An interactive approach to writing essays and research reports in psychology

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An interactive approach to writing essays and research reports in psychology

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Lorelle J. Burton

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ABOUT THE AUTHOR

Lorelle Burton

Lorelle Burton is Professor of Psychology in the School of Psychology and Counselling at the University of Southern Queensland (USQ) and Associate Dean (Students) in the Faculty of Health, Engineering and Sciences at USQ. She currently leads the Community Futures research program in the Institute for Resilient Regions at USQ and has extensive experience as principal supervisor of higher degree research and Honours students. Lorelle has received multiple teaching excellence awards, including the 2001 USQ Award for Teaching Excellence; the 2004 Pearson Education and APS Early Career Teaching Award; an inaugural 2006 Carrick Citation for "delivering nationally recognised teaching practices and resources that inspire first-year students to actively engage in learning processes and develop critical thinking skills"; and an individual Carrick Australian Award for Teaching Excellence in Social Sciences. More recently, she was bestowed the prestigious 2016 APS Distinguished Contribution to Psychological Education Award. Lorelle has led national research projects in learning and teaching, has served on national committees and boards, and has been an invited assessor for the national awards and grants. Lorelle has authored multiple psychology textbooks, including the market-leading first-year Australian psychology textbook. She also recently co-edited a book on the elements of applied psychological practice to help psychology graduates prepare for the National Psychology Exam. Lorelle's current research extends beyond academia to promote community-based learning and well-being. She works collaboratively with marginalised groups, including youth and older people, and her team has recently developed an Indigenous cultural heritage trail in partnership with Aboriginal communities in south-west Queensland. The Community Futures research seeks people's own stories as a powerful way to strengthen communities and find new paths to support them into the future.

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CHAPTER 1

Where to begin

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

- **1.1** apply the APA style in your writing
- **1.2** understand the difference between a research essay and a research report
- **1.3** ensure the information you find is relevant
- **1.4** review the literature to develop your argument
- **1.5** understand how to avoid plagiarism.

1.1 Introduction to APA style

LEARNING OBJECTIVE 1.1 Apply the APA style in your writing.

Everyone uses different "languages" for different activities. Visiting a foreign country will often mean you must speak in a different language from the one you normally use. But even in your everyday life you will vary your vocabulary in different circumstances. For example, the way you would speak in front of your grandparents is different from the way you would speak to young children. The language you would use while watching a game of cricket differs from that you would use in a formal debate. We all learn to use language appropriate to the occasion.

In the same way, the academic study of psychology has its own language. Unlike the colloquial "languages" you use in daily life, the one you need to use in studying psychology has precise and detailed requirements that you must follow. These requirements are contained in the *Publication Manual of the American Psychological Association* (APA). This language is commonly referred to as **APA style**.

APA style traces its origins back to 1928, when editors from a group of psychological and anthropological journals developed a seven-page "standard of procedures" to guide authors in the presentation of their work. This guide, now in its sixth edition, has been vastly expanded in the intervening years to provide a comprehensive manual of instructions that is accepted worldwide as the standard for writing in the discipline of psychology.

APA style covers every aspect of writing and presentation including format, structure, punctuation, word order, spelling, grammar, writing style, capitalisation, abbreviations, and referencing. Standardisation of these requirements provides benefits for everyone associated with the discipline of psychology. The main benefit is consistency. When everyone uses the same formatting and style conventions, it is much easier for the reader to understand what has been written and compare it with the work of others. No matter where the study originated, the written work will be presented in a style that is universally recognised. Imagine the confusion if every writer decided to use a different format, different abbreviations, different spellings, and a different order. The result would be chaos.

The APA style requirements apply to you, as a student in psychology, in the same way they apply to all other writers involved in the discipline at an academic level. Learning a language that you have never come across before may seem daunting, but do not be discouraged. At an introductory level, you are not expected to be an expert on all its nuances. The important thing is that you learn to apply the key elements of APA style. That is what this book is all about.

As a student setting out to write your first **essay** or **research report** in psychology, you may indeed be intimidated by the 270-plus pages of the *APA Publication Manual*. No one expects you to memorise all 270 pages of the *Publication Manual*. Rather, this book aims to provide a hands-on, interactive approach to learning the key elements that you will need to apply when writing essays and research reports in the discipline of psychology. It will summarise the most important points of style and presentation and allow you to practise them in a user-friendly way.

This book recognises that the more you practise APA style requirements, the easier they become to learn. The many learning exercises throughout the book will help you master the skills needed for APA formatting. It would be impossible to cover every aspect of the APA manual. Instead, the focus is on the requirements that are most important to the writing you will be doing.

Learning to use the correct APA style is also an easy way to improve your grades. Not only will sticking to APA requirements in areas such as grammar and punctuation improve the flow of your writing, but many lecturers will actually mark your paper down if you stray from APA style. Using this book could be the key to a higher grade point average. Chapter 2 covers the mechanics of APA style and provides tips for writing clearly and precisely. You will learn how to sharpen your critical thinking skills in Chapter 3.

Why research is reported

The body of knowledge in the field of psychology, as in all academic disciplines, continues to grow as researchers carry out more and more studies. The way researchers convey the results of the work they

have done is by publishing them in the form of an essay or research report. Certain accepted conventions govern the format of these reporting mechanisms. Learning these conventions is vital if you intend to pursue postgraduate studies. They are forms that you will be expected to follow, so you will have to learn them at some stage. But even if you do not go on to further study, learning APA style will help you understand more quickly what the author of an essay or research report is trying to say.

1.2 Essays versus research reports

LEARNING OBJECTIVE 1.2 Understand the difference between a research essay and a research report.

The two most common types of work you will undertake as an undergraduate student are the essay and the research report. These two models are similar in many ways, but there is one crucial difference between them. The essay is based on a review of past literature and what you can conclude from that—you have no data of your own to report. A research report also reviews past literature but is primarily concerned with reporting the results of research that you have carried out.

In the 4th edition of this book, we distinguish between quantitative and qualitative research. **Quantitative research** uses measurable data to quantify attitudes, opinions, and/or behaviours and generalises results from a large, representative sample population to the target population. In quantitative research, data are analysed through numerical comparisons and statistical inferences to formulate facts about, and uncover patterns in, various phenomena. Quantitative data collection methods include various forms of surveys, interviews, longitudinal or cross-sectional studies, experimental studies, and other systematic observations.

Qualitative research is more exploratory than quantitative research, and involves delving deeper into the research question to gain an understanding of underlying reasons, opinions, and motivations of human behaviour. Qualitative research provides insights into the problem from a research participant's perspective. Qualitative data collection methods include interviews and focus groups, and data may also be collected through participant observations. The sample size is typically small in qualitative research and data are analysed by themes from descriptions by participants.

In this book, you will learn how to format research reports in APA style for both quantitative and qualitative research.

The following sections will look at the formatting and content requirements for both an essay and a research report, including both a quantitative research report and a qualitative research report.

Structure of an essay

The aim of an essay is to examine the literature on a particular topic, critically evaluate the findings, and reach some conclusions. You may argue a particular point of view based on the evidence that you have considered in the available research. An essay does not require you to carry out any original research or studies of your own. It is similar to the review articles you will see published in psychology journals.

An essay is not normally divided into separate sections; the text simply flows from start to finish without headings or subheadings to separate different sections. However, this does not mean that essays do not contain a number of different elements. A standard essay pattern includes an introduction, a body, and a conclusion. The introduction, one or two paragraphs long, sets the scene for what will follow; the body is where past research is reviewed and critically examined; and the conclusion is where a particular argument is advanced.

An essay also requires a title page, an **abstract**, and a **reference list**. (The exact content and formatting requirements for an essay are outlined in more detail in Chapter 4.)

Sections of a research report

The main aim of a research report is to disseminate to others the results of a study that you have conducted. This will require you to review past literature and critically evaluate key studies on the topic, but the primary aim is to describe what you did and found in your own research.

A research report has a set structure. This involves a number of different sections, divided by subheadings, each of which has particular format and content requirements. This structure must be followed. The research report describes original work that contributes to the body of knowledge on the topic. It needs to adhere to the same conventions that all other researchers use when reporting their results.

A quantitative research report contains the following main sections:

- Introduction—where you critically evaluate past research and explain why you undertook the study and what you expected to find
- Method—where you describe how you conducted the study
- Results—where you report what you found
- Discussion—where you outline the conclusions you can draw from these findings.

A qualitative research report contains the same main sections as in a quantitative research report, with the exception that you typically combine the Results and Discussion sections. Thus the analysis and interpretation of qualitative data is reported in the same one section of the report.

Like an essay, both quantitative and qualitative research reports also require a title page, an abstract, and a reference list. In some cases, they may also include appendices. (The exact content and formatting requirements for each section of a quantitative research report and qualitative research report are outlined in more detail in Chapters 5 and 6, respectively.)

1.3 Finding the right information

LEARNING OBJECTIVE 1.3 Ensure the information you find is relevant.

It takes a great deal of time to write essays and research reports in psychology. Before you even put pen to paper (or hands to keyboard!) you need to first find the appropriate information and then review the literature. Make sure you pace your study, allowing sufficient time to devote to the actual writing-up process.

The first step in preparing an essay or research report is to clarify exactly what you want to talk about. For an essay, this means carefully examining the topic and making sure you understand exactly what you are being asked to do. This issue is covered in more detail in Chapter 4. For a research report, this means being very clear on your research aims and what you expect to find through your study. This is covered in more detail in Chapter 5. If you are unclear on either the essay topic or your exact research aims, make sure you ask for advice. This might simply mean talking to your lecturer or tutor. Or you might try an online discussion group, where you can post a message and receive feedback from fellow students or from academic staff.

The next step is to thoroughly research the literature relevant to your topic. There are a few general rules you should follow in surveying past research. The more you read on your topic, the greater your depth of knowledge will become and the more informed you will be when assessing it. You should consult a wide range of sources when looking for relevant studies. Check out books, journals, other **peer-reviewed articles**, the internet, unpublished academic papers, conference proceedings, newspapers, and any other sources that might be relevant. This will ensure that you locate the widest possible range of views on the topic. Also, make sure you compare older and newer sources to track developments over time. Earlier works may present pivotal findings on a particular topic, but newer works may have modified or supplemented those findings. As a general rule of thumb, you should consult sources published in the past five years as well as earlier works on the topic. You need to cover the total picture in your research.

The next sections will provide more information on how to search the literature for the most relevant material and how to review that material once you have found it.

Searching the literature

There are many ways in which students can search the literature for material most relevant to their research topic. The resources available to each student will be different, and you should take the time to learn how to get the best results from these resources.

Be sure to keep a photocopy of any material you may wish to cite in your work, noting the full referencing details. Write down the author, year published, title, and full publication details, including page numbers, of every article you collect, even if you are uncertain whether to include it in your essay or research report.

The rest of this chapter will outline how to search the literature in two ways—by using the library in the traditional way, and by using the internet. It will provide tips on how you can use these resources most effectively to save time that you can use in reviewing the literature and writing your essay or research report.

Using the library

The two main hard copy resources in a library are books and journals. You can find where these are kept by consulting the library's catalogue system. Most libraries now maintain computerised catalogues, which make it easier to locate books and journal articles. Other library resources include unpublished student theses, conference proceedings, newspapers, videos, and government reports. These resources will also be listed in the library catalogue.

Sometimes you will be looking for a particular book or journal article that is not listed in the library catalogue. You may be able to obtain it from another library through an inter-library loan. The easiest way to organise this is by talking to a library staff member at the reference desk. Do not be nervous about asking for help on this or any other concern you have about library resources. Asking for help can save you a lot of time and trouble in the long run.

It is a good idea to keep a checklist of sources that you have used. It can be quite confusing to keep track of the material you have found and the sources you still need to locate. A written record is the best way to make sure you do not waste time searching repeatedly for information you have already found.

Many libraries today subscribe to journals that can be viewed electronically through online databases. Some of these databases will enable you to access full-text versions of journal articles. This means you do not have to locate a printed copy of the journal, since the text of the article is available to you online. Other databases do not provide full-text versions, so you will need to track down a hard copy. Check whether your library subscribes to online databases that provide access to the journals you are looking for. Three useful databases that provide online access to full-text journal articles are:

- Ingenta (http://www.ingentaconnect.com)
- Science Direct (http://www.sciencedirect.com/science)
- Wiley Online Library (http://onlinelibrary.wiley.com/).

Two other extremely valuable databases are Psychological Abstracts and the Social Sciences Citation Index (SSCI).

Psychological Abstracts includes abstracts of many articles published in the field of psychology, covering a wide range of sources including journal articles, books, book chapters, technical reports, and student dissertations. It is published monthly and includes full reference details for the articles.

Psychological Abstracts is available in hard copy in most university libraries. It is also available in electronic form, which enables you to search much more quickly through the abstracts it contains. The main electronic version, called PsycINFO, provides access to abstracts of all types of publications. A slightly smaller version, called PsycARTICLES, omits dissertations and technical reports. The electronic version of this database is an extremely valuable tool that can save you considerable time and energy tracking down reference details.

The Social Sciences Citation Index (SSCI) provides a list of all works cited by authors in a wide range of publications in the social sciences field. The SSCI is printed annually, but many university libraries now have access to an electronic version of the SSCI. You can use this to discover the reference details of works related to your topic, and also to determine which works have been cited most often in a particular field of study. This can be very useful in focusing your search.

This list of resources is not exhaustive; other databases can also be useful. Check with your library staff for help in finding the right database for your topic.

Using the internet

Used properly, the internet is a powerful medium through which to locate and access information on your research topic. The internet provides quick links to data sources all over the world at the click of a mouse button. However, you need to be very selective in the way you use the internet and in the type of information you draw from it. Trawling through the mountains of information available on the World Wide Web can be time consuming, and the quality of data you end up with may not meet the rigorous standards required in academic writing.

This section will further examine methods you can use to find information on your research topic through the internet, suggest ways to evaluate the quality of the information you find on the internet, provide links to useful sites for students of psychology, and offer some general tips on how to make your search for data more effective.

Ways to find information on the internet

The internet is a vast resource with unlimited access points, so do not rely on just one or two sites when researching a topic. The rest of this section will outline three ways to locate information on the Web: through general search engines, subject directories, and the Invisible Web.

The first method is to use a general search engine. Most people with internet access will be familiar with these programs, which can be used to search for information on any topic at all. Some of the more common are:

- Google (http://www.google.com)
- Google scholar (http://scholar.google.com.au/)
- Bing (http://www.bing.com)
- Yahoo! (http://www.yahoo.com).

They work by searching the internet to find files containing key words that match those you enter in your search request. The problem with search engines is that they do not use specific criteria for choosing which sites they locate, so you may end up with a long list of often useless material.

These search engines are useful for finding information on topics of general interest but are not suitable for locating the scholarly material you need in academic research. Do not rely on these search engines in your study—there are much better alternatives.

One of these alternatives is the second way to locate information on the internet—via subject directories. Many students may not be aware of these directories, or do not use them often enough. Subject directories allow you to search for information on particular research topics within selected academic resources. They ignore all the miscellaneous, non-refereed sites accessed by general search engines and concentrate on sites that provide access only to academic-quality data. An example of a reliable subject directory is Academic Info (http://www.academicinfo.net/index.html).

The third way to find information is through the Invisible Web. This "invisible" Web is what you cannot retrieve (or "see") in the search results of a general search engine or subject directory. It provides access to searchable databases, dynamically generated pages and pages intentionally excluded from general search engines. It also includes high-powered search engines that access material not "visible" to traditional search engines. One way to find the Invisible Web is to search a subject term and the word "database" using a general search engine. For more information about the Invisible Web, access the following site:

- Finding information on the internet: A Tutorial (http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/InvisibleWeb.html).

Useful psychology sites

Many internet sites provide specific information on psychology topics. These sites include pages maintained by peak professional bodies, psychology departments of universities, academic journals that specialise in psychology, and sites created by individual psychologists. They often contain useful information and links to other resources. The following are among the best psychology sites you can use in your research:

- AmoebaWeb (http://old.vanguard.edu/psychology/amoebaweb/)
- PsychNET (http://www.psychnet-uk.com)
- Psych Web (http://www.psywww.com)
- Electronic Journals and Periodicals (http://psych.hanover.edu/Krantz/journal.html)
- Scholarly Psychology Resources on the Web (http://www.psywww.com/resource/bytopic.htm)
- Australian Psychological Society (http://www.psychology.org.au)
- American Psychological Association (http://www.apa.org).

Tips for searching the internet more effectively

Searching for information on the internet can be a time consuming and complicated process. Here are some simple tips that will help you search more effectively and find the information you seek with less hassle.

- Take care with the way you submit your search request. Make sure you read the instructions for each search engine you use—many operate in completely different ways (e.g., some are sensitive to capital letters in your search request).
- Check the accuracy of your spelling. If your first attempt does not produce satisfactory results, repeat your request using alternative spellings or key terms.
- Use several different search engines; do not rely on just one. Different search engines access different sites and produce different results, even when you submit exactly the same request.
- Refine your search request. Look at the *advanced search* tips that many search engines offer. They will often tell you how to refine your search by linking key words with Boolean operators such as AND or NOT. This will help narrow the search.
- Make sure you keep a note of those subject directories and sites you find most helpful and easy to use so you can access them quickly in future research.

Evaluating the quality of information on the internet

Not all the information you find on the internet is suitable for use in a university essay or report. The first thing you must do is apply the same critical review as you would to information found in a traditional source—that is, you need to check whether the information was generated by academic research, whether that research conformed to the highest standards of academic rigour, whether the work was published in a peer-reviewed academic forum, and when the research was carried out.

One important use of the internet is to access online versions of reputable journals. You can be sure that the data contained in these online journals meet the academic standards you require.

Information published in other online arenas may give you valuable background on your topic and help you gain a wider appreciation of the arguments that you might consider. However, unless the information meets the standards applied to peer-reviewed publications, be very cautious about the weight you place on it. Websites give people the opportunity to publish their opinions about various topics, without the backing of reputable research. You should be sceptical of data that do not result from the application of scientific methods.

A good way to assess the quality of the information you find on the internet is to use the CARS evaluation checklist developed by Harris (1997). CARS is an acronym that stands for Credibility, Accuracy, Reasonableness and Support—four key criteria that provide a simple recipe for quality control.

Credibility is all about how confident you can be that the information provided is reliable. Harris (1997) identifies the author's credentials as one important indicator. You should check whether an author has been named in the first place, as anonymity is not a good indicator of reliability. You should also check their academic qualifications, their background or experience in the field they are addressing, the organisations they represent, their position or job title, their previous publications, their reputation among peers, and whether their contact details are provided. You also need to check for evidence of quality control. It is relatively easy for people to post information on the Web that has not been assessed or reviewed by anyone else. You need to look for evidence that the information has been subject to the scrutiny of others with appropriate expertise. For instance, is the information posted on behalf of a reputable organisation? Has the information been drawn from a book or academic journal that is subject to peer review? Is it drawn from an online journal that has an editor and a peer-review process?

Accuracy is the test of how true the information is—whether it is up to date, factual, detailed, exact, and comprehensive (Harris, 1997). Ongoing research is continually adding to the body of knowledge in many subject areas, so information can quickly become obsolete. You need to be sure that the data you are accessing remains current. You also need to check that the information gives a complete view of the subject matter, rather than looking at it from a narrow perspective. The full range of views needs to be acknowledged and discussed, particularly in areas where there are definitive texts or theories that are important in this field of study. Finally, check the intended audience and purpose of the information. For example, firms may place information on the Web to try to persuade prospective purchasers to buy their goods or services. You would have far less faith in that information than you would in data drawn from an academic source that is specifically intended for scholarly use.

Reasonableness means assessing the information for fairness, objectivity, moderateness, and consistency (Harris, 1997). Check whether the information is presented in a balanced way, free from emotive or irrational arguments that advance a particular cause ahead of others. Is the stance neutral, or does the information reflect a bias or self-serving interest? Be sceptical of organisations or sites that promote their own products with one-sided information. Be sceptical, also, of apparently wild and extreme claims that seem too far-fetched to be true. Use your common sense to carry out a reality check on these statements. If they seem difficult to believe, there is probably reason to doubt them.

The final test in the CARS evaluation is **Support**, which is all about the extent to which the information presented has been backed up and corroborated. Check the sources of the information. Can they be verified? Are they published and documented? It is particularly important that the source of statistics is documented, otherwise someone could simply be fabricating the numbers (Harris, 1997). Check also that the information presented is corroborated by others. Test the information provided against other sources to see whether there is agreement, particularly where it presents contentious or surprising claims. Look also for consistency with the body of knowledge on a particular topic—that is, check whether it builds on well-known and established information in that field.

1.4 Reviewing the literature

LEARNING OBJECTIVE 1.4 Review the literature to develop your argument.

Now that you have searched the literature and found the most relevant past research, you are ready to review the articles for evidence to develop your argument.

Be realistic about how many works you can review in depth. It is impossible to comprehensively critique every source that touches on your topic. You need to work out which are the key studies you should focus most energy on and which are the less important works. However, do not make the mistake of concentrating all your time on only one or two sources. You need to strike a balance. Knowing how to evaluate the information you retrieve from your scholarly works requires an exercise in critical thinking. Consult Chapter 3 for details on how to critically interpret and evaluate the research evidence.

The rest of this section will provide tips on background reading and note taking.

Reading articles

When you read through an article or book chapter as part of your research, there are two main questions you should ask yourself: what are the key points the author is making, and how do those findings relate to your research questions? It is often difficult to answer these questions after reading through the work only once. A good practice is to read through articles at least twice. The first read will help you identify the main points the author is making and decide whether they are useful to your own research. During your second read you should start taking notes on those key findings.

Note taking

Taking clear and concise notes is essential in academic research. Effective note-taking practices can make writing an essay or report much quicker and easier than if it is done in a disorganised way. This section provides tips on how to improve your note-taking procedures.

- Take detailed but selective notes. You should note only the key findings and arguments in an article rather than trying to summarise everything the author has said.
- Keep photocopies of important articles. Resist the temptation to photocopy every article, essay, or book chapter that has a remote connection to your research topic. That could result in mountains of paper that will be of little use to you.
- When you find a relevant work, make sure you photocopy or record the full referencing details—the names of the authors, the title of the publication, the place and date of publication, and the page numbers. This will avoid the need for a lot of rechecking when you come to cite texts in your work or reference list.
- Take comprehensive notes to help you avoid plagiarism. It will ensure that you give credit to other authors where necessary, and not accidentally reproduce their words or ideas as your own.
- Use a system. Do not take notes haphazardly; rather, work to a system that ensures you record all the details needed for each work you read. This means not only recording the key ideas, and the page numbers they appeared on, but also capturing all the reference details previously mentioned. Some

people find it useful to take notes on separate index cards for each work. Others use a set form that includes spaces in which to enter information such as reference details.

- Use a computer if that suits you. Most people tend to take handwritten notes, but if you find it more comfortable to use a computer, then do so. Computer notes have the advantage that they do not need to be retyped and can easily be cut and pasted. Whether you use a computer, a typewriter, or a pencil, the key requirement is to be systematic.
- Take notes on index cards: this will make it easier to organise your material when you come to write the paper. For example, you might sort the cards into piles that are "for" or "against" your argument. Or you might arrange the cards in a number of different categories, according to the research questions you are addressing and the arguments you will make.

1.5 Academic integrity

LEARNING OBJECTIVE 1.5 Understand how to avoid plagiarism.

As a tertiary student, you are expected to meet high standards of academic integrity. A fundamental requirement is that you acknowledge the ideas and findings of other authors and do not attempt to present them as your own work. The rest of this section examines two ways in which academic integrity is undermined—plagiarism and collusion.

Plagiarism

If you include someone else's published words or ideas in your own work without acknowledging their source, you are guilty of **plagiarism**. Whether you copy another author's words exactly or simply paraphrase his or her ideas, you must acknowledge the original source of those words or ideas, or you are plagiarising.

When you attempt to copy another author's work and pass it off as your own, you commit plagiarism. It is considered an extremely serious offence in the academic world. Authors work extremely hard

on their own research in order to produce fresh and original ideas. Simply copying the results of that research and pretending they are your own work is the academic equivalent of theft—you have stolen someone else's intellectual property. This is dishonest and fraudulent.

You are expected to come up with original ideas of your own; this is the key to achieving success in an academic discipline. Plagiarising the work of others is no substitute for original thinking and is a sure recipe for failure. Plagiarism will normally lead to the loss of marks and often results in essays or reports being rejected completely. In fact, plagiarism is considered such a serious offence in the academic world that Australian universities have thrown out students for committing this offence. Ignorance is not an excuse, as most university handbooks (as well as the study guides for individual courses or subjects) contain explicit warnings about the penalties involved if students are caught plagiarising.

Lifting passages of text directly from someone else's work without attribution is the worst form of plagiarism. Paraphrasing someone else's thoughts, dressing them up in slightly different words and pretending they are your own work, is a more subtle form. Rather than reproducing other writers' ideas, carefully consider their implications and demonstrate that you can draw your *own* conclusions. You demonstrate your understanding of the material when you discuss what it means in your own words, rather than repeating what someone else has written.

This is not to say you should not refer to other authors' work or even quote directly from a published work. In fact, this is practically mandatory in reviewing the past literature on a topic. Quotation marks are required to indicate the exact words of another author (see Chapter 7).

It is essential that you acknowledge where ideas or words came from. Consider the following sentence taken from Burton (1998):

> An important finding of this study is that a relationship between self-report imagery ability and spatial ability becomes evident when spatial shapes are included as the stimuli to be imagined on imagery questionnaires.

How would you cite this information in your own work? You would be guilty of plagiarism if you wrote the following:

> A relationship between self-report imagery and spatial abilities occurs when spatial shapes are the stimuli imagined on imagery questionnaires (Burton, 1998).

It is not sufficient merely to change a few words and put a citation at the end of the sentence. You need to summarise the material *in your own words* and acknowledge the author. For example:

> Burton (1998) found that the nature of the stimuli imagined is an important factor when examining the relationship between objective and subjective measures of visual imagery and spatial abilities. These measures were shown to correlate when abstract, spatial shapes were included as the stimuli imagined on visual imagery questionnaires.

Acknowledging the work of others is an important skill that becomes easier with practice. When citing previous research in your own writing, you should demonstrate your understanding of the material by stating what it means in your own words. It is sometimes helpful to first establish the context in which the information is to be interpreted. This is illustrated in the previous example.

The following exercise is designed to help you learn how to rephrase information in your own words and avoid plagiarism in your writing.

- Read through a research article and see if you can identify the author's key argument.
- Write down the concluding paragraph.
- Read through this paragraph again and carefully consider its implications.
- See if you understand what the author is trying to say and draw your own conclusions.
- Now rephrase this paragraph in your own words.
- Read through your version of the paragraph and have another go at rewriting it in your own words.
- Compare your new, rephrased paragraph with the original paragraph. Check that the meaning of the original paragraph is retained in your revised version.
- Try rewriting the concluding paragraphs of some other articles in your own words. Stop when you feel confident that you know how to avoid plagiarism.
- Make sure you acknowledge the author of the work you are citing and include the year of publication.

You will have more opportunities to practise citing the work of others in later exercises in this book. In particular, Chapter 6 provides more information on how to format in-text citations in correct APA style. You may choose to cite other writers' material in the form of a direct quote, rather than rephrasing it in your own words.

Collusion

When two or more students present essentially the same material in a written assignment for assessment, they are guilty of **collusion**. Unless specifically instructed otherwise, you are expected to submit an assignment that is your own work. You are not permitted to collaborate with other students so that you all submit the same or a similar finished product.

As a student, you are often encouraged to work in collaboration with others, since this can be an extremely useful way to discuss issues and address questions relating to assignments. There is nothing wrong with this type of discussion or sharing of ideas. Collaboration crosses the line into collusion when you start sharing written material and incorporating work produced by other students in your own essay or report. Lecturers want to assess your own, individual work; they do not want to see the combined work of several students submitted by each of the contributors.

The bottom line is that although you may collaborate with other students in the planning and research stages of an essay or report, when it comes to drawing conclusions and writing up the final product, you must produce your own work.

Markers find it easy to spot cases of collusion, and those found guilty of the practice will normally face a severe academic penalty.

More information on how to cite research and produce a reference list in APA format is provided in Chapters 7 and 8. You will learn how to polish your work and prepare the final copy for submission by reading Chapter 9.

CHECKLIST

☐ Have you conducted a thorough review of the literature? You should complete this review before beginning to write your essay or research report. Be sure to consider sources published in the past five years as well as earlier works on the topic.
☐ Have you visited the library and consulted the library catalogue to locate hard copies of books and journal articles on your topic? Note the full reference details for all sources of information.
☐ Have you checked whether your library subscribes to online databases that provide access to full-text journal articles?
☐ Have you used the Psychological Abstracts and SSCI databases to access the abstracts of different publications on your topic?
☐ Make sure you ask the librarian for help if you have problems locating any sources using the catalogue or online databases.
☐ Have you used the internet to access online versions of peer-reviewed journals? Be sure to read through the tips for searching for information on the internet before commencing your search.
☐ Did you consult at least one of the subject directories listed in this chapter to search for information on your research topic?
☐ Did you evaluate the quality of information found on the internet using the CARS criteria: Credibility, Accuracy, Reasonableness and Support?
☐ When reading through each source for the first time, did you identify the author's main points and decide whether the work would be useful in your own research?
☐ The second time you read each article, did you take notes on the key findings? Make sure you consult the tips on how to improve your note-taking procedures to help you avoid plagiarism.
☐ Make sure you have consulted a wide range of peer-reviewed sources before commencing to write your essay or research report.
☐ Have you collaborated with other students when working on your assignment? If so, make sure you submit an assignment that is your own work. You do not want to be found guilty of collusion.

