see this as an integral part of their work, and feel that the research could not be done in any but a clandestine manner, for example, observing groups such as the Ku Klux Klan. When the researcher assumes a false identity to observe and be part of a group for research purposes, he or she must be aware of the damage that can be done when the research findings are published. If subjects read the findings, they must then come to terms with the fact that they have been cheated and misled by someone they trusted.

Deliberate deception is in direct contrast to the ideal of informed consent. Yet often the choice appears to be an element of deception or the abandonment of the research.

A video has been added as a useful resource for students. Videos can be commercially produced or custom-made for the unit, and can be sent to students with their study materials.

Video

Watch the video included in your study package: 'The Ethics of Covert Field Research.' As you watch each case, consider the following questions, and note your responses in the space provided:

• What risks were involved for participants?

• What risks were involved for the researcher?

Students have been invited to respond to the video and given space to write their reflections in the Guide itself.

• Are risks to participants offset by gains in knowledge?

Revised guide:
Page 4

Students have been directed to another non-print resource, in this case, a multimedia exercise on CD-ROM provided with the study materials.

Computer activity

Work through the computer-based activity entitled 'Ethical Research: The Essential Questions'. The program will allow you to experience the decisions that have to be made in order to complete ethical research, and will allow you to reflect upon the key issues involved.

Covert field studies

It is useful at this point to examine in more detail the ethics of covert field research. Three widely debated examples are presented below.

Watchqueen

A researcher covertly posed as a 'watchqueen' or 'look-out' for homosexuals in public toilets. He secretly noted the car license number plates of 134 men. A friend in the police force gave him unauthorised access to the names and addresses of 100 of the men through registration listings. One year after these observations—and after changing his hairstyle, dress, car and voice—he covertly interviewed 50 of these men, as part of a 'social health household survey'. The subject of the interview was marital sexuality.

Pygmalion

In order to study the theory of the 'self-fulfilling prophecy' (that is, that teachers' expectations of each student's achievement can become self-fulfilling), two researchers administered a 'test of inflected acquisition', actually a little known test of general ability. Teachers were advised that a randomly selected group had performed well on the test and were identified as 'late bloomers… about to show an unusual forward spurt of academic and intellectual functioning'.

Pentecostal

A researcher chose a new Pentecostal congregation for detailed analysis. He became a regular worshipper for 18 months, leading prayers, reading lessons, observing many testimonies and confessions, and speaking in tongues. He became friendly with many members, and claimed to profess to beliefs he didn't hold.

This is a new section which has been added to provide learners with examples and opportunities to practice.

Activity

Examine each of these covert field research studies in terms of its ethical responsibility.

The questions provide the learner with guidelines for examining the examples.

- What ethical problems does the case present?

Revised guide:
Page 5

A table or grid has been provided to assist students to organise their thoughts on the material.

- What should participants have been told about the study?
- Into which of the 2 major positions does the researcher fit?

Use the table below to organise your responses to the questions:

	Ethical problems	Participants' knowledge	Position of research
Watchqueen			
Pygmalion			
Pentecostal			

Now compare your notes to ours at the back of the book.

Difficulties of specifying firm guidelines

Some considerations which prevent the stipulation of informed consent into firm guidelines for research practice are questions such as: How long does consent apply? Is informed consent reversible? If a subject withdraws from an experiment, does this mean the researcher may not use information supplied by this subject to date? These sorts of questions are being asked as the political and social mood of society changes.

While there exists considerable difficulty in translating informed consent into firm guidelines for research practice, the debate has contributed much to the practice of social research in that researchers are more aware of the position of the subject in research, and can identify and account for factors detrimental to their welfare.

References

American Psychological Association. (1993). Ethical principles in the conduct of research into human participants. *American Psychologist*, 57(1), 33–51.

Baumrind, D. (1964). Some thought on the ethics of research. *American Psychologist, 19*(3), 113–143.

Du Toit, B.M. (1980). Ethics, informed consent and fieldwork. *Journal of Anthropological Research, 36*(3), 37–45.

Judd, CM., Smith, E.R., & Kidder, L.H. (1991). *Research methods in social relations* (6th ed.). Fort Worth: Holt, Rinehart and Winston.

Resources have been correctly referenced according to the preferred style, here American Psychological Association (APA).

Note about APA formatting: APA formatting guidelines are not mandatory for published documents such as these. For example, APA suggests that references should be indented on the first line. This is the format recommended for an *unpublished* manuscript to be given to a publisher who will then apply a style (APA, 1994, p. 331-2).

Constructivism and instructional design

The systems approach to instructional design is an extremely useful framework for the design of distance learning materials, particularly for lecturers who are new to the process. Its step-by-step approach makes it easy to work with, and materials developed are generally effective and user-friendly.

In recent years, however, new learning theory has proposed that more effective learning environments are based on the premise that students *construct*, rather than *absorb* knowledge. The difference between it and the systems approach is that instead of breaking the instruction up into tasks and sub-tasks and teaching the parts to the students, students interact with a complex learning environment where they are required to use whatever they find useful to help them learn. Your role is then to provide the support and scaffolding required by the student, and to define the role and nature of assessment.

Jonassen (1994) looked at the views of constructivists and instructional designers who participated in debates conducted in several issues of *Educational Technology*. From these papers, he concluded that many of these teachers believed that knowledge construction may best be facilitated by learning environments which:

- provide multiple representations of reality, which avoid oversimplification

- focus on knowledge construction, not reproduction

- present authentic tasks (contextualising rather than abstract instruction)

- provide real world, case based learning environments rather than pre-determined instructional sequences

- foster reflective practice

- enable context- and content-dependent knowledge construction

- support collaborative construction of knowledge through social negotiation, not competition (p. 35).

It is arguably more difficult and time consuming to design a learning environment along these lines than to use a systems approach, particularly for distance students. However, a unit designed according to a constructivist philosophy is likely to be much more effective, meaningful and enjoyable for both the students and teachers.

An example of such an approach is given in the following pages. It requires students to actively construct their own understanding of psychology, its practice and its value in society. The modules are based on authentic practice, they are complex and facilitate transfer of learning to other situations. In order to address the problems, students will need to generate their own responses to the challenge.

Sample topic for knowledge construction

The sample below gives an example of a learning environment designed from a constructivist perspective. It is a single module from a fictitious psychology course. It might occupy 3-4 weeks of a unit, and students would work in small collaborative groups.

Authentic, real-world learning environment which enables context- and context-dependent knowledge construction.

Authentic tasks which contextualise the instruction.

Resources provide multiple representations of reality, and enable construction of knowledge.

The Individual: Personality

Problem:

Is personality inherited?

Situation:

The problem situation can be examined in the video. You will find a television current affairs segment reporting on recent research into twin studies. Additional material can be found in the accompanying folder: press clippings, a journal article, letters and other documents.

Practical outcome:

Choose an authentic activity of your choice in response to the situation, for example:

* A radio interview with an 'expert' in the field
* A brochure for adoptive parents
* An article for a parents' magazine.

Resources available to you:

History:
* A selection of historical documents

Appropriate and relevant theories:
* Televised lecture
* Custom-made audiotapes and print support.
* References and readings.

Key research in the area:
* Compilation of journal articles and research reports.

Research methodology:
* Custom-made video on appropriate research methodologies, such as twin studies, adoption and association studies.
* Print support.

Basic statistical analysis:
* Existing interactive multimedia courseware on relevant statistics such as correlations.
* Print alternative, and supplement to, courseware: textbook and workbook.

Sample student support

The page below lists some considerations of how students both on and off-campus might be given adequate support and opportunities for the social construction of knowledge in a constructivist learning environment.

Equivalent, but different, student support can be provided for on and off-campus students using television and communication technologies.

Lectures

On-campus
Not a traditional weekly lecture, but a televised (or videotaped) lecture series where, once a fortnight, an acknowledged expert in the area gives a lecture on a topic relevant to one or more of the modules. Students can freely choose which lectures are relevant.

Off-campus
The same lectures are broadcast via educational television services, and are also available on video. Students are advised of the schedule in advance.

Tutorials

On-campus
Students are assigned to small group tutorials, according to topic, which meet with the lecturer once a week. Discussion is student-centred.

Off-campus
The timeslot used for the televised lectures is used in alternate weeks for a live, interactive television tutorial. Some interviews and panel discussions will be conducted, and common concerns and problems will be globally addressed, but a substantial portion of the time will be devoted to phone-in questions.

Individual consultations with lecturer

On-campus
Students make individual appointments to see the lecturer at a convenient time.

Coaching and support provided by teacher.

Off-campus
The lecturer writes to and telephones each student in the first week of the course to establish contact and encourage interaction. Further phone calls are initiated by the lecturer as required, as well as electronic communication via email and the virtual campus. Regular feedback will be provided via the post, telephone and facsimile.

Lecturer-initiated support groups

On-campus
Topic based support groups can be organised on-campus as required.

Off-campus
At least two audio-conferences (or videoconferences if feasible) per topic will be arranged for students.

Collaboration with teacher and other students.

Student-initiated support groups

On-campus
Traditionally, the coffee shop discussions.

Off-campus
Electronic chats or bulletin boards will be encouraged. Nearby students' names and telephone numbers will be circulated with permission.

Difficulties in implementing these approaches

There are certain difficulties perceived to be associated with adopting either a systems or constructivist approach to the writing and production of study materials. Some lecturers have commented that more paper is used if you add activities and guidance to the modules. While this is true in the example given here on the *Ethics of Research*, in many cases the reverse is true. The process of using instructional design principles often shows that an abundance of material (frequently an excess of factual information) has been provided unnecessarily, and it is possible to cut down on paper use substantially.

Constructivist approaches to study materials require a great deal of thought and effort to implement in the first instance. However, once you begin to approach your teaching from a constructivist perspective, it is very easy to incorporate its elements into your everyday planning. If you have a team of people working on a unit, you are in a very good position to try this new approach. However, even if you cannot marshal the resources to attempt it on a grand scale, you could adopt elements of the approach and see how it works. For example, you could begin by replacing the 3000 word essay with a more authentic task for assessment.

Remember that you are not expected to complete your unit in isolation. Help is always available from qualified staff in your university. If you are writing a new unit, it is a good idea to write just one or two modules or chapters and then meet with an Instructional Designer to discuss your effort. If you happen to be doing something incorrectly, or if you need help on a particular section, such a meeting will be extremely useful to you.

Preparing the Plan

■ ■
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■

Purpose of the plan

Imagine a student receiving a package of study materials and wondering where to start. The Plan is usually the best place to start. It describes the structure and administrative details of the unit and provides learners with all the information they need before they begin work on the content of the unit presented in the Guide and Reader.