KEY TERMS

abstract A concise overview of the contents of an essay or report.
accuracy The information provides a true and comprehensive view of the subject matter.
APA style The format and editorial style requirements outlined in the *Publication Manual of the American Psychological Association*.
collusion Collaborating with others to produce written material that is not your own, individual work.
credibility The information is reliable and worthy of belief because it comes from a trustworthy source.
essay Critically examines the literature on a particular topic and draws conclusions on the basis of the available evidence.
peer-reviewed articles Scholarly articles that undergo a rigorous review process by experts in the field before publication.
plagiarism Using someone else's ideas or published words in your own work without acknowledging their source.
qualitative research Involves exploring a research topic through methods such as interviews, observation, and case studies to gain a richer understanding of the relevant phenomena.
quantitative research Involves using experiments or surveys that provide data that can be quantified, tabulated, summarised, and analysed.
reasonableness The information is fair, objective, moderate and consistent.
reference list The full publication details of the information sources you have cited in your text.

research report Critically examines previous research studies on a given topic, makes predictions about expected findings, describes what you did in your own research, and discusses the importance of what you found.

support The information is authentic and can be corroborated by others in the field.

INTERNET ACTIVITY

The following activity is designed to help you to practise finding the right information on a particular research topic.

Consider the research question "How does culture shape your thoughts, feelings and behaviours?" This topic is often examined by cultural psychologists who study the ways in which people are affected by the culture in which they live. Cultural psychologists examine how individual psychological processes are shaped by cultural context. Culture refers to the shared rules that govern our thoughts and behaviour; it is a filter through which we see and understand our current reality. You should be able to cite many authors in support of this definition of cultural psychology; the author of your introductory psychology textbook is probably one example. However, this activity requires you to delve deeper into this research question by conducting a thorough search of the literature.

1. Use the internet to explore the topic. See if you can access any or all of the subject directories and psychology sites listed in this chapter, and practise searching online for material on the topic. To help focus your search, consult the section on tips for searching the internet more effectively.
2. Find at least two reputable online articles to help answer the research question.

APPLIED ACTIVITY

This activity follows on from the internet activity, requiring you to locate additional material on the topic.

1. Visit your nearest academic library and take the time to become familiar with its layout. Find where the psychology books and journals are located on the shelves by looking them up on the library's catalogue system. There will be many sources devoted to understanding cultural psychology. Introduce yourself to the librarian and ask what psychology databases are available for you to access.
2. Find two journal articles and two books or book chapters to help you better understand the research topic.
3. Put all of the sources together and read through the material. Does the information enable you to better answer the original research question, "How does culture shape your thoughts, feelings and behaviours?"

No set answers are provided for these activities, because you will discover different sources of information on the research topic using different online and library resources. Consult Chapter 3 for more information on how to critically evaluate research evidence. Chapters 4, 5 and 6 provide information on how to write essays and research reports. Chapters 2, 7 and 8 outline the key elements for citing research in APA style and producing a complete reference list. Finally, Chapter 9 provides a checklist on how to polish the writing of your essay or report.

ACKNOWLEDGMENTS

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CHAPTER 2

Writing in APA style

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

- **2.1** understand the importance of APA style
- **2.2** construct clear and succinct lists
- **2.3** correctly format numbers in your report or essay
- **2.4** communicate your message with clarity and meaning
- **2.5** use effective language.

2.1 Learning the mechanics of APA editorial style

LEARNING OBJECTIVE 2.1 Understand the importance of APA style.

APA style has set requirements for punctuation and editorial style. This chapter will introduce these requirements and provide information that will help you write clearly and concisely. The first section presents a basic guide to punctuation, spelling, capitalisation, and other relevant writing issues. These guidelines are specific to APA style, so even if you are a confident writer you should read the following pages carefully to ensure your written assignments conform to APA style requirements.

Punctuation

Punctuation marks provide signposts that guide the reader through your work. They tell the reader when to stop, when to pause, and when to take a different path. They turn what would otherwise be a long, confusing string of words into a form that gives them meaning. Without correct punctuation, your work can become difficult to read and even harder to understand.

Punctuation marks have distinct purposes, and it is important to use the right one at the right time. The way you punctuate sets up the rhythm of your sentences and helps the reader to interpret your words. As with many aspects of the English language, the use of punctuation often requires good judgement rather than the application of rigid rules. Some punctuation marks have many uses, while others are used more restrictively. The following section provides a brief description of the most common punctuation marks and how they should be used.

Full stop (period)

Use a full stop to end a sentence and space twice after the full stop (include one space after a comma, semi-colon, and colon). Single full stops also denote missing letters in abbreviations (a.m., 2nd ed., Vol. 3, vs., e.g., etc.) and name initials (W. C. Fields). Do not use full stops in capital letter abbreviations (APA, IQ, PC, TV) or acronyms (ASIO, CSIRO, TAFE), or in most measurement abbreviations (cm, g, km, mm, ml).

Comma

Commas, the most common form of punctuation, have many uses. Generally, they indicate a pause in the flow of a sentence. The main ways the comma can be used include:

- to link different elements of a sentence. For example:

  After the votes had been counted, the winner was announced.

- to separate elements in a series of three or more items. For example:

  the good, the bad, and the ugly

  red, white, and blue

  . . . in a study by Collins, Barnes, and Milne (2004)

  pages 21, 36, 52, and 89

  the apple, pear, or orange

- to enclose supplementary or explanatory information in the middle of a sentence. For example:

  The winner of the competition, Bob Smith, was overjoyed.

- to set off a clause that modifies (adds information to) part or all of the main clause in a sentence. For example:

  The experience was rewarding for many of the children, who were extremely tired by the end of the day.

- to separate independent clauses linked by a conjunction. For example:

  The conclusions were presented clearly and concisely, and the student received a high mark.

- to include the year in parenthetical reference citations. For example:

  (Fielder, 2009)

  (Crook, 2010, discovered . . .)

  (Ryan, Fox, & Lawrence, 2017)

Semicolon

Use a semicolon when you want to indicate a more definite pause than if you used a comma, but a stronger link than if you used a full stop. The most common uses of the semicolon include:

- to separate independent clauses that are not joined by a conjunction (e.g., *and, or,* or *but*). For example:

  The people on the first bus arrived on time; those on the second bus were two hours late.

- to separate elements in a list or series that already contain commas. For example:

  Their colour choices were red, white, and blue; green and gold; or blue and white.

Colon

A colon is used to indicate the start of a series of points. For example:

Essays have three main elements: the introduction, the main body, and the conclusion.

or

Three states border New South Wales: South Australia, Queensland, and Victoria.

Use a colon where the second part of a sentence explains or amplifies the first part. For example:

> The shopping list contained a variety of items: carrots, bananas, milk, bread, and cereal.
>
> The coach selected two players: Bill and John.
>
> Beware: This cliff is steep and dangerous.

Note that an initial capital is used for the first word after the colon if what follows the colon makes a full sentence.

Colons are also used in ratios (3:7), in times (7:30 a.m.), and in reference lists to separate the place of publication from the publisher (Brisbane, Australia: John Wiley & Sons).

Em dash

Em dashes may be used in place of a colon when introducing an amplification, as in the previous examples, to indicate a sudden interruption in the continuity of a sentence, or instead of parentheses when incidental information is inserted in a sentence. For example:

> Organisational psychologists have focused on how to enhance achievement motivation—and productivity—on the job.

Note that there is no space between the dash and the word on either side of it. Dashes should be used sparingly to maintain their dramatic impact.

En dash

The en dash is used in place of *to* (e.g., pp. 23–36, May–June) and between words of equal weight in compound adjectives (e.g., "the Sydney–Hobart yacht race", "cost–benefit ratio"). In APA style you may use a hyphen instead of an en dash if the en dash is not available on your computer.

Hyphenation

Hyphens are commonly used to link most compound adjectives. For example:

> long-term memory (adjective + noun)
>
> trouble-free motoring (noun + adjective)
>
> red-hot lava (adjective + adjective)
>
> three-step process, 40-hour week (number + noun)

Note that in compound adjectives:

- an adverb plus a participle takes a hyphen only before a noun ("a well-fed cat" but "the cat was well fed"; "a forward-thinking manager" but "she was forward thinking")
- adverbs ending in -ly never take a hyphen ("a highly regarded scholar")
- an adverb plus an adjective is usually set solid (underrepresented, overtired)
- a floating hyphen can be appended to either end of the shared word to avoid repeating one element of a compound adjective (e.g., "pre- and post-election polls"; "a well-written and -argued essay").

Prefixes such as anti-, co-, inter-, macro-, non-, pre-, re-, semi-, sub-, and un- are usually set solid with the root word, requiring a hyphen only if the last letter of the prefix and the first letter of the root word are the same, if the root is a proper noun, or if ambiguity could result. For example:

antiwar (but anti-Taliban), codependent (but co-opt; exceptions include cooperation, coordination), intranet (but intra-abdominal), nonprofit (but non-national), prewar (but pre-Christmas), subtext (but sub-Saharan Africa).

Quotation marks

Quotation marks have a number of uses. Use double quotation marks:

- to indicate that you are quoting directly what somebody else has written or said. For example:

  Fulton (2000) said: "This theory remains unproven."

  Sue told me, "This policy must be implemented."

  The participants were instructed: "Work as quickly as you can without making any mistakes."

- to highlight or emphasise a word or phrase, or to indicate an unusual, ironic, or colloquial usage. Only use quotation marks the first time the word or phrase is used. For example:

  The trophy was the "holy grail" for all the teams in the tournament.

  When I needed their help, all my "friends" vanished. In fact, my friends . . .

- to set off the title of a journal article or a book chapter when referred to in text. For example:

  Valdez (2001), in "The Dynamics of Teamwork", saw this clearly.

Use single quotation marks for quotations within quotations. For example:

Davis (2016) argued: "The 'solution' was worse than the disease."

Note that full stops and commas are always placed inside the closing quotation marks; other punctuation marks are placed inside the closing quotation marks only when they are part of the quoted material.

Do not use quotation marks to introduce or highlight technical terms; in these instances use italics. For example:

Nguyen (1999) used the term *broadbanding* to describe this technology.

Do not use quotation marks to identify the anchors of a scale; in these instances use italics.

Consult Chapter 7 for information on how to cite direct quotations in your work.

Parentheses

Use parentheses to enclose material that is incidental or explanatory, to set off reference citations, to highlight letters that identify items in a series within a sentence or paragraph, to group elements in mathematical expressions, to enclose degrees of freedom, or to introduce abbreviations. For example:

The Olympic Games of 2000 (held in Sydney) were a great success.

The results indicated a five-factor solution (see Table 3).

Spanner (2009) reported . . .

Two new research methodologies were developed (Bennett & Coleborn, 2007).

Critical thinking requires (a) scepticism, (b) objectivity, and (c) open-mindedness.

. . . was significant, $F(1, 71) = 9.52$, $p = .045$.

. . . was significant ($p < .01$).

The Australian Bureau of Statistics (ABS) produced a landmark report.

Do not use parentheses back to back. For example, do not write:

. . . (e.g., cultural bias) (Gruber & Vella, 2008).

Use a semicolon to separate the different items in the parentheses, as follows:

(e.g., cultural bias; Gruber & Vella, 2008).

. . . the Australian Psychological Society (APS; Gulliford, 2017).

Square brackets

Use square brackets for parentheses within parentheses. For example:

> (The number of respondents [24] was disappointing.)

Or to enclose material within a quoted passage inserted by anyone other than the original author. For example:

> "Maslow's Pyramid of Needs [see Figure 6.2] arranged human needs in a hierarchy of strength or potency."

Slash or solidus

Use a slash (also known as a solidus):

- to separate compound alternatives (e.g., the old-way/new-way technique)
- to replace *per* in selected units of measurement (e.g., 40 km/h)
- to separate a numerator from a denominator in a mathematical expression (e.g., X/Y).

Spelling

Spelling correctly is important, since mistakes not only diminish your credibility but can obscure your meaning. Always use a dictionary to check the spelling of words you are unsure of. The standard spelling and hyphenation reference for APA journals and books is *Merriam-Webster's Collegiate Dictionary*. However, this is an American publication and uses American spellings, which can be different from Australian spellings (e.g., American English uses -ize, -or, and -er spellings where Australian English uses -ise, -our and -re). Unless otherwise advised, you should use Australian spelling in the body of your assignments. The *Macquarie* or *Oxford* dictionaries are recommended. However, you should retain the American spelling if you are quoting directly from a source that uses American spelling. Remember also to retain the American spelling when you list the full publication details in your reference list. Do not rely on the spellcheck function on your computer to pick up spelling mistakes. Spellcheckers do not identify instances where a word is used in the wrong context (e.g., *they're*, as a contraction for *they are*, instead of *their* or *there*). Similar words are often misused. For example, be sure to distinguish between the following words:

> *accept* (verb meaning to take or receive; to agree to) and *except* (verb meaning to exclude)
>
> *affect* (verb meaning to act on; to impress; produce an effect) and *effect* (noun meaning a result; a consequence; also a verb meaning to accomplish; bring about)
>
> *its* (possessive of pronoun it) and *it's* (contraction for "it is")
>
> *practice* (noun meaning repeated performance; the action of performing) and *practise* (verb meaning to carry out, perform; to pursue a skill)

principal (adjective meaning first or highest in rank; noun meaning a chief or head) and *principle* (noun meaning an accepted rule of action).

Consult www.apastyle.org for the latest information on preferred spelling.

Capitalisation

Use an initial capital (uppercase) letter in the following situations:

- in the first word in a sentence
- in the first word after a colon when what follows is a complete sentence. For example:

> The instructions had one major advantage: They were easy to read.
>
> The results supported the hypothesis: Parents with strong achievement motivation encouraged their children to think and act independently from an early age.

- for all words (except articles, conjunctions, and short prepositions) in the titles and headings of journals and books. For example:

> The book entitled "The Last of the Emperors" . . .

- in formal or official titles. You can use lowercase for short, generic, or informal titles; that is, use initial capitals when referring to the full official name of a test, but lowercase if you use a shortened version or refer to it generally. For example:

> She met the Minister for Foreign Affairs and Trade. The minister claimed . . .
>
> The researchers used the Differential Aptitude Test. This comprehension test showed interesting results.

- for proper nouns and names
- in cross-references to specific figures or tables—for example, "as shown in Figure 6" or "(see Table 2)".

Abbreviations and acronyms

Avoid the overuse of abbreviations and **acronyms**, especially if readers are unfamiliar with the terms and are forced to backtrack to search for their meaning. However, short forms can be useful for avoiding the repetition of long, cumbersome names or titles.

Consider the following as general rules of thumb for the use of abbreviations and acronyms in essays and research reports:

- If you use an abbreviation or acronym, you must spell out the full name the first time you use it, followed immediately by its abbreviation or acronym in parentheses. You can then use the abbreviation or acronym in subsequent citations. For example:

> Coronary heart disease (CHD) symptoms include shortness of breath. People with CHD . . .

The Public Relations Institute of Australia (PRIA) was represented.

Read-only memory (ROM) contains instructions that can be read but not modified.

- Rather than using an uncommon abbreviation or acronym only two or three times, you should probably spell out the term in full each time.
- Some well-known abbreviations and acronyms (e.g., IQ, CD, REM, AIDS, HIV) may be used without spelling them out in full on first mention.
- Conversely, some abbreviations used frequently in the psychology literature still need to be spelt out at first mention. These terms include:

conditioned stimulus (CS)

reaction time (RT)

short-term memory (STM).

Headings

Use headings to divide your work into sections and subsections. They should provide a logical structure that leads the reader through your text. In APA format, you may use up to five levels of headings; however, for most purposes three or four levels are probably the most you will need. Always use the same level of heading for topics of similar importance. Do not number the headings. Avoid using only one subsection heading within a section; try to include at least two subsections or none at all.

Different heading formats are needed for different levels of heading. The number of heading levels depends on the length and complexity of your article.

- If only one level of heading is needed, use Level 1 (centred, bold face, upper- and lowercase). For example:

The Nature and Function of Visual Imagery

- If a paper requires two levels of headings, use Level 1 and Level 2 (flush to the left margin, bold face, upper- and lowercase). For example:

The Nature and Function of Visual Imagery

Measurement Issues in the Study of Visual Imagery

- If a paper requires three levels of headings, use Level 1, Level 2, and Level 3 (indented, boldface, lowercase paragraph heading ending with a full stop). For example:

The Nature and Function of Visual Imagery

Measurement Issues in the Study of Visual Imagery

Self-report imagery questionnaires.

Here is another example for formatting three levels of heading in your work.

Method

Materials

Cognitive ability tests.

- In works with experimental studies and extensive literature reviews, you might use four levels—Level 1, Level 2, Level 3, and Level 4 (indented, bold face, italicised, lowercase paragraph heading ending with a full stop). For example:

The Nature and Function of Visual Imagery

Measurement Issues in the Study of Visual Imagery

Self-report imagery questionnaires.

Vividness of visual imagery.

Another example:

Method

Materials

Cognitive ability tests.

Spatial relations test.

- In very long works, such as theses and dissertations, you may use five levels, following the same top-down progression, from Level 1 to Level 5 (indented, italicised, lowercase paragraph ending with a full stop). For example:

The Nature and Function of Visual Imagery Level 1

Then your paragraph begins below, indented like a regular paragraph. It continues like a regular paragraph.

Measurement Issues in the Study of Visual Imagery Level 2

Then your paragraph begins below, indented like a regular paragraph. It continues like a regular paragraph.

Self-report imagery questionnaires. Then your paragraph begins right here, in line with the heading. It continues like a regular paragraph. Level 3

Vividness of visual imagery. Your paragraph begins right here, in line with the heading. It continues like a regular paragraph. Level 4

Vividness of visual imagery questionnaire. Your paragraph begins right here, in line with the heading. It continues like a regular paragraph. Level 5

- In a lowercase paragraph heading (Levels 3–5), the first letter of the first word in the heading is uppercase and the remaining words are lowercase, except for proper nouns and the first word of a full sentence that follows a colon.
- Please note that the introduction of an essay or report does not commence with a heading "Introduction", nor does it commence with a Level 1 heading. Instead, repeat the full title of the work, centred, in upper- and lowercase, at the top of the page.

2.2 Point form or seriation

LEARNING OBJECTIVE 2.2 Construct clear and succinct lists.

Use a list format when you have to identify a number of items, if you think that will make the sequence or relationship clearer to the reader. When you are listing three or more items within a sentence or paragraph, introduce each item with a lowercase letter in parentheses (starting with "(a)"), and place a comma between each item. For example:

> The tests were designed to examine the three areas of (a) motor skills, (b) reaction time, and (c) levels of stress.

If one or more elements already have commas within them, use a semicolon between each element. For example:

> We divided participants into three groups: (a) low-need achievers, who averaged fewer than 15 points; (b) moderate-need achievers, who averaged between 15 and 30 points; and (c) high-need achievers, who averaged more than 30 points.

If the items in your series are compound sentences and are preceded by a colon, capitalise the first word of the first item. For example:

> Bakal's (2010) study reached two conclusions: (a) Self-monitoring, as opposed to counselling, had a positive impact on behavioural management; and (b) stimulus control techniques were less effective than previously reported.

Alternatively, you may use bulleted lists within a sentence to separate three or more elements. The list should be punctuated as if it were a complete sentence. For example:

> Stereotypes help us to make sense of the world in which we live, but they also lead to distortions of reality, such as:
>
> - us–them thinking, whereby people focus on the differences between cultural groups and ignore the similarities that exist between them;
> - selective thinking, whereby people only see what reinforces the cultural stereotype and reject any perceptions that do not fit; and
> - recognising dissimilarity between members of their own cultural group but assuming that all members of another culture behave the same way (Burton, Westen, & Kowalski, 2015).

You might want to identify several paragraphs as part of a series, for example if you are listing in sequence a series of conclusions. In this case, identify them with an indented numeral followed by a full stop, as now shown.

> Using Jean Piaget's theory of cognitive development, we predicted that the following principles would be observed in our sample:
>
> 1. Infants experience the world and develop schemas through their senses and motor skills . . . [paragraph continues].
> 2. Children in the preoperational stage learn to represent objects symbolically, but cannot think logically . . . [paragraph continues].
> 3. Children in the concrete operational stage . . . [paragraph continues].

Alternatively, you may use bulleted lists to achieve the same effect, without implying importance of the items by their ordinal position. Symbols such as small squares and circles may be used in bulleted lists. For example:

> Using Jean Piaget's theory of cognitive development, we predicted that the following principles would be observed in our sample:
>
> - Infants experience the world and develop schemas through their senses and motor skills . . . [paragraph continues].

- Children in the preoperational stage learn to represent objects symbolically, but cannot think logically . . . [paragraph continues].
- Children in the concrete operational stage . . . [paragraph continues].

Anchors on a scale

Do not use quotation marks to identify the range of items on a scale. Italicise them instead. For example:

> The items were rated on a scale ranging from 1 (*no image at all*) to 5 (*clear and vivid image*).

2.3 Numbers

LEARNING OBJECTIVE 2.3 Correctly format numbers in your report or essay.

As a general rule, you should use words to express numbers from one to nine, but use numerals or figures for numbers 10 and above. Use commas in numerals above 999. For example:

> 15 cm wide
>
> 10th-grade
>
> 38 years old
>
> 1,121 distractor words
>
> There were three people

Specific rules are now listed.

Use numerals or figures:

- to show the results of all statistical or mathematical functions, such as percentages (except where they begin a sentence), fractions, ratios, and degrees. For example:

> Only 6% of respondents answered positively on that item.
>
> 0.56 of the area
>
> a ratio of 7:1
>
> multiplied by 3
>
> the 4th percentile
>
> 9 times as many (proportion)

- for all numbers that represent time (see exception that follows), dates, and ages. For example:

> The test commenced at 8:30 a.m. on 24 June and lasted 6 hr 28 min.
>
> Thirty 9-year-olds participated in the study for 2 weeks.

- for all numbers that precede a unit of measurement. For example:

  The desk was 89.25 cm wide.

  a 1-mg dose

- to show sample or population sizes, the specific number of participants in an experiment, exact sums of money, and scores and points on a scale. For example:

  The group included 86 females.

  4 participants [*but* six observers, three raters]

  Each participant was paid $5.

  3rd and 4th years

  7th-grade students

  He scored 2 on a 5-point scale.

- to identify items in a numbered series, parts of books, figures and tables, and each number in a list of four or more numbers. For example:

  Chapter 8

  Figure 6

  (see Table 2)

  2, 4, 6, and 8 songs, respectively

- to represent all numbers in the abstract of a paper.

Use words to express:

- numbers below 10 that do not represent precise measurements. For example:

  six trials

  two-tailed *t* test

- approximations of numbers of days, months, and years. For example:

  About six months ago . . .

  Around four days later . . .

  Around ten days . . .

- any number that begins a sentence, title, or heading. For example:

  Forty participants answered the survey; 11 students did not answer.

  Twenty-two percent of the sample showed an increase; 9% showed no change.

  Try to reword the sentence to avoid beginning with a number.
- common fractions. For example:

  one sixth of the class

Combine figures and words to express:

- back-to-back modifiers. For example:

  3 two-way interactions

  six 5-point scales

  the first 20 items

Footnotes

Try to avoid the need for footnotes. They should be used only if they are essential to clarify the text, but in most cases the information is either unnecessary or can be drawn into your main text. Use superscript Arabic numerals (placed immediately after the matter they refer to), for footnote reference numbers. The first reference should be "[1]", subsequent footnotes following in numerical order. An example of how to present footnotes in your text is now provided.

The Gf-Gc theory denies that a third-order general factor is necessary to provide for correlations among the broad second-order factors (Lohman, Pellegrino, Alderton, & Regian, 1987).[1]

The footnote referred to by the in-text reference number is not placed at the bottom of the page it appears on; instead, you should group all the footnotes together in a separate section at the very end of your work. Label the section with the centred heading "Footnotes" set with an initial capital.

For example:

Footnotes

[1]In later revisions of Gf-Gc theory, Horn (1976) referred to the general factor as a combination of second-order broad factors (Lohman et al., 1987).

[2]From "Age and Health Care Beliefs", by N. J. Woodward and B. S. Wallston, 1987, Psychology and Aging, 2, pp. 3–8. Copyright © 1987 by Psychology and Aging. Adapted with permission.

Four types of notes appear in APA journals: author, content, copyright permission, and table notes. Check the APA manual for guidance on how each is used. See Chapter 5 for more information on table notes.

2.4 Writing clearly and concisely

LEARNING OBJECTIVE 2.4 Communicate your message with clarity and meaning.

Writing clearly and concisely, using logical punctuation and correct grammar, is the starting point to delivering a successful piece of work. A crisp writing style helps you communicate your intended message without the possibility of misinterpretation. Thoughtful use of language also indicates that you respect the reader and have done everything possible to make your work easy to understand.

The following section provides guidelines on how to deliver clear and concise written assignments.

Grammar

Poor grammar immediately gives the reader a bad impression of your professionalism as reflected in your work. Worse, incorrect grammar and sentence construction can create misunderstandings about what you actually mean. Be sure to check your grammar thoroughly before submitting any work for assessment. Do not rely on the grammar-check function of your computer.

The following sections include examples of common grammatical mistakes that can compromise the standard of your work. If you need further guidance, you should consult a specialised text on grammar or writing technique.

Verbs

Verbs inject life into your writing by describing the actions that take place. Choosing and using verbs carefully can help you avoid common grammar errors and make your writing more vigorous, direct, and effective.

Subject–verb agreement

Check whether the verb is singular or plural (its number). The verb's number must agree with that of the subject of the sentence—that is, if the sentence's subject is singular, the verb must also be singular. Watch the number of your verb when the subject of the sentence is a collective noun—a single word that describes a group, for instance of people or objects. If the verb describes the group as a whole, treat the noun as singular and use a singular verb. For example:

> The team hopes to win a medal at the Olympics.

If the verb describes individual elements within the group, treat the noun as plural and use a plural noun. For example:

> The team were of different minds on the issue.

Twin subjects that form a single unit take a singular verb. For instance:

> Research and development was to be the company's new focus.

Active versus passive voice

The active voice is generally preferred over the passive. Academic writers are particularly prone to overuse of the passive voice, often in the (mistaken) belief that, along with the removal of personal pronouns, using the passive lends greater objectivity and authority to their writing. The passive has many disadvantages: it tends to be weaker, wordier, less direct, and less vigorous than the active.

The "voice" relates to the way a sentence or phrase is structured. The **active voice** puts the *actor*, or instigator, before the verb. The **passive voice** focuses on the *acted upon*, or recipient. For example:

> *Passive:* "The elimination of wordy constructions by writers is a desirable objective."
>
> *Active:* "Writers should eliminate wordy constructions."
>
> *or* "Writers should avoid unnecessary wordiness."

Replacing passive with active verbs is one of the best ways to improve the clarity of your writing. The difference between the two is simple. In the active voice, the *instigator* is usually the subject of the sentence or independent clause, and is followed by the verb and then the *recipient*. This is a logical progression—the actor comes first, followed by the action, then the recipient of that action (the acted upon). For example:

Instigator	*Action*	*Recipient*
(actor/subject)	(verb)	(acted upon/object)
The committee	passed	the motion.

In the passive voice, that order and focus is reversed—the recipient precedes the verb, which is followed by the instigator. This construction is less direct and less concise. For example:

Recipient	*Action*	*Instigator*
The motion	was passed by	the committee.

Alternatively, a passive construction can delete the "actor" entirely from the sentence, which, in failing to identify the actor, is inevitably less informative than the active option. For example:

> The motion was passed.

Generally, you should use the active voice wherever possible. However, passive constructions may be appropriate when the recipient is your intended subject and the instigator is of lesser importance. For example:

> The computer had been designed to fulfil the needs of the accounts department.

Here the computer, rather than the designer, is the focus of discussion.

Tense

Pay special attention to your choice of tenses in your writing. Conventions apply to the tenses that you use in writing about particular topics. It is also important that you use tenses consistently throughout your work. If, for example, you are reporting past actions, you should use all past tense verbs:

> The sample *was biased* as the students *were not* randomly allocated to different treatment groups. This *was considered* a major limitation of the study.

Follow these guidelines for using tenses:

- Use the past tense when describing past events, such as when you are summarising your research aims and results or discussing another author's findings. For example:

> Self-esteem scores increased significantly.

- Use the past tense (e.g., "Jones argued") or present perfect tense (e.g., "psychologists have shown") in your literature review.
- Use the present tense to discuss results and present conclusions. For example:

> The results indicate that . . .

Pronouns

Pronouns (e.g., *it, she, they, him, them*) are short forms that take the place of nouns to avoid the need to repeat the same noun numerous times. However, your use of pronouns may confuse readers if you do not make clear which nouns they are replacing (their antecedent). A pronoun must also agree in both number and gender with the noun it replaces. For example:

> *Wrong:* Every participant, whether from group A or group B, filled and returned their questionnaire.
>
> *Right:* Every participant, whether from group A or group B, filled and returned his or her questionnaire.

A **relative pronoun** (e.g., *who, whom, which, that*) introduces a clause that defines or amplifies the noun that precedes it. For example:

> The students, who were aged between 15 and 18, worked hard.

Many writers are confused about when to use the defining (or restrictive) relative pronoun *that* and when to use the non-defining (non-restrictive) relative pronoun *which*. The confusion is not helped by the fact that *which* may also be used as a restrictive pronoun. Note the following guidelines:

- Use "that" when the information defines the meaning of the noun to which it relates. For example:

  This is the book *that* I read yesterday.

- Use "which" when the information merely adds to the understanding of the noun it follows. For example:

  I want to read the other book, which is a thriller.

Be sure to use *that* rather than *who* as the pronoun for animals. For example:

The dog that fetched the bone was rewarded.

Another point of confusion for writers can be when to use *who* or *whom* in a sentence. Use *who* as the subject of a verb and *whom* as the object of a verb or a preposition. The easiest way to determine whether a relative pronoun is the subject or object of a verb is to turn the subordinate clause around and substitute a personal pronoun. If you can substitute *he* or *she*, *who* is correct; if you can substitute *him* or *her*, *whom* is the correct pronoun. For example:

Wrong: Name the student whom you found achieved the best results in the class. [You found him or her achieved the best results in the class.]

Right: Name the student who you found achieved the best results in the class. [You found he or she achieved the best results in the class.]

Wrong: The child who I identified as the youngest fell asleep. [I identified he or she as the youngest.]

Right: The child whom I identified as the youngest fell asleep. [I identified him or her as the youngest.]

Parallel construction

When you are listing or outlining a number of ideas in a sentence or paragraph, make sure you use the same grammatical form for each idea—that is, a **parallel construction**. Each element or idea you list should be structured the same way, so the reader knows they are connected. For example, the following sentence structure is not parallel because the third element has a different structure from that used for the first two elements:

The manager was responsible for running the store, balancing the books, and employment.

Note that the first two elements feature a verb ("running" and "balancing"), while the third is a noun ("employment"). Consider, instead,

> The manager was responsible for running the store, balancing the books, and hiring the staff.

Here the three elements have a parallel structure ("running the store"; "balancing the books"; and "hiring the staff").

Nominalisations

Nominalisation refers to the process, or the result, of turning a verb into a noun. Nominalisations (also known as *buried verbs*) tend to make your writing wordy and indirect by converting an action word (verb) into an abstract concept. They are often associated with passive constructions. The simple remedy, as illustrated, is to return to the original verb and use it actively. On the left are examples of nominalisation; on the right are preferred solutions.

We had a discussion about the matter	We discussed the matter
The decision was taken by the board	The board decided
The instructions helped in the provision of information	The instructions helped provide information

Modifiers

Modifiers are adverbs or adjectives (single words or phrases) that "modify" another word or phrase in a sentence. Modifiers are used to give a more complete or richer meaning. Take the following sentence:

> Bill climbed the ladder.

The addition of different modifiers (e.g., *quickly* or *slowly*) can give quite different interpretations to that apparently simple and straightforward statement, as follows:

> Bill *quickly* climbed the ladder.
>
> Bill *slowly* climbed the ladder.

Modifiers are extremely useful devices that we all employ every day to make our writing more meaningful. However, a common error occurs with the incorrect positioning of modifiers within a sentence, which can actually confuse its meaning. This problem occurs when it is unclear which word or phrase a modifier relates to. Three common problems are misplaced modifiers, dangling modifiers and squinting modifiers.

Misplaced modifiers

A **misplaced modifier** is one that has been placed in the wrong position within a sentence. This error leads to uncertainty about its meaning. Consider the following sentence, containing the modifier "almost":

> That student has *almost* upset all his lecturers.

In this case, the location of the modifier gives the impression that the student had *almost* angered his lecturers. However, the real story is that rather than almost getting his lecturers upset, this student had been causing problems for just about all of his lecturers. The sentence should have read:

> That student has upset *almost* all his lecturers.

Positioning the modifier in the wrong place totally changed the meaning of the sentence. To overcome this problem, modifiers should be placed as close as possible to the word or phrase that they modify.

Dangling modifiers

Dangling modifiers are typically phrases that "dangle" at the beginning or end of a sentence without making clear what they relate to. Here is an example:

> Jenny was hit by a tree driving down the road.

The modifier *driving down the road* refers to Jenny, but its position within the sentence gives the impression that the tree was driving down the road! In this case, the modifier is placed too far away from its subject (*Jenny*). A better structure would be as follows:

> Driving down the road, Jenny was hit by a tree.

That change in position places the modifier immediately next to the subject that it modifies, which makes the meaning much clearer.

Sometimes you may need to add words to better link the dangling modifier to its subject. Consider the following sentence:

> Kicked in the air, Bernard caught the football.

In this case, the modifier *kicked in the air* relates to the football, not to Bernard. However the sentence structure makes it seem as though Bernard had been kicked in the air. The way to remedy this error is to ensure that the modifier and its subject are as close together as possible. In this case, that means adding a few words to better link them, as follows:

> Bernard caught the football, which had been kicked in the air.

Squinting modifiers

A **squinting modifier** is one that is placed ambiguously within a sentence, so that it is unclear whether it relates to the word that precedes it or the one that follows it. Consider the following sentence:

> Typing an essay quickly leads to mistakes.

This sentence can be interpreted in two ways, because it is unclear which subject the modifier *quickly* relates to. One interpretation is that you make mistakes if you are typing quickly. The second is that typing an essay is a quick way to make mistakes. To overcome this uncertainty, you may need to add in a word or two to clarify which subject the modifier belongs to, as follows:

> Typing an essay quickly *can* lead to mistakes.

2.5 Choosing your words carefully

LEARNING OBJECTIVE 2.5 Use effective language.

The main purpose of university assignments is to demonstrate that you understand and have engaged with the ideas you are studying and that you have fulfilled the necessary practical tasks to further this understanding. The way you present your arguments and research solutions in your essay or report is almost as important as the research itself. If you obscure your case behind jargon and tortuous constructions or pompous wordiness, you risk confusing as well as irritating the reader. Aim to write clearly and concisely, using the simplest language and most explicit constructions consistent with accurately communicating your ideas.

The following sections include information on how to avoid jargon, wordiness, pomposity, superfluity, and contractions in your work. Using concise language will help your argument to become clear to the reader.

Avoiding jargon

Jargon refers to specialist or technical terms that are not widely understood. For instance, lawyers or doctors use specialist terms that other lawyers or doctors understand, but no one else does. The problem with the overuse of jargon is that it often obscures your intended meaning. Some writers believe that merely by using specialist terminology they are demonstrating their competence. This is not the case, particularly if their understanding of the concepts is thrown into doubt. Never use words if you do not know what they mean. If you need to use specialist terms, explain or define them either in the text or in a glossary.

Wordiness

Unnecessary wordiness diminishes the clarity of your writing and makes reading your work harder. By clogging your work with clichés, flowery or obscure language, and convoluted explanations, you diminish the ability of the reader to understand quickly the points you are trying to make.

Two ways in which wordiness can creep into your work are through pomposity and superfluity.

Pomposity

Some writers apparently feel that using pompous, affected, and overblown language in their written assignments will somehow demonstrate their competence. This is a mistake. **Pomposity** here means using overlong and flowery words and forms when a simpler equivalent is available. Pompous words act as speed bumps for readers—slowing them down to a crawl and forcing them to take more time than is necessary to absorb your arguments. A few simple examples are now shown, with preferred options in parentheses.

commencement (start)	termination (end)
concerning (about)	endeavour (try)

Superfluity

Superfluity relates to including redundant words and adopting unnecessarily long-winded expressions and explanations. As with pomposity, superfluity can cloud your meaning and irritate the reader. There is a simple way to remedy superfluity: if you can delete a word or phrase (or sentence!) with no loss of meaning, or if you can replace one expression with a shorter, clearer one that means the same thing, then you should do so.

You may use certain long-winded phrases out of habit in your first draft, but any superfluity is easy to pick up and eliminate when you revise. Some simple examples of how you can overcome superfluous expressions are now provided.

owing to the fact that	because
at this point in time	now
give consideration to	consider
the majority of	most
on a daily basis	daily
until such time as	until
three different groups	three groups

Contractions

Contractions combine two words in a shortened form that reflects informal speech patterns; they usually include an apostrophe to indicate where letters have been left out (e.g., *don't, they'll,* and *would've*). You should not use contractions in formal writing such as an essay or report. Spell out both words in full.

Sentence and paragraph length

Sentence and paragraph length are a part of the overall structure that guides the reader through your work. They should help to form a logical and orderly pathway, and should make the journey from start to finish as smooth and comfortable as possible. The following guidelines provide some tips for deciding sentence and paragraph length.

Sentences should be kept reasonably short. An average of 15–20 words will help reader comprehension. A general rule is to permit one idea per sentence, perhaps allowing one supporting idea. Long sentences make your work harder to understand, since they often introduce competing ideas. Readers may have trouble processing long sentences.

Conversely, sentences that are consistently too short can set up an abrupt, disjointed rhythm. The key to maintaining reader interest is to vary the length of your sentences, keeping in mind an average of 15–20 words.

Similar guidelines apply to paragraph length. Try to avoid single-sentence paragraphs. While there is no set limit to the number of sentences per paragraph, try to discuss only one theme in each paragraph in order to maintain the reader's attention. Keep in mind that paragraphs should be no longer than one double-spaced page. Try to link the ideas in different paragraphs so that the logic of your argument flows smoothly.

Using non-discriminatory language

Keeping discriminatory language out of your writing shows respect for the feelings of your readers and indicates a lack of bias in your research. People should not be discussed or referred to any differently in your writing because of factors such as gender, ethnicity, sexual orientation, or age.

The following tips will help you apply **non-discriminatory language** in your writing:

- Cite attributes such as age, gender, religion, race, or marital status only if they are important to your analysis; however, do not go to extremes to remove all mention of the individual attributes of people. Racial and ethnic groups are designated by proper nouns and are capitalised. Also, individuals may prefer to be named according to their nation or region of origin. For example, the following terms are preferred:

  Aboriginal Australians or Indigenous Australians

  Chinese Australians

  gay men and lesbians

- Gender is a cultural term used to refer to men and women as social groups; sex is biological and should be used when the biological distinction is predominant.
- Do not use derogatory terms that might offend individuals or groups. When possible, avoid labelling people. For example:

  "students at risk of early dropout" is preferred to "at-risk students"

  "people with major depression" is preferred to "depressed people"

- Use plural rather than singular nouns to avoid having to repeat "his or her" and "he or she" constructions. For example, the following sentence uses a singular noun:

  Each sacked worker worried about his or her future prospects.

  Changing to a plural noun, avoids the need to include "his or her":

  All the sacked workers worried about their future prospects.

- Acknowledge participation in a study using descriptive terms such as:

  individuals

  university students

  children

  respondents

  However, the terms "participants" and "subjects" are also acceptable.
- Use the active voice to acknowledge participation. For example:

  The subjects completed the experimental trial.

  A total of 65 participants completed the survey.

  Consult the APA manual for additional guidelines on reducing bias in language.

CHECKLIST

☐ Include two spaces after each full stop (period).
☐ Include one space after each comma, semicolon, and colon.
☐ Use a comma to indicate a pause in the flow of sentences.
☐ Use an em dash to add incidental information or to indicate a sudden interruption in the continuity of a sentence.
☐ Check whether a hyphen is needed for words formed with prefixes.
☐ Use double quotation marks to quote directly from another author or to highlight a word or phrase.
☐ Use parentheses to enclose reference citations and to introduce abbreviations.
☐ Use a dictionary to check the correct spelling of difficult or unfamiliar words. Do not rely on the spellcheck function of a computer.
☐ Capitalise the first word after a colon (for complete sentences only).
☐ Use italics, rather than double quotation marks, to identify the range of items on a scale.
☐ Use the appropriate levels of heading to divide work into sections.
☐ Use lowercase letters in parentheses before each item if listing three or more items within a sentence. Alternatively, use bulleted lists.
☐ Use numbers followed by a full stop to identify several statements set out as part of a series. Alternatively, if you do not wish to imply the importance of items, use bullets to identify items in the series.
☐ Use words to express numbers below 10; use numerals for numbers 10 and above. Note the exceptions to this general rule.
☐ Check your work for common grammatical errors. Do not rely on the grammar-check function of a computer.
☐ Try to write in the active rather than the passive voice, except in particular cases.
☐ Use the past or present perfect tense in your literature review and when describing results.
☐ Use the present tense to discuss the implications of your results and to present your conclusions.
☐ Avoid unnecessary jargon, wordiness, pomposity, superfluity, and contractions in your writing.
☐ Use an average of 15–20 words per sentence.
☐ Make sure that your paragraphs are no longer than one double-spaced page.
☐ Use non-discriminatory language in your writing.

KEY TERMS

acronym Initials that can be pronounced as a word (e.g., CSIRO, TAFE).
active voice Places the *actor*, or instigator, before the verb.
contraction Shortened form of two combined words, usually containing an apostrophe to indicate where letters are missing.
dangling modifier A phrase usually placed at the start or end of a sentence that does not modify its intended subject.
misplaced modifier An adjective or adverb placed in the wrong position within a sentence.
modifier An adverb or adjective that changes the meaning of another word or phrase in a sentence.
nominalisation The process, or the result, of converting a verb into an abstract noun.
non-discriminatory language Words that do not discriminate between individuals on the basis of factors such as sex, race, or age.
parallel construction Each element in a sentence or list has a similar grammatical form.
passive voice Places the *acted upon*, or recipient, before the verb.
pomposity Using overlong and flowery words when a simpler equivalent is available.
pronouns Words (e.g., *it, them,* or *they*) that substitute for nouns.

relative pronouns Words (e.g., *who, which,* and *that*) that introduce a clause defining or amplifying the noun that precedes them.

squinting modifier An adjective or phrase that is misplaced within a sentence, confusing the intended subject of the modifier.

superfluity Using unnecessary words that do not contribute to your meaning.

REVIEW QUESTIONS

1 Which of the following sentences contains the preferred use of tense and voice?
(a) Moss (2006) shows the same results.
(b) Moss (2006) showed the same results.
(c) Moss (2006) had shown the same results.
(d) The same results have been shown by Moss (2006).

2 Which of the following sentences demonstrates correct pronoun use?
(a) Neither the fastest worker nor the slowest worker had any idea about their performance.
(b) The lions who jumped through the hoop successfully were applauded.
(c) The group improved its scores by 5%.
(d) All of the sentences are correct.

3 Choose the correctly structured sentence among the following edited versions:

Kohlberg's moral reasoning theory emphasises not only developmental stages but also moral dilemmas, as well.

(a) Leave as is.
(b) Kohlberg's moral reasoning theory not only emphasises developmental stages but also moral dilemmas.
(c) Kohlberg's moral reasoning theory emphasises not only developmental stages but also moral dilemmas.
(d) Kohlberg's moral reasoning theory emphasises not only developmental stages but neither moral dilemmas.

4 Choose the correct option for punctuation of a series.

The three broad categories of psychoactive drugs are (1) depressants, (2) stimulants, and (3) hallucinogens.

(a) Leave as is.
(b) The three broad categories of psychoactive drugs are a) depressants, b) stimulants, and c) hallucinogens.
(c) The three broad categories of psychoactive drugs are 1. depressants, 2. stimulants, and 3. hallucinogens.
(d) The three broad categories of psychoactive drugs are (a) depressants, (b) stimulants, and (c) hallucinogens.

5 Which of the following examples should not be hyphenated?
(a) anti-social behaviour
(b) self-esteem exercise
(c) three-trial task
(d) middle-class group

APPLIED ACTIVITY

1 Type the following four headings in correct APA format:
Level 1: Operant conditioning
Level 2: Skinner's experiments
Level 3: Principles of reinforcement
Level 4: Continuous reinforcement

2 Edit the following sentences, taking into account the discussion in this chapter on APA editorial style and how to write clearly and concisely.

(a) Information-processing speed has been linked by researchers to scores on IQ tests.
(b) The three-factor solution in Study Two replicates our findings in Study One.
(c) Marshall and Holding (2003) propose that our actions can modify our attitudes.
(d) The team of experts were to formulate one solution.
(e) The children that displayed acceptable behaviour were allowed to play outside for the remainder of the day.
(f) The chimpanzees who learned sign language were also trained to use computer-mediated language.
(g) The participants rated their motivation on a 5-point scale ranging from 1 "no motivation to do anything" to 5 "highly motivated to succeed".
(h) The different cultural groups, Australians, Middle Easterners, and North Americans, have displayed different perceptions of personal space.
(i) Researchers in the field of developmental psychology support one main assumption—development is a lifelong process.
(j) The judges rated the gymnasts using the skill performance scale.
(k) The tasks that the first group solved were randomly ordered, those that the second group solved were in a fixed order.
(l) Baillie (2009) showed that parents of delinquent youngsters are often unaware of their children's whereabouts, and delinquency was assessed by the Parenting Skills Test, PST.
(m) The confederate either appeared happy or sad in the study.
(n) The 31 men in this study rated their 31 women partners highly when the ladies were supportive of their needs.

ACKNOWLEDGMENTS

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CHAPTER 3

Critical thinking

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

3.1 understand the importance of critical thinking in research

3.2 understand the importance of critically evaluating research

3.3 apply critical thinking in essay and report writing.

3.1 Critical thinking

LEARNING OBJECTIVE 3.1 Understand the importance of critical thinking in research.

Critical thinking is a skill that has wide application in many areas of life, but particularly when you are undertaking academic research. Critical thinking involves carefully examining and analysing evidence to assess its validity and worth. It means probing beneath what appears on the surface, weighing up alternative views, and searching for other explanations before accepting an argument. It means being objective, open-minded, and sceptical. Critical thinking is a frame of mind that is essential in both researching and writing.

Critical thinking is not about criticising someone else's point of view or taking a negative approach. In essence, it involves making a logical and rational evaluation of research evidence, assessing both its strengths and its weaknesses. It involves looking for evidence to support arguments put forward by other researchers, not accepting them at face value.

Critical thinking is an essential academic skill, since it encourages you to decide for yourself how to interpret and evaluate the information you read in scholarly journals and books. Almost all your research in psychology will involve reading the work of others. It is crucial that you develop an ability to look critically at what other researchers have concluded, the evidence they have presented in support of those conclusions, and the methods they used to obtain that evidence. Only through a critical analysis of past research can you ensure that your own research is built on sound foundations.

The following three important principles underpin critical thinking. Keeping these principles in mind at all times during your research will help you to construct an informed and rational analysis.

Scepticism

A sceptical approach is one of the key elements of critical thinking. **Scepticism** means never taking anything for granted. Always question assumptions or conclusions, and consider whether they flow logically from the evidence presented. Do not accept an assertion merely because it is in print or is delivered by a person of authority.

Objectivity

Being objective means taking an impartial and disinterested approach, setting aside any emotional reactions or personal views when considering an issue. **Objectivity** requires that you judge a researcher's arguments or conclusions according to the logic that underlies them and the evidence presented to support them, not on subjective beliefs or assumptions.

Open-mindedness

Be open-minded about what you are examining. Consider all sides of an argument, even if you have personal opinions one way or another. **Open-mindedness** means never ignoring potential explanations or interpretations, being flexible and willing to accept evidence that might conflict with your own personal experience.

Critical thinking enables you to analyse and assess independently the information you read in scholarly journals and books. It is crucial if you are to draw on these sources in your own research. Unless you are able to examine critically the research that others carry out, you will not be able to make informed judgements of your own. The critical thinking skills you apply in examining the work of others can also be applied to your own work to ensure it is robust and based on sound arguments.

3.2 Critically evaluating research

LEARNING OBJECTIVE 3.2 Understand the importance of critically evaluating research.

An essential component in every type of academic research is a careful review of past research that is relevant to the topic. Analysing past research is like developing the recipe for a meal you are creating. You need to be able to look at all the ingredients available to you, assess their worth both individually

and in combination with one another, then make decisions about which you will include in your creation, and in what quantities. To do that, you need the skills to critically evaluate those ingredients, disregarding any elaborate packaging or marketing claims.

Like the perfect meal, the value of your research will depend largely on the quality of the ingredients you use. The critical thinking approach helps ensure that you start with the right ingredients.

Interpret and evaluate the research evidence

Critical thinking is not 'magic'—it is a skill that anyone can learn and apply. The following section outlines a five-step procedure you can use to critically evaluate research sources in psychology. These five steps are as follows.

1. Identify the source.
2. Analyse the arguments.
3. Examine the research methodology.
4. Evaluate the results.
5. Analyse the conclusions and implications.

Each of these five steps will now be explained in more detail.

1. Identify the source

The first thing you should do when reading a piece of past research is identify the source. That is, you should consider three things about the research—who were the researchers (the authors), when was the work published, and where was it published?

From a critical thinking perspective, the most important consideration is where the work was published. You should note whether the work appeared in a refereed journal or book, a paper from a peer-reviewed conference, a web page, a magazine, a newspaper, or some other forum. Scholarly journals and books undergo a rigorous peer-review process before publication to ensure they meet a high standard of academic integrity. Consequently, you will normally be able to place greater value on research from a peer-reviewed source than on material that has not undergone such scrutiny, such as a newspaper article.

The date of publication can be an important factor in judging the value of a work you are reading. Consider how long ago the research was done. If it was published many years ago, newer research may have modified the earlier findings. However, you should still consider past research, since it will often have shaped more recently published work. In understanding how a concept has developed over time, you are in a better position to critically evaluate its current status. If it is a recent work (i.e., published within the past five years), consider whether it merely replicates the results of previous work or is a pioneering study that breaks new ground. If the work replicates previous studies, this will usually provide an indication of its **reliability**. However, if the work is pioneering and is not backed up by past research results, you may need further verification before assuming its results to be reliable.

You also need to identify the author. From a critical thinking point of view, the author is not as important as the place and date of publication. It should not matter who conducted the research, so long as it adheres to ethical and rigorous research design procedures and produces reliable findings. However, the name of the author, together with the year of publication, will form the citation that is included in the text of your essay or report.

2. Analyse the arguments

An argument is a point of view or statement presented in a research work. The researcher will normally gather evidence in support of an argument by testing specific **hypotheses**. Hypotheses assert how particular variables are related. If these hypotheses are supported by evidence, then the argument is established. Often, researchers will set out to find support for more than one argument in a study. Hypotheses must be tested and evidence presented for each of the key arguments.

In a sense, the arguments for which a research study sets out to provide supporting evidence are its essence—the core of what the study is all about. From a critical thinking viewpoint, this makes it

extremely important that the arguments are based on sound **theory**, are supported by evidence, and flow logically from that evidence. If not, any conclusions drawn will be flawed and the value of the research work will be diminished. Theories suggest hypotheses that can then be tested to explain why behaviours or events take place. Evidence found in support of a hypothesis can provide support for a theory, but does not in itself prove the theory to be correct.

Ask yourself a number of questions about the arguments set out in a study.

- *Are the arguments based on sound theory?*
  Check that the arguments have resulted from a comprehensive literature review and flow logically from the relevant theory on that topic.
- *Have alternative sides of the argument been addressed?*
  Researchers will normally examine both pros and cons of their argument. Accepting an argument on the basis of only part of the evidence is dangerous. Only by identifying and considering alternative sides of an argument can an informed judgement be made on its **validity**.
- *Have the terms been properly defined?*
  You need to be clear exactly what authors mean when they use particular terms. Some terms may have several meanings, depending on the context in which they are used. In particular, it is important that any variables being measured are clearly defined. Different studies may use the same labels for variables, even though they may be measuring totally different things. Only by having a clear definition of what the variable means in each particular study can the reader make sense of the findings.
- *Does the evidence support the argument?*
  The strength of an argument is based solely on the quality of the evidence presented to support it. Is the evidence convincing? How strong are the links between the evidence and the argument? Is there a compelling logic that ties them together?
- *Are the hypotheses appropriate?*
  Check whether the hypotheses are a valid test of the argument. You must be sure that the study is testing the right things so as to support the argument.
- *Are the arguments weak?*
  It is equally important from a critical thinking perspective that you learn to spot arguments that are not based on the evidence presented and do not flow logically from theory.

Always remember that the strength of any argument is based solely on the evidence that underpins it, and nothing else. A number of problems are associated with weak arguments; the following section will outline several of the most common. While the list is not exhaustive, it will give you an overview of the fallacies you will come across most often. You should learn not only to recognise these fallacies in other people's work, but to avoid them in your own.

Appeals to authority

The *appeal to authority* fallacy is an argument that relies on the authority of the person making it rather than on the evidence presented. When judging the strength of an argument, you should entirely disregard who has presented it. That an author is well known or has made compelling arguments in the past does not signify that any new arguments he or she proposes will necessarily be equally strong. As a student, you should not be too ready to accept an argument just because it is put forward by someone considered an authority. Judge an argument on the evidence, not on the author's name.

Appeals to popularity

Just as you should not accept an argument simply because of the person making it, neither should you accept an argument just because it is widespread and popular. You have probably encountered many stereotypes and commonly held misconceptions that are not based on any hard evidence. For example, people once believed that the Earth was flat and that you would fall off the edge if you sailed far enough. This widely held view has since been proved to be false. Once again, the evidence that supports an argument is the true barometer of its strength and validity. Do not simply accept a generalisation or a sweeping statement that echoes a popular sentiment—always delve deeper.

Straw man

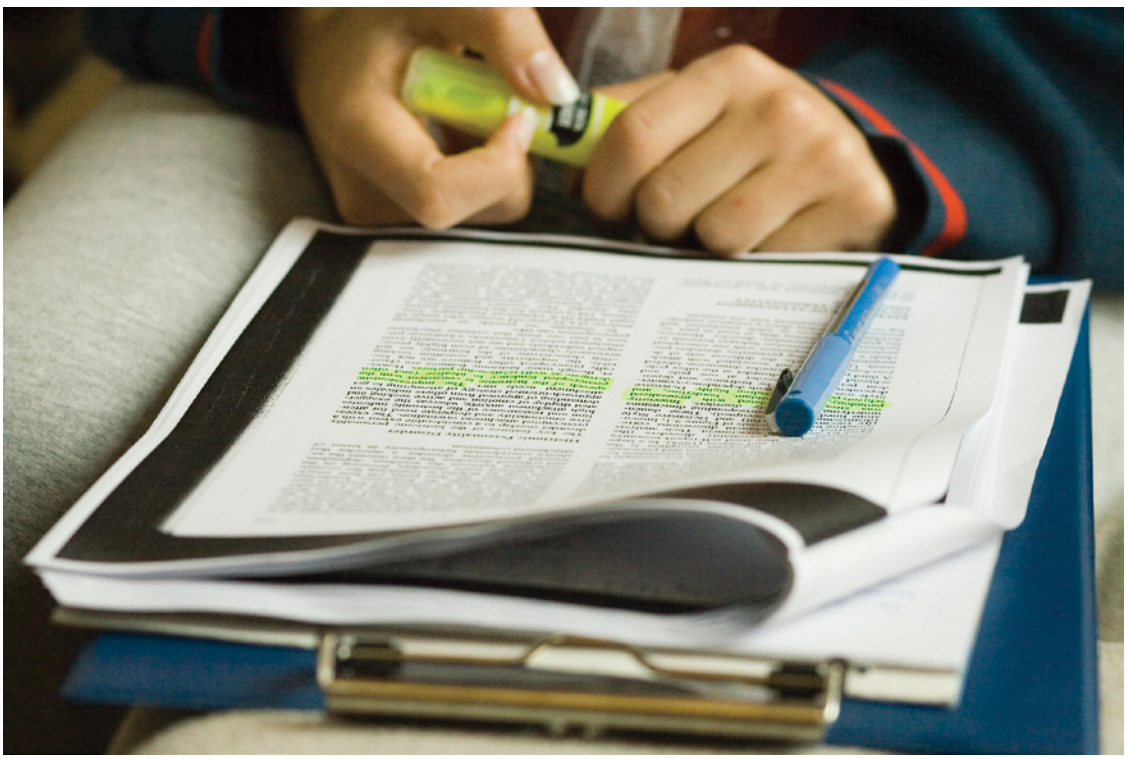
The *straw man* fallacy involves authors deliberately attacking an opposing argument in order to make their own argument appear stronger. The author sets up a decoy argument—a straw man—in order to deliberately destroy it. Often the straw man argument will be weak and easily refuted, which makes it easy to discredit it. The problem is that destroying an opposing argument does not necessarily prove that *your* argument is correct. Once again, the only way to validate an argument is through the evidence you present to support it.

Arguments against the person

Writers may also try to attack the author of an alternative argument in order to strengthen their own position. The attack will be aimed at the person rather than the argument he or she has put forward. In a sense, this is the flipside of the appeal to authority fallacy. In this case, rather than accepting an argument because of the authority or reputation of the person making it, the argument is rejected because of supposed failings of the person making it. Just because the person may have character flaws or have presented weak arguments in the past, it does not follow that any new arguments he or she proposes will necessarily be invalid.

3. Examine the research methodology

Critical thinking requires that you analyse not only the results reported in a research study but also the way in which they were obtained. Pay close attention to the research methodology: Who were the participants and how was the study conducted?



In considering the participants, the key question in quantitative research is whether they provide a **representative sample**. Most studies rely on selecting a sample group that represents a wider population. The results obtained from this sample group are then extrapolated to represent the findings that would be obtained from studying the entire population. If the sample group is representative, the results can be confidently generalised to the target population. If the sample group is not representative, the results should be interpreted with scepticism.

This means you need to critically evaluate the techniques used to select the participants in order to satisfy yourself that they do represent the target population. Normally, the best way of obtaining a representative sample is through **random selection**, by means of which every member of the target population has an equal chance of being included in the sample.

In considering whether the sample is representative, you should examine the characteristics of the participants. For example, how many were male and how many were female? What ages were they? What were their ethnic backgrounds? Do the demographic characteristics of the sample group reflect the characteristics of the target population? Did the selection techniques used provide a representative cross-section of the target population?

Consider whether the sample is large enough for the results to be meaningful. Generally speaking, the larger and more representative the sample, the more reliable the results.

You need to make sure that the psychological tests used will produce both reliable and valid results. Measures are reliable when they will produce consistent results in repeated testing; they are valid if the test actually measures what it claims to measure.

Unlike quantitative research, qualitative research is not concerned with numbers or sample representativeness to enable generalisations of findings to the target population (Burton, Goodwin, & Goodwin, 2018). In contrast, qualitative research focuses on research questions that delve into the personal experiences of participants and explores participants' thoughts, feelings, and behaviours to gain insight into a research problem. Qualitative research typically uses three non-probability sampling methods—purposive sampling, quota sampling, and snowball sampling—to provide a deepened understanding of a phenomenon under investigation. **Purposive sampling** involves the researcher inviting individuals to participate based on the particular aim of the study and because they meet specific criteria or characteristics of a population. In **quota sampling**, the researcher determines what the population looks like in terms of certain qualities and selects specific individuals from within various subgroups to participate in the study for each "quota" or quality. In **snowball sampling**, a few individuals relevant to the research topic participate in the study and the researcher recruits new participants by asking participants to refer him/her to more people.

Quantitative research typically requires a larger sample size than qualitative research. Quantitative research selects a subset of a population using probability sampling techniques to ensure generalisability of findings. While there are no specific rules when determining an appropriate sample size in qualitative research, the question of "how many participants" can depend on the time and resources available, and overall research objectives. What is important in qualitative research is that sufficient data is obtained to build a persuasive, analytical narrative that is rich, complex, and detailed. You have reached a sufficient sample size in qualitative research when you attain **saturation**. Saturation occurs when adding more participants to the study does not add anything new to what has already been established.

4. Evaluate the results

The data that a researcher uses as evidence to support an argument are contained in the "results" section of an article. This section examines the outcomes of the tests or observations carried out by the researcher. It is important that you critically examine these data on a number of levels. Ask yourself the following questions.