The information presented in the Plan falls broadly into two categories:

■ Unit structure information, such as unit aims and objectives, recommended textbooks, resources, assessment, and assignments.

■ Administrative details, such as how to submit assignments, contacting tutors, and calendars.

A sample Plan has been included in this section, together with notes on each of the recommended sub-headings. Use it as a guide. You are welcome to use any of the text of the sample Plan in the preparation of your own Plan. Much of the information will be common to all units.

You may find you have other requirements in your unit that are not covered here, or you need to provide additional information and guidelines to students. The Plan can be used flexibly to suit your needs and can be adapted accordingly.

Sample plan:
Page 1

Write in the more personal second person. Refer to the student as 'you'. Here, the plan answers the question: 'Why should I study this?'

If you assume prerequisite knowledge, state it here in the introduction.

Mention the resources used and the means of assessment.

Write a sentence or two stating your aims for the unit.

List the more general unit objectives here and write them in terms of what the students will be able to do after they have completed the unit.

UNIT NO.

Plan

Brief Introduction to the Unit

The outcome of any serious research can only be to make two questions grow where only one grew before.

Thorsten Veblen

Welcome to *Research Methods: An Introduction*, where many questions will grow as you participate in learning about modern research methods.

When you have completed this unit you will no longer accept evidence prefaced with the ubiquitous phrase: 'Research has shown...'. You will ask: 'What research?' 'When was it done?' 'What methodology was used?' and a hundred other questions that give you the knowledge to assess the worth of the evidence before you.

The content and approach of the unit relies heavily on the assumption that you have a working knowledge of statistics. You must have completed Statistics 101 or equivalent as a pre-requisite to this unit.

If the pre-requisite unit on statistics is no longer fresh in your mind, take the time to revise the material before you start work on this unit.

As well as the print material provided, you will use audio and video tapes in the study of the unit, together with published research articles. You will be assessed by means of an exercise, an essay, a research proposal and a final examination.

Aims and Objectives

Aims

The primary aim of the unit is to give you the skills to be able to recognise and plan good research.

Objectives

When you have completed this unit you will be able to:

- Discuss internal and external validity of research.
- Evaluate research in terms of its design structure, validity and ethical responsibility.
- Prepare a research proposal.

Sample plan:
Page 2

Provide information on the materials students have been sent, what to do if they haven't got something, and what has to be returned.

Include here any additional unit materials which students may be required to order, such as kits, samples, maps, photographs.

Cite text fully and correctly in the preferred referencing style.

Provide information on the tutor. Encourage students to maintain contact with the tutor, once established.

If the tutor is not known when materials are sent, you could include a section for students to fill in when contact is established.

Include space for fax number and email address as well as phone number.

Unit Materials

The package of study materials you have been sent normally includes the material you need for a full semester's study. Materials are not sent out weekly or monthly.

For this unit you have been sent:

- A Plan
- A Guide
- A Reader
- One video (VHS)
- Two audio cassette tapes

If any of these items have not been included in your package, please notify External Studies. You may keep all printed study materials, unless advised otherwise. Audio and video tapes, must be returned (preferably rewound) to External Studies.

Textbook

The textbook for the unit is:

Judd, CM., Smith, E.R., & Kidder, L.H. (1991). *Research methods in social relations* (6th ed.). Fort Worth: Holt, Rinehart and Winston.

Your Tutor

Early in the semester, you will be assigned a tutor who is responsible for your learning progress and who will assist you with any problems or difficulties you may be having with the unit. Your tutor will assess your assignments and provide feedback on your progress.

Don't be reluctant to contact your tutor, or feel that you are imposing on his or her time. Tutors are always willing to assist and you should get into the habit of regular contact. When contact with your tutor is established, fill in the details in the box below. This will be a handy reference to keep with your study materials.

Tutor:

Phone No:

Fax No.

Email address:

Times available:

Sample plan:
Page 3

If appropriate, provide information on the weighting or credit points allocated to the unit and the suggested hours of study.

A table summary provides unit structure and organisation at a glance. Number weeks as appropriate to semester length.

Study Load

It is recommended that you spend approximately 10 hours of study per week on the unit.

Table of Unit Organisation

A summary of the unit organisation and structure is presented below. It provides you with a week by week listing of the unit requirements. Note that some modules require more time to complete than others— the week allocations give you a guide to the recommended time to spend on each section.

Week	Module	Topic	Reading Textbook	Reading Reader	Other Resources & Appointments	Assignment	Week Due
1	1	Approaches to research	Chapter 12	Articles 1, 2 & 3			
2	2	Theory of research	Chapters 3 & 5	Articles 4 & 5		No. 1: Research evaluation	4
3							
4	3	Ethics of research	Chapter 15	Articles 6 & 7	Video and computer program	No. 2: Essay	7
5							
6					Audioconference (Date to be determined)		
7	4	Research methods	Chapters 17, 18 & 19	Articles 8 & 9			
8							
9	5	Case study		Article 10	Audiotape		
10	6	Research design	Chapters 8, 9 & 10	Article 11	Video	No. 3: Research proposal	14
11							
12							
13	7	Measurement	Chapters 20 & 22	Articles 12 & 13	Audio tape		
14					Audioconference)		
15		Examination			Examination		

Sample plan:
Page 4

Include here any additional
information, if any, that students need
to know. For example:

- videoconferences
- audioconferences
- seminars
- field trip organisation
- placement in institutions
- telematics tutorials

List here the key references for the
subject area. If appropriate, you could
also include lists of books available to
students through the university library.

If there are subject-specific journals,
list them here.

Name any additional resources your
students might find helpful, such as:

- community organisations
- relevant government bodies
- public information centres
- special facilities
- published examination papers

Additional Unit Information

Your participation in *Research Methods: An Introduction* will include
two audioconferences scheduled to be held in Weeks 5 and 13 of the
semester. You will be provided with details on the dates and times,
together with information on procedures and protocol for
audioconferencing, at a later date.

Students who have participated in an audioconference have generally
found it to be a worthwhile learning experience, and have appreciated
the opportunity to share ideas with others. Both audioconferences are
scheduled for maximum benefit and impact, that is, just prior to
assignment submission dates, so you will have the opportunity to
discuss your progress and problems.

References and Resources

There are some very good general references in the area of research
methods. Some of these are listed below. You might consider buying a
selection to supplement your textbook and Reader:

- Burgess, R.G. (1982). *Field research: A sourcebook and field manual.*
  London: Allen and Unwin.

- Denzin, N.K. (1988). *The research act.* New York: McGraw Hill.

- Campbell, D.T., & Stanley, J.C. (1966). *Experimental and quasi-
  experimental designs for research.* Chicago: Rand McNally.

A number of journals are also quite specifically related to the area of
research:

- Educational Researcher

- American Psychologist

- Journal of Anthropological Research

- Psychological Bulletin

- Evaluation Quarterly

Further information can also be obtained from:

> The Society for Fair and Ethical Research
>
> PO Box 11111
>
> Perth, WA 6001

This Society publishes a quarterly newsletter which can be obtained
free of charge by writing to the above address.

Sample plan:
Page 5

Include here a list of all the components of assessment and their mark allocation.

Assessment

You are required to complete three assignments and to sit an examination at the end of the semester. The allocation of marks is as follows:

Assignment 1:
    Research evaluation   10%

Assignment 2:
    Essay   20%

Assignment 3:
    Research proposal   30%

Examination   **40%**

Please note that all components must be attempted. It is not sufficient to reach an aggregate of 50% of the total.

List here your requirements for the presentation of assignments, or refer students to the relevant guide for assignment writing.

Presentation of Assignments

For written assignments, please follow these guidelines of presentation:

- Type your assignment, or write clearly in legible handwriting.

- Use size A4 paper and leave a suitable margin for comments, (e.g., 3-4 cm).

- Number each page.

Include here details of how to submit an assignment correctly. Include which day of the week the assignment is due, or should be posted, e.g., the Friday, or Monday, of the week specified. Remember to advise on the correct procedure for obtaining extensions.

Submitting Assignments

Assignment dates are usually given in terms of week numbers. Your assignment should be received by the week specified. If you require an extension of time, remember to contact External Studies before the due date.

When you have completed each assignment, attach an Assignment Attachment Sheet. Remember to keep a copy of your assignment—a photocopy is better than an earlier draft.

Send your assignment to External Studies, where staff will record its receipt and dispatch it to your tutor. Do not send it directly to your tutor.

If assignments can be accepted by fax or email, give details here.

Sample plan:
Page 6

It is always advisable to include the assignments in the Plan rather than the more permanent Guide, particularly if they are changed regularly.

Give full instructions on assignment choice as well as details of length, marks allocation and week due.

It is a good idea to give students an opportunity to 'invest' in the unit, by giving them a relatively short and quick assignment early in the semester. If you include an assignment due by Week 4 or 5, it helps students to start work straight away, and your response to their efforts is often a source of encouragement and motivation.

Assignments

Complete all assignments.

Assignment 1: Research Evaluation
Choose *one* piece of research from the recommended journals and answer the following questions:

1. What was the purpose of the study?
2. Describe the researcher.
3. What, in your opinion, are the strengths and weaknesses of this piece of research?

Remember to send a copy of the article with your assignment. Your assignment should be a maximum of about 750 words.

Marks: 10%   Due: Week 4

Assignment 2: Essay
Behavioural study of obedience

A paid volunteer subject was told that the purpose of the experiment was to evaluate the effectiveness of punishment on learning. The volunteer subject was to function as the teacher, and another subject (actually a stooge in the employ of the experimenter) was to act as the learner.

Each time the learner made a mistake in the designated task, the teacher was to administer an electric shock, increasing the intensity of the shock with each failure. The final deception was that the stooge, communicating by intercom with the teacher, complained of a heart condition, warned that he couldn't continue and emitted sounds of pain when shocks were applied. Subjects expressing concern about the condition of the learner were instructed by the experimenter to continue the experiment. The crucial question was the extent to which subjects would obey this directive to continue in the face of the learner's rather dramatic pleas to desist.

Read the full article describing this controversial study: Milgrim (1963). Examine the research in terms of its ethical responsibilities. (Your essay should be about 1200 words.)

Marks: 20%   Due: Week 7

Assignment 3: Research proposal

Prepare a research proposal, in an area of your own choice, using the guidelines for preparation given in Module 6. Your assignment should be approximately 2000 words.

Marks: 30%   Due: Week 14

Dividing the unit into weekly segments

Many lecturers divide their unit into weekly segments, to enable students to plan their study periods and to reinforce the study habit. This is a useful procedure but it is not necessary for effective self-paced study. An alternative is to divide the unit into the most comfortable topics, and allocate the number of weeks' study advisable for each.