- *Have the appropriate analyses been used?*
  You need to satisfy yourself that the researcher has used appropriate tests to answer the research questions he or she is examining. The data might be well presented and explained, but might not be the data needed for a robust interpretation of the research findings. You will learn how to critically analyse research results when you study statistics and research methods in future courses. (Chapter 5 presents more information on how to report statistical findings in your quantitative research report; Chapter 6 provides more information on how to report and discuss findings in your qualitative research report.)

- *Are the results reliable?*
  The reliability of a study's results will depend heavily on the methodology used. You should already have examined this methodology closely. At this stage, you should be double-checking the results for issues such as the level of significance, whether the sample size was appropriate, and whether the analyses were performed correctly.
- *Are the results presented clearly?*
  The results must be presented in a format that makes it easy for the reader to identify and understand the key findings. In quantitative research, this often requires the use of tables and figures. These illustrations must be simple, clear, and well designed. They must also be clearly linked to the text that describes them.

  In qualitative research, analysis involves interpreting data for meaning. Qualitative research analysis is typically interpretative and involves searching for patterns or themes in the data (Burton, Goodwin & Goodwin, 2018). The idea is to provide a meaningful and cohesive representation of the data from diverse viewpoints or complex issues while remaining "true" to individual participants' descriptions. The aim of the qualitative analysis is to describe, explore, and understand phenomena from an individual or group perspective.
- *Do the results support the hypotheses?*
  Quantitative research studies set out to test hypotheses in order to provide support for an argument. The results of these tests must show compelling support for the hypotheses, or the strength of the argument will suffer. Look for results that demonstrate statistically significant differences or relationships.
- *Are the results interpreted with insight?*
  The results of any research must be interpreted. You need to examine whether the researcher has made the correct deductions from the data. In quantitative research, the statistical analysis of the data may suggest support for the hypotheses, but has the researcher ruled out alternative explanations for that result? Consider whether the researcher has been thorough and insightful in the way the results have been interpreted. In qualitative research, data analysis is a process of systematically searching and analysing the data to provide an informative narrative of specific phenomena.

5. Analyse the conclusions and implications

With the hypotheses tested and the quantitative data analysed, the researcher now has to interpret what it all means and draw some conclusions. Similarly, in qualitative research, the researcher analyses the data to gain detailed insights into the phenomena being studied. This is an opportunity for the researcher to be creative, although any insights must be anchored in logic and the evidence. The conclusions reached must be based on sound evidence, as presented in the study, and logical reasoning derived from the evidence. Researchers sometimes overstep that boundary when attempting to demonstrate the importance of their findings, reaching conclusions that the evidence simply does not support.

You should also assess the importance of the study's findings. Has it broken new ground or merely replicated past studies? Has it identified new questions to be answered in future research or posed no such challenges? Does it raise questions about previously accepted theories, or does it merely confirm them? You need to consider what contribution the study has made to understanding of the research topic.

This kind of analysis is the essence of critical thinking. It requires you to objectively review the strength of the work's conclusions, based purely on the quality of evidence put forward to support them. Critical thinking requires you to be sceptical about what researchers assert. In quantitative research, you need to question the validity of their theoretical framework, the hypotheses they have tested, the research methods they have used, and the interpretations they have reached. Similarly, for qualitative research, you need to demonstrate rigour by clearly explaining how the data was interpreted and identifying key considerations that underpinned your outcomes. This might involve researchers reflecting on their analyses and commenting on how the conclusions might be influenced by their personal assumptions and biases (Brownlow & Lamont-Mills, 2018).

Applying critical thinking to your own writing is simple: just use the same principles you would use in reviewing another researcher's work. The critical thinking process outlined in the first part of this chapter provides a useful checklist that you can apply to your own writing.

More detailed information on how to organise an essay or report, what should go in each section, what formats to use, and how to develop an argument is contained in Chapters 4 and 5. The rest of this chapter will provide broader advice on writing from a critical thinking perspective. As well as offering general tips, the chapter will focus on two specific aspects of critical writing—developing a balanced argument and ensuring that your argument flows logically. The chapter will finish with a checklist to help you apply critical thinking in your research and writing.

3.3 General tips on how to write critically

LEARNING OBJECTIVE 3.3 Apply critical thinking in essay and report writing.

- A key to writing well is to make sure you read extensively and gain a deep understanding of your research topic. Unless you really know the subject matter, you will not be able to write authoritatively.
- Make sure your arguments are based on evidence. Your work must clearly spell out the link between your arguments and the evidence being used to support them. You cannot imply a link or assume the reader will accept your argument unless you present a compelling case based on evidence.
- Consider the contribution that your study has made to the research topic. This will help you to draw conclusions about the implications or significance of your work.
- Think about the way your report is structured. It does not matter how groundbreaking your findings might be, if your work is not formatted and structured properly it will be of little value.

Develop a balanced argument

A crucial component of the critical writing process is developing a balanced argument. There is always more than one side to a story. In fact, there often can be numerous possible explanations for the data collected in a research study. Your work should not put forward only the argument you prefer but should also examine alternative views. You should explain the research evidence that supports each of the various sides of the argument, and show the reasoning that led you to settle on the argument you are advocating. You should even explain any arguments against the case you are presenting, if only to demonstrate why you have rejected them.

Unless you consider opposing points of view, you are expecting the reader simply to accept the idea that there are no alternative points of view. By examining alternative viewpoints and showing why the evidence available nonetheless supports your argument, you strengthen your case.

For example, in Australia there has been considerable debate about whether there should be a policy of mandatory detention for anyone who comes to the country without proper authorisation, whether they are an asylum seeker or simply an illegal immigrant. If you were to mount an argument either for or against a policy of mandatory detention, it would not be enough to just outline one side of the debate and ignore the counter-arguments. You must acknowledge the alternative points of view and outline evidence that refutes them or gives greater weight to your own argument. For instance, those who support a policy of mandatory detention argue that when it was in force, the number of people attempting to enter Australia without authorisation dropped dramatically. They say that such a policy is an effective deterrent to those who would otherwise seek to enter the country illegally. If you were attempting to mount an argument against mandatory detention, you would need to acknowledge and refute this viewpoint. For instance, you might argue that by putting the human rights of detainees at risk, the policy infringes international treaties to which Australia is a signatory. Therefore, irrespective of the deterrent value, such a policy should not be supported. Only by properly addressing and refuting alternative viewpoints can your argument withstand scrutiny.

Logical flow of argument

Logic is integral to critical thinking. There must be logic in the reasoning that drives your work and in its structure. The flow of your work should be controlled, methodical, and logical, so that the reader can easily follow your reasoning. The easiest way to achieve this is by using a structure that takes the reader down a clear and logical path.

Do not try to cram too many ideas into each paragraph, or jump from one part of your argument to another. Build your argument step by step. Each point you make should build on the previous point and flow logically from it. Be concise, but provide sufficient discussion so that the point you are making is clear. For example:

> Johnson (1997) reported that practitioners saw themselves in the midst of a learning curve about new communication technologies. All respondents admitted to knowledge gaps about technologies but also admitted that their self-identity as professionals depended on reducing that gap. Practitioners reported definite gains in productivity and efficiency, particularly the ability to do research faster and cheaper. They also recognised the usefulness of two-way communication features, but saw them as another option in addition to traditional one-way media and face-to-face communication.
>
> Springston (2001) also found a lack of expertise in the use of new technologies for two-way communication. Participants indicated that the potential for new technologies to improve two-way communication was not being exploited to the extent they believed possible. Email and the Web were seen as the most important facets of new communication technologies, with both appearing to be fully integrated into public relations practice. However, the survey indicated many of the features and multimedia capabilities of new technologies were underused. In fact, new technology was somewhat overwhelming to many respondents, with information overload identified as a problem.
>
> There is no doubt that Internet-based technologies are excellent vehicles through which to disseminate information. However, that is not the only

way they can be used. Kent and Taylor (1998) argued that the Web provided opportunities to create lasting relationships with publics through dialogic loops that permit the negotiated exchange of ideas and opinions. Dialogic loops are two-way communication mechanisms that allow publics to query organisations and allow organisations to respond . . . [paragraph continues].

CHECKLIST

As already noted, critical thinking is a skill that everyone can learn and apply. Use the following checklist to ensure you have incorporated critical thinking principles when reviewing research articles. You can also apply the principles of critical thinking when examining your own writing. (Consult Chapters 4, 5 and 6 for more information on the process of writing essays and research reports.)

- ☐ Have you reviewed the literature extensively?
- ☐ Have you read the research articles with objectivity, scepticism, and an open mind?
- ☐ Have you identified who the researchers are, when the work was published, and where it was published?
- ☐ Have the key terms been properly defined?
- ☐ Are the key arguments based on sound theory?
- ☐ Have testable hypotheses been proposed?
- ☐ Have alternative sides of the arguments been addressed?
- ☐ Can you identify any fallacies in the arguments?
- ☐ Was the research methodology appropriate?
- ☐ Have you identified who the participants were and how the study was conducted?
- ☐ Can you identify the sampling method used?
- ☐ If quantitative research, do the participants form a representative sample?
- ☐ If qualitative research, what form of non-probability sampling method was used to select participants?
- ☐ Can the results of quantitative research be generalised to the target population with confidence?
- ☐ Will the methodology produce reliable and valid results?
- ☐ Have the appropriate analyses been used?
- ☐ Are the results or findings presented clearly?
- ☐ Are the results or data interpreted appropriately?
- ☐ If quantitative research, do the results support the hypotheses?
- ☐ If qualitative research, does the analysis provide a meaningful and cohesive representation of the data?
- ☐ Have you ruled out any alternative explanations for the results?
- ☐ Are the conclusions based on logical reasoning?
- ☐ Has the study made an important contribution to the research topic?

KEY TERMS

hypotheses Statements about the expected findings of your study.

objectivity Making an impartial judgement about something.

open-mindedness Considering all sides of an issue, including explanations that differ from your personal point of view.

purposive sampling A form of non-probability sampling whereby participants are selected based on characteristics of a population and the aim of the study.

quota sampling A form of non-probability sampling whereby participants are selected based on specific qualities of a population.

random selection A sampling procedure in which every member of the target population has an equal chance of being selected.

reliability The degree to which consistent results are achieved with repeat testing.

representative sample A sample that has the same distribution of characteristics as the target population.

saturation Is what occurs when adding more participants does not provide any enhanced perspectives or information relevant to the research question.

scepticism Not accepting an assertion as true until you have examined the evidence.

snowball sampling A form on non-probability sampling whereby participants are selected based on their relevance to the research topic and the researcher asks them to refer more people like them to participate in the study.

theory A proposition that attempts to describe relationships, define concepts, or explain why certain events take place.

validity The degree of "truthfulness" of a test or argument.

APPLIED ACTIVITY

(Italics have been used in the following exercises for **emphasis** only. Please remember to submit your work in APA style and only use italics where appropriate.)

1 First read through the section of your textbook that covers how psychologists do their research. Then read the following exercise and list any problems you can detect with the way the study was conducted. Use the critical thinking skills developed in this chapter to evaluate the research.

> *A psychology lecturer, Professor I. M. Smart, wanted to know what students thought about the Foundation Psychology course she taught. Professor Smart went to the library during one free study hour and sampled 26 of the 503 students enrolled in her course. There were no males in this sample. The next day she went to the refectory and sampled an additional 31 students from her course (10 females and 21 males). The results were that 10 students wanted more critical thinking exercises in the lecture, 13 students wanted more interactive learning activities in the tutorial, and the remaining students thought the course was fine as it was. Professor Smart concluded that, overall, students were happy with her teaching of the course.*

2 This exercise is designed to help you apply critical thinking principles when reviewing a research article. For the purposes of this exercise, treat the following information taken from an honours thesis as a research article you have located on a particular topic. The thesis is entitled "Person–Environment Fit and Job Stress" and was written by Lynette Sutherland in 1992. Assume that all citations have full reference information given at the end of the article. Critically evaluate the article by using the checklist at the end of this chapter.

> *It is a well-researched fact that job stress is a major cause of both physical and psychological ill health, coupled with the increasing costs of premature turn-over, absenteeism, employee illness, disability, and death (Hoffman & Hobson, 1986). Job stress has led many organisations to adopt stress*

reduction and management programs into their corporate frameworks (Wallis, 1986). The approach to stress that appears to be the most accepted is the view that stress is inferred by the presence of physiological or behavioural signs and psychological or somatic symptoms (Schuler, 1980). There also seems to be an emphasis on the presence of a transactional process in stress, usually between the environment, the individual, and the coping response (Fisher, 1986). While stressor *refers to the environmental stimulus acting on the individual,* strain *refers to the actual response exhibited, whether it is physiological, psychological, or behavioural in nature. The term* stress*, then, refers to the study of stressors and strains (Beehr & Franz, 1987).*

In general, person–environment fit theory predicts that the magnitude of strain experienced by an individual is proportional to the degree of misfit between that individual and his/her work environment (Van Harrison, 1978). The type of strain that develops as a result of this misfit depends largely on which motives are not met by the work environment. In contrast, good person–environment fit results in feelings of self-worth, self-efficacy, and competency within the employee (White, 1963). Research evidence indicates that perceptions of stress are related to affect—the presence of negative emotions and physiological symptoms (e.g., Pennebaker, 1982). For example, people high in negative affectivity (NA) are said to dwell on the negative side of the world (Pennebaker & Watson, 1988) and report an increased level of strain, distress, and physical complaints, when stressors and health problems are not actually present (Watson, 1987). In contrast, people high in positive affectivity (PA) are said to lead a full, interesting, and happy life (Watson & Pennebaker, 1989) and see the world in a much more positive light.

Holland's (1985) hexagonal theory of vocational preferences proposes a set of six personality types and environments, in parallel: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. The extent to which an individual's occupation matches his/her personality type is described by the term congruence. *An individual's level of congruence is based on a comparison of their occupational environment with a personality profile, based on the three highest scoring personality dimensions on measures such as the Vocational Preference Inventory (VPI; Holland, 1978) or the Self-Directed Search (SDS; Holland, 1985). When an individual works in an environment that is either closely aligned with or the same as their personality type, the relationship is described as congruent.*

The aim of this study was to investigate the relationship between congruence and occupational stress. It was hypothesised that employees with high person–environment fit will report lower levels of stress and strain. Conversely, it was hypothesised that employees with low person–environment fit will report higher levels of stress and strain. The role of affect was also examined in light of the stress–strain relationship.

A total of 154 full-time working adults participated in the study. Seventy-nine males with a mean age of 35.8 years (SD = 8.23) and 75 females with a mean age of 34.4 years (SD = 9.93) completed the SDS, OSI, and the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Overall, participants ranged in age from 18 to 58 years, with a mean age of 35 years. Of these, 75 were employed in the Toowoomba, Queensland, region. The remaining 79 participants were tested while attending a residential school at the Sydney University of Technology, New South Wales. The sample was broken down into the following work

categories: 14 in Realistic, 14 in Investigative, 7 in Artistic, 80 in Social, 25 in Enterprising, and 13 in Conventional occupations. Participants were to have been employed in their current occupation for at least 6 months.

Results suggested that as congruence increased, the report of job stressors and strains decreased, as measured by the OSI. This provides evidence for the role of matching the person to the job environment during selection, recruitment, or even promotion. People with NA were found to report higher levels of stress and strain at work. This indicates that measurement of affect is important in ascertaining which employees will be prone to stress-related illnesses and work difficulties. However, the role of these variables needs to be further examined with a larger sample (preferably one that exceeds 200) before any conclusions can be drawn concerning their involvement in the prediction of job stress and strain. Given that the current sample results are based on a sample not composed of different occupation types in equal numbers, these findings should not be generalised to the general population. Indeed, a large proportion of this sample was employed in social occupations. It may be that such people have higher levels of congruence than other work groups, thereby raising the overall congruence level for the entire sample. Future studies should aim to sample equally across Holland's (1985) six environmental typologies.

The current study has, however, successfully overcome a number of methodological weaknesses evidenced in past studies. Most importantly, this study used an individual's actual occupation as the environmental measure, making the measurement of congruence significantly more accurate than in studies using environmental measures such as preferred university major. Future research on the relationship between congruence and job stress and strain should attempt to measure stressors at work by asking the respondents

to indicate how stressful each job characteristic is for them. This could be combined with Holland's (1985) congruence measure to establish a more comprehensive measure of person–environment fit.

INTERNET ACTIVITY

Search the literature for information on one or all of the following research topics:

- Nutrition and early childhood education
- What do personality tests really measure?
- Effects of media violence.

Select one refereed journal article, one chapter in an edited book, one newspaper article, and one online web article for critical evaluation. Use the checklist at the end of this chapter to critically evaluate each source. Is similar evidence found in all four sources?

No set answers are provided for this internet activity, because different sources of information on each research topic will be found using different online and library resources. The activity was designed to give you hands-on practice in finding information using a variety of sources.

ACKNOWLEDGMENTS

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CHAPTER 4

Essays

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

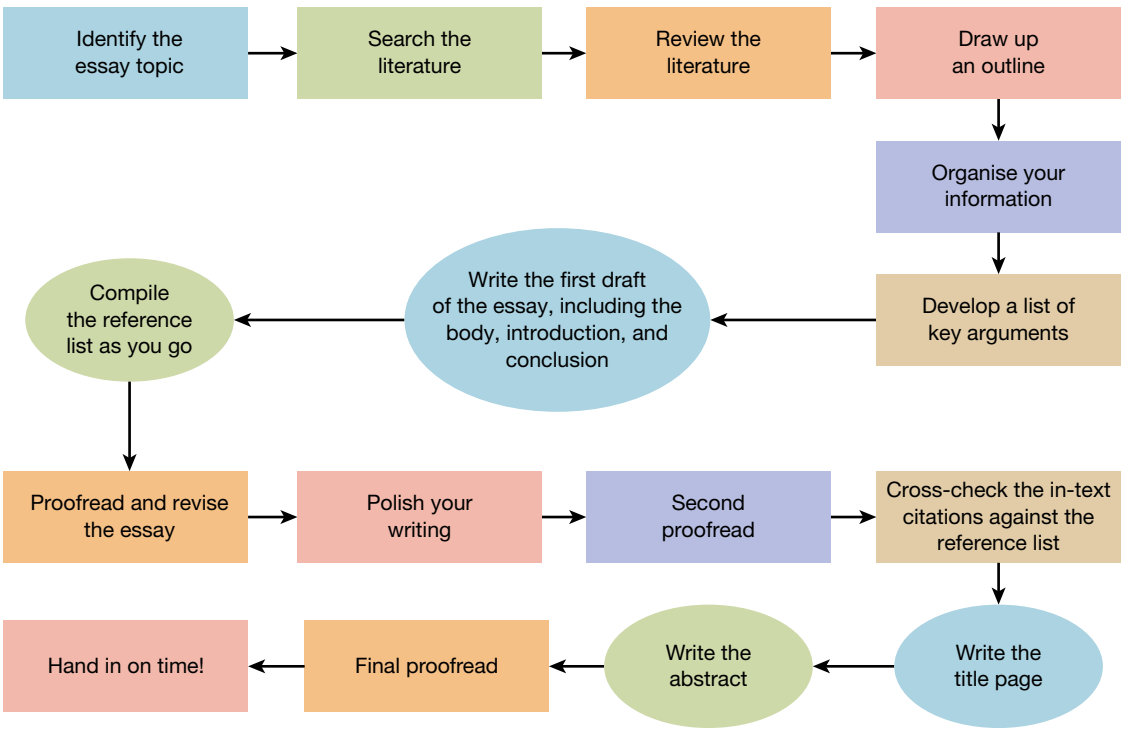
- **4.1** identify the steps in writing an essay in APA style
- **4.2** identify and address the topic of your essay
- **4.3** structure your essay in a logical way.

4.1 Basic steps in essay writing

LEARNING OBJECTIVE 4.1 Identify the steps in writing an essay in APA style.

Figure 4.1 outlines the broad steps you should follow in writing an essay. Once you have your essay topic you can start searching and reviewing the relevant literature. The next step is to lay the foundations of your essay by drawing up an outline, organising your information so as to create a logical argument, and listing the key arguments that you intend to develop. Then you should begin writing the first draft of your essay, including an introduction, the main body, and a conclusion. Make sure you compile your reference list as you go. There is nothing more frustrating and time-consuming than having to search through the literature a second time in order to construct your reference list. Compiling your reference list as you write will help you identify when an author has published twice in the same year or where different authors have the same surname. It will also ensure that the in-text citations match the reference list.

FIGURE 4.1 The basic steps to writing a good essay



There is no set order in which you should write the three sections of the essay; some people prefer to start with the introduction, while others prefer to write the body first and then complete the introduction when they have a better idea of the essay's final form. The conclusion is normally written last. Now you have a first draft, you can start to refine and improve your work. You should edit and proofread your essay several times, polishing and improving it as you go. Now is the best time to add the other sections of the essay—the title page, the abstract, and the final reference list. Be careful to cross-check all your in-text citations against the reference list. The final step is to proofread and check your essay carefully one last time. Then hand it in!

In this chapter you will learn about the different sections that make up an essay, the correct formatting and structure for each section, and how to organise your information and develop an argument in your essay. At the end of the chapter you will find examples of a well-written and -formatted essay (the "Good Essay") and a poorly written and formatted essay (the "Bad Essay").

4.2 Identifying the essay topic

LEARNING OBJECTIVE 4.2 Identify and address the topic of your essay.

In undergraduate courses your lecturers will often stipulate the topic of your essay. At other times you will be given a choice of topics. Whichever is the case, you need to follow some basic ground rules in relation to the topic of your essay.

The most important precept is to *address the topic*. If the question has been provided for you, read it very carefully and make sure your essay responds directly to it. Essay topics are presented in a particular way because the lecturer is looking for particular content. There is no point in researching and writing on a topic that is different from what was required, even if it is an area you find more interesting.

If you have been given a choice of topics, evaluate each one carefully. There are two main considerations in choosing your topic. First, it should be the topic that interests you most. That way you will be more motivated to complete the essay, and you will enjoy it more. Second, try to choose a topic on which plenty of reference materials are available and easy to access. If the range of reference materials is narrow and difficult to find, you will have more trouble writing the essay.

When deciding on an essay topic, carefully examine the "key words" it contains. These key words are the verbs that specify what you are being asked to do in your essay. For example, essay topics will commonly ask you to *evaluate*, *discuss*, *compare* and *contrast*, or *review* a subject. Each of these verbs is asking you for something different. Definitions for these common key words are as follows.

- *Evaluate:* To weigh up the worth of something and reach a definite conclusion. It is more than just describing several sides to an argument; you are being asked to judge their merits and put forward your own opinion.
- *Discuss:* To present research evidence about your topic, describing in some detail the arguments for and against the evidence. It is not enough merely to describe one aspect of the topic; you should aim to cover competing ideas.
- *Compare and contrast:* To look for similarities and differences between the concepts or theories being examined. You should describe past research on the subject, considering similarities and differences in how other authors have approached it. You do not have to state your personal views, but you should come to a conclusion based on the research evidence.
- *Review:* To report widely on the subject, covering as much of the research as you can. You should examine past research critically, pointing out poor arguments or validity problems, and commenting on the strengths of the works you are reviewing.

4.3 Sections of the essay

LEARNING OBJECTIVE 4.3 Structure your essay in a logical way.

Using the correct structure is important when you write an essay. The finished product combines a number of elements in a logical progression—considering past research, developing an argument, and coming to a conclusion. The requirements for each section of an essay—title page, abstract, introduction, main body, conclusion, and reference list—are outlined below.

Title page

The title page informs the reader of the topic of your essay, who has written it, and what educational institution the writer is affiliated with. APA formatting requires these elements to be presented in a specific way.

You must include three main elements on your title page—the essay title, your name, and the university or institution you are studying at. You should also include a page header and a "running head" at the top of the page, located in the manuscript page header.

The three elements of the title page (the title, your name, and your institution) should be centred horizontally, and centred vertically in the upper half of the page. The title appears first, then your name, then your institutional affiliation. They should appear on separate double-spaced lines.

Title

The **title** should be no longer than 12 words. Aim to summarise the main theme of your essay so the reader can quickly comprehend the topic. The title should make sense in its own right and should introduce the broad area of your research topic, as well as specific variables and concepts you are investigating. For this reason, try not to use abbreviations in your title.

The title should be in upper- and lowercase type, centred horizontally on the title page. Capitalise all words of four or more letters—the only words you do not capitalise are articles (*a*, *an*, and *the*) and short prepositions and conjunctions such as *in*, *of*, *to*, *and*, *but*, and *for*. All verbs, nouns, adjectives, and pronouns should be capitalised. If the title is more than one line long, try to find a logical place to break it into two lines. The title should be double-line spaced and repeated at the top of the first page of the essay proper.

Name

Include your full name in upper- and lowercase type, centred horizontally on the page, on the line below the title. Most authors use their middle initial as well as their first name and surname. You may not wish to, or you may not have a middle name. However, you should be consistent in the way you write your name on each piece of work you submit for assessment.

Institution

The name of the institution where you are studying follows on the line below your name, centred, and in upper- and lowercase. Use the full, official name of the institution, not an abbreviated name.

Manuscript page number

Manuscript page headers are used as an identifier, in case pages are misplaced or mixed up. Manuscript page headers comprise a manuscript page number and a running head.

A manuscript **page number** appears as a numeral, not a word. Start with the number "1" on your title page and continue to number consecutively from there. The page number should appear at least 2.54 cm (i.e., 1 inch) from the right-hand edge of the page, in the space between the top edge of the paper and the first line of the text.

Most word-processing software packages will allow you to include the page number on every page automatically, so you do not have to type them in individually.

Running head

Running heads are also used to identify the article for readers. A **running head** is an abbreviated version of a title. The running head should be a maximum of 50 characters long, including punctuation and spaces, and should be placed in the manuscript page header, in all uppercase letters, flush with the left margin. On the title page, introduce it with the words "Running head" followed by a colon and a space, and then the running head in capital letters, as follows:

Running head: TREATMENT OF CHILDHOOD DEPRESSION

The running head and page number appear on the title page and all subsequent pages to identify each page of the manuscript. On subsequent pages of the manuscript, do not include the introductory words "Running head" or the colon. Use the automatic functions of your word-processing program to generate a running head as part of a page header for your work.

While it is tempting to try to make the layout of your title page more interesting by including bold type, italics, elaborate type fonts, or even borders around the page, such features are not permitted in APA format. See chapter 9 for more on appropriate fonts. Follow the simple, clear requirements outlined. See the sample title page from the Good Essay example at the end of this chapter.

Abstract

An **abstract** is a short summary of your essay. It should provide a comprehensive but concise overview, so that a reader can quickly grasp the essence of your essay. People often read an abstract to decide whether to read the full document.

An abstract is often written last because it summarises the contents of the essay. Word limits vary, but abstracts typically range from 150 to 250 words, but it may be briefer for a review article or a short essay. Your abstract should include:

- an introduction to the topic
- the purpose, underlying theoretical construct, and scope of your work
- the sources used (e.g., published literature)
- key findings
- conclusions.

Wherever possible, try to use the active rather than the passive voice, and the third person rather than the first person. Remember also to use numerals for all numbers except those that begin a sentence.

The abstract appears on a new page, immediately after the title page. Type the word "Abstract" at the top of the page, centred, and in upper- and lowercase. Start the abstract one double-line space below, flush left, and without indentation. Write the entire abstract in a single paragraph.

Remember that the running head will appear flush left and the page number "2" will appear in the top right-hand corner of the page (in the manuscript page header). This should appear automatically if you use the page header function of your word-processing package. A sample abstract from the Good Essay is provided at the end of this chapter.

Introduction

The introduction establishes the topic that you will address, states the purpose of the essay, and outlines the main points you intend to argue.

The rationale

For most student essays, the introduction should be only a few paragraphs long. The length will vary depending on the length of the essay—the longer the essay, the longer your introduction may be. A well-written introduction will engage the reader's attention and interest, and encourage him or her to read on.

The introduction sets up the framework for your essay. It tells the reader what you are reviewing, why you are reviewing it, and how you intend to proceed. From your introduction the reader should have a good idea of the nature of the research topic and the arguments you will put forward.

The introduction should clearly state the problem you are addressing, placing it in the context of past research on the topic. It should state the purpose of your review: what you are aiming to resolve. It should also outline the way you will structure your argument.

Be careful about using personal pronouns in your essay. Some lecturers prefer that you avoid them. For example, rather than using the phrase "I will argue …", you may be expected to set out your argument impersonally—"In this essay it will be argued …" or "Research evidence indicates that …"

Using personal pronouns can help you to write in the active rather than the passive voice. However, you should use them sparingly in your writing. It is important to make sure your argument is based on the research evidence available, rather than a personal opinion that is not backed by research.

The format

Do not include the heading "Introduction" in this section because it is evident from its position in the manuscript. Instead, you should repeat the title of the essay at the top of a new page. Note that this repeated title is not formatted as a Level 1 heading. See the sample introductory paragraph of the Good Essay at the end of this chapter. The text begins one double-line space below this title. Continue to use double-line spacing between all text lines of the essay. Remember not to insert any extra line spaces between paragraphs and to indent the first line of each paragraph. Each page of your essay should also include the running head and page number in the header. See the sample Good Essay at the end of this chapter.

The essay body

The following sections explain how to structure your essay by drawing up an outline and organising information in a logical way. The question of how to provide a balanced argument in your essay is also addressed. For a more detailed explanation of how to use critical thinking principles in organising your information, see Chapter 3.

Drawing up an outline

After you have reviewed the literature and gathered the information you need to write the essay, the next step is to develop an outline. The outline is the skeleton that shows broadly how you will structure your essay and develop your arguments. It is a framework you can use to start writing. Just as builders need a blueprint before they can start construction, you should start the writing process by developing an outline.

Outlines can take several forms. You may choose to set out the broad areas you intend to cover, as well as the topics you wish to discuss within each of these sections. You may wish to list the theories or concepts that you intend to discuss in each section, with the relevant citations. The key is that your outline should arrange your information in a logical and clear fashion, so that you build your argument as you progress.

Do not imagine that your outline will stay exactly as it was when you first wrote it. Most students will make many changes as they continue their research and develop their arguments during the process of completing an assignment.

There are many strategies to choose from, and different students will have different preferences. For example, some students prefer to use a visual plan, or cognitive map, to represent the broad themes, ideas, and arguments in their work, and wait until the latter stages of reading to link the themes into a coherent whole.

Figure 4.2 shows a sample outline for an essay that examines job satisfaction and organisational commitment as predictors of employee turnover.

FIGURE 4.2 A sample essay outline

- Introduction
  - Definition of employee turnover
    - Consequences of turnover for the organisation
    - Consequences of turnover for the leaver
    - Measurement of turnover
      - Self-report questionnaires
      - Personnel records
- Predictive models of employee turnover
  - Structural model
  - Unfolding model
- Predictive measures of employee turnover
  - Job satisfaction
    - Opportunities for growth
    - Job characteristics
    - Personality variables
  - Work environment satisfaction
    - Relationships in the workplace
    - Work ethic in the workplace
  - Organisational commitment
    - Job challenge
    - Job duties
- Relationship between job satisfaction, organisational commitment, and employee turnover
  - Compare and contrast relevant research studies
  - Critique of relevant research evidence
  - Future research directions
- Conclusion

Organising your information

You now have a written outline, a sense of how you will structure your essay, and the concepts you want to cover within each section. The next step is to start writing these sections. Here you will have to pay close attention to the way you organise the information you are presenting.

Be sure to keep similar points or concepts together. Sometimes you will be able to do that in one paragraph. More often you will need several paragraphs to cover related ideas. Use linking sentences to help the reader move smoothly between the ideas you are presenting. Only when you have finished discussing all similar ideas should you move on to contradictory evidence.

A good approach is to start with general information and move towards specific details. For example, you might first describe a treatment method and then outline arguments that particular researchers have presented about that treatment.

Make sure you stick to one broad idea or concept in each paragraph. Do not try to cover too much or to introduce new ideas in the same paragraph. Your aim should be to build your argument logically and make it easy for readers to understand where you are heading, rather than to confuse them with too much unrelated information in one paragraph.

Similarly, the paragraphs in each section should build logically, rather than simply jumping from one concept to another and back again. Each paragraph of your essay should be structured in a way that develops a logical, smooth-flowing argument. The quality of your essay will be judged not just by its content but also by the way that content is organised.

Begin the paragraph with an opening topic sentence to introduce the main idea you intend to develop. This will provide a focus for the paragraph and can preview for the reader the information that will likely follow. It might also involve a statement that links to the key point covered in the preceding paragraph. Then elaborate on the idea by explaining the topic further and providing more detail about the concept. Next provide an example to illuminate the focus or theme of the paragraph. This is an

opportunity to provide a practical example that illustrates your key argument. You might quote directly from a reliable source or cite published research on the topic. Finally, you should include a linking or concluding sentence. This might involve you rounding off the key idea developed in the paragraph or linking the key point being discussed in the current paragraph with the idea to be established in the next paragraph.

The example paragraphs below focus on the topic of chat room communications and challenging chat room critics.

> Chat rooms were originally developed for … in the early 1980s… Chat room popularity grew … Today, over 35% of chat room users are secondary school children. Davis (2002) argued the reason for greater prevalence in teenagers using chat rooms is … Jones (2001) suggested that … and this contributes to the development of conversational skills for adolescents.
>
> Adolescents enjoy the opportunity to engage socially online using various social media, including chat rooms… [paragraph continues].

Developing an argument

In writing your essay, you will normally be required to develop an argument and then draw a conclusion. Obviously, the quality of your conclusion will depend on the quality of the argument you have developed. So it is essential that you adhere to the correct principles when you are building your argument.

The most important principle is that you cover all the competing sides of an argument. Essentially, you need to present the research evidence that supports different viewpoints and come to a conclusion about which is most convincing. You cannot do this by concentrating on only one side of the argument. You must also consider opposing viewpoints, and demonstrate to the reader why you have chosen one ahead of others in your conclusion. Chapter 3 presents more information on how to develop a balanced argument and the logical flow of your argument.

In doing so, you should discuss the implications of the research evidence that supports the different sides of the argument. For example, do not merely note that the sample used in a particular study was too small; discuss the possible implications of this shortcoming for the topic being discussed. By critically examining the research evidence in this way, you are demonstrating why you have reached a particular conclusion.

The conclusions you draw must be based on research evidence. It is not enough simply to state your opinion. This is why reviewing the literature and identifying all relevant material is essential before writing an essay. You must have all of the pieces of the puzzle at your fingertips before you can solve it.

Conclusion

This section of your essay should summarise your main points and then draw conclusions based on these points. Your argument should be set out logically, without introducing any new ideas or concepts not already discussed.

Like the introduction, your conclusion should be only a few paragraphs long (depending on the overall length of the essay). In a short essay (less than 2000 words), the conclusion should follow on from the body of the essay, without a heading, and without starting on a new page.

The aim of the conclusion is to briefly summarise the main arguments you have made, then to draw conclusions from those key points. In other words, you describe the answers to the research problem that was set, then you discuss what those findings mean. The conclusion represents the final destination on the journey that your essay travels. It draws together all your work in a logical way and leaves the reader with a sense of completion.

Reference list

The last section of your essay is the reference list. All works cited in the essay must appear in the reference list. See Chapters 7 and 8 for more information.

It is a good idea to compile your reference list as you write the essay. For each citation you use in the essay body, include the full reference in the reference list. If you delete any in-text references as you check and redraft the essay, make sure you delete these entries from your reference list. This process will save you time when you do a final proofread of your essay, since you will not have to worry about finding the full reference for each in-text citation.

Word limit

You will often be given a word limit for your essay. Make sure you stay within 10 percent either side of the limit or you will almost certainly lose marks. For example, for a 1500-word essay you should write between 1350 and 1650 words. Writing to length is one of the skills on which you will be assessed. If you are over the word limit, you may find it difficult to cut out sections you have worked hard to produce. However, you must make the tough decisions to cut excess material in order to submit a concise, high-quality essay that fits the word limit.

CHECKLIST

Literature review

☐ Have you identified your essay topic?
☐ Have you undertaken a thorough search of the literature and obtained sufficient references to support your argument?
☐ Have you drawn up an outline and organised your information so that it forms a logical argument?

Title page

☐ Does your title page include the three main elements—title, your name, and educational institution?
☐ Have you written your title in 12 words or less that summarise the main theme of your essay?
☐ Have you included the running head and a manuscript page number on every page of your essay, including the title page, abstract, introduction, essay body, and reference list?
☐ Have you numbered all pages consecutively, starting with a "1" on the title page?

Abstract

☐ Does the abstract follow on the second page of your essay?
☐ Is your abstract headed "Abstract" at the top of the page, centred and in upper- and lowercase?
☐ Is the abstract written in one paragraph, double-line spaced, and without any indentation?
☐ Does your abstract summarise the main contents of the essay?
☐ Is your abstract about 150 to 250 words long?

Introduction

☐ Have you repeated the title at the top of the first page of the essay proper?
☐ Have you double-line spaced your introduction and indented the first line of each paragraph?
☐ Does your introduction specify the topic you will address in the essay?
☐ Does your introduction outline the main points you want to argue in the essay body?

Body of essay

☐ Have you logically structured the information in each paragraph?
☐ Does the main body of your essay examine the past research critically?
☐ Have you looked at both or all sides of the arguments?
☐ Do your key arguments logically flow from one paragraph to the next?
☐ Have you provided appropriate research evidence to back up your argument?

Conclusion

☐ Does your conclusion summarise the main points raised in the essay?
☐ Does your conclusion follow logically from the main body?
☐ Have you answered the exact question posed in your essay topic?
☐ Have you checked that you have not introduced any new points in your conclusion?

References

☐ Does your reference list appear on a separate page at the end of the essay?
☐ Is your reference list headed "References" at the top of the page, centred and in upper- and lowercase?
☐ Have you cross-checked the in-text citations to match the reference list entries?
☐ Have you formatted all in-text citations according to the specific requirements outlined in chapter 6?
☐ Have you formatted your reference list according to the specific requirements outlined in chapter 7?

Other

☐ Is your essay double-line spaced throughout, with no extra line spaces between paragraphs?
☐ Have you indented the first line of each paragraph?
☐ Does your essay length fall within 10 percent either side of the word limit?
☐ Have you completed a final proofread of the essay?

KEY TERMS

abstract A concise overview of the contents of the essay or report.
page number All pages of a manuscript are numbered consecutively, starting with the title page.
running head A shortened version of the title placed, flush left, in the manuscript page header.
title A summary of up to 12 words about the main theme of your essay or report.

APPLIED ACTIVITY

Read through the two sample essays provided at the end of this chapter. Both essays were written to the topic "Critically evaluate the different treatments of insomnia in adults". After reading through each essay, see if you can distinguish between the well-written and -formatted essay (i.e., the "Good Essay") and the poorly written and formatted essay (i.e., the "Bad Essay"). Even after only one read, you will probably notice many differences between the formats and structures of each essay. The sample Good Essay was modified from a 1500-word essay submitted for a first-year psychology course. The Good Essay illustrates the correct application of many of the concepts covered in this writing guide. Please note, however, that there is never only one right way to write an essay. Use the Good Essay as a guide only; you must apply your own creativity when writing essays in psychology. The Good Essay provides a quick visual check of an essay written in correct APA format. In contrast, the Bad Essay was written to highlight a number of the most common errors students make when writing essays. In most cases, you will see the errors noted in the Bad Essay corrected in the Good Essay.

Now read through each essay again and see if you can identify the things done well in the Good Essay and the things that need correcting in the Bad Essay. Write your comments in the margins of the two essays or on a separate sheet of paper. See if you have mastered APA style requirements by checking your answers against the solutions provided in Appendix 2 and Appendix 3 at the back of the book.

Note that the answers to the essays pick up on errors discussed in other chapters. In the Good Essay, boxes are used to highlight the skilful application of different concepts. Corresponding page references are provided if you wish to read through the relevant section of the text. In the Bad Essay, footnotes are used to explain the errors. You will notice that some errors are repeated throughout the Bad Essay but they are referred to only once. All of the errors—both minor and major—are highlighted in the solution, so do not despair if you cannot find the 94 errors in the Bad Essay!

ACKNOWLEDGMENTS

Image: © EM Karuna / Shutterstock.com
Image: © elenaleonova / Getty Images

Bad essay

Title: Critically Evaluate Different Treatments of Insomnia in Adults.

Name: J. Doe

University: University of Nonames

INTRODUCTION

Insomnia is defined as a lack of satisfaction in the amount of sleep each night. People who experience insomnia may have problems falling asleep (sleep onset insomnia), remaining asleep at night, and early morning awakenings (Riedel Lichstein and Dwyer, 1995, page 55). The 3 different treatment methods of insomnia I will be discussing in this assignment are 1. Pharmacological therapy, 2. Self-help therapy, and 3. Cognitive–behaviour therapy. According to the articles reviewed, these treatment methods are currently the main treatments for insomnia, yet none guarantee a cure for insomnia.

People over 65 years of age are likely to suffer from chronic sleep disorders. Statistics indicate that 30-40% of individuals throughout their lives (insomnia is more common among ladies and the elderly) will suffer from insomnia at some point in their lives and that 10-20% of these people will continue this on a long-term scale (Hryshko-Mullen et al., 2000). A lot of people who suffer from insomnia report multiple and prolonged awakenings in the second half of the night, and increased daytime napping (Campbell, 1998). Also, people with insomnia tend to display higher levels of psychological distress and report impaired daytime functioning (Mimeault and Morin, 1999).

In the following studies to be reviewed, patients were all adults who kept a sleep log or diary to establish a baseline.

The most commonly used method to treat insomnia is pharmacological therapy. This involves the patient taking medications to help them get to sleep, such as benzodiazepines. Patients show short-term improvements in sleep latency, total time slept and quality of the sleep (Hryshko-Mullen et al., 2000).

The studies showed that the longer patients used medications to control their insomnia, the less effective the medications became (Hryshko-Mullen et al., 2000; Mimeault et al., 1999). For example, when using Benzodiazepines for long periods of time there can be some side-effects, such as poor memory. A patient can become dependent on the medication he/she is using to help him/her cure his/her insomnia instead of trying to find other ways to improve sleep. Perhaps relaxation, stimulus control guidelines, sleep hygiene or sleep restriction might help improve sleep quality? In comparison with other treatment methods such as cognitive-behaviour therapy, the studies showed that medication was not effective in the long-term.

Riedel, Lichstein, and Dwyer (1995) examined the affect of self-help therapy for individuals suffering from insomnia. Self-help therapy involves a series of sessions where a qualified psychologist counsels the patient about their insomnia. Riedel et al. (1995) stated that self-help therapy usually works better if used in conjunction with cognitive-behaviour therapy. This is because the cognitive-behaviour technique teaches patients

to better understand their insomnia. A lot of patients report that they can control their sleep patterns by adjusting their lifestyle as required.

The third treatment option of cognitive-behaviour therapy was discussed by a number of studies: (Hryshko-Mullen et al., 2000; Mimeault and Morin, 1999; and Riedel et al., 1995). CBT is a combination of two separate types of treatment. Treatments such as cognitive-behaviour therapy for insomnia were developed as an alternative to medication (Riedel et al.). In the cognitive part, educational activities are used to change irrational beliefs about sleep. In the behavioural part, sleep restriction procedures are used to remove stimuli associated with arousal states (Hryshko-Mullen et al.). In a study by Morin C.M., Colecchi C., Stone J., Sood R., & Brink D. (1999), patients were told to go to bed only when they were ready to sleep and to get up and do something in another room if unable to fall asleep within fifteen or twenty minutes. These procedures helped to regulate the sleep-wake cycle. Patients learned to link the bedroom with sleep rather than with feelings of frustration and anxiety typically associated with not being able to sleep when in bed (Morin, Colecchi, Stone, Sood, & Brink, 1999).

Sleep hygiene was used as part of this cognitive-behaviour treatment and involves increasing patient awareness and challenging irrational beliefs about their insomnia and how much sleep they need (Declerck, Schreuder, & Verbeek, 1999). According to Declerck et al. patients also learn the important relationship between sleep and other health factors such as diet, exercise, caffeine and alcohol.

There were some disadvantages of this method though (Riedel et al., 1995, Mimeault, 1999). These included:
1. Some patients may have been taking sleep medication,
2. Some patients may have exaggerated their sleep improvements, and
3. Most of the samples in the studies were volunteers who did not suffer from chronic insomnia.

CONCLUSION

Comparison of each of the treatments revealed that cognitive-behaviour therapy treatment would seem to be the most effective treatment for long-term management of insomnia. In contrast, pharmacological therapy or medication was more effective in the short-term. Medications were shown to have negative daytime affects such as poor memory, fatigue and loss of concentration. Patients are also likely to suffer from withdrawal and get rebound insomnia when they stop taking the medication. Overall, a large amount of research suggests that pharmacological methods are more effective when used in conjunction with cognitive-behaviour therapy. More research is needed in this area before conclusions can be made about the best treatment of insomnia.

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Good essay

Insomnia in Adults: A Critical Evaluation of

Different Treatment Methods

Jan Silcock

The University of Southern Queensland

Abstract

Insomnia is defined as difficulty in falling asleep, difficulty in remaining asleep, or waking early in the morning. Insomnia is most prevalent in women and in older persons. This essay critiques different treatments of insomnia in adults: pharmacological therapy, exercise programs, and cognitive-behaviour therapy. Research evidence indicates that pharmacological therapy is effective in the short term but can have negative side-effects when used in the long term. Moderate levels of exercise can also help to promote sleep quality in adults in the long term. Cognitive-behaviour therapy helps to challenge faulty thinking and behaviours associated with insomnia. The short-term benefits of cognitive-behaviour therapy are evident when it is used either alone or in combination with pharmacological therapy. It will be argued that cognitive-behaviour therapy provides the best long-term results.

Insomnia in Adults: A Critical Evaluation of Different Treatment Methods

According to Rathus (1999), the three main sleeping problems associated with insomnia are "difficulty falling asleep (sleep onset insomnia), difficulty remaining asleep through the night, and early morning awakening" (p. 217). Insomnia is more prevalent in adults, especially women and older persons (Mimeault & Morin, 1999). Research indicates that up to 10% of adults experience chronic insomnia (Mellinger, Balter, & Uhlenhuth, 1985, as cited in Mimeault & Morin, 1999), resulting in poor daytime functioning at home and in the workplace. Insomnia can also impact negatively on social and personal relationships (Hryshko-Mullen, Broeckl, Haddock, & Peterson, 2000). It is therefore important to find treatments that are effective in the long term and have minimal side-effects. Current treatment methods of insomnia include pharmacological therapy, exercise programs, and cognitive-behaviour therapy (CBT). It will be argued that CBT provides long-term improvements in sleep behaviour.

Pharmacological therapy involves prescribing sedative-hypnotic drugs such as zolpidem or a benzodiazepine. Such medications appear to offer short-term benefits such as repatterning sleep after a long period of disruption (Hryshko-Mullen et al., 2000). However, benzodiazepines such as temazepam may create tolerance and dependence over time (Riedel, Lichstein, & Dwyer, 1995), with rebound insomnia occurring on withdrawal (Morin, Colecchi, Stone, Sood, & Brink, 1999). Mental confusion and memory loss can also result from long-term use of benzodiazepines (McDowell, Mion, Lyndon, & Inouye, 1998).

Monti, Alvarino, Cardinali, Savio, and Pintos (1999) examined the effects of melatonin replacement therapy. Melatonin is an endogenous neurohormone involved

in sleep whose naturally occurring levels decrease with age (Monti et al.). Ten adults (eight women) aged between 66 and 86 years spent nine nights in the sleep laboratory. Monti et al. used three stages of assessment: baseline (placebo), treatment (3 mg melatonin), and withdrawal (placebo). Data collected from polysomnographic recordings indicated that melatonin replacement therapy was effective in the short term. Half of the participants (four females) showed a reduction in the number of nocturnal awakenings after five nights. This suggests that melatonin replacement therapy may produce an increase in total sleep time and sleep efficiency. The results further indicate that melatonin is free from side-effects, since rebound insomnia was not evident. However, participants interviewed at the completion of the study revealed that they did not notice any improvement in their quality of sleep. Further research is required to establish the role subjective perceptions of sleep play in insomnia.

The Monti et al. (1999) study has a number of limitations. These include the very small sample size and the lack of a control group. A larger and more representative sample is required to examine whether the results can be generalised to other age groups and to men. Furthermore, the long-term effectiveness of melatonin replacement therapy remains unknown since there was no follow-up.

Exercise offers an alternative approach to the treatment of insomnia in adults. A study by King, Oman, Brassington, Bliwise, and Haskell (1997) found moderate exercise in the late afternoon/early evening to be sleep enhancing. A total of 19 men and 29 women aged between 50 and 76 years were randomly assigned to either the treatment or the control group. The treatment group engaged in low-impact aerobics, brisk walking, and stationary cycling for a 16-week trial period. They also

completed sleep diaries and underwent treadmill exercises to establish baselines. The participants were blind to the treatment aims to lower expectations of improved sleep. The exercise group showed a high exercise adherence rate of 93.6%. The results of the King et al. study indicated that exercise needed to be maintained for about eight weeks or longer to produce the following sleep improvements: reduced sleep onset latency and increased sleep maintenance. The wide age range of participants suggests that results may be generalisable to older persons who experience insomnia (Riedel et al., 1995).

The study by King et al. (1997) has a number of methodological flaws. A small proportion of participants were taking sleep medication, with women receiving hormone replacement therapy in some cases. Therefore, the extent to which exercise alone is responsible for the positive treatment results is unclear. Further research in this area should include polysomnographic data to better measure sleep quality in participants. Participants were also described as having moderate rather than severe sleep complaints at baseline. It is therefore difficult to establish the extent to which exercise offers an effective long-term treatment approach for chronic sufferers of insomnia.

In contrast to pharmacological therapy and exercise, CBT targets the underlying factors associated with insomnia, such as poor sleep habits and stress. CBT allows people to take responsibility for their own treatment either in a self-help format or with therapist guidance (Mimeault & Morin, 1999). The cognitive component of CBT identifies and challenges an individual's faulty beliefs concerning sleep. For example, some insomniacs believed that 8 hr sleep was necessary for quality sleep.

The behavioural component of CBT seeks to change behaviours that contribute to poor sleep (Hryshko-Mullen et al., 2000). Participants are educated on sleep hygiene factors (e.g., smoking, alcohol, and caffeine intake) and how these contribute to sleep problems. Stimulus control procedures aim to make the bedroom environment more conducive to relaxation and sleep. This involves removing stimuli associated with arousal states such as eating, reading, working, and watching television (Hryshko-Mullen et al., 2000). Sleep restriction is used to repattern an individual's wake–sleep cycle. Time for sleep is limited quite severely in the initial stages, then increased gradually as sleep efficiency improves. Relaxation therapy is also used to promote sleep (Hryshko-Mullen et al., 2000).

Hryshko-Mullen et al. (2000) used CBT and stress management procedures to treat 42 military personnel (22 females) who reported sleep maintenance problems. The average age of the group was 53.6 years. CBT was used in six training sessions. Two individual treatment sessions were also administered both during and after the program. Participants maintained sleep diaries throughout the trial and showed a 53% decrease in sleep onset latency and a 40% decrease in waking after sleep onset. Participants also reported improved sleep efficiency, suggesting that CBT was effective in the short term. There is some evidence to support the long-term effectiveness of CBT with improvements maintained at around the three month follow-up.

There are a number of factors that limit the generalisability of the Hryshko-Mullen et al. (2000) results. These include the absence of a control group and the underrepresentation of women in the sample. Furthermore, the extent to which the

results can be generalised to nonmilitary adults remains questionable. Further research using more representative samples is needed.

A study by Morin et al. (1999) treated chronic insomniacs by administering pharmacological therapy and CBT either separately or in combination. The 78 participants were randomly allocated to one of four groups: (a) CBT, (b) pharmacological therapy, (c) CBT and pharmacological therapy, and (d) placebo. A total of 72 participants (six withdrew) completed treatment over 8 weeks. Outcome measures—daily sleep diaries, polysomnography, and clinical rating scales—were taken before and after treatment. Follow-up measures were taken 3, 12, and 24 months after treatment. The post-treatment results indicated that a combination of CBT and pharmacological therapy was more effective than either treatment alone in the short term. Improvements in sleep maintenance and sleep efficiency were also noted in the long term. However, CBT outperformed the pharmacological and combined treatments at the 24-month follow-up. This supports the short-term benefits noted by Hryshko-Mullen et al. (2000) and indicates that sleep improvements are better sustained over time with CBT.

In conclusion, pharmacological therapy is an effective short-term approach to the treatment of insomnia. Given the negative side-effects associated with pharmacological therapy, however, the value of other treatment approaches merits further investigation. Lifestyle factors such as moderate exercise can have positive effects and offer a healthy alternative to pharmacological therapy. In contrast, CBT is cost effective and shows positive results in alleviating symptoms in the long-term. CBT may be used alone or in combination and is most effective when tailored to meet the individual needs of the chronic insomniac.

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CHAPTER 5

Quantitative research reports

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

5.1 identify the steps in writing a quantitative research report

5.2 determine the topic of your research report

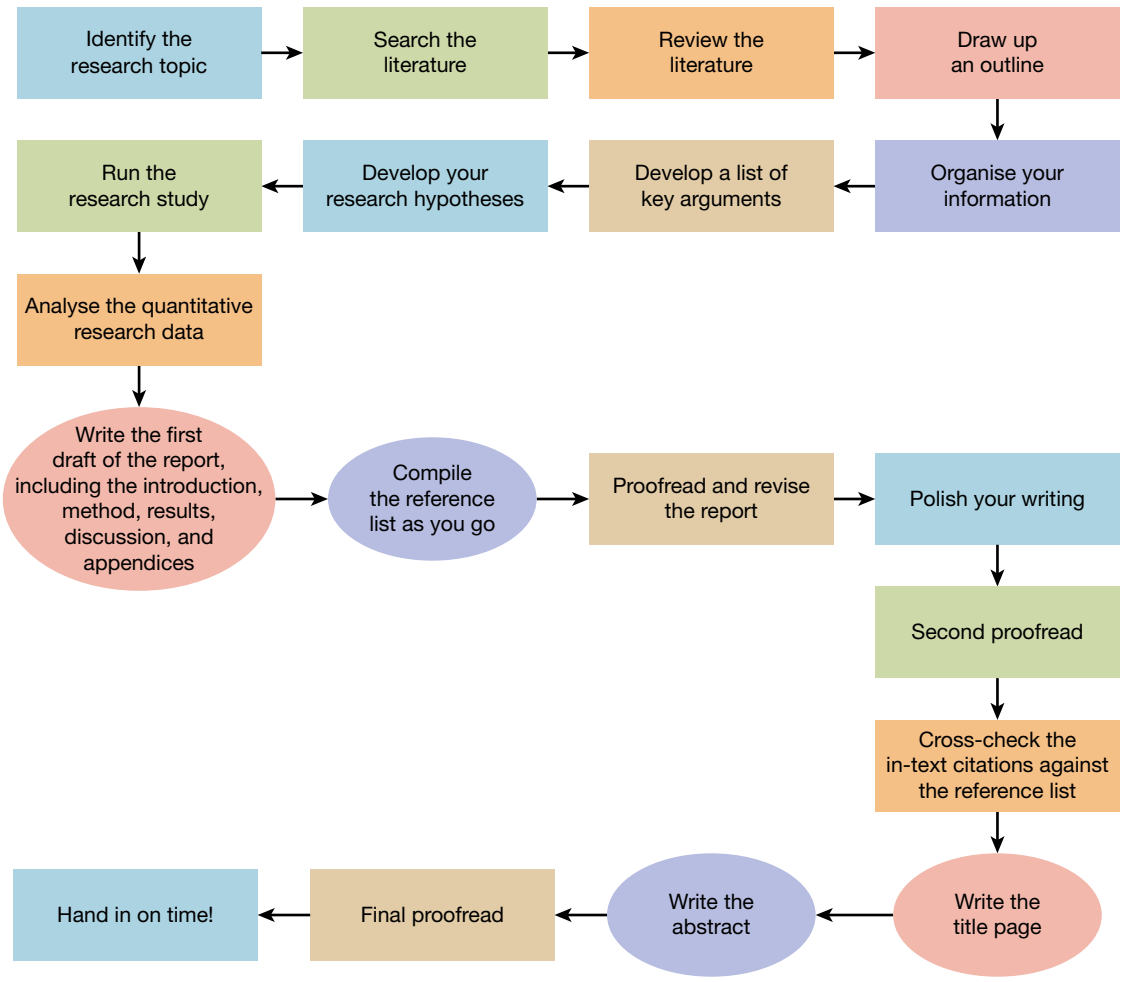
5.3 understand the format of a quantitative research report.

5.1 Writing a research report

LEARNING OBJECTIVE 5.1 Identify the steps in writing a quantitative research report.

Figure 5.1 outlines the broad steps to follow when writing a quantitative research report. Once you have your research topic you should start searching and reviewing the relevant literature. The next step is to lay the foundations of your report by drawing up an outline and organising your information so as to create a logical argument. If you are conducting a quantitative research project, you should first develop your research hypotheses, then run the study and analyse the research data. You should then begin writing the first draft of your report, covering the introduction, the method, the results, and the discussion. Check whether you need to include any appendices, and label them appropriately. Make sure you compile your reference list as you go to save you valuable time when putting the finishing touches on your assignment. This technique will also ensure that your in-text citations match the reference list entries.

FIGURE 5.1 The basic steps to writing a good quantitative research report



There is no set order in which you should write the four sections of the report. Some people prefer to start with the introduction, while others prefer to write the method and results sections first and then complete the introduction. You will normally complete the discussion last. Once you have a first draft, you can start to refine and improve your writing. Edit and proofread your research report several times, polishing

and improving it as you go. Now is the best time to add the other sections of the report, including the title page, the abstract, and the final reference list. Be careful to cross-check all your in-text citations against the reference list. Finally, carefully proofread and check your report one last time. Then hand it in!

In this chapter you will learn about the different sections in a research report, the correct formatting and structure for each section, and how to present your results and discuss your findings in a report. You will find examples of a well-written and formatted quantitative research report (the "Good Report") and a poorly presented and formatted quantitative research report (the "Bad Report") at the end of the chapter.

5.2 Identifying the research topic

LEARNING OBJECTIVE 5.2 Determine the topic of your research report.

As a student of psychology, you will normally be required to carry out your own research projects and report on the results. These assignments are called *research reports*. They differ from essays in that they require you to carry out original research of your own rather than to discuss or evaluate the research of others.

There are two main types of research: quantitative and qualitative.

Quantitative research

Quantitative research typically involves using experiments or surveys to gather data that can be statistically analysed to test particular hypotheses. The normal process is to carry out an experiment or survey, tabulate the data, analyse it using standard statistical packages and protocols, and then draw conclusions relating to predetermined hypotheses.

Quantitative research is normally based on large sample sizes that are representative of the population. The research can usually be replicated or repeated, giving it high reliability; and the analysis of the results is more objective than that of qualitative research, often using standardised techniques. Quantitative research takes a deductive and objective approach. Conclusions about predetermined hypotheses are drawn from the results of scientifically controlled testing.

Qualitative research

Qualitative research typically involves in-depth analysis of relatively few participants to gather data that provide a richer and deeper understanding of the research topic than afforded by quantitative research. Many exploratory research techniques can be used, such as interviews, observations, and case studies.

Qualitative research is more inductive and subjective than quantitative research. Often the researcher does not begin with predetermined hypotheses but develops them based on the outcome of the research process. Rather than using statistical analyses to confirm hypotheses objectively, the researcher must make a subjective judgement about what the data mean. Further information about qualitative research reports is available in Chapter 6.

5.3 Parts of a quantitative research report

LEARNING OBJECTIVE 5.3 Understand the format of a quantitative research report.

As a psychology student, you will normally use a quantitative research framework. The following section will focus on the format required for a quantitative research report. It will outline the different elements of the report, and what each should contain.

There are four main parts to a quantitative research report; they reflect the different stages of the research process and are reported in a set sequence. First, the *introduction* outlines the research problem and describes the expected results. Second, the *method* describes how you conducted the research. Third, the *results* document what you found. Fourth, the *discussion* interprets and draws conclusions from your findings.