Revision of the plan

The Plan will contain all the dates for the weekly work as well as assignment dates. While it is useful to compile the Plan as you write the Guide, the last thing you should do before you hand in your unit for publication is to check the detail in the Plan and ensure that it is consistent with the content of the other two documents, and that the dates conform with University calendars, if appropriate.

Because the Plan contains so much specific information and detail, it is important to revise it each time the unit is offered. Details such as dates, assignments and administrative arrangements may need to be changed with each printing.

Compiling the Reader
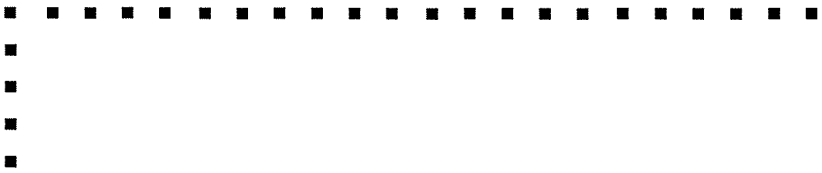
Components of a reader

The Reader is a collection of documents which the learner studies in conjunction with the Guide.

It provides a means of enriching your teaching by allowing you to draw on ideas from the very best articles and books in your field.

The Reader might include:

- Journal articles
- Chapters of books
- Newspaper articles and reports
- Documents from primary sources
- Tables, maps and photographs
- Published brochures and booklets.

Choosing readings

Material for the Reader must be chosen with the objectives of the unit in mind. You may wish to consider a range of material from the theoretical to the practical, and from the serious to the entertaining.

The most important thing to remember about the Reader is that it supplements the Guide. No reading should be included in the Reader unless it is specifically mentioned in the Guide. You may, of course, include optional and enrichment material, but the learners must always be aware of the status of each document.

Documents in the reader are not retyped, so it is important for you to provide the best possible copy of an article or chapter for printing.

Page limits

As a very rough guide, consider 200 A4 pages a maximum for the Reader. Of course you may have a case for including more than this, for example, if your unit has no suitable textbook. On the other hand you may need substantially less, depending on the subject and the teaching methods employed.

Avoid the temptation to include all known articles written on the subject. Students have only so many waking hours to devote to reading, and you should select the best. You do not have to include a whole article or chapter when only part of it is relevant. Some judicious editing will help to cut down the bulk.

Library service

A supplement to including articles in the Reader is to encourage students to use the service provided by the library. A list of non-critical or enrichment articles could be recommended in advance, to allow students plenty of time to order them from the library.

The articles should be provided to the library as early as possible to ensure that they are readily available when students request them.

Copyright

As the Reader is generally a compilation of articles and book chapters which are the subject of copyright, it is essential that you comply with the provisions of the Copyright Act and any rules that your institution has developed to ensure compliance.

Obtain advice on copyright if you are in any doubt about your right to use materials from published books, the Internet, brochures, newspapers, and cartoons and illustrations.

CHAPTER 5

Planning additional resources and services

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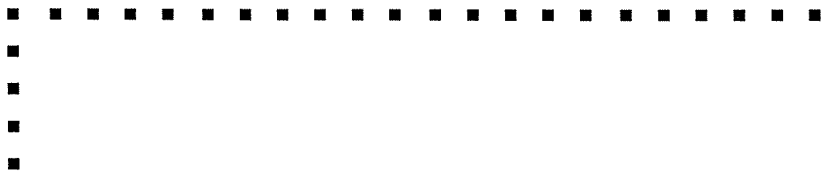
The promise of the new technologies

New technologies are having a considerable impact upon the way distance learning is offered. The Internet and CD-ROM show promise as the technologies to replace the paper-based materials now used as the primary medium for distance education.

Some universities now offer complete units of study over the World Wide Web, where students enrol, study and are assessed without receiving any paper documents at all.

Many universities also offer units on CD-ROM where hypertext links are provided from the Guide to the relevant articles in the Reader, or to a Glossary or other appropriate section of the unit. The student studying the Guide section of the unit, comes, for example, to a reading which is highlighted in another coloured text. Clicking on the highlighted text takes the student directly to that reading, which can be read on screen or printed off on the student's own printer. Students can also be directed to short video clips, pictures, graphics, or animated models.

As you can imagine, there are many equity issues involved in the wholesale embracing of such technologies. The fact that many students do not possess the equipment required to utilise such resources means that for the time being at least, paper is still a necessary mode of dissemination, as an alternative for those units that are provided in such a manner. The old technologies will coexist with the new.

The challenge in the future, when we can safely assume that all our students have access to computer technology (as we do now with television) will be to design study materials which utilise the strengths of the technology, and are not simply print techniques transferred to another medium.

Additional print and non-print materials

If we accept that the paper-based version of distance materials is still the acceptable form for the majority of students (at least for the time being), the Guide can be enhanced considerably by the use of additional resources and non-print media. Concentrate on employing the best medium for achieving your purpose: don't include a video or some slides just for variety. On the other hand, using a video may be the *only* effective way to achieve an objective and you may need to go out of your way to provide such a resource.

When planning your materials consider using some of the media described below.

Illustrative materials, cards, charts, and maps

Photographs, diagrams and other kinds of illustrative material are virtually essential in some areas. Some photographs, for example, are primary source material in their own right and can be used for questioning as well as illustrative purposes.

Slides are often transferred to video as more students have access to a video player and the overall cost of a video tape is less than of that slides.

If your unit has a set of commonly used scientific terms, or categories that must be referred to often, or frequently used names of countries and cities, consider preparing a one page ready reference guide. Your resulting diagram, map, or list can then be printed on cardboard and it becomes an accessible reference for the learner to pin on a noticeboard or desk. Any information that is needed throughout the unit can be put on such a card.

Kits

For more practical exercises, kits may be sent to off-campus students. Kits such as rocks for geological study, electronic circuitry, case study packages, and mathematics teaching aids can all be sent to students through the mail.

Videotapes

Videotapes can range from fully scripted elaborate productions to a simple two-person interview. They are, especially in the first instance, quite expensive to produce, but if funding can be obtained, they offer considerable benefits.

Videotapes should not be produced in a way that induces passive watching, as some television programs might.

You can encourage students to interact with the program with written activities printed in the Guide, and also with instructions on the video itself. For example, you might give directions to the students to stop the video at certain points to allow them to think of a response, write notes, predict consequences, and so on. Used this way, video is a dynamic teaching device.

Audiotapes

Audiotapes have never been used to the same extent as video in distance education packages. Perhaps that is because they earned a terrible reputation when some lecturers taped their on-campus lectures and sent them to their off-campus students. These unfortunate students were forced to listen to very poor quality recordings and were non-plussed when asked to examine the diagram currently being shown on the overhead transparency!

Students often state that they listen to tapes in the car, or while they are doing repetitive activities such as cooking or ironing, so if you are contemplating using them, think carefully about their purpose. They are particularly useful as enrichment material which reinforces other resources, and helps students to strengthen connections between elements. You might consider recording guest speakers, interviews, debates or sending pre-recorded tapes, such as radio programs (with permission). Audiotapes have also been found to be effective for introductions to courses, for motivating, and for giving some sense of your personality to the learner.

Like a lot of techniques in distance teaching, this seems like a lot of extra work up front, but your hard work will be rewarded by the benefits it provides your students.

Broadcast and interactive television

Many universities offer units which include broadcast television programs, that is, the programs are televised on regional or national television such as the ABC and SBS. Such programs usually employ high production values and are central to the unit content. Frequently there is a program to be watched for each week of the semester, although for some units there may be only one or two televised programs.

Interactive television is growing in popularity as a means to add an element of interactivity to an otherwise non-interactive medium. It allows students to participate in the program by telephoning in to talk to the presenter and other viewers in live broadcasts.

Computer-based materials and multimedia

Computer technology now allows the inclusion of learning materials in distance education units ranging from a simple interactive exercise sent on floppy disk to a microworld or simulation on CD-ROM that students can explore in depth.

If you can locate a program that fulfils the needs of your unit and is commercially available, you will be able to save the expense of developing your own courseware. More and more programs are becoming available which are directed at specific learning issues in tertiary and secondary education.

Interactive multimedia is expensive to produce because of the labour-intensive nature of the process. However, many universities now have the facilities to produce such programs and you should pursue the idea if you have a learning situation that is not readily provided for by other forms of media.

Again, in the short term you will have to consider the needs of students who do not have access to the equipment required to use such resources, and provide an alternative means for them to learn that part of the unit.

Teleconferences

More a student service than a resource, teleconferencing is becoming an integral part of distance education. Teleconferences are audio or video link-ups which allow you to communicate with people in many different locations at one time.

An audioconference allows you to set up a discussion with a small group of students by telephone. The procedure links all the phones so that each person can hear and converse, just as in a normal telephone conversation.

A videoconference is similar to an audioconference except that vision as well as sound is provided. The vision can be one-way, where the students can see and hear the lecturer, but the lecturer can only hear the students, or two-way where there is full sound and vision between sites.

For a teleconference to succeed as a learning exercise it needs careful planning. An agenda needs to be decided, and circulated to students in advance. Students must also be advised of the protocol of an audioconference to allow everyone a chance to participate.

Audiographics

Audiographics is a communication system which uses audioconferencing to create an audio link between a teacher at one site and students at other sites. The audio connection is complemented by an interactive computer system where the computer screen acts as a kind of electronic blackboard. Any changes that are

made on the computer by any of the participants appear simultaneously on all the screens while voice contact is maintained throughout.

Audiographics is used quite extensively in schools and its use is expanding into tertiary institutions. It is much less expensive to deliver than videoconferencing and in many cases more effective.

Email

Email is used extensively by academics in day-to-day contact as an extremely effective asynchronous mode of communication. It is also an important element in communication between distance education students and their lecturers.

Email can be used to provide assistance to individual students or group postings. Students can email their assignments to lecturers and feedback can be emailed back. Students can also communicate with each other in formal or informal ways, in discussion groups or bulletin boards.