In addition to the four main sections, a research report also includes a title page, **abstract, reference list**, and appendices (if required).

The following section examines in more detail what is required in each part of a research report.

Title page

The requirements for your report's title page are the same as those for an essay. As with a qualitative research report and an essay, you will have a title that ideally will be about 10 to 12 words long. Your title should appear on a separate title page and also include your name and institution. Please see the Good Report at the end of this chapter.

Abstract

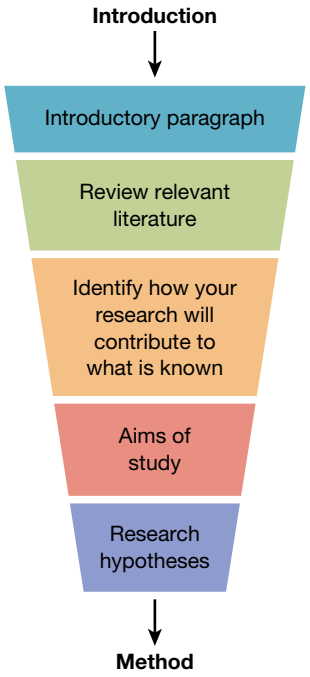
The format for your report abstract is the same as that for an essay: one paragraph, ranging from 150 to 250 words. In the abstract you should describe briefly each of the four main sections of the quantitative research report. That is, you should define the research problem, outline your research method (who your participants were and what procedures they were required to follow), describe the key findings, and discuss the implications.

Introduction

The introduction also follows the same format as in an essay. It should start on a new page but should not carry the heading "Introduction", because it is clearly identified by its position in the report. Instead, repeat the full title of the report, centred, in upper- and lowercase, at the top of the page. Note: This repeated title is not formatted as a Level 1 heading and so is not typed in boldface. Remember, the running head and a manuscript page number should appear at the top of each page of your report.

Your introduction should introduce the broad topic, review relevant research, identify how your research will contribute beyond what is already known, state your research aims, and outline your hypotheses. It should move logically from the general to the specific (see Figure 5.2). A principal reason for the introduction is to justify why the current research is needed.

FIGURE 5.2 The different elements of an introduction



As shown in this funnel shape, you begin your introduction with general information. You then critically review the relevant literature. Next, you identify how your current study will contribute to what is already known. You finish your introduction with the specific details of your research aims and research hypotheses.

First, you should introduce the broad topic you are addressing informing the reader, in general terms, why you are carrying out the study and identify your area of research. This normally means introducing the general theoretical framework that underpins your study and defining any key terms used. The aim is not to move too quickly into the specifics of your study, but first to set the scene for your reader. For an example, see the first paragraph in the Good Report presented at the end of this chapter.

Second, you will need to review the relevant literature in the area of your research topic (see Chapter 3 for more information on how to critically evaluate research). This review should outline the work of previous researchers in this area, along with their findings and conclusions. Make sure you focus on the literature that is most relevant to your research question and hypotheses. Although it is important to put forward alternative viewpoints and present a balanced argument, you should not try to cover every single piece of past research in your literature review. Again, this section is a logical step from the broad introduction you gave at the start. You have first outlined the wider topic in your introductory paragraph/s, then discussed the literature most important to your study in the remaining paragraphs. The second, third, and fourth paragraphs in the introduction of the Good Report provide examples of how to critically review the literature.

It is not always easy to know how much research needs to be reviewed, but a simple approach is to ensure that you review as much research as needed to tell your story. Try to focus your review on those issues most important for establishing the rationale of your study. Remember, it is important to present your key arguments in a logical way. Mention briefly those studies that are not directly relevant to your current research aims. However, research that is pivotal to your current research aims should be evaluated in more detail. Generally speaking, you will find a handful of research studies that are very closely related to your current research aims. Such studies should be reviewed extensively, especially when the current study extends upon this previous research.

Third, based on your review of the literature, you need to recognise what your study will add to the current knowledge on this topic. This is where you consider what has been learned from previous research in the field, and establish some research questions that still need to be answered. Identifying how your research will contribute beyond what is already known will help provide a clear rationale for the aims of your study.

Fourth, state the aims of your research. In this section you start to become more specific, focusing on what your study aims to achieve. That is, you tell the reader exactly what you are investigating and why. See the last paragraph in the introduction of the Good Report at the end of this chapter for an example. Briefly outline the methodology you will be using to achieve your research aims. This may involve identifying the **dependent variable** and any **independent variables** in your study.

Fifth, state your **hypotheses.** That is, state what you expected to find as a result of your research. Here you are most specific, stating exactly what you thought the study would discover. The hypotheses should follow logically from the preceding review of the literature and are derived from the statement of research aims. The aim of your study is to test whether the evidence supports your hypotheses. To do that, your hypotheses need to include quantifiable measures that can be tested.

Hypotheses

Because you are writing a report about a research study that you have already completed, you should state your hypotheses in the past tense.

Do not number your hypotheses; simply include them in the final section of the introduction.

Examples of poor and good hypotheses are now presented.

> Hypothesis 1. Friends are more similar than strangers in their attitudes and preferred activities.

This hypothesis is *poor* for the following reasons.

- Hypotheses should not be numbered.
- Hypotheses should be written in the past tense, not the present tense.
- Hypotheses should include quantifiable measures; it is unclear here what attitudes and activities are being measured.

Here is the same hypothesis rephrased:

> It was hypothesised that same-sex friends would show more similar attitudes to the environment, abortion, multiculturalism, and law and order than would same-sex strangers.

This statement is a *good* example of a hypothesis for the following reasons.

- The hypothesis is written as a statement and is not numbered.
- The hypothesis is written in the past tense.
- The hypothesis includes quantifiable measures: Attitudes to the environment, abortion, multiculturalism, and law and order are to be measured.

Another example is now shown.

> The first hypothesis is that parental bonding will influence adolescent behaviours.

This hypothesis is *poor* for the following reasons.

- Hypotheses should not be numbered.
- Hypotheses should be written in the past tense, not the present tense.
- Hypotheses should include quantifiable measures; again, it is unclear what behaviours (i.e., attitudes and activities) are being measured. It is also unclear what is meant by the term *influence*.

Consider the following version of the same hypothesis.

> It was hypothesised that adolescent health behaviours would vary with the level of parental bonding. Adolescents would display positive health behaviours when their parents displayed high levels of affection, emotional warmth, empathy, and closeness. Adolescents would display negative health behaviours when their parents displayed high levels of overprotection, control, and excessive contact.

This statement is a *good* example of a hypothesis because it is written in the past tense and clearly outlines the expected relationship among a number of different variables.

Method

The Method section describes how you conducted your study. You should provide enough detail in this section so that another researcher could replicate the study based on the information it contains. This level of detail also allows readers to evaluate whether the study method was appropriate and whether the

results are reliable and valid. However, you should try to include only information that is relevant and not overload the reader with too much detail.

The Method section follows on from the introduction and does not begin on a new page. On the next line, write the heading "Method" in upper- and lowercase, centred and in boldface (i.e., format as a Level 1 heading). See an example in the Good Report at the end of this chapter. As you are describing what you have already done in the study, you should write in the past tense.

The Method section normally contains three subsections: Participants, Apparatus (or Materials), and Procedure. Start each of these three subsections with the heading written flush left, boldface, in upper- and lowercase (i.e., format as a Level 2 heading). See the sample Method section in the Good Report at the end of this chapter. Consult the APA manual for the format of headings for multiple experiments.

Participants

This section identifies the people who took part in the study, describes them, and details how they were involved in the study. You should describe how the participants were selected and, if they were divided into groups, how these groups were distinguished.

Your participants represent a sample of a wider population. You will normally be trying to make generalisations about the wider group based on what you discovered about this sample group. You need to give readers enough details about the sample for them to judge whether it is representative of the wider group. This, in turn, will influence the extent to which readers believe your findings are valid. You should describe major demographic variables such as age, sex, level of education, occupation, and nationality. The demographic characteristics you need to describe will depend on the nature of the study, but your objective is to demonstrate that your sample is representative of the wider population.

Apparatus and materials

This section describes the equipment—the apparatus and materials—you used in the study. This should cover all the tests you used to collect data during the study, including surveys, questionnaires, interviews, and timed tests, as well as the use of any machines, computers, or custom-built devices. For example, you might have your participants complete a written survey, or you might use a computer to display images to them as part of a visual imagery test.

There is no need to describe standard or common items used in the testing, such as pens, pencils, stopwatches, or desks. However, you should describe any unusual or custom-built devices in some detail. Often a photograph or drawing will help you to illustrate the equipment better than a written description alone. Give the brand name and model number of equipment you used, such as computers and projectors.

Students commonly use standardised tests and questionnaires, or tests that other researchers have used before. In these cases, you must cite the source, using the author–date citation method (see Chapter 7). If the tests are standard, a brief description is sufficient. If you have developed a questionnaire or test specifically for your study, you will need to explain it in more detail.

Make sure you explain the scales used to determine scores for questionnaires and how you calculated scores for particular variables. For example, you might have asked participants to rate survey items using a scale of 1 (*strongly disagree*) to 5 (*strongly agree*), then calculated the mean for each item.

You should also briefly mention research that supports the reliability and validity of your tests and questionnaires.

Procedure

In this section you should describe, step-by-step, how you carried out the study. Normally you would start with a summary of any instructions given to participants and describe, if relevant, how they were put into groups. Studies commonly involve allocating participants to different groups and subjecting them to slightly different tasks or treatments. This is known as experimental manipulation and is

designed to identify any particular variables that might affect the study results. You should describe any experimental manipulations in detail. For example, you may have an **experimental group** that is exposed to an independent variable under investigation. The experimental group is usually matched with a **control group** that receives similar treatment except for the independent variable. Thus, in your procedure you would need to specify how the different groups were formed and the treatments they each received. The *APA Publication Manual* encourages the use of personal pronouns (such as *I* or *we*) to describe the specific instructions you provided to participants. However, they recommend that you restrict the use of *we* to refer only to yourself and your co-authors of the study. For example, "We informed the participants". See Chapter 4 for more information on the use of personal pronouns.

Again, if standardised testing procedures have been used, they may be summarised briefly, but new procedures developed for your study should be explained in more detail. You need to find the right balance between providing too much detail and providing too little. As a guide, remember that the information you provide in this section should be sufficient to permit a reader to repeat your tests using exactly the same procedures.

Results

The Results section should outline how you analysed the data you collected in your study, the main findings that resulted from those statistical analyses, and whether the findings supported the research questions you originally posed. Thus, the Results section should do two things: (a) Summarise the data collected, and (b) describe the results of statistical analyses as they relate to the hypotheses and research questions in the study (Morgan, Reichert, & Harrison, 2002).

Begin this section with the heading "Results" centred and in boldface (i.e., format as a Level 1 heading), with the first letter capitalised, on the next line after the Method section ends. Use the past

tense to describe your results, since you are talking about the results of analyses that you have already carried out. It is important to remember not to draw conclusions in the Results section because you do this in the Discussion section.

Start with a brief summary of the main findings of your study, addressing your research aims. In quantitative reports, this requires that you restate the hypothesis or research question. Next you should identify the statistical analysis and test statistic, such as *t* tests, correlations, and regression analyses. You should then report the value of the test statistic, degrees of freedom, level of probability, and effect size. Be sure to provide a conclusive statement about the support or non-support for the research hypothesis. Next you should report descriptive statistics—the mean and standard deviations—rather than scores for individual participants to highlight any differences between groups.

You will have to work out the best way to present the results, whether in words only or in words supported by tables and figures. Often it is easier to present statistical findings in a table or figure than a written description. Make sure you introduce tables or figures and then comment on what is most important about the data they contain. Never insert a table or graph without a written interpretation to support it; at the same time, do not write so much about the table or figure that it becomes superfluous. Also, never insert a table or figure simply for the sake of it. Use tables or figures only if they make it easier for the reader to understand the findings. More information on how you present tables and figures is provided later in this chapter.

Qualitative reports normally use descriptive methods such as observation, interviews, and case studies to describe behaviour, rather than collecting data that can be analysed statistically. Qualitative studies focus on individuals or a small group of participants, and seek to derive findings from a detailed analysis of their behaviour. Presenting the results of such studies therefore relies almost entirely on detailed written descriptions. You still need to present the major findings and show how they relate to the research questions you began with, but you will not normally have statistical analyses to draw from.

Reporting on statistics

In quantitative research, you will normally have to analyse and then report on statistical data. There are special APA requirements for how statistical data are reported.

Most analyses are carried out using specialised computer software packages. When reporting on statistical data, the first thing you should do is describe the software package and the statistical techniques used to produce the data. Results of the hypotheses set forth at the end of the introduction should be handled in sequential order. Restate each hypothesis and then, for each hypothesis, briefly discuss the statistical analysis performed and the outcome of that analysis, providing a clear statement of support or not support for the hypothesis. For example:

> The first hypothesis predicted that easy words would be better recalled than difficult words. The results of a paired samples *t* test provided support for this prediction, $t(105) = 5.98$, $p = .002$, $d = 0.56$, 95% CI [.25, .85]. The participants recalled more easy words ($M = 20.53$, $SD = 2.41$) than difficult words ($M = 16.24$, $SD = 1.87$). The second hypothesis … [paragraph continues].

In general, you should provide not only the results of the analyses, but also enough information about the way you obtained them that the reader can assess their validity. For example, you might comment on your sample size to demonstrate that your study has sufficient validity to detect any real effect in the data.

Probability level

In statistical analysis, you are normally trying to demonstrate that a particular effect is attributable to the variable you manipulated rather than to chance. This is described as the **level of probability**, and is important in demonstrating the statistical significance of your findings. You should always state the level of probability for your analyses. There are two types of probabilities. The first type refers to the a priori probability; the probability of falsely rejecting a null hypothesis. The a priori probability is the probability of a Type I error and is often called the "alpha level", as indicated by the Greek letter alpha (α). Commonly used alpha levels or "significance levels" are .05 and .01. For example, an alpha level of .05 indicates that five times out of 100 the result could be attributable to chance. The second type refers to the probability value (p), the a posteriori likelihood of obtaining a result that is as extreme as, or more extreme than, the obtained observed value (Morgan et al., 2002). A general statement about the level of probability used to test for statistical significance should be made at the beginning of the results section. For example:

> An alpha level of .05 was used for all statistical analyses.

Furthermore, the *APA Publication Manual* recommends that, wherever possible, it is good practice to report the exact probability (p value). For example:

> With an alpha level of .05, the effect of task difficulty was statistically significant, $F(1, 131) = 9.54$, $p = .028$.

The p value is often provided with the output from most statistical packages. However, please note that the p value cannot equal zero. Do not report $p = .000$ even if this value appears on the computer printout. In such instances, you should report $p < .001$.

If tables of correlations are reported, then it is often easier to highlight the values in the table with a pre-specified level of statistical significance. Use a single asterisk (*) to indicate $p < .05$ and a double asterisk (**) to indicate $p < .01$.

In statistical analyses, the term "significance" has a particular meaning. Describing a result as **statistically significant** means it is not due to chance, based on the appropriate level of probability for the sample size tested. For example, you would write "$p < .05$" to indicate that your result is statistically significant at the .05 alpha level. If a result is not statistically significant at the .05 alpha level, you would write "$p > .05$" or "*ns*". Alternatively, you can report the exact significance level (e.g., $p = .15$).

Here are some more examples of how to report your statistical findings:

> A one-tailed t test for independent samples indicated that the high-anxiety group had a significantly faster reaction time ($M = 7.53$, $SD = 0.36$) than the low-anxiety group ($M = 5.80$, $SD = 0.27$), $t(49) = 5.21$, $p = .003$, $d = 0.54$, 95% CI [.25, .85].

> Significant relationships were observed between employment status and positive affect ($r = .21$, $p < .05$), and between employment status and age ($r = .43$, $p < .01$).

> An analysis of variance (ANOVA) was performed to establish the effects of training (untrained and trained) and problem difficulty (easy and hard) on participants' problem-solving ability. There was no evidence of an interaction, $F(1, 46) = 3.67$, $p > .05$. The ANOVA did reveal a significant main effect of training, $F(1, 46) = 43.72$, $p = .001$, $\omega^2 = .05$, but the main effect of problem difficulty was not significant, $F(1, 46) = 2.84$, $p = .13$.

Note that in ANOVA, the interaction effect is always reported first. The main effects should be reported only in those instances where the interaction is not significant.

Effect size

The APA manual recommends that for each statistic, you report not only the level of probability (or statistical significance), but also some index of the **effect size**. Information about the effect size will help the reader to understand the magnitude of the experimental effect or the strength of a relationship. Effect size indices help researchers to judge the importance of an observed finding and are of two general types. First, there are indices that compare differences between treatment means; for example, Cohen's *d* and Glass's Δ (increment of change). Second, there are indices that are based on measures of association, such as correlation and explained variance. Some of the more common correlational indices include Pearson's product-moment correlation coefficient *r*, Spearman's rank-order correlation r_s, point biserial correlation r_{pb}, and phi coefficient Φ. In ANOVA designs, indices that account for the amount of variance in the dependent variable accounted for by the independent variable include η^2 (eta-squared), ω^2 (omega-squared), and R^2. You should consult the *APA Publication Manual* for a list of other common effect size indices.

The effect size indicator should be reported immediately after the test of statistical significance (e.g., *p* value or α level). This should be followed by a short descriptive sentence about the nature of the effect. For example:

> With an alpha level of .01, the relationship between general self-efficacy and proactive coping was strong (Pearson's $r = .70$).

You should aim to provide a confidence interval (CI) for each effect size reported. As a general rule, try to use the same confidence level, specified on an a priori basis (e.g., a 95% or 99% CI), throughout your report. Place the lower- and upper-limits of a CI in square brackets. For example:

> 95% CI [.25, .85]

Statistical symbols

Abbreviations or symbols can be used for common statistical terms. The symbols most commonly used are Greek and Roman letters. Population statistics are normally expressed with a Greek letter, while sample statistics use a Roman letter. This is a convention used by all disciplines in presenting statistical analyses. These symbols should be used only when accompanied by numeric values. If used on their own, the terms should appear in full. For example, you would write "$N = 256$" rather than "sample size = 256", but you would write "there was a large number in the sample" rather than "there was a large *N* in the sample". Roman letters are italicised and may be either upper- or lowercase. Greek letters are not italicised and are in lowercase. Roman

numerals are uppercase but not italicised. As already mentioned, when you present the results of statistical analyses, you should provide the degrees of freedom, obtained value, and probability level. These data can be presented using the abbreviations for the terms. The degrees of freedom should be in parentheses. For example, the results of a *t* test might show degrees of freedom of 120, an obtained value of 4.52, and a probability level of less than .05. That information would be presented as follows:

$$t(120) = 4.52,\ p < .05$$

Table 5.1 lists the most common symbols and abbreviations of statistical terms.

TABLE 5.1 Common symbols and abbreviations of statistical terms

Statistical term	Symbol or abbreviation
Analysis of variance (univariate)	ANOVA
Cohen's measure of effect size for comparing sample means	*d*
Degree of freedom	*df*
Fisher's F ratio, F distribution	*F*
Frequency	*f*
Null hypothesis	H_0
Mean; Mean square; Mean square error	*M; MS; MSE*
Median	*Mdn*
Number in a subsample	*n*
Total number in a sample	*N*
Nonsignificant	*ns*
Probability level	*p*
Percentile	*P*
Pearson product–moment correlation	*r*
Pearson product-moment correlation squared; coefficient of determination	r^2
Multiple correlation squared; measure of strength of relationship	R^2
Standard deviation	*SD*
Standard error (of measurement)	*SE*
Sum of squares	*SS*
Computed value of *t* test	*t*
Abscissa (horizontal axis in graph)	*x*
Ordinate (vertical axis in graph)	*y*
Standard score	z
Alpha; probability of a Type I error	α
Beta; probability of a Type II error	β
Chi-square	χ^2
Eta squared; measure of strength of relationship	η^2
Omega squared; measure of strength of relationship	ω^2

Some additional examples of how to report the results of statistical analysis using symbols or abbreviations are now provided.

$F(1, 97) = 6.24, p < .05, \eta^2 = .01.$

$\chi^2(3, N = 100) = 11.43, p < .05.$

Participants scored higher on the … ($M = 25.79$, $SD = 8.14$) …

$r = .01$, *ns*

Units of measurement

APA style also has set requirements for how you express units of measurement. Always use metric units of measurement. You need to convert any nonmetric figures into their metric equivalents. This includes measurements for weight, volume, and distance.

Some units of measurement can be abbreviated. As with statistical symbols, you can abbreviate units of measurement only when they relate to a numeric value; otherwise you must write out the unit of measurement in full. That is, you would write "9 cm" rather than "9 centimetres" (and not 9 cms), but you would write "the length was measured in centimetres" rather than using the abbreviation "the length was measured in cm".

Some of the more common APA abbreviations for units of measurement are listed in Table 5.2.

TABLE 5.2 Common APA abbreviations for units of measurement

Unit of measurement	Abbreviation
degrees Celsius	°C
centimetre	cm
gram	g
hour	hr
kilogram	kg
kilometre	km
kilometres per hour	kph
litre	L
metre	m
milligram	mg
millilitre	ml
millimetre	mm
minute	min
millisecond	ms
second	s

When you use an abbreviation with a numeric value, put one space between them. For example, write "10 min" rather than "10min". Abbreviations are usually lowercase, with some exceptions (e.g., "L" for litre). Check the *APA Publication Manual* if you are unsure.

Do not pluralise abbreviations. For example, write "7 hr" rather than "7 hrs". Do not place a full stop after the abbreviation, unless it is at the end of a sentence (exceptions include "e.g.", "i.e.", "a.m.", and "p.m.").

Units of time are treated slightly differently. Although you can abbreviate hour, minute, and second, you cannot abbreviate day, week, month, or year. Examples of abbreviations for units of measurement are 4:08 p.m., 10.32 cm, 15 m, 46 s, 40 kph, and 31 hr. See Chapter 2 for more information.

Decimals

The APA manual sets out the requirements for presenting decimal numbers. In general, include two decimal places when reporting the results of your statistical analyses, especially for correlations and inferential statistics such as *t* tests. Do not use more than two decimal places, even when the output of your analyses does so.

Use a zero before a decimal point when the number is less than one. For example, "0.98 g", "0.68 L", or "0.54 s". However, you should not include a zero before a decimal point in cases where the number can never be greater than one, such as in correlations, proportions, and levels of probability. For example, correlations range between zero (no correlation) and one (perfect correlation), but can never be greater than one. The sign indicates the direction of the relationship, either positive or negative. As a result, you would write ".35" rather than "0.35" for a positive correlation. Alternatively, a measurement of height in centimetres can be more than one, so you would write "0.78 cm", not ".78 cm". Additional examples are provided below.

0.45 cm

$r = -.94$, $p = .025$

0.69 mg

$r = .89$, $p = .001$

Tables

Tables are an efficient way to display large quantities of complex data in a concise and easily comprehensible form. They help the reader process and absorb information much more quickly than through a lengthy written description.

Tables should be used only to summarise a large amount of data and to illustrate the most important findings of your analyses. Tables should provide a visual summary of the data and the reader should be able to understand the data at a glance. However, tables should be used sparingly. Do not use tables if the data can easily be summarised in a few words. For example, the data in a table with only two rows and two columns could be as easily described in writing. It is important that a table does not repeat what is already reported in the text. Rather, a table should supplement the text and summarise data that is central to interpreting the research hypotheses. Be sure to discuss only some of the table's highlights in the text.

You should number every table that you include in your report. Use Arabic numerals, and number them in the order in which they appear. You need to introduce each table in your writing before it appears; never insert a table without a written introduction explaining its content. Refer to tables by their number. For example:

As shown in Table 1, the descriptive statistics …

adults with post-training (see Table 3) …

A set format is required when you insert a table in your report. The table number and title should be double-line spaced. Start with the heading "Table 1", flush left, in upper- and lowercase. On the next line below put a title in italics. You must give every table a number and title, which should be a concise description of the data it contains. Number the tables sequentially in order of presentation in your report. The title is written in title case (upper- and lowercase), italicised, and flush left. Tables may be typed either single- or double-line spaced. See sample tables in the Good Report at the end of this chapter. There should be no full stop at the end of the title. Add an unbroken horizontal rule on the line beneath the title stretching from the left-hand margin to a few spaces past the right-hand edge of the table body.

Beneath this line enter the heading of each column. Use a capital letter for only the first letter of the first word of these headings. For common headings, such as the mean or probability level, you may use the standard abbreviations. If you use any other abbreviations in your column headings, you must explain what they stand for in a note at the bottom of the table. Try to limit the width of each column heading to only a few characters more than the width of the data that the column contains. Include at least three character spaces between the columns. Finally, place another rule across the bottom of the column headings.

In the body of the table, the first, left-most column normally contains the row labels. For example, each cell in that column holds a label that identifies the data across that row. The main heading at the top of the first column is set flush left. The row labels beneath it are indented three spaces.

Place another horizontal rule across the bottom of the table. Any notes will then be added below that rule. Do not use any vertical lines or borders in your tables. The horizontal lines above and below the column headings, and at the bottom of the table body, are the only rules you should use.

A sample table is now shown.

Table 1

Summary of Hierarchical Regression Analysis for Personality Variables Predicting Visual Imagery Ability (N = 154)

Variable	*B*	*SE B*	β	R^2
Step 1				
Perfectionism	4.98	0.98	.37*	.14
Reasoning	2.63	0.21	.14*	.02
Step 2				
Perfectionism	3.01	0.76	.28	.08
Reasoning	2.15	0.11	.13	.02
Vigilance	1.85	0.34	.29*	.08

Note. $*p < .05$.

Table notes

Notes can be used at the bottom of the table to clarify or explain information it contains. There are three types of table notes. First, a *general note* relates to the table as a whole. For example, this is where you would define abbreviations and variable names. Start a general note on the line immediately below the bottom of the table with the word "Note" set flush left, in italics, followed by a full stop. Second, a *specific note* refers to a particular column, row, or item of data. You should indicate the item that the note refers to by placing a superscript lowercase letter immediately after the item in the table body (e.g., "University[a]"). Any such reference letter placed in the body should then have an explanation in the notes section, starting with the corresponding superscript letter. Third, a *probability note* refers to the level of statistical significance of the data. Indicate this in the body of the table with an asterisk (e.g., "4.31*"), then place details of the probability level in the notes section below the table, beginning with the corresponding asterisk symbol.

An example of how to place notes in tables is provided in Table 2.

Table 2

Mean Total Correct for University Students and High School Students on Free-Recall and Paired-Associate Memory Tasks

Memory task	University[a]	High school[b]	*t*
Free-recall			
Related words	105	98	*ns*
Unrelated words	122	85	9.26**
Paired-associate			
Related words	90	72	4.31*
Unrelated words	110	101	*ns*

Note. University = first-year university students.

High school = final-year high school students.

[a]$n = 123$ for university students. [b]$n = 154$ for high-school students.

*$p < .05$. **$p < .01$.

See the tables in the Good Report at the end of this chapter for additional examples of the three kinds of table notes.

Figures

Figures are illustrative devices including charts, graphs, pictures, diagrams, drawings, and photographs. Use a figure when it enhances, simplifies, or amplifies key information. Often, using a figure to convey information visually is much quicker and easier than trying to explain it in words. Readers can pick up at a glance exactly what you mean.

As with tables, do not use figures merely to duplicate what you have already written. The idea of including a figure is to make it easier for the reader to understand what you are saying. Do not force the reader to read the written text and then try to absorb the same information again in a figure. Also, try to make the figure as clear and simple as possible. There is no point including a figure if it is so complex and difficult to decipher that it actually makes it harder for the reader to follow your arguments.

Never split a figure across two pages. Make sure you can fit the whole figure on one page, rather than putting half on one page and the rest on the next.

Graphs are probably the most common form of figure used in reports. There are many different types of graphs, all suited to particular purposes. In general, you should use a graph when you need to convey a trend or overall pattern. When using a graph, you must label both x and y axes, using upper- and lowercase. The label for the y axis should be printed vertically and centred. The label for the x axis should be centred horizontally. Be sure to include error bars (i.e., standard errors of the means) in your graphs. These error bars should be explained in the figure caption.

Bar graphs are used when the independent variable is categorical (e.g., as with different experimental conditions). For example, Figure 1 shows vertical bars representing different tests of ability.

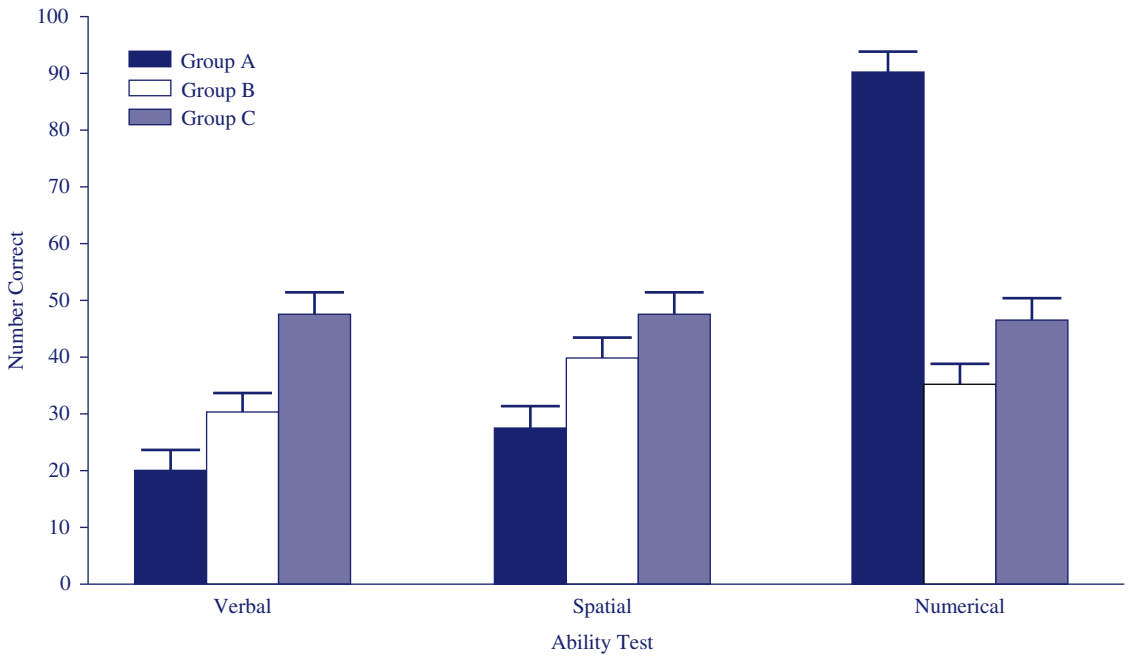


Figure 1. Mean number correct (+ *SE*) on verbal, spatial, and numerical ability tests for group A (n = 150), group B (n = 150), and group C (n = 150).

Line graphs are used to show the relation between two quantitative variables. The independent variable is plotted on the horizontal axis, and the dependent variable is plotted on the vertical axis. For example, Figure 2 shows a line graph version of the data presented as a bar graph in Figure 1.

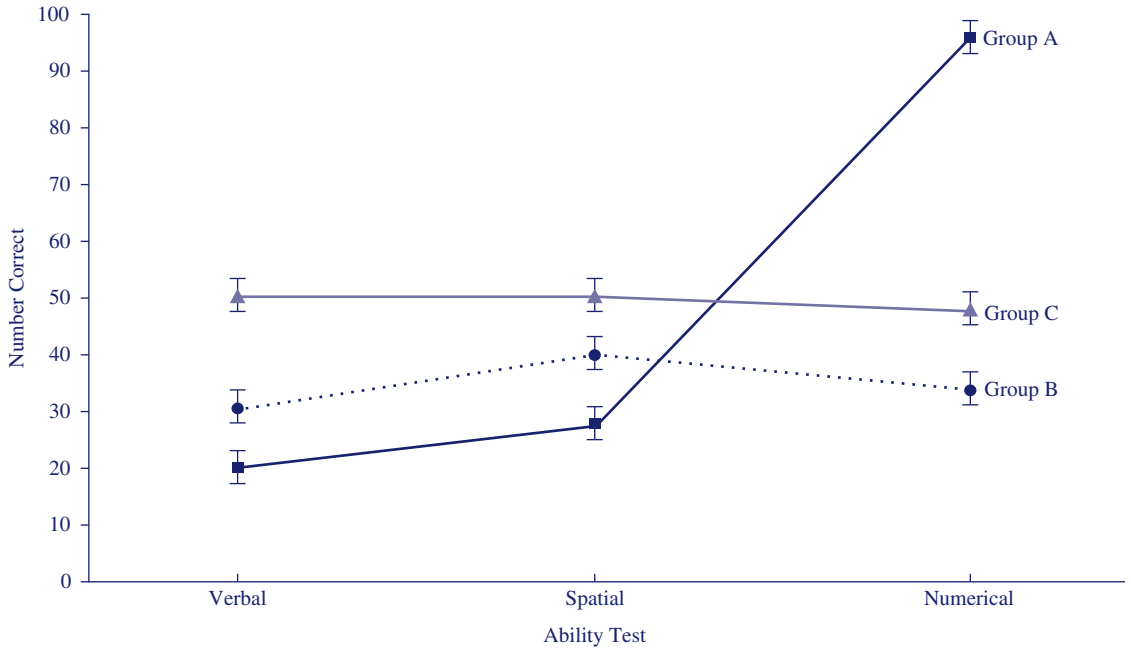


Figure 2. A line graph version of the data presented in Figure 1.

Scatter plots consist of single dots plotted to represent the values of single events on the two variables scaled on the abscissa and ordinates. Be sure to indicate the zero point on the axes. Solid circles are used to represent data points. Meaningful clusters of dots imply correlations. For example, a cluster of dots along a diagonal implies a linear relationship, and if all the dots fall on the diagonal line, the coefficient of correlation is 1.00. For example, Figure 3 shows a sample scatter plot.

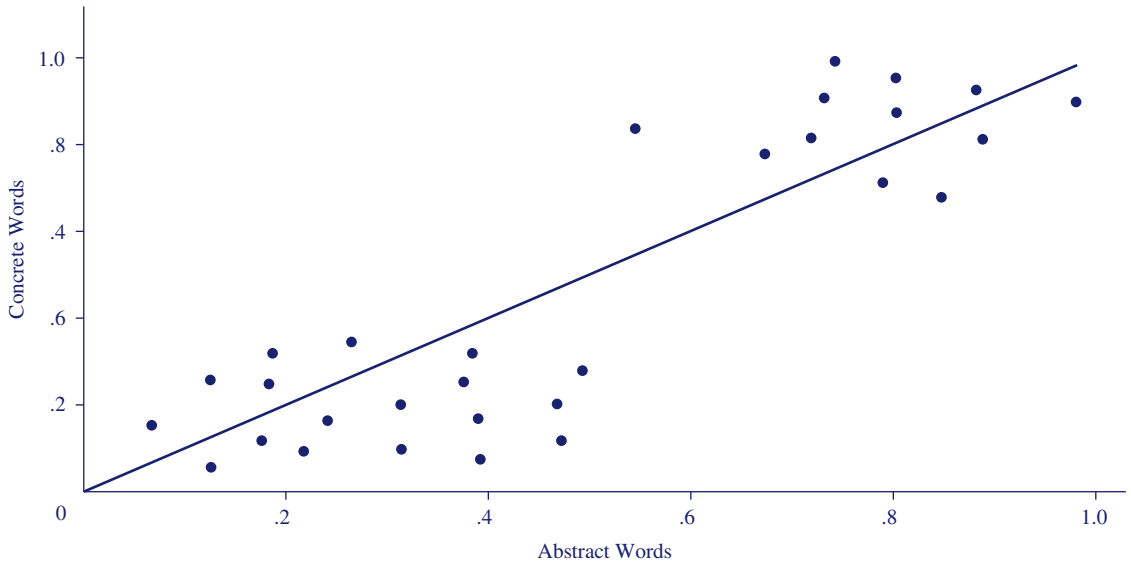


Figure 3. Proportion of abstract and concrete words correctly identified by participants ($n = 25$).

Graphs are not normally as precise as tables in showing numerical information; if statistical precision is important, a table is probably the better option. Do not include information in both table and graph format. This is unnecessary duplication.

You should number your figures in sequence, starting with "Figure 1". You also need a caption that both explains the figure and serves as a figure title. However, unlike tables, the number and the title are placed beneath the figure. Start with the number of the figure, flush left and in italics. Use an initial capital for the word "Figure" and an Arabic numeral for the number (e.g., *"Figure 1"*). Leave one space then enter the caption in upper- and lowercase followed by a full stop. If the caption requires more than one line, the second line is set flush left. Typically, only the first word of the caption has a capital (except for proper nouns) and, unlike in a table, the title is not italicised. After this descriptive caption, you should add any information needed to interpret the figure. For example, you might explain units of measurement or symbols that are not included in the legend. Where appropriate, you might also include an acknowledgement that a figure is reproduced from another source. For example:

> *Figure 1.* Processing speed and age. Speed increases rapidly from about ages 6 to 12 years and starts to level off by age 15. Adapted from "Processing Speed, Working Memory, and Fluid Intelligence: Evidence for a Developmental Cascade," by A. F. Fry and S. Hale, 2009, *Psychological Science, 7*, p. 239. Copyright 2009 by the Australian Psychological Society.

Placement of tables and figures

You have two options for where to place tables and figures in your report: You may choose to place them within the body of the report or you may group them together at the end of the report, after the reference list. The *APA Publication Manual* recommends the latter option for manuscripts being prepared for publication. Check with your lecturer for the preferred alternative for your report.

If you are placing a table or figure in the body of the report, it should be inserted immediately after the paragraph in which it is first introduced. Make sure the whole table or figure will fit on one page without turning over to the next. Sometimes you may have to leave the bottom of the page blank and start the table or figure at the top of the following page.

If you decide to put all the tables at the end of the report, print each on a separate page in the order in which they appear in the report.

If you group all your figures together at the end of the report, the format is slightly different from that used for tables. Each figure has a caption comprising a figure number and a title. List all the figure captions together on a new page immediately after the tables. Begin this page with the heading "Figure Captions" centred, in upper- and lowercase, with the first letter of each word capitalised. Beneath this heading list all the figure captions, starting each on a new line. The figure number should be in italics, the title in upper- and lowercase. Then include each of the figures, on a separate page, in the order in which they appear in the list of captions (see example below).

Figure Captions

Figure 1. A simplified model of Kosslyn's (1980) theory of visual imagery.

Figure 2. A hypothetical stratum model of visual imagery within the structure of human cognitive abilities.

Discussion

At this stage of your report, you have introduced your study aims, reviewed the relevant literature, described the methods, and outlined your results. Now it is time to discuss what it all means.

Start the Discussion section immediately following the Results section. Do not start a new page. Head the section with the word "Discussion" centred, in boldface, in upper- and lowercase (i.e., format as a Level 1 heading). Unlike in the Method and Results sections, you should use the present tense in your discussion, as you are actively discussing the results and presenting conclusions rather than describing what you have already done or found.

The Discussion section is where you undertake a more detailed analysis of your results. In contrast to your introduction, your discussion begins more specifically with comment on the support or non-support for your research hypotheses. This is followed by discussion of your main findings and whether or not your current results provide support for earlier findings reported in the literature. You then complete the discussion by deliberating on the broader implications of your findings and by considering possible future research directions.

You should begin your Discussion section by restating the research aims and discussing whether the results support your original research hypotheses. In the subsequent paragraphs, you should fully discuss each hypothesis in turn. However, make sure you do not simply repeat what was stated in your Results section. For each research hypothesis, you need to discuss the main findings, consider whether the results support earlier research, deliberate on the implications of the key findings, and suggest directions for future research.

For each research hypothesis, you should discuss whether your results support previous research. This involves comparing your results with those of other researchers in comparable studies. You should refer back to some of the key studies you mentioned in your introduction and discuss whether your results are consistent with such previous research. Where appropriate, you should mention whether or not your results replicate previous findings.

You then need to discuss how your current results contribute to the body of research on your topic. Do your results provide support for a particular theory? Or are there other, alternative explanations that should be acknowledged? This is where you should consider the robustness of your current research design and whether any methodological flaws may have systematically affected the results of your study. However, you should mention only those extraneous variables believed to have influenced your current results. Acknowledge any shortcomings you have identified in the way you conducted the study but try not to overemphasise them. Simply focus on what is most significant about your study.

You must then discuss the implications of your findings. This means evaluating whether your study has contributed to the theoretical foundation of your research topic, whether it has practical applications, and whether it illustrates the need for further research in the area. This is not an opportunity merely to repeat information that you have already included in other sections, nor is it the place to introduce new findings that you have not previously mentioned. Rather, you need to interpret, evaluate, and comment on what is important about what your study has revealed. For example, you might comment on the smallness of your sample and the implications that has for the validity of your results. State how future research might overcome these limitations.

Your Discussion section will normally end with a concluding paragraph that sums up the main findings of your research and their implications. The conclusion should give the reader a concise understanding of the main theoretical consequences of the results. You should comment on the importance of your findings and whether or not your study has contributed to what is already known. For an example, see the last paragraph in the Good Report presented at the end of this chapter.

Reference list

The reference list follows the Discussion section, starting on a new page. As in your essays, all works cited in your report must appear in the reference list. The formatting and layout of the reference list for a report are identical to those outlined in Chapter 8.

Appendices

An appendix presents supplementary material at the end of a report, such as tables, figures, questionnaires, or detailed statistical data. An appendix is used when you want to provide more information about a particular matter or concept, but it would be distracting to do so within the main text of your report. The appendix should elaborate on information presented in the body of the report but should not contain material that is central to your argument.

Appendices should be placed at the end of your report, following the reference list and any tables or figures. If you include more than one appendix, assign to each an identifying letter, starting with *A*, in the order in which they are cited in the text. If you use only one appendix, you do not need to give it a letter. Every appendix should have a short title to make it easier for the reader to identify.

Start each appendix on a new page. At the top of the page centre the heading "Appendix" followed by the appropriate letter. On the next line, centre the title of the appendix, in upper- and lowercase. Begin the text of the appendix flush left, followed by indented paragraphs.

If you cite an appendix in the body of your text, be sure that it appears at the end of the report. Equally, any appendices included at the end of your report must be cited in the text. When you cite an appendix in the text, refer to it by its letter rather than its title. For example, you should place a note such as "see Appendix A" at the appropriate place in the text.

Word limit

If you are given a word limit for your report, make sure you stick to it. As with essays, you are normally permitted leeway of 10% either side of that limit. See Chapters 4 and 9 for further information on word limits.

CHECKLIST

Literature review

☐ Have you identified your research topic?
☐ Have you undertaken a thorough search of the literature and obtained sufficient references to support your argument?
☐ Have you drawn up an outline and organised your information so that it forms a logical argument?

Title page

☐ Does your title page include the three main elements: title, your name, and educational institution?
☐ Is your title 12 words or less?
☐ Does your title summarise the main theme of your quantitative research report?
☐ Have you included a manuscript page number and the running head on every page of your research report, including the title page?
☐ Have you numbered all pages consecutively, starting with a "1" on the title page?

Abstract

☐ Does the abstract follow on the second page of your report?
☐ Is your abstract headed with "Abstract", centred at the top of the page?
☐ Is the abstract written in one paragraph without indentation?
☐ Does your abstract summarise the main contents of the report?
☐ Is your abstract about 150 to 250 words long?

Introduction

☐ Have you repeated the title at the top of the first page of the report proper?
☐ Does your introduction specify the topic that will be investigated in the report?
☐ Does your introduction outline the main points you want to argue in the report?
☐ Does the introduction of your report examine the past research critically?
☐ Have you looked at both sides of the arguments, for and against?
☐ Have you provided appropriate research evidence to back up your argument?
☐ Have you identified how your research will contribute to what is already known?
☐ Have you developed a rationale for your research aims and hypotheses?
☐ Are your introduction and hypotheses written in the past tense?

Method

☐ Does your Method section commence one double-line space below the last line of the introduction, not necessarily on a new page?
☐ Is your Method section headed with "Method", centred and in boldface?
☐ Does your Method section adequately describe who participated in the study and how the study was conducted?
☐ Have you divided your Method section into Participants, Apparatus (or Materials), and Procedure subsections?
☐ Have you commenced each of these three subsections with the heading written flush left, boldface, in upper- and lowercase?
☐ Have you then commenced your paragraph one double-line space below each heading, indented like a regular paragraph?

Results

☐ Does your Results section commence one double-line space below the last line of the Method section, not necessarily on a new page?
☐ Is your Results section headed with "Results", centred and in boldface?
☐ Does your Results section describe the main findings of your study?

☐ Do you restate the hypothesis or research question?
☐ Do you identify the statistical analysis and test statistic?
☐ Do you report the value of the test statistic, degrees of freedom, level of probability, and effect size?
☐ Do you state the support or non-support for the research hypothesis?
☐ Have you correctly typed any statistical symbols and abbreviations of units of measurement?

Tables
☐ Is each table introduced in the text?
☐ Are the tables numbered sequentially in the order first mentioned in the report?
☐ Do all tables include titles, are they single- or double-line spaced, and does each table fit across the width of a page?
☐ Does each column and row of your tables include appropriate headings?
☐ Does your table include only horizontal lines, not vertical lines?
☐ Are table notes listed in the appropriate order of general, specific, and probability?

Figures
☐ Is each figure introduced in the text?
☐ Are figures numbered sequentially in the order first mentioned in the report?
☐ If your figures are collected at the end of the report, are all figure captions grouped together on a separate page?
☐ If your figures are contained in the body of the report, is each figure caption typed beneath the relevant figure?
☐ Is each figure as clear and simple as possible?
☐ Does each figure fit on the one page?

Discussion
☐ Does your Discussion section commence one double-line space below the last line of the Results section, not necessarily on a new page?
☐ Is your Discussion section headed with "Discussion", centred and in boldface?
☐ Does your discussion provide a clear statement of support or non-support for hypotheses and aims?
☐ For each research hypothesis, do you discuss whether or not your current results provide support for earlier findings?
☐ Does your Discussion section comment on the implications of what you have found?
☐ Do you acknowledge any shortcomings in the way you conducted the study?
☐ Do you consider possible future research directions?
☐ Have you commented on the theoretical importance of your research findings?
☐ Does your conclusion sum up the main findings?
☐ Is your discussion written in the present tense?

References
☐ Does your reference list appear on a separate page following the Discussion section?
☐ Is your reference list headed with "References", centred at the top of the page?
☐ Have you cross-checked the in-text citations to match the reference list entries?
☐ Have you formatted all in-text citations according to the specific requirements outlined in Chapter 7?
☐ Have you formatted your reference list according to the specific requirements outlined in Chapter 8?

Appendices
☐ Have you included any appendices, if required?

Other
☐ Does your report stay within 10 percent either side of the word limit?
☐ Have you completed a final proofread of the report?
☐ Is your report double-line spaced?
☐ Did you indent (1 tab space) the first line of each paragraph?

KEY TERMS

abstract A concise overview of the contents of an essay or report.
control group A group in an experiment that is not exposed to the independent variable under investigation.
dependent variable The behaviour (or response) the experimenter measures to see if the manipulation of the independent variable had an effect.
effect size A measure of the strength of the relationship.
experimental group A group in an experiment that is exposed to the independent variable under investigation.
hypotheses Statements about the expected findings of your study (hypothesis is the singular form of the noun).
independent variable The variable that is specifically manipulated by an experimenter to observe its effects on the dependent variable.
level of probability The level of significance used to establish that an outcome is not due to chance.
qualitative research Exploring a research topic through methods such as interviews, observation, and case studies to gain a richer understanding of the relevant phenomena.
quantitative research Involves using experiments or surveys that provide data that can be quantified, tabulated, summarised, and analysed.
reference list The full publication details of the information sources you have cited in your text.
statistically significant The level of probability used to establish that a result is not due to chance.

APPLIED ACTIVITY

Have a quick look through the two sample research reports provided at the end of this chapter. You will notice that they are two versions of the same report written to the topic "Similarity in Attitudes and Activity Preferences of Friends and Strangers". One version is a well-written and formatted report (i.e., the "Good Report") and the other is a poorly written and formatted report (i.e., the "Bad Report"). You should be able to distinguish between each version of the report at a glance. All of the style errors in the Bad Report are corrected in the Good Report. The Good Report was modified from an original, 2000-word report submitted for an undergraduate psychology course. It illustrates the correct application of many of the concepts covered in this writing guide. Please note, however, that there is *never* only one right way to write the various sections of a report. Use the Good Report only as a guide to the correct format; apply your own creativity when writing reports in psychology.

The Good Report provides a quick visual check of a research report written in correct APA format. In contrast, the Bad Report highlights a number of the most common style errors students make when writing reports. Now read through the Bad Report again. See if you can identify the errors in the Bad Report and correct them so that the report conforms to APA style. Write your corrections in the margins of the report or on a separate piece of paper. See if you have identified all the errors in the Bad Report by checking your corrections against the solutions to the Good Report provided in Appendix 4 at the back of the book. In the answers to the Good Report, boxes are used to highlight the skilful application of different concepts. Good luck!

ACKNOWLEDGMENTS

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Bad report

Title: Similarity in Attitudes and Activity Preferences
Your Name:
University:

ABSTRACT

A survey was carried out among university students and their friends to determine whether same-sex friends were more similar than same-sex strangers in their attitudes and preferred activities. The 756 participants each completed an attitudes and activities survey and they were later grouped into 198 friend or 180 stranger dyads. Results indicated that friends were more similar than strangers in their attitudes towards abortion and law and order, but not towards environmental or multicultural issues. No differences in similarity were found between friends and strangers in activity preferences. Further research measuring the strength of values behind particular attitudes, friendship duration, and more diversified activities is needed to further clarify the role of similarity in friendship.

INTRODUCTION

Many researchers have been interested in determining what characteristics form the foundations for interpersonal relations. Similarity has been emphasised as one of the main predictors of interpersonal attraction and friendship development (Vaughan and Hogg, 1995). Some other influencing factors include physical attractiveness, proximity, familiarity, and availability (Vaughan & Hogg, 1995). Several studies (e.g., Kandel, 1978; Fink & Wild, 1995; Lea & Duck, 1982; Werner & Parmelee, 1979) have been carried out to determine whether friends are more similar than strangers in terms of such factors as leisure activities, attitudes, and values. These studies, however, have produced mixed results. While some researchers have found similarity of attitudes or values to be more predictive of liking, others have found similarity of activities to be more influential (Vaughan & Hogg).

According to Heider's Balance Theory (1946 cited in Vaughan and Hogg 1995), individuals prefer to have relationships with those whose attitudes are consistent with their own to avoid negative psychological tension. E.g., individuals who are strong advocates of industry and progress may not be attracted to people who are passionate supporters of environmental protection. Such polarised beliefs are likely to create tension within a relationship. If friends hold such opposing beliefs, Balance Theory proposes that they are often motivated to try to maximise congruency either through mutual influence or by changing their own attitudes and behaviours (Fink and Wild).

Values serve as the foundations upon which attitudes are formed and may impact upon friendship development (Vaughan & Hogg). A study by Lea & Duck (1982) found that similarity on values that are strongly endorsed or strongly rejected, rather than those to which a person is indifferent or neutral, significantly influenced friendship in the development stage (that is, during the first six months). Lea and Duck (1982) also found that participants most often chose as their friends, people who shared uncommon values. McCarthy and Duck (1976) conducted a study on attitude similarity of 30 same-sex dyads in different stages of friendship development. They found that dissimilarity in attitudes appears to be attractive in the tentative stages of friendship development (that is, one to six months); however, established friendships of at least twelve months' duration favoured total attitude similarity.

Alternatively, it has been argued that activity similarity is more predictive of liking than attitude similarity. A study by Werner & Parmelee (1979) of 24 same-sex friends compared attitude and activity similarity. They found that friends were more similar on activity preferences than attitude similarities. No gender effects emerged in their study. Likewise, Kandel found similarity was significantly higher on behaviours than on attitudes in a study of 1879 same-sex adolescent friendship dyads. Kandel's study revealed that although similarity varied greatly on different dimensions, the highest attitude and activity similarity for both males and females was drug-related.

The aim of this study is to determine whether same-sex friends are more similar than same-sex strangers in their attitudes and preferred recreational activities. From the research examined, it is anticipated that irrespective of gender, similarity of both attitudes and activities influences friendship development. The first hypothesis is that friends will be more similar than strangers in their attitudes to the environment, abortion, multiculturalism, and law and order. The second hypothesis is that friends will be more similar than strangers in the extent to which they enjoy active, passive, social, and creative activities.

METHOD

Participants

756 participants in this study consisted of 396 undergraduate psychology students from the University of Southern Queensland and 360 of their same-sex friends. The friend dyads consisted of 109 males and 287 females. The stranger dyads consisted of 71 males and 289 females. 83% of the participants were Anglo-Australians and 69% were Christians. Students received course credit for their participation. The students' friends' participation was voluntary with no incentives offered. A demographic data sheet that asked for information such as gender, age, nationality, and student status was also included.

Materials

The 28-item Attitudes and Activities Survey was constructed to measure participants' attitudes and activity preferences. The first 16 items of this survey were designed to measure attitudes towards four topics: the environment, abortion, multiculturalism, and law and order. Each topic consisted of 4 direct statements (e.g., "Abortion is morally wrong"), and participants were instructed to rate the strength of their agreement to the statement on a scale from 1 "*strongly disagree*" to 7 "*strongly agree*". Scores for each attitude topic could theoretically range between four and 28.

The last 12 items in the survey were designed to measure activities in four categories: active, passive, social, and creative. Each category comprised 3 items (e.g., "Visiting people"). Participants were instructed to rate their enjoyment of each of the activities on a scale from 1 "*not enjoyable*" to 4 "*very enjoyable*". Thus, scores for each of the four activity categories could theoretically range between three and 12.

Procedure

All student participants received two copies of the survey and were instructed to complete one copy and recruit a same-sex friend to complete the other. Apart from being the same sex, the chosen friend also had to meet the following criteria: They had to be 1. At least 17 years of age, 2. Not currently enrolled in the Social Processes of Behaviour course, 3. Not a relative, and 4. A close friend rather than just an acquaintance. Participants were instructed to complete the surveys and return them to the USQ in sealed envelopes provided to ensure anonymity of responses. Once received, the completed surveys were grouped into friend or stranger categories. Half of the surveys were kept together as intact friend dyads, while the remainder were separated and randomly paired with another participant of the same sex to form stranger dyads. Questionnaire pairs that did not meet the required criteria were discarded (N = 18). The data were scored and analysed by the course lecturer.

RESULTS

In an initial analysis of the data using gender and relationship type as independent variables, no significant gender differences were found with regard to any of the attitudes or activities. Gender also did not interact with relationship type. Therefore, data for males and females were pooled and results are presented for the combined data. The mean difference scores for attitudes of friends and strangers are presented in Table One.

Table 1
Mean Difference Scores for Attitudes of Friends and Strangers

	Attitude Topic			
Type of Relationship	Abortion	Law	Environment	Culture
Friend	6.12	3.98	2.96	4.49
Stranger	8.17	4.78	3.29	5.01
Difference	2.85*	1.97	0.33	0.52

Note. For friends, $n = 196$; for strangers, $n = 181$. Mean difference scores could theoretically range from 0 to 24, with lower scores indicating greater similarity of attitudes.

The results from Table One suggest that friends are more similar than strangers in their attitudes towards abortion and law and order. The mean difference score for friends in their attitude towards abortion was significantly less than strangers in their attitude towards abortion (t (179) = 2.85). The mean difference score for friends in their attitudes towards law and order was significantly lower than strangers in their attitude towards law and order (t (179) = 1.97). There were no significant differences between friends and strangers in their attitudes towards environmental or multicultural issues.

Table Two presents the mean differences for preferred activities of friends and strangers.

Table 2
Mean Difference Scores for Preferred Activities of Friends and Strangers

	Attitude Topic			
Type of Relationship	Active	Passive	Social	Creative
Friend	1.92	1.54	1.77	2.67
Stranger	2.06	1.59	1.64	2.43

Note. For friends, $n = 196$; for strangers, $n = 181$. Mean differences scores could theoretically range from 0 to 9, with lower scores indicating greater similarity of preferred activities.

Table Two suggests that the activity preferences of friends and strangers do not differ and analyses confirmed that the differences were not statistically significant.

DISCUSSION

The results provided partial support for the hypothesis that friends would be more similar than strangers in their attitudes. Results indicate that friends were more similar than strangers in their attitudes towards abortion and law and order issues, but no more similar than strangers in their attitude towards multicultural or environmental issues.

Dissimilarity on important values may cause an imbalance of cognitions, which may prompt friends to influence each other to change their attitudes towards these issues in order to maintain cognitive consistency.

Duration of friendship is a variable that may have confounded the effects of attitude similarity in the present study. Further research is required to address this limitation.

The results did not support the hypothesis that friends would be more similar than strangers in the extent to which they enjoy active, passive, social and creative activities. Further research is required.

A further limitation of the study was the wide age range.

Overall, the results of the study suggest that people do not have to be similar in all of their attitudes and preferred activities to become friends.

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Good report

Similarity in the Attitudes and Activity Preferences of

Friends and Strangers

Nancey Hoare

University of Southern Queensland

Abstract

A survey was carried out among university students and their friends to determine whether same-sex friends were more similar than same-sex strangers in their attitudes and preferred activities. The 756 participants each completed an attitudes and activities survey and they were later grouped into 198 friend or 180 stranger dyads. Results indicated that the attitudes of friends were more similar than those of strangers on the issues of abortion and law and order, but not on environmental or multicultural issues. However, the study found no differences between friends and strangers in the similarity of the activities they preferred. Further research is needed to clarify the role of similarity in friendship. This research needs to consider the strength of values behind particular attitudes, the duration of the friendships, and whether using more specific categories of activity types could produce different results.

Similarity in the Attitudes and Activity Preferences of Friends and Strangers

Many researchers have been interested in determining what characteristics form the foundations for interpersonal relations. Similarity has been emphasised as one of the main predictors of interpersonal attraction and friendship development (Vaughan & Hogg, 1995). Some other influencing factors include physical attractiveness, proximity, familiarity, and availability (Vaughan & Hogg, 1995). Several studies (e.g., Fink & Wild, 1995; Kandel, 1978; Lea & Duck, 1982; Werner & Parmelee, 1979) examined whether friends were more similar than strangers in terms of such factors as leisure activities, attitudes, and values. These studies have produced mixed results. Some researchers have found similarity of attitudes or values to be more predictive of liking. Others have found similarity of activities to be more influential (Vaughan & Hogg, 1995).

According to Heider's Balance Theory (1946, as cited in Vaughan & Hogg, 1995), individuals prefer to have relationships with those whose attitudes are consistent with their own. This avoids negative psychological tension. For example, individuals who are strong advocates of industry may not be attracted to people who are passionate about environmental protection. Such polarised beliefs are likely to create tension within a relationship. Balance Theory proposes that friends with such polarised beliefs try to maximise congruency either through mutual influence or by changing their own attitudes and behaviours (Fink & Wild, 1995).

Values serve as the foundations upon which attitudes are formed and may impact upon friendship development (Vaughan & Hogg, 1995). Lea and Duck (1982) found that similarity on values which people either strongly endorse or reject significantly influence

friendship in the development (i.e., during the first 6 months) compared with values about which they are indifferent or neutral. Lea and Duck also found that participants most often chose people who shared uncommon values as their friends. McCarthy and Duck (1976) conducted a study on attitude similarity of 30 same-sex dyads in different stages of friendship development. They found that dissimilarity in attitudes appears to be attractive in the tentative stages of friendship development (i.e., 1 to 6 months); however, established friendships of about twelve months' duration favoured total attitude similarity.

Alternatively, it has been argued that activity similarity is more predictive of liking. Werner and Parmelee (1979) compared the attitudes and activities of 24 same-sex friends. They found that friends had greater similarity in their activities than their attitudes. No gender effects emerged in their study. Likewise, Kandel (1978) found similarity was significantly higher on behaviours than on attitudes in a study of 1879 same-sex adolescent friendship dyads. Kandel's study revealed that although similarity varied greatly on different dimensions, the highest attitude and activity similarity for both males and females was drug-related.