Learner independence and interactivity

Each of these resources and services offers a particular strength and a possible answer to a problem in delivering an effective program to students at a distance. It is useful to chart levels of independence and interactivity from high to low in the following way:
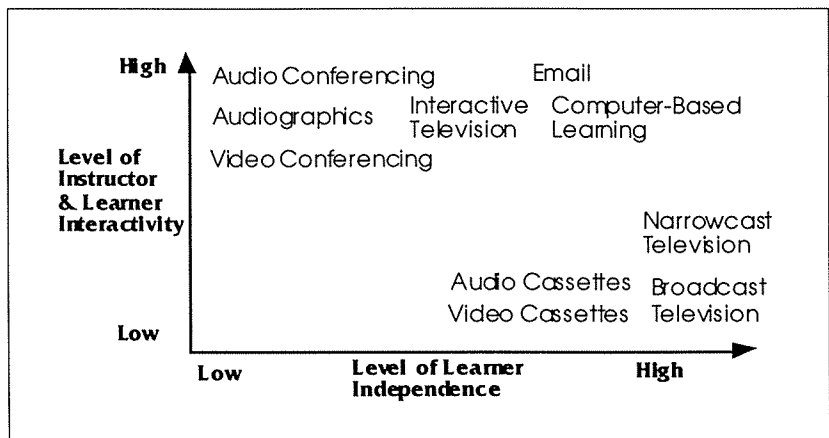
Figure 2: Learner independence and interactivity (Oliver & Grant, 1994)

For example, broadcast television has very low levels of interactivity and high levels of independence. Students can use this medium without much assistance or interaction with their lecturer. By contrast, interactive television, where students can phone in to discuss issues on air, is higher on the interactivity scale.

If you find you tend to use an abundance of media that cluster around the high independence end of the continuum, it might be appropriate

to try to employ some of the new communication technologies such as videoconferencing and email which will enable you to interact more directly with your students.

You can choose from these additional resources according to the requirements of the units, and the needs of the students for interactivity on particular issues.

Editorial style guidelines

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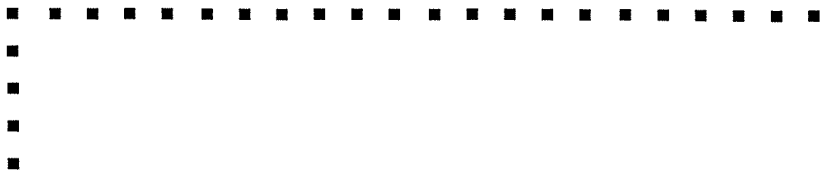
Editorial style

The style guidelines given below are based on the Australian Government Publishing Service (AGPS) *Style Manual for Authors, Editors and Printers*. The points presented here generally give variations on the style recommended in the *Style Manual* and also select an appropriate style when the *Style Manual* gives a choice. This chapter also explains many of the most common style problems encountered in writing instructional materials.

Spelling follows the current edition of the Macquarie dictionary. If more than one spelling is offered, choose the first. Consequently, *program* is preferred to *programme, organise* to *organize, focused* to *focussed, counselling* to *counseling* and so on.

Aboriginals

Aboriginal is always capitalised except when referring to the original inhabitants of a country. The word Aboriginal is used as an adjective, and is also preferred to Aborigine when used as a noun.

Maximum capitalisation

When referring to a book title or article in the text, capitalise the first letter of each major word. For example:

> The Hawke Ascendancy
> The Mask of Tutankhamen
> Dali and Miro
> Healthy Eating in Australia

The exception to this rule is titles in reference lists which follow the APA convention. In this case, only the first word is capitalised.

Always capitalise the first word after a colon in a title even if the word is a minor one:

Problem Drinking: The New Approach
Vietnam: A Reporter's War

Parts of a book

Always capitalise the first letter of a part of a book when you are referring specifically to that element. For example:

Refer to Chapter 5 ...
See Figure 2 ...
These details are included in Table 4.

Note, however, that you would not capitalise general references:

Several chapters address this issue.
Many figures and tables have been included.

Small capitals

Capitals should never be used for emphasis. If capitals are used for acronyms and computer terms, they should be small capitals, that is, one point smaller than the text. For example, compare the effect:

The language used in this program is FORTRAN.
The language used in this program is FORTRAN.

Italics

Underlined words in a manuscript or draft are always converted to italic for the final copy.

Italics are used for:

- Titles of books, journals, papers presented at conferences, pamphlets, films, plays, musical works, paintings, newspapers, periodicals:

    Gulliver's Travels
    Australian Journal of Teacher Education
    Fossicking Mudmaps in Queensland
    Wild Strawberries
    Pygmalion
    The Pirates of Penzance
    The Laughing Cavalier
    Sydney Morning Herald
    The Bulletin

- Scientific names for plants and animals:

    Betula pendula
    Eucalyptus scoparia
    Alnus rhombifolia

- The first occurrence of a new, key term. Do not italicise after the first occurrence:

    A useful strategy is to draw a *concept map.*
    This level of productivity is *capital intensive.*

- A letter, word or phrase cited as an example:

  A word such as *fear* . . .
  The letters *b* and *d* are often confused.
  Use *practise* as a verb.

- Emphasis: Italics can be used for emphasis to clarify an otherwise difficult sentence. This technique should be used sparingly. It is preferable to reword the sentence, where possible, to attain clarity.

- Headings: When required, italics can also be used as a lower level heading.

Do not use italics for foreign words and phrases which have become accepted usage in English. For example:

  et al.
  ad lib
  vis-à-vis
  per se
  quid pro quo

Underlining

Since underlining in your draft copy will be translated to italics in the published version, never use underlining for emphasis. Desktop publishing now almost precludes the use of underlining in published text. There is always a more effective way of emphasising or highlighting text than using underlining, such as font variation and size, emboldening, and so on.

Fullstops

Fullstops are used in abbreviations, as decimal points, to separate elements of a reference, and of course to indicate the end of a sentence. Fullstops should not be used at the end of headings and sub-headings.

Colons

A colon may be used to introduce an explanatory word, phrase or clause. For example:

  A close reading of the poem reveals one of the important characteristics of Romantic poetry: its deeply personal approach.

Colons are also used to introduce lists, either running-on or separated from the text. Use a colon alone: do not accompany it with a dash or hyphen.

For example:

  You will be required to bring: (Don't use: You will be required to bring:-)
  • Your textbook
  • Two computer disks
  • The completed questionnaires

Do not capitalise the first word after a colon in a sentence, unless it is part of a separated list or a complete question. For example:

> One might ask: How often do I need to go? How long does a consultation last?

Always use a colon to introduce an indented quotation. For example:

> As Bruner (1960) notes:
>> We begin with the hypothesis that any subject can be taught effectively in some intellectually honest way to any child at any stage of development. It is a bold hypothesis and an essential one in thinking about the nature of a curriculum. (p. 11)

Commas

Commas are used as described in the Australian Government *Style Manual* with the following exceptions:

- Commas are used before and after abbreviations such as i.e., and e.g.,

- Commas are used in dates:

  > 1 December, 1945.
  > June, 1993.

Dashes and hyphens

Dashes are used to separate, hyphens to join.

The use of a pair of dashes is a very powerful way to emphasise a parenthetical thought:

> Many large tracts of land in Arnhem land no one wanted—no one except the Aboriginals—until they were found to contain significant mineral deposits.

To distinguish between a hyphen and a dash: leave no spaces around a hyphen; leave a space on each side of a dash, or use an em dash. An em dash is a proper publishing convention which was never available on a typewriter.

Square brackets

Round brackets are often used in quotes when square brackets are correct. Use square brackets to enclose added material in direct quotes:

> The student who can plan his [or her] own effective study timetable, and stick to it, is bound to succeed.
> Substantial amounts of funds are wasted each year on the purchase and installation of education products that . . . [are] inappropriate or ineffective.

Ellipses

Generally, use three points, with a space before and after each group, to indicate that quoted material has been omitted. Four ellipsis points may be used to indicate an omission between two sentences.

Solidus (slash, oblique, diagonal)

Try to avoid using the solidus generally in your writing.

For example:

> The factory's restaurant or canteen. (Don't use: restaurant/canteen)
> The lecture-seminar is scheduled for 11.00 am.(Don't use: lecture/seminar)
> Each student will choose his or her best piece of work to submit. (Don't use: his/her)

Quotation marks

Single quotation marks are preferred to double for direct quotes included in the text (i.e., not indented). Use double quotation marks to quote within a quote. For example:

> As Suzuki (1990) writes: 'I heard a bioethicist justify research on human embryos because it would "allow us to recover the many embryos that are normally aborted and so are an enormous waste" . . . Are the only things of worth those that are measured in terms of their use for humans?'

Single quotation marks are also used for titles of chapters or modules, articles, essays, lectures, songs, radio and television programs. For example:

> 'Existential Phenomenology and Psychoanalysis'
> 'After the Dreaming: The 1968 Boyer Lectures'
> 'Imagine'
> 'Four Corners'
> 'The Science Show'

Shortened forms

Abbreviations in lower case or with an initial capital are finished with a full stop. For example:

> et al. Vol . Fig. Sept.

Acronyms and abbreviations with capital letters are written without full stops:

> WA GPO DEC PhD

When using a shortened form in the text always give the full name on the first occurrence followed by the shortened form in brackets. For example:

> The World Health Organisation (WHO) confirmed these figures in its latest report.

Ampersand

Use the ampersand (&) to replace *and* when listing more than one author in parentheses. For example:

> Many theories see learning as a matter of information-processing, with several successive stages (Reynolds & Flagg, 1977).

However, use the word *and* in the text:

> Bass and Dills (1984) looked at the state of the art of instructional development.

For example, that is

E.g. and i.e. are frequently used shortened forms. It is preferable to spell out the words in text, *for example* and *that is*, and to use the shortened form in parentheses. For example:

> The style which signifies 'classic' in a fabric is based on geometric shapes (i.e., circles, squares and stripes) generally presented in a tiny, repetitious pattern.

Plurals

Usually an *s* is added to shortened forms to make them plural. For example:

> MPs Eds

Note that an apostrophe is not used. Similarly, an *s* is added without apostrophe to years:

> 1950s, not 1950's

References and bibliographies

Your choice of referencing system will be determined largely by your discipline, and the style preferred by your school or department. The most commonly used systems are Harvard (and variations), the footnote system, and the style of the American Psychological Association (APA). The Harvard and footnote systems are documented in the AGPS *Style Manual*. Variations on these styles do exist, so follow your school or department's guidelines. APA is fully described in the *Publication Manual of the American Psychological Association* (APA, 1994). Whichever system is chosen, remember to:

- Remain consistent throughout the document
- Check that every reference listed in the text has a corresponding bibliography or reference list entry
- Ensure that textual references agree in every detail with reference lists.

Numbers

The general rule in text is to use numerals to express numbers 10 and above and words to express numbers below 10. Exceptions to this are:

- Use words for any number beginning a sentence. For example:

  Twenty seven people made enquiries that day.

- Use numerals for numbers under 10 that are used for comparison with numbers 10 and above. For example:

  The 2nd and 12th questions proved the most difficult.
  The 16 items found in the whale's stomach included 5 plastic bags, 3 aluminium cans, 3 shoes and 1 swimsuit.

- Use numerals in a numbered series. For example:

  Year 7, Table 3, Chapter 9

- Use numerals for dates:

  5 June, 1991, 1 January, 2001

Non-discriminatory language

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Eliminating bias

Non-discriminatory language should be used in all documents, video and audiotapes. Bias within language—and especially the use of stereotypes—categorises individuals as members of a group, obscuring individuality with the ascribed characteristics of the group of which the person is a member. For example, each time a woman's sex is unnecessarily highlighted in communication, it reinforces the attitude that the woman is to be considered first as a female and second as an individual with skills or competence.

Conversely, by avoiding sex-role and other stereotypes, by ignoring irrelevant racial characteristics and cultural differences and by accepting the common humanity of individuals of minority groups, each person's equality of opportunity will be enhanced. Bias-free communication which expresses similarities and differences objectively and fairly is a major factor in achieving equal opportunity for all.

The equitable representation of women and men and minority group members can be achieved by:

■ Sensitive and appropriate use of language

■ Recognition of and respect for achievement irrespective of gender, race, and other irrelevant personal characteristics

■ Emphasis on common human characteristics

■ Equality of description by use of the same type of descriptor

■ Avoidance of racial, ethnic and gender stereotypes

■ Reviewing and rewording where the language used appears discriminatory or belittling.

The AGPS *Style Manual* (AGPS, 1994) has an extensive discussion on the use of non-sexist language. It provides alternatives to the most common forms of sexism found in written and oral communication. Your own institution may also have produced a publication on non-discriminatory language to be used as guidelines for bias-free communication.

Common examples of discriminatory language

The most common examples of discriminatory language found in instructional documents are described below:

■ Referring to the student as *he*.

This can be effectively eliminated by addressing the reader or student in the second person as is recommended for all documents. As well as reducing the risk of using discriminatory language, this style is a lot more personal and inviting for the reader. For example:

Each student is required to send two completed self-test question sheets to his tutor by the end of Week 3.

This is better expressed as:

You are required to send two completed self-test question sheets to your tutor by the end of Week 3.

■ Referring to lecturers, researchers, subjects and so on as *he*.

For example:

Each lecturer will use the results of the tests to assess his students' progress.

You can delete the offending pronoun:

Each lecturer will use the results of the test to assess students' progress.

Or you can change from the singular to the plural:

Lecturers will use the results to assess students' progress.

It is preferable to avoid the use of he/she, she/he, his/her and her/his. If necessary, reword the sentence.

■ Using sex-specific words when gender-inclusive words are more appropriate.

Some commonly used terms and preferred alternatives are presented below:

Frequent usage	Alternative
actress	actor
authoress	author, writer
directress	director
heiress	heir
manageress	manager
waitress	waiter

- Using man to refer to men and women.

  The generic *man* is often used to refer to humankind in general. Some commonly used terms and alternatives are presented below:

Frequent usage	Alternative
man	people, women and men, persons, humanity
mankind	people, human beings
man on the land	farmer
manpower	labour, staff, personnel
man the library desk	staff the library desk
man hours	staff hours
the average man	the average person
one-man operation	one-person operation

- Including quotes in the Guide which use discriminatory language. For example, this quote has a distinct gender bias:

  > No one would find it interesting to talk to a man who never raised or lowered his voice, never changed the speed of his words, and showed no change of feelings in his eyes and expression. No one finds it interesting to listen to a lecture delivered with the same monotony.

  There are several alternatives. First of all consider whether you need to quote. Can you rephrase the ideas in your own words, and include them in the body of the text? If you wish to retain the original wording you can insert the word *sic* enclosed in square brackets, immediately after the discriminatory expression.

  Alternatively, you could insert additional words in square brackets to include both sexes. For example:

  > No one would find it interesting to talk to a man [or woman] who never raised or lowered his [or her] voice, never changed the speed of his [or her] words, and showed no change of feelings in his [or her] eyes and expression. No one finds it interesting to listen to a lecture delivered with the same monotony.

  This alternative can be a little cumbersome if there are many references to modify.

- Selecting readings for the Reader which use discriminatory language.

  You will find that more recent writings are less likely to include discriminatory language. If your Reader includes older articles which discriminate on the basis of sex, race, or marital status, be on the lookout for more recent readings which might be suitable replacements for offending articles.

Unintended discrimination

There are a number of other, more subtle, instances where your materials may discriminate. For example: Do all your illustrations or cartoons feature a single sex, are all the nurses female, all the accountants male? Does your writing assume that all students are Christian and Anglo-saxon? Are all your selected readings written by men?

The values and societal roles, implicit as well as explicit, in teaching and learning materials should be as free as possible from bias. In particular, it is important that the use of stereotypes and restricted career roles be avoided. Both men and women should be portrayed, in printed materials, graphic representations and audiovisual programs, as to produce a wide range of images including those which develop mutual respect for each group and for individuals in groups.

In representing the roles of women and men, an effort should be made to expand the roles of both sexes to include men in nurturing and homemaking and to include women in areas of business and technology. Both sexes should be allowed a full range of emotional expression to avoid gender stereotyping.

The perspectives, experiences and contributions of both women and men should be considered in course content. Thus, topics covered should include, where applicable, specific references to the experiences of women. Readings, case studies and examples should relate to women as well as men, where possible. Given that the quality of resources is the prime criterion, a reasonable balance of library resources representing women's as well as men's contributions to the field of study should be sought. These approaches can assist in eliminating the unintentional bias of excluding women in course topics and resources.

In summary, educational resources for students at all levels should acknowledge the roles and contributions of both men and women and the quality of people irrespective of race, colour or ethnic origin. Such resources should exhibit balance in content and illustration, be expressed in bias-free language, and present minority groups objectively and without stereotyping.

Evaluating the unit

Formative evaluation of a unit

You might think that once you have arranged, written, compiled, organised, checked and re-checked your unit to the implementation stage that your job is done. But there is one more step. You, and your students, must evaluate the unit.

The first time a unit is offered is very much a 'trial-run'. Often the unit is found to be sound and just the wrinkles have to be ironed out. Less often, substantial changes have to be made to resolve problems encountered.

There are several ways you can evaluate whether your unit is an effective teaching document.

The first check can be made before your unit is implemented. Give the draft document to two or three colleagues in your field for comments and recommendations. Any changes can be incorporated into the final copy, before printing.

The first time the unit is taught, keep a copy especially for corrections and notes. Note in the margins all the queries, confusions and comments generated from the target group—your students. These can be resolved in a revised version. Note also your own observations about the effectiveness of the various sections of the document, and any errors you discover.

Finally, provide students with an evaluation sheet to be completed and returned at the conclusion of the unit. Don't send it near the end of the semester. It will be most useful and complete if students have it throughout the study period. You might consider asking students to give you an evaluation several times throughout the unit, such as at each assessment point.

This information, together with more formal objective data, such as assignment and examination results, will provide you with a useful starting point for the revision of the unit.

You can then be assured that your students are receiving effective well-designed materials which are not only productive in achieving their objectives, but are a pleasure to use.

CHAPTER 9

Page layouts for the Guide

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Components of the guide

The Guide is the central instructional component of a unit, and it contains many elements which require special consideration in terms of style and presentation. The Guide is normally divided into modules, sections or chapters, each representing a week or more of student study time. Within each chapter some or all of the following will be featured:

- Objectives
- General text and headings
- Activities and learner guidance
- Enrichment material
- Quotes
- Lists
- Tables, graphs and figures
- Lists of references
- Answers to activities
- Glossaries and definitions

Each of these components requires a distinguishing style which will make its status readily apparent to the reader. Each will be discussed in the following sections.

Title page

The title page gives the name and number of the unit and the name of the author, and any additional information such as longer sub-headings.

Name of unit

Subtitle or further description of the unit

Unit number

Name of the author of the unit

**Research methods:
An introduction**

**A guide to the theory, practice and ethics
of research methods**

ABC 1234

Bernie Brown
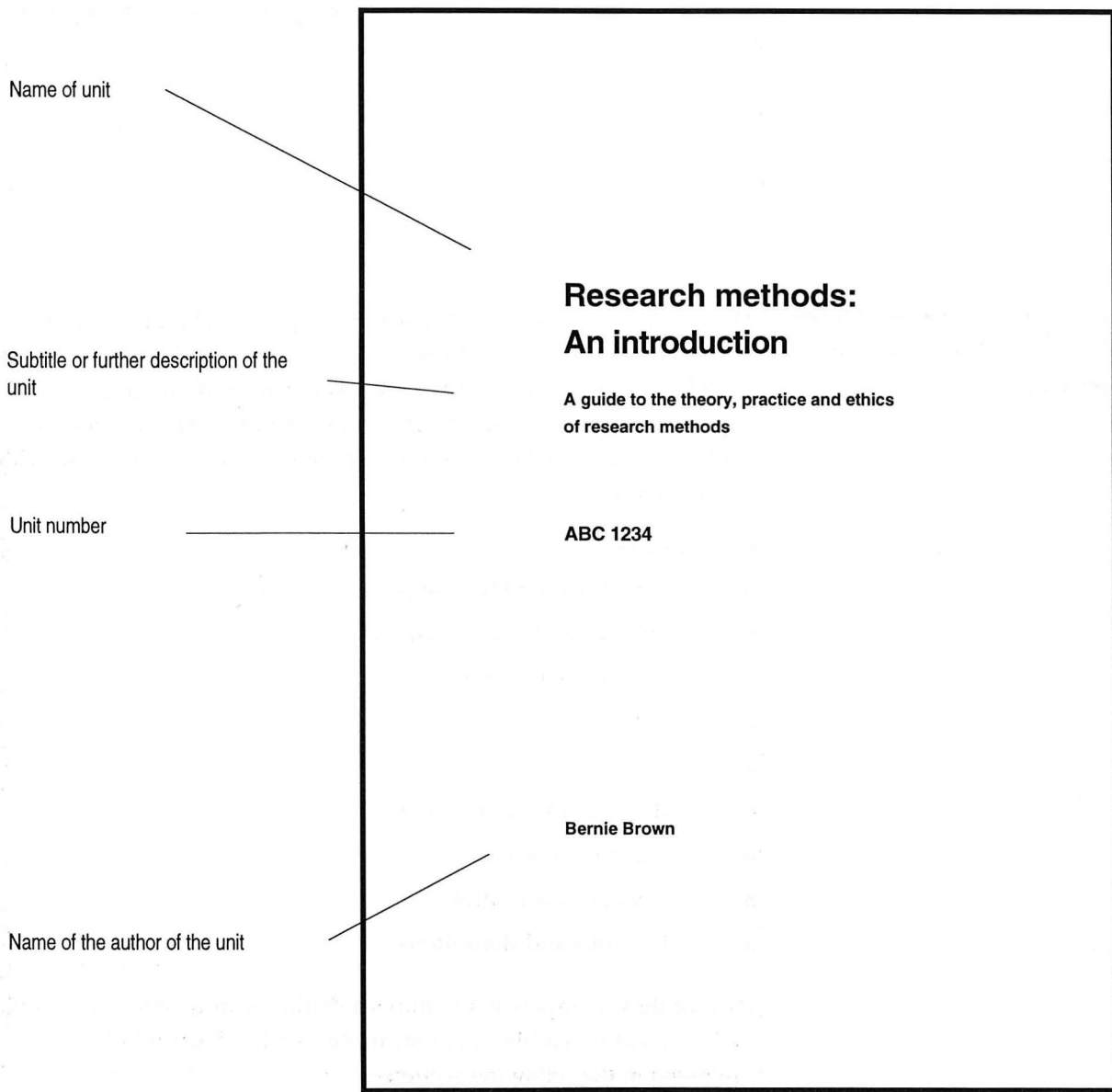
Other identifying information could also be placed on this page such as the University logo, department information and course details.

Reverse of title page

Information presented on the reverse of the title page includes publication details such as the year of the edition; the copyright details; the names of the author(s), instructional designer and desktop publisher; referencing data such as the operating document number, dates of revisions and the keyboarder identification.

Name of unit and year of edition

Research methods: An introduction
1996 Edition

Name of author(s)

Author:
Bernie Brown

Name of instructional designer(s)

Instructional Designer:
Louise Johnson

Desktop Publisher
John Carr

Name of desktop publisher(s)

Referencing data

exstg.doc/1995/update 1996

© Edith Cowan University, 1996

Copyright symbol and owner

Contents page for the guide

The contents page lists the main sections of the Guide, including any that appear before the contents page. The contents page always appears on the right-hand page. The reverse of the contents page is usually blank.

Helvetica 12 pt, bold

Helvetica 11 pt, not bold

Contents

Preface and foreword

A preface is an explanatory passage written by the author to the learner or reader. It can include explanations on the setting out or approach of the document and also include acknowledgments. The author's name appears at the end.

A preface is always placed on a right hand page (odd numbered). The reverse of the preface page may include the remainder of the preface, or it is left blank. The preface is placed after the Contents page, and before the main body of the book.

Note that a Guide may also, more rarely, have a foreword. This is usually a letter or introduction written by someone other than the author, who may be an eminent person in the field. A foreword is placed on a right hand page after the title pages and before the Contents page.

Chapters

Each chapter or section of the text begins on a right-hand page. There is no separate title page at the start of a chapter—the major heading and number appear at the top of the page. Sections within chapters follow on and do not start on a separate page.

Document layout

The dialogue box on a word processor for the document layout would include the following information. (This dialogue box is taken from Microsoft Word 6.)

```
════════════════ Document Layout ════════════════

 ┌─ Margins ──────────┬──── Layout ─────────┐
 │                                           │
 │  Top:     [2.8 cm]⬍ [At Least ▼]  Left:  [5 cm]⬍      ┌─────────┐
 │  Bottom:  [1.4 cm]⬍ [At Least ▼]  Right: [1.5 cm]⬍    │   OK    │
 │                              ┌─Preview─               └─────────┘
 │  Gutter:  [1 cm]⬍                                     [ Cancel  ]
 │                                                       [Default...]
 │  ┌─From Edge─                                         [  Help   ]
 │  Header: [1.25 cm]⬍                                   ☐ Mirror
 │  Footer: [1.1 cm]⬍                                      Margins
 │
 │  Apply To:
 │  [Whole Document        ▼]                            [Page Setup...]
 └───────────────────────────────────────────┘
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Layout

A suggested layout of the page is as follows:

Gutter: 1 cm

Left margin: 5 cm

Right margin: 1.5 cm

Top margin: 2.8 cm

Note than headings are
indented minus 3.5 cm

Bottom margin: 1.4 cm

M O D U L E 3

The ethics of research

Many affronts to human dignity have been made in the name of research.

The medical experiments conducted by Nazi German doctors in concentration camps during World War II alerted researchers to the previously neglected rights of research participants, and codes of ethics were formulated. As a result, questionable practices are no longer endorsed, and research subjects must provide not only their consent to participate in the research, but also their informed consent.

Objectives

After completing this section you should be able to:

* Describe informed consent.
* Discuss the problems encountered in translating informed consent into firm guidelines for research practice.
* Examine the ethical considerations of research studies.

Informed consent

In research, the subject must be made aware of the purposes, procedures and risks of the experiment or research if true informed consent is to be given. Subjects must know the duration of the study, the data gathering techniques to be used and the possible consequences of the research. They must not be coerced into agreeing to take part in the research, and know that they have the option of refusing to participate or terminating their involvement in the research at any time.

The notion of informed consent has been extended in recent years to incorporate the ethics which guide the particular research. The subject should be assured that confidential information would not be misused, trusted communications would not be misrepresented, informants would not be identified if this would prove embarrassing, and the civil rights of subjects would be recognised. Du Toit (1980) also makes the point that consent to take part in research is not always informed consent. He gives the example of the assumption that the return of a questionnaire implies consent.

He questions this assumption, as the respondent has not necessarily been informed of the purpose of the research.
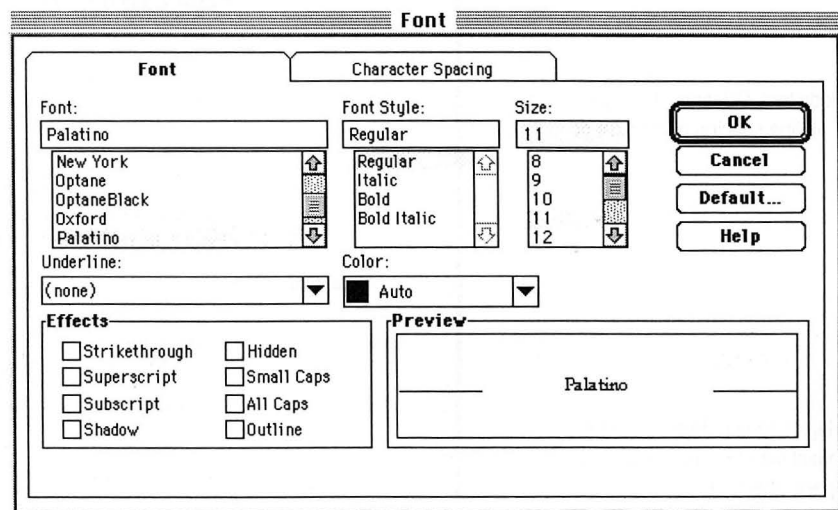
Typeface (font)

The style suggested here is a very simple one. It uses only two commonly available fonts: Palatino for the text and Helvetica for the headings. Palatino is a serif font, which means it has little strokes at the end of each letter form. Serif fonts are generally easier to read in long passages, so a serif font is ideal for general text.

This is an example of Palatino typeface.

Helvetica is a sans serif font. Such fonts are useful for headings as they provide more legible text and contrast well with the serif text fonts.
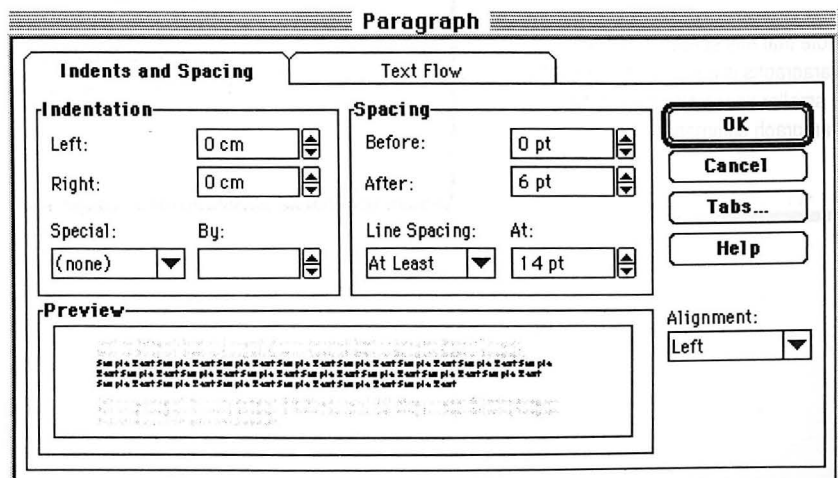
This is an example of Helvetica typeface.

The font dialogue box would appear as below:

```
═══════════════════════ Font ═══════════════════════
┌───────────────┬─────────────────────────────────┐
│     Font      │      Character Spacing           │
├───────────────┴─────────────────────────────────┤
│ Font:            Font Style:       Size:          │
│ ┌───────────┐   ┌──────────┐    ┌────┐  ┌──────┐ │
│ │Palatino   │   │Regular   │    │11  │  │  OK  │ │
│ ├───────────┤   ├──────────┤    ├────┤  └──────┘ │
│ │New York  ⇧│   │Regular  ⇧│    │8  ⇧│  ┌──────┐ │
│ │Optane     │   │Italic    │    │9   │  │Cancel│ │
│ │OptaneBlack│   │Bold      │    │10  │  └──────┘ │
│ │Oxford     │   │Bold Italic│   │11  │  ┌───────┐│
│ │Palatino  ⇩│   │         ⇩│    │12 ⇩│  │Default.││
│ └───────────┘   └──────────┘    └────┘  └───────┘│
│ Underline:       Color:                 ┌──────┐ │
│ ┌──────────▼┐   ┌■ Auto    ▼┐           │ Help │ │
│ │(none)     │   └───────────┘           └──────┘ │
│ ┌Effects────────────────┐ ┌Preview──────────────┐│
│ │☐Strikethrough ☐Hidden │ │                     ││
│ │☐Superscript ☐Small Caps│ │      Palatino      ││
│ │☐Subscript   ☐All Caps │ │                     ││
│ │☐Shadow      ☐Outline  │ │                     ││
│ └───────────────────────┘ └─────────────────────┘│
└──────────────────────────────────────────────────┘
```

Line spacing

Line spacing is frequently set at 120% of typeface size, although this figure can vary according to the column width and the purpose of the text. The recommended line spacing for the sample unit in 11 pt text is at least 14 pt. The paragraph dialogue box would appear as below:

```
═══════════════════════ Paragraph ═══════════════════
┌──────────────────────┬───────────────────────────┐
│ Indents and Spacing  │      Text Flow            │
├──────────────────────┴───────────────────────────┤
│ ┌Indentation────────┐ ┌Spacing─────────┐ ┌──────┐│
│ │ Left:   ┌0 cm  ⬍┐ │ │Before: ┌0 pt ⬍┐│ │  OK  ││
│ │         └───────┘ │ │        └──────┘│ └──────┘│
│ │ Right:  ┌0 cm  ⬍┐ │ │After:  ┌6 pt ⬍┐│ ┌──────┐│
│ │         └───────┘ │ │        └──────┘│ │Cancel││
│ │ Special:  By:     │ │Line Spacing: At:│ └──────┘│
│ │ ┌(none)▼┐┌─────⬍┐ │ │┌At Least▼┐┌14pt⬍┐│┌─────┐│
│ │ └───────┘└──────┘ │ │└─────────┘└────┘ ││Tabs.││
│ └───────────────────┘ └────────────────┘ └─────┘ │
│ ┌Preview──────────────────────────┐    ┌────────┐│
│ │                                 │    │ Help   ││
│ │                                 │    └────────┘│
│ │                                 │  Alignment:  │
│ │                                 │  ┌Left    ▼┐ │
│ └─────────────────────────────────┘  └─────────┘ │
└──────────────────────────────────────────────────┘
```

Styles and spacing: Page 1

The following pages give suggested type styles and spacing for this simple document design.

Body text: Palatino 11 pt, space after 6 pt, line spacing at least 14 pt

Major heading: Helvetica 14 pt, bold, indent left -3.5, space before 12 pt, space after 6 pt

Note that this space between the paragraphs is not an extra return. It is a smaller space attached to the paragraph command.

M O D U L E 3

The ethics of research

Many affronts to human dignity have been made in the name of research.

The medical experiments conducted by Nazi German doctors in concentration camps during World War II alerted researchers to the previously neglected rights of research participants, and codes of ethics were formulated. As a result, questionable practices are no longer endorsed, and research subjects must provide not only their consent to participate in the research, but also their informed consent.

Objectives

After completing this section you should be able to:

- Describe informed consent.
- Discuss the problems encountered in translating informed consent into firm guidelines for research practice.
- Examine the ethical considerations of research studies.

Informed consent

In research, the subject must be made aware of the purposes, procedures and risks of the experiment or research if true informed consent is to be given. Subjects must know the duration of the study, the data gathering techniques to be used and the possible consequences of the research. They must not be coerced into agreeing to take part in the research, and know that they have the option of refusing to participate or terminating their involvement in the research at any time.

The notion of informed consent has been extended in recent years to incorporate the ethics which guide the particular research. The subject should be assured that confidential information would not be misused, trusted communications would not be misrepresented, informants would not be identified if this would prove embarrassing, and the civil rights of subjects would be recognised. Du Toit (1980) also makes the point that consent to take part in research is not always informed consent. He gives the example of the assumption that the return of a questionnaire implies consent.

He questions this assumption, as the respondent has not necessarily been informed of the purpose of the research.

Styles and spacing:
Page 2

Activity text is exactly the same as the Body text for simplicity, but it is separated from the text by lines.

The line is a blank paragraph with a top border, space before 10 pt, space after 12 pt.

Minor heading: Helvetica 12 pt, bold, space before 10 pt, space after 4 pt

Reading

Read Chapter 15 of your text book: Judd, Smith, & Kidder (1991): *Research methods in social relations* (6th ed.).

This is a good general reference on the ethical implications of research. It discusses questionable practices involving research participants, and the researcher's responsibility to the participants at the conclusion of the research.

Difficulties in implementing informed consent

Many research designs are such that it would be impossible to provide for informed consent of participants. For example, if a sociologist was observing crowd behaviour at a football match, it would be absurd to announce to the crowd that a sociologist was present making observations, and to explain the purpose and method of the research.

It has been argued that any activities occurring in a public place should be considered open to systematic observation for research purposes, just as they are to unsystematic observation by curious bystanders.

Reading

Before you proceed with this section, read the American Psychological Association's position on ethical research: 'Ethical principles in the conduct of research into human participants' in your Reader.

These principles are used by many researchers in psychology and other behavioural and social sciences, and are revised regularly.

The two major positions of researchers

Two major positions held by social scientists have been identified.

Position 1: Deception is inadmissible

The first is that deception is an inadmissible affront to individual autonomy and self-respect, and is inconsistent with the scientific objective of discovering the truth.

Headings

Headings are printed in a contrasting typeface to the text: Helvetica. There are three suggested levels of headings: chapter headings and two levels within the text (see following examples).

The paragraph and font information for the first level heading in text is as follows:

The paragraph and font information for the second level heading in text is as follows:

Try to keep heading levels to a minimum, but if required, further levels can be introduced, using bold or italics.

Ensure a consistent use of headings throughout the unit. For example, if only half the chapters have headings, insert headings throughout the remainder to facilitate consistent organisation and enable students to locate information more readily.

Activities

Activities are separated from the text by parallel lines. They may be signalled with icons or symbols to denote the nature of the activity or by using the word *Activity* or *Exercise*. Activities are enclosed within the text area.

Activities can be numbered consecutively throughout the Guide, or they can be given two-part numbers according to the chapter, for example, 4.1, 2.5.

Activities space can extend out to the full width within margins to accommodate grids, matrices and columns if desired. Allow space for students to write, either with dotted or solid lines, tables or white space.

Lists and points

Lists can be numbered or bulleted. Bullets (or dots) are generally sufficient but numbers may be necessary when a sequence is involved, or when students are referred to a particular number at a later point in the text. Arabic numbers with a full stop are preferred. Lists are best flush with the margin rather than indented.

Text should be indented 5-10 mm from the bullets using hanging indents.

As a general rule, bulleted and numbered points always start with a capital letter and, if the point is a complete sentence, finish with a full stop.

Enrichment material, extracts and articles

A large block of additional text which may constitute material from another source, explanatory material, a questionnaire, an example and so on, is boxed to separate it from the text, and printed in 11 point Helvetica to provide contrast.

The box may occupy the full width of the page (so that the left side aligns with the heading indent) and headings are usually centred sub-headings. It should start or finish at the top or bottom of the page, preferably the page following its mention in the text.

Objectives

There are two alternative ways of presenting objectives:

- As part of the introduction to the chapter. In this case they are incorporated into the text and require no special layout.
- Separated from the text with a heading, with points indented as for a list.

Quotes

Quotes longer than 40 words are indented 10 mm from the left. No quotation marks are used. Quotes are set in the same point size as the text. Quotes shorter than 40 words use single quotation marks and follow on in the text. They are not indented.

Glossaries and definitions

A glossary of commonly encountered words may be provided at the end of the Guide. Words are printed in bold with definitions in normal text following. Alternatively, definitions can be provided in the left-hand margin area adjacent to the word's first occurrence in the text. In this option, the word and definition can be printed in 9 point Helvetica in the margin.

Tables, graphs and figures, cartoons, illustrations

Tables, graphs and figures can occupy the usual text area or be extended to the left into the heading area. They can be numbered consecutively or incorporate the chapter number, for example, Figure 2.1. The name of the table, graph or figure is printed in Helvetica bold 10 pt. Text in tables, graphs and figures may be a point or two smaller to accommodate columns or to improve spacing and general appearance. As in the general text, column headings are in Helvetica and text in the cells in Palatino.

Cartoons and illustrations can use the text width, or extend to the left margin, whichever is preferred.

Answers or feedback on activities

Answers to activities may be presented in a section at the end of the chapter or following on in the text. If comments and feedback follow on, no special layout is required—it is simply incorporated into the body of the text. If answers are to be provided separately they are placed at the end of the chapter, after the references. They are numbered and named in accordance with the number given to the activity.

References

References or Further Reading lists are provided at the end of each chapter or at the end of the unit as a separate section. They do not need to be numbered unless this is part of the referencing system.

The second and remaining lines of each reference should be indented 5mm. For example:

Fleming, M. (1963). What is a good film? *Journal of the University Film Producers Association*, 15, 8-9.

Klatzky, R.L. (1975). *Human memory: Structures and processes*. San Francisco: Freeman.

CHAPTER 10

Page layouts for the Plan

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The cover

The cover design is often the same for all three documents of the unit, the Plan, the Guide and the Reader, but the relevant document name is used as appropriate.

Some differentiation of documents with colour may be appropriate. For example, colours may vary to indicate editions, or various shades of the one colour may be used to differentiate the cover of the Plan, Guide and Reader. The cover may be individually designed with illustrations and graphics to suit the unit. The important points to note about the cover are:

■ It is preferable for units to have a descriptive title, as well as (or instead of) a subject-number title. A descriptive title is more meaningful for students and helps to make the document instantly recognisable. When appropriate, use a descriptive title as your main heading on the cover for example, Romantic Literature, not Literature 201. Use Literature 201 as your sub-heading.

■ Feature the word Plan, Guide or Reader.

Because the Plan contains all the elements of the unit that need constant revision, is it generally revised and reprinted more frequently than the Guide. Consequently, the cover is usually printed on paper, not cardboard, and the pages are stapled, not bound.

Copyright information and document reference details can be printed on the reverse of the cover.

Contents page for the plan

The contents page is an important component of the Plan because it allows students to quickly access the details they are seeking. A sample contents page is printed below.

Helvetica 12 pt, not bold

Contents

Page layout and styles

Text, layout and styles for the Plan are normally the same as those selected for the Guide (see Chapter 9).

CHAPTER 11

Page layouts for the Reader

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Purpose of the reader

The Reader contains many or all of the articles and chapters students are directed to read in the Guide.

All articles and documents are reproduced from the original or a photocopy—they are generally not retyped. In order to retain the authenticity of the document for citing or quoting, the original page numbers are retained. To help students find their way in the Reader it is useful to provide a contents page and a cover sheet for each article.

It is important to provide students with full details of the source of each item, to enable them to follow up and locate references.

The cover

The cover of the Reader is the same design as the Plan and Guide, except for the word Reader and possibly the shade of the colour used.

Contents page

Information presented on the contents page is simply a full citation of each article. The order relates to the order the articles are referred to in the Guide. Alternatively, you may place the articles in alphabetical order by author. This is particularly useful if you refer students to the same article from several points in the Guide.

Contents page for the reader

The contents page for the reader is a list of articles and chapters and other resources, which generally refers to each reading in the same way it is referred to in the guide, and in the same order.
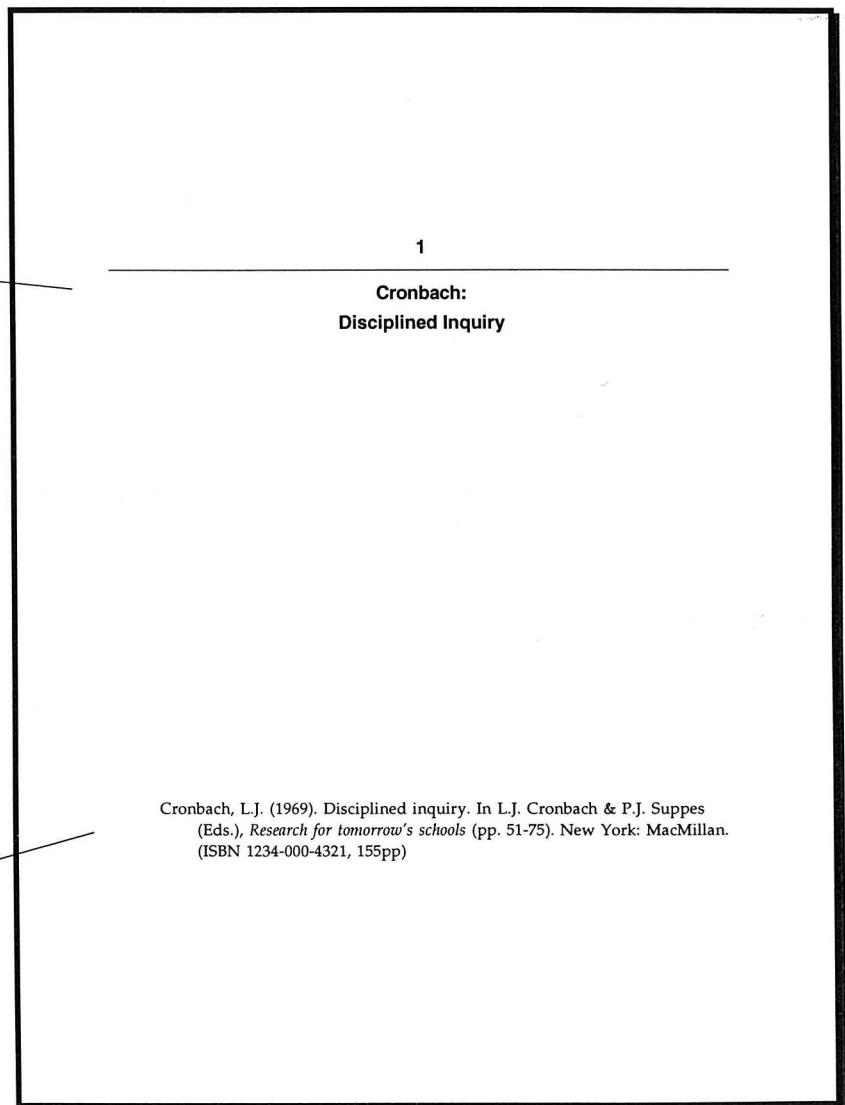
Helvetica 12 pt, not bold

Contents

(1)   Cronbach, L.J. (1969). Disciplined inquiry. In L.J. Cronbach & P.J. Suppes (Eds.), *Research for tomorrow's schools* (pp. 51-75). New York: MacMillan.

(2)   Nisbet, R.D. (1996). The impact of research: A crisis of confidence. *Evaluation Quarterly*, 76(5), 22-34.

(3)   American Psychological Association. (1993). Ethical principles in the conduct of research into human participants. *American Psychologist*, 57(1), 33–51.

(4)   Gardiner, B.J., & Hitchcock, T.M. (1992). Fieldwork and the nature of research. *Anthropology Today*, 66(3), 21-28.

(5)   Robinson, M.T. (1995). Covert methods. *Journal of Ethical Research*, 44(2), 57-68.

(6)   Chee, Y.L. (1994). Some thoughts on the consequences of research. *Evaluation Quarterly*, 74(4), 41-48.

(7)   Spencer, B.D., & Harrison, F.V. (1993). An interpretive study of rules and regulations in the fire brigade. *Fire Brigade Quarterly*, 21(6), 43-54.

(8)   Johnson, L.M., & Carr, E.M. (1991). Systemic and analytic research. Education and Researching, 55(7), 33-44.

Cover sheet

The cover sheet for each reading normally includes the full citation of the reference, the number of the document and the author and title. Other information such as the ISBN number for a book and the total number of pages may also be given here. The cover sheet can be printed on coloured paper to indicate at a glance that it is at the start of a new article.

Number, title and author are centred Helvetica 14 pt

1

Cronbach:
Disciplined Inquiry

The full reference is given here in correct bibliographic style, in Palatino 11 point text.

Cronbach, L.J. (1969). Disciplined inquiry. In L.J. Cronbach & P.J. Suppes (Eds.), *Research for tomorrow's schools* (pp. 51-75). New York: MacMillan. (ISBN 1234-000-4321, 155pp)

Quality of the master

It is important to provide the best possible copy of articles to be included in the Reader. Generally, the master copy is made by trimming the edges of the copy you provide and centring it on the page. It is then glued or waxed into position.

If you can, give a full sized copy of the original rather than one that has been reduced down to fit two pages on one A4 sheet. The use of these reduced copies as masters means that often the finished product is almost illegible.

REFERENCES

References and further reading

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The following list gives a few references which may be useful starting points if you are interested in reading more widely in the area. The references have been chosen because they are either important references in the field, or because they have been written for University lecturers, and have practical application.

Generally the first reference has been annotated in each section, and the remainder listed for further reading.

Instructional design: Systems approach

Gagné, R.M., Briggs, L.J., & Wager, W.W. (1992). *Principles of instructional design* (4th ed.). Orlando, FL: Harcourt, Brace, Jovanovich.

> The Gagné-Briggs model of instructional design represents a systems approach to the design of instructional sequences. This book includes a discussion and examples of their *Stages in designing instructional systems* and their *Events of instruction.*

Further reading

Dick, W., & Carey, L. (1990). *The systematic design of instruction* (3rd. ed.).Glenview, IL: Scott, Foresman and Company.

Romiszowski, A.J. (1981). *Designing instructional systems: Decision making in course planning and curriculum design.* London: Kogan Page.

Rowntree, D. (1994). *Preparing materials for open, distance and flexible learning.* London: Kogan Page.

West, C.K., Farmer, J.A., & Wolff, P.M. (1991). *Instructional design: Implications from cognitive science*. Englewood Cliffs, NJ: Prentice Hall.

Lockwood, F. (1992). *Activities in self-instructional texts*. London: Kogan Page.

Constructivist learning environments

Duffy, T.M., Lowyck, J., & Jonassen, D.H. (Eds.). (1993). *Designing environments for constructive learning*. Berlin: Springer-Verlag.

This edited book is an excellent starting point for anyone interested in designing constructivist learning environments using any medium.

Further reading

Bednar, A.K., Cunningham, D.J., Duffy, T.M., & Perry, J.D. (1991). Theory into practice: How do we link? In G.J. Anglin (Ed.), *Instructional technology: Past, present and future*. Englewood CO: Libraries Unlimited.

Brown, J.S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational researcher*, 18(1), 32-42.

Chalmers, D., & Fuller, R. (1996). *Teaching for learning at university*. London: Kogan Page.

Jonassen, D. (1994). Towards a constructivist design model. *Educational Technology*, 34(4), 34-37.

Lebow, D. (1993). Constructivist values for instructional systems design: Five principles toward a new mindset. *Educational Technology Research and Development*, 41(3), 4-16.

Desktop publishing

Wynn, S., & Herrington, J. (1995). *The page in print: Designing better documents with desktop publishing*. Perth: ECU.

This book makes the point that the instructional design of your unit and the layout of the text on the page work hand in hand to maximise the impact and effectiveness of the instructional material for the student. It gives some principles and guidelines for designing the layout of effective printed materials.

Further reading

Green, C. (1993). *The desktop publisher's idea book*. New York: Bantam.

Parker, R.C. (1990). *Looking good in print: A guide to basic design in desktop publishing* (2nd ed.). Chapel Hill, NC: Ventana Press.

Williams, R. (1994). *The non-designers design book: Design and typographic principles for the visual novice*. Berkeley, Ca: Peachpit Press.

Distance education technologies

Oliver, R., & Grant, M. (1994). *Distance education technologies: A review of instructional technologies for distance education and open learning*. Perth: ECU.

This book presents an overview of distance education technologies such as television, telematics, videoconferencing, and print. It describes levels of learner independence and interactivity, the strengths and weaknesses of the medium and the equipment and costs associated with production. The information is presented in a way that makes comparisons of candidate media possible.

Further reading

Herrmann, A. (1993). What can I use in my teaching and when? In J. Herrington, (Ed.), *Using television and videoconferencing*. Perth: WADEC.

Kozma, R. (1991). Learning with media. *Review of Educational Research*, 61(2),179-211.

Romiszowski, A.J. (1984). *The selection and use of instructional media*. London: Kogan Page.

Television and videoconferencing

Herrington, J. (Ed.).(1993). *Using television and videoconferencing*. Perth: WADEC.

This book looks at television, video and videoconferencing in a learning context. It gives some ideas on the best uses of each medium (what it's good at), and the choices you need to make about using the medium in a variety of contexts such as on-campus classes, distance education and small group work.

Further reading

Catchpole, M. (1993). Interactive media: The bridge between distance and classroom education. In T. Nunan (Ed.). *Distance education futures* (pp. 37-56). Adelaide: University of South Australia.

Multimedia

Oliver, R., & Herrington, J. (1995). Making the most of the media in multimedia. In L. Summers (Ed.) *A focus on learning: Proceedings of Teaching Learning Forum, 95* (pp. 194-198). Perth: ECU.

This article looks at the unique attributes of interactive multimedia and describes some of the strategies that can be used to increase the effectiveness of learning materials in this format.

Further reading

Park, I., & Hannafin, M.J. (1993). Empirically-based guidelines for the design of interactive multimedia. *Educational Technology Research and Design*, 41(3), 63-85.

Herrington, J. & Oliver, R. (1995). Critical characteristics of situated learning: Implications for the instructional design of multimedia. In J. Pearce & A. Ellis (Eds.). *Learning with technology* (pp. 253-262). Parkville, Vic: University of Melbourne.

McNeil, B.J., & Nelson, K.R. (1991). Meta-analysis of interactive video instruction: A 10 year review of achievement effects. *Journal of Computer-Based Instruction*, 18(1), 1-6.

Liao, Y.K. (1992). Effects of computer-assisted instruction on cognitive outcomes: A meta-analysis. *Journal of Research on Computing in Education*, 24(3), 367-380.

Style guidelines

Australian Government Publishing Service. (1994). *Style manual for authors, editors and printers* (5th ed.). Canberra: AGPS Press.

American Psychological Association. (1994). *Publication manual of the American Psychological Association* (4th ed.). Washington DC: Author.