The present study aimed to determine whether same-sex friends are more similar than same-sex strangers in their attitudes and preferred recreational activities. From the research examined, it was anticipated that irrespective of gender, similarity of both attitudes and activities influences friendship development. It was hypothesised that same-sex friends would show more similar attitudes to the environment, abortion, multiculturalism, and law and order than would same-sex strangers. It was also hypothesised that same-sex friends would be more similar than same-sex strangers in the active, passive, social, and creative activities they preferred.

Method

Participants

The 756 participants in this study consisted of 396 undergraduate psychology students from the University of Southern Queensland (USQ) and 360 of their same-sex friends. Of the two conditions in the study, the friend dyads consisted of 109 males and 287 females, with ages ranging from 17 to 52 years, and a mean age of 26.98 years ($SD = 5.49$). The stranger dyads consisted of 71 males and 289 females with ages ranging from 17 to 78 years, and a mean age of 28.43 years ($SD = 6.29$). Eighty-three percent of the participants were Anglo-Australians and 69% were Christians. Students received course credit for their participation. Participation by the students' friends was voluntary, with no incentives offered.

Materials

The 28-item Attitudes and Activities Survey was constructed to measure participants' attitudes and activity preferences. The first 16 items of this survey were designed to measure attitudes towards four topics: the environment, abortion, multiculturalism, and law and order. Each topic consisted of four direct statements (e.g., "Abortion is morally wrong") and participants were instructed to rate the strength of their agreement to the statement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores for each attitude topic could theoretically range between 4 and 28.

The last 12 items in the survey were designed to measure activities in four categories: active, passive, social, and creative. Each category comprised three items (e.g., "Visiting people"). Participants were instructed to rate their enjoyment of each

of the activities on a scale from 1 (*not enjoyable*) to 4 (*very enjoyable*). Thus, scores for each of the four activity categories could theoretically range between 3 and 12.

A demographic data sheet that asked for information such as gender, age, nationality, and student status was also included.

Procedure

All 396 student participants received two copies of the survey. They were instructed to complete one copy and recruit a same-sex friend to complete the other. Apart from being the same sex, the chosen friend also had to meet the following criteria: He or she had to be (a) at least 17 years of age, (b) not currently enrolled in the Social Processes of Behaviour course, (c) not a relative, and (d) a close friend rather than just an acquaintance. Participants were instructed to complete the surveys and return them to the USQ in sealed envelopes provided to ensure anonymity of responses. Half of the student surveys were kept together as intact friend dyads, while the remainder were separated and randomly paired with another participant of the same sex to form stranger dyads. Questionnaire pairs that did not meet the required criteria were discarded ($N = 18$). The course lecturer scored and analysed the data using the Statistical Package for Social Scientists (SPSS, standard version 6.1.2, 1995).

Results

An initial analysis of the data found no significant gender differences on any of the attitudes or activities. Gender also did not interact with relationship type. Therefore, data for males and females were pooled and results are presented for the combined data. The mean difference scores for attitudes of friends and strangers are presented in Table 1.

The results from Table 1 indicate that with an alpha level of .05, friends were more similar than strangers in their attitudes towards abortion, $t(179) = 2.85$, $p < .01$. A significant mean difference was also observed between friends and strangers on their attitudes towards law and order, $t(179) = 1.97$, $p < .05$. There were no significant differences between friends and strangers in their attitudes towards environmental or multicultural issues ($p > .05$).

Table 2 presents the mean difference scores for preferred activities of friends and strangers. As shown in Table 2, the preferences of friends and strangers for active, passive, social, and creative activities did not significantly differ ($p > .05$).

Discussion

As anticipated, males and females paired with either friends or dyads reported similar attitudes and preferred activities. This finding supports the results of Werner and Parmelee (1979) and Kandel (1978) where same-sex friends were sampled. The results provide partial support for the hypothesis that friends would have more similar attitudes than strangers. Results indicate that friends were more similar than strangers in their attitudes towards abortion and law and order issues, but no more similar in their attitude towards multicultural or environmental issues. Values might have influenced participants' responses to the attitude survey items. The four attitude categories touch on topics that could be considered controversial in present-day society. As a result, those topics might evoke strong emotional responses from participants who feel quite strongly about them.

For example, 69% of participants in this study hold Christian beliefs. For those people, abortion issues may have a higher value than environmental or multicultural

issues. These people may not be willing to compromise their values for friendship. Also, strong personal safety issues might have influenced responses to the law and order items. The strength of such personal opinion might not have been as great for items relating to multicultural or environmental attitudes. Given that previous research by Lea and Duck (1982) found a relationship between strongly accepted values and friendship development, value judgements could have influenced the present results. While friends may influence each other's attitudes to some degree, it may be that higher-valued attitudes need to be more congruous than values that an individual regards as less important. Dissimilarity on important values could cause an imbalance of cognitions. As a result, friends may try to influence each other to change their attitudes on these issues, to correct this imbalance.

Duration of friendship is a variable that may have confounded the effects of attitude similarity in the present study. McCarthy and Duck (1976) found that in the early stage of friendship development (1 to 6 months), individuals prefer others who are mildly or highly dissimilar in their attitudes. In this study, while students were instructed to recruit a close friend, there were no limitations on the length of acquaintance. Therefore, some friendships may have been in the tentative stages, where dissimilarity of attitudes may be more attractive. To address this limitation in future research, participants could be asked to indicate how long they have been friends. Another option is to apply a restriction to long-lasting friendships (i.e., friends about six months or more).

The results did not support the hypothesis that friends would be more similar than strangers in the active, passive, social, and creative activities they preferred.

These findings differ from those of previous studies (e.g., Kandel, 1978; Werner & Palmer, 1979), in which activity similarity was reported to be higher between friends than between strangers. This could be attributed to the types of activity items used in the present survey. The 12 activity items were very general (e.g., "Listening to music"), which most people are likely to enjoy to some extent. There were no survey items relating to more specific, uncommon, or deviant activities. Further research could incorporate more specific items (e.g., playing tennis and knitting), less common activities (e.g., hang gliding, bull riding, and rock collecting), or more deviant activities (e.g., legal or illegal drug use), to determine whether they would exert a stronger influence on friendship development than the more subdued activities used in this study.

A further limitation of the study was the wide age range. Differences in developmental stages might have influenced attitude and activity preferences. Friends at different developmental stages may engage in different types of activities. Attitudes may also vary in importance depending on participants' ages. Future research could overcome this problem by analysing different age groups separately.

Overall, the results of the study suggest that people do not have to be similar in all of their attitudes and preferred activities to become friends. It may be that similarity of attitudes associated with strongly held values is important in friendship development, but those that are less value-laden may not be as important. Further research could include a measure of values, consider the friendship duration, and cover more diverse activities to clarify the role of similarity in friendship.

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Table 1

Mean Difference Scores for Attitudes of Friends and Strangers

Relationship type	Attitude topic							
	Abortion		Law		Environment		Culture	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Friend[a]	6.12	0.18	2.98	0.47	2.96	0.23	4.49	0.39
Stranger[b]	8.97	0.12	4.95	0.34	3.29	0.25	5.01	0.56
Difference *t* statistic	2.85**		1.97**		0.33		0.52	

Note. Mean difference scores could theoretically range from 0–24, with lower scores indicating greater similarity of attitudes. Law = law and order. Culture = multiculturalism.

[a]$n = 198$ for friends. [b]$n = 180$ for strangers.

*$p < .05$. **$p < .01$.

Table 2

Mean Difference Scores for Preferred Activities of Friends and Strangers

Relationship type	Activity category							
	Active		Passive		Social		Creative	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Friend[a]	1.92	0.31	1.54	0.42	1.77	0.54	2.67	0.71
Stranger[b]	2.06	0.15	1.59	0.33	1.64	0.60	2.43	0.69

Note. Mean differences scores could theoretically range from 0–9, with lower scores indicating greater similarity of preferred activities.

[a]$n = 198$ for friends. [b]$n = 180$ for strangers.

CHAPTER 6

Qualitative research reports

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

6.1 understand the difference between qualitative and quantitative research reports

6.2 understand the structure of a qualitative research report

6.3 understand how to use reflexivity in qualitative research.

6.1 Qualitative research in psychology

LEARNING OBJECTIVE 6.1 Understand the difference between qualitative and quantitative research reports.

This chapter will introduce you to writing a qualitative research report. There are important underlying differences between quantitative and qualitative research, and you need to reflect that in the structure of your research report, while keeping within the APA style writing guidelines. Considering these differences will give you a better understanding of qualitative work within the broader research context, and help you understand what the final report requires.

To consider what a qualitative research report requires, first think about how this approach differs from quantitative research. Where quantitative research is often thought of as **quantifying phenomena**, qualitative research is about **describing phenomena** and **interpretation**. This latter element is interesting because it is true of all research, including quantitative research. The key difference is that qualitative research tends to investigate phenomena by interpreting human experience, or the language that shapes it. Interpretation involves searching for patterns or themes in the data to explore the application of a theory or model in a particular context, or identifying a theory or model that emerges from the data. Qualitative experts have described human experience as being something that *is socially constructed* (see Howitt, 2010; Willig, 2008). If human experience is socially constructed, then it must have a subjective element. This is unsurprisingly described as **subjectivity** and refers to the lived experiences of individuals. That is, an individual's experiences are informed and mediated by all the relational, social, cultural, historical, and linguistic contexts they have experienced.

The idea of subjectivity also applies to the researcher. A researcher produces a subjective account when they define and interpret a phenomenon. **Reflexivity** is the act of reflecting on one's subjectivity. So a researcher will explore their relational, social, cultural, historical, and linguistic contexts. Noteworthy, is that the focus of the reflexivity should be on how it shapes the production of research and the knowledge produced. The reporting of reflexivity in a research report is important in that findings can be understood in the broader research context. This means that readers can critically assess how the research evolved and in what way the interpretation is informed by the subjectivity of those who performed the interpreting.

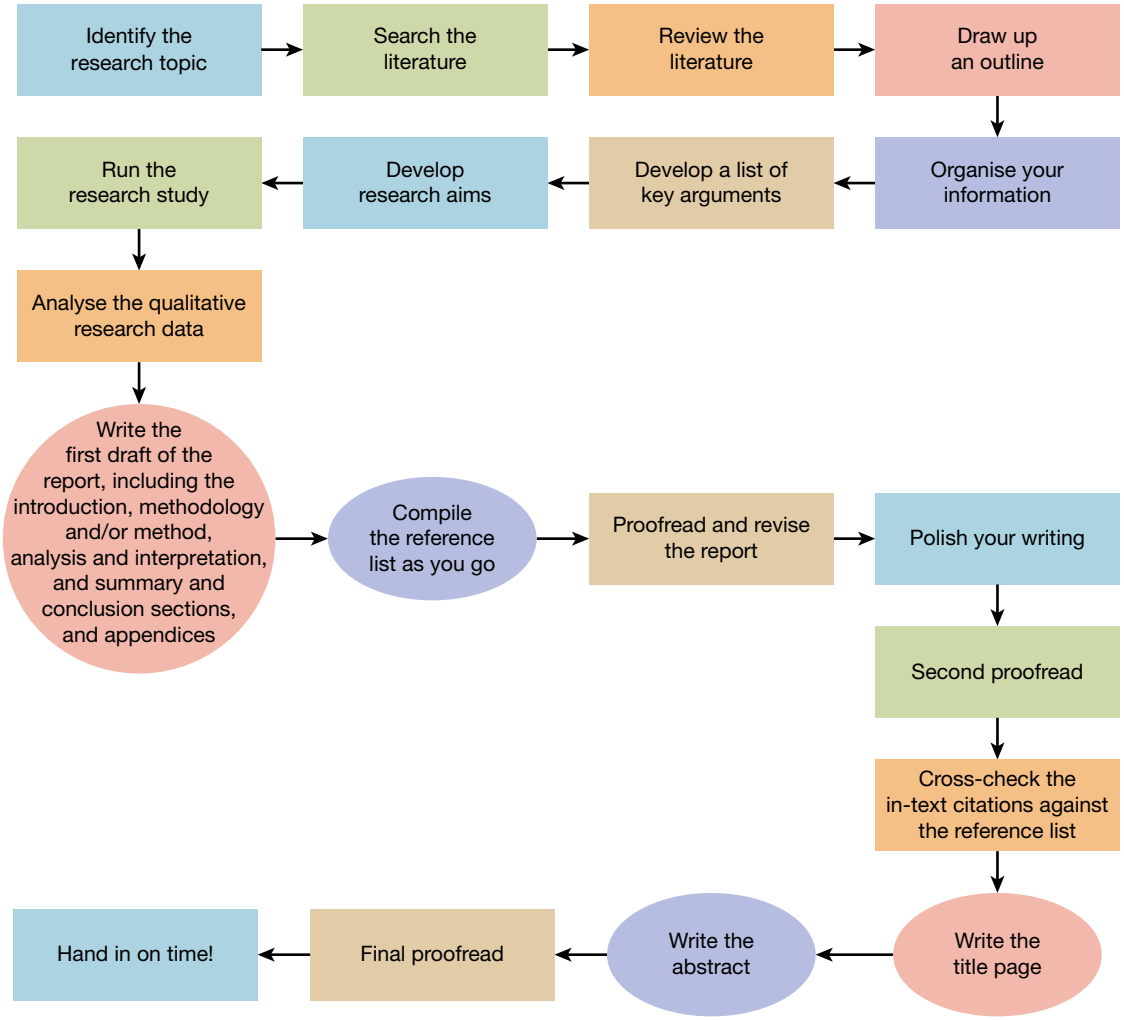
6.2 The structure of a qualitative research report

LEARNING OBJECTIVE 6.2 Understand the structure of a qualitative research report.

Figure 6.1 outlines the broad steps to follow when writing a qualitative research report. Each of the different sections of a qualitative research report are discussed below.

It is important to recognise that there is no one accepted approach and there is some flexibility regarding the different sections to include in a qualitative research report. There will always be some divergences in qualitative research, depending on the theoretical position taken by the researcher. For example, **interpretative phenomenological analysis (IPA)** researchers take an idiographic focus, offering insights into a participant's lifeworld; it explores how each unique individual, in a given context, personally experiences a specific phenomenon. IPA researchers would likely engage with reflexivity because research is viewed as a dynamic process and the researcher is considered to have an active role in that process. However, other qualitative researchers who undertake **content analysis** (analyse information for meaning), or adopt **discursive psychology** (examine the psychological themes in language) more broadly, or **critical discourse analysis** (examine how language is used in texts and contexts) more specifically, may not engage as readily in reflexivity as part of their research. In such instances, a reflective statement may not be included in the report, or it may be included in different sections of the report. Refer to the two example reports provided at the end of this chapter.

FIGURE 6.1 The basic steps to writing a good qualitative research report



Both example qualitative research reports provided at the end of this chapter use **thematic analysis** to identify patterns (or themes) across their respective qualitative datasets. Thematic analysis is relatively easy for beginner researchers to use. It allows for flexibility in the choice of theoretical framework and enables a rich and detailed reporting of patterns in the data (Braun & Clarke, 2006). However, as noted previously, a reflexive statement is not always included in a qualitative research report based on thematic analysis, and the decision whether or not to include one generally rests with the researcher. The two reports shown at the end of this chapter both demonstrate how reflexive statements may be included in the various sections of a qualitative research report.

Title page

The requirements for your report's title page are the same as those for an essay. As with a quantitative research report and an essay, you will have a title that ideally will be about 10 to 12 words long. Your title should appear on a separate title page and also include your name and institution. Please see "Qualitative research report 1" at the end of this chapter.

Abstract

Write the abstract on the next page after the title page. Follow the same general formatting guidelines of abstracts outlined for quantitative research reports and essays (see Chapters 4 and 5), but with the content of the abstract adapted to reflect the intricacies of the qualitative research. An example abstract follows:

Abstract

> The abstract should commence on a new page. The abstract should consist of a brief description of each of the sections of the report. Therefore, the abstract should begin with a statement of the problem or issue under investigation. Essentially, this is a summary of the introduction. Be careful of leaving out this first part. The next sentence should begin with a description of the methodology. It should then describe (briefly) the participants, the procedures used (e.g., interviews, focus groups, etc.) and the type of data analysis technique used (e.g., grounded theory, thematic analysis, etc.). That is, provide a short summary of the method section. The abstract then needs to provide a brief outline of findings (e.g., the number and name of themes). This provides a short summary of the data analysis and interpretation section. Lastly, you provide a statement about the implications of the emergent themes. This summarises the conclusion. There may also be a statement regarding the limitations of the study and possible future research. Overall, your abstract should typically range from 150 to 250 words.

Introduction

As with an essay and a quantitative research report, this section is called the introduction but it doesn't have the heading "introduction". Simply provide the title, upper- and lowercase and centred, and then move straight into the introduction.

Your introduction—alternatively known as the literature review—should begin with a "big picture" statement about what the issue or problem is in the real world that needs to be studied. For example, if your research is going to focus on students' experiences of studying at university, then you should begin by telling the reader why this is an important topic. You should articulate what issues they face and why these issues present a problem serious enough to warrant research into it. You then need to discuss past research into the issue, taking a critical look at what individual research studies found, and why they should or shouldn't be relied upon.

The introduction should be long enough (critically review sufficient existing literature) to provide the scope for building a convincing argument or rationale for the study. You should not discuss the findings of your research in the introduction. It is a review of past literature, not the current study. The art of

essay or report writing—including both qualitative and quantitative research—involves providing "signposts" or links between ideas so that the paragraphs flow smoothly and the reader knows, at all times, why they are reading any particular passage. They know this because you have related key material to the argument that you are formulating and provided links between ideas, and signposts as to why particular past research is relevant.

Personal pronouns in the introduction

Although using personal pronouns is acceptable in qualitative research reports, do so judiciously. Use them when describing what you actually did, and when you are being reflexive about your position within the research, but they should rarely be used to state your opinions or beliefs. This would be seen as bias unless you are stating opinions and beliefs in order to reflect on and critique them. The introduction is not the place to do this because you should be presenting an unbiased argument about past research, not an opinion. Therefore, the introduction should contain a coherent argument which leads into the rationale for the research. In fact, there are typically three interwoven arguments, depending on the qualitative research approach taken. The first involves a reflexive account of the subjectivity of the researcher, the second is a critical review of the literature that leads into the rationale for the topic of the research, and the third is a rationale for how you are conducting the qualitative research.

Reflexivity in the introduction

Many students find the prospect of writing a qualitative research report quite difficult and nerve-wracking, particularly in understanding the role of reflexivity and where it "fits" in a qualitative research report. They think the skills needed to write a qualitative research report are very different to those required for a quantitative research report. However, that anxiety is misplaced. The basic research skills are the same, with just a slightly different approach needed in writing the report.

The introduction is a common place for seasoned researchers to introduce their reflexivity, which is an important element in much qualitative research. However, flexibility is allowed regarding where to position any reflective statements in your qualitative research report. Not all qualitative research will require a reflective statement. This statement may appear in the introduction or in a summary section of a report following the Analysis and Interpretation section. If the reflective statement is included in the introduction, this will involve the researcher describing their initial interest in the research area, and how this research interest drove the research aims.

One issue is that while it is widely accepted within the psychology discipline that qualitative research report writing is a vital skill for graduates to have, many students rarely get to write them. Nor is there much in the psychological report writing literature to guide students. Students can access credible journals that publish qualitative psychological studies, which will act as an additional guide for writing a qualitative research report. Further, there are other journals that publish articles on the actual process of qualitative research, including writing up the study. Students are encouraged to read as widely as they can on the topic and to consult published research and textbooks for more information on writing about qualitative research.

Methodology

When structuring a research report there are standard terms that form the headings in a report. Two such terms that are often confused with each other, even in published articles, are "method" and "methodology". Methodology refers to the theoretical analysis of the approach or methods used in the qualitative research. In the traditional structured research article the term "method" is often used as a heading of a section in the report that describes the techniques or processes used within that piece of qualitative research. There should be enough detail in this section to replicate the research.

Since qualitative research leans more towards a social constructionist approach, research is not aiming for replicability (Willig, 2008). Knowledge is not viewed as an objective, measurable reality; rather, knowledge can be constructed differently, as it may be a reflection of different contexts and for different groups. That is, each research environment and group of people are viewed as different and so the methodological aim

is to understand the specifics of the research. The term "methodology" refers to the theoretical principles of research, which informs the methods that are then drawn on to conduct the research. It is therefore good research practice to include a section in a qualitative research report that discusses the underpinning methodological principles, although there is flexibility in this practice. Qualitative Research Report 1 shown at the end of this chapter outlines the theoretical framework for the research and demonstrates how a reflexive statement may be included in the methodology section of a qualitative research report.

The determination of an appropriate methodology can be described as:

> The strategy, plan of action, process or design lying behind the choice of particular methods and linking the choice and use of methods to the desired outcomes (Crotty, 1998).

Some examples of different types of qualitative methodologies include ethnography, phenomenological research, action research, discourse analysis, and grounded theory. Books such as that written by Carla Willig (2008) provide a reasonable overview of these different approaches to qualitative research.

Method

The Method section follows largely the same conventions as that of quantitative research, with some important differences. In quantitative research reports you need to provide enough information about the participants so another researcher could replicate the study with a similar group. With qualitative research, replication is not an issue. It is accepted that qualitative research does not require—and indeed cannot obtain—reliability in the quantitative sense. Any interview is seen as constructed at that time and place, and is non-replicable. The information you provide about the participants is therefore somewhat different.

You need to provide anything that will aid the reader in understanding who the participants are—including age, economic status, cultural background, number of children, etc.—which might help to understand their data. However, if a feature is not relevant to the study (e.g., whether or not the participant has children, if that isn't relevant to the interview), don't include it in the description. The questions you should ask yourself before including any descriptions of participants are:

1. Is this information necessary in order to understand the data more completely? and
2. Will this information enable my reader to identify individual participants?

Obviously the answers to the above questions should be "yes" to number 1 and "no" to number 2. On the other hand, you might want to give the reader a more rounded view of your participants, especially if the research is based on in-depth case studies and there were only two or three of them. In a larger sample you would perhaps describe them more generally but with a small number of interviewees you can be more detailed. Therefore, it is important to mention the number of participants, and why you chose that amount.

You need to describe how your participants were recruited and to explain if there is a relationship to you. Are they close friends? Are they related to you—mother, sister, uncle, etc.? Are they people you walked up to in the cafeteria and asked if they might be interested? Did you put a message on an online chat group site and ask for volunteers? There are ethical implications with any of these recruitment strategies that you also need to address.

In qualitative research you are trying to highlight the personal experiences of the people you interview or in critically examining language or other textual artefacts (e.g., images, poetry, music). When conducting interview-based research it defeats the purpose if you refer to them in depersonalising ways such as "participant one" and "participant two". Pseudonyms are a good way to personalise the report without identifying participants. Make it clear to the reader how you obtained permission to write the case study and if you are using pseudonyms, not real names. For example:

I assert that this case report example is a composite case of several similar cases demonstrating narcissistic personality disorder. I have chosen the pseudonym, Marcia for this composite case.

or

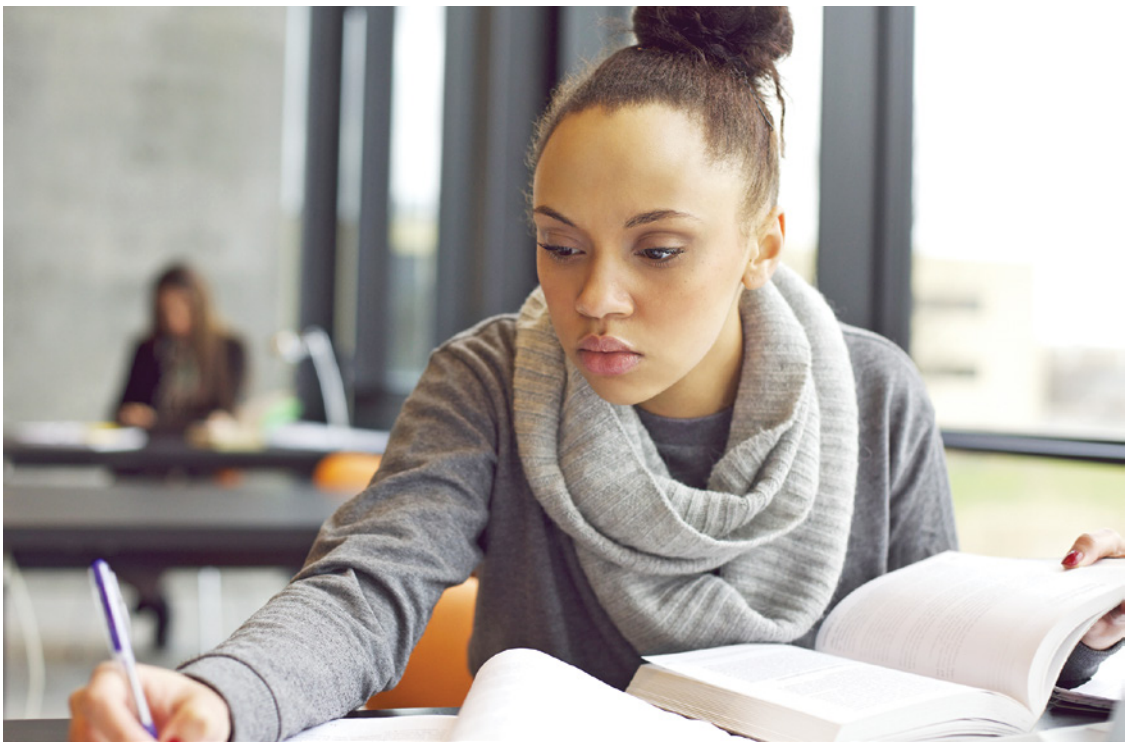
Marcia is a pseudonym for the presentation of this de-identified real-life case which is published here with the written permission of the client.

Procedure

In this section, briefly describe what you did. Mention that you obtained ethics approval and informed consent, as well as how you recruited participants, protected confidentiality, and ensured that the participants were not adversely affected by their part in the research. You do not need to include the materials you used (e.g., brand of tape recorder). You are encouraged to refer to any interview schedule used. It's a good idea to include this as an appendix to the report. In text-based research, the description and justification for the selection of text is included here. Qualitative Research Report 2 provides a reflexive statement in the Method section to highlight the author's personal involvement with the partner organisation and to acknowledge how this personal experience may influence interpretation of the data.

When you have appendices you should order them as they are mentioned in the report. Therefore, if you mention the interview schedule first, it should be Appendix A (see Qualitative Research Report 1 for an example). If you mention the consent forms next, they should be included as Appendix B and so on.

Data analysis



In this section you describe exactly what you did in order to obtain your findings. This may include how you obtained themes if you conducted interview research, a critique of text-based resources, or a discussion of praxis in action-based research. This is where you describe in detail the systematic steps you took. This is the part of the report where you start to convince your readers that your analysis is credible so they need to see from your description that you went to some lengths to ensure transparency and trustworthiness. How many times did you read through the transcripts or texts? Did you begin the analysis after you had conducted the first interview or did you wait until you had collected all the data? At what point did you look for different cases? On what basis were the themes chosen? All of this detail enables the reader to get an impression of whether or not you demonstrate rigour in your analytic technique. It is also helpful to provide a reference for the techniques that you used. That is, what prior research or researcher are you relying on when you claim that your technique is appropriate?

It is also important to state in this section if you have gone back to the literature to better understand your findings, using sources that may not have seemed relevant when originally writing the literature review.

Analysis and Interpretation

Where possible, the Analysis and Interpretation section should not be two separate sections as would be the Results and Discussion sections in a quantitative research report. In a quantitative research report, you are supposed to simply discuss the statistical results in the Results section and then discuss the implications of these results in the Discussion section. However, you can't do this when your data is words, as in a qualitative research report. You cannot present the data chunks separately from the analysis and interpretation.

The Analysis and Interpretation section typically begins with a brief overview of the themes or findings that you are going to discuss. You might also mention if there were themes that you are not going to discuss and why you've chosen the ones you have. As well as naming the themes, you could describe them (briefly) and mention how they might be linked (e.g., some could be manifest themes with one an overarching latent theme).

Once you've provided an overview you can start to describe the themes or the textual analysis in detail. With interview-based research, it's best to provide the name of the theme as a subheading so that the structure of the analysis is clear. Under the heading you can describe the theme in a bit more detail and then provide data extracts (quotations) from one or more participants as evidence for what you write. After providing the extracts, refer back to them again and discuss their content and why this is important to the analysis overall. Never let an extract "speak for itself". It is your job to tell the reader, after the extract is presented, exactly what it demonstrates and how you interpret this.

It's important to interpret each section within a theme but it's also important to have some sort of summary to each theme—talking about it as a whole, and explaining its importance. Therefore at the end of each theme you need to provide an overall discussion of it so that the reader is clear why this is all relevant.

Be careful to avoid creating little case histories, focusing on the individual's entire story, rather than extracting themes and using the data from all participants, to illustrate those themes. When the analysis becomes little case histories it tends to be simply descriptive rather than interpretive. It's not a good idea to use the topics of your questions as themes. Again this leads to a purely descriptive study. For example, "I asked this, participants said that". You need to reflect on underlying messages or common experiences and use those as your themes, not question topics.

Personal pronouns in the analysis and interpretation section

In this section of the report it's fine to use personal pronouns but again, be judicious (see Chapter 2 for detail on active versus passive voice). It's quite acceptable if you are using reflexivity to make your report more transparent, but it detracts from the trustworthiness of the study if you write about your

personal beliefs and opinions. Your analysis must depend on the evidence you present—your reader will accept what you say if they can see for themselves the evidence for it in the data extracts you use.

At all costs, avoid using substitutes for personal pronouns such as "this author". If you mean "I", say "I" and if you feel uncomfortable doing that, take time to check if it's really appropriate to be using a personal pronoun in the way that you propose. If you are still uncomfortable, better to use passive voice than to use "this author".

Formatting data extracts

When using data extracts as evidence for your argument, introduce the point being made, then provide the data extracts that illustrate what you want to describe and then explain what the data demonstrates. As mentioned before, you should not leave a quote to "speak for itself". It increases credibility and a greater understanding of the phenomenon if you offer some analysis or interpretation after presenting a quote—what do these quotes illustrate and how do they link to the literature? This is where there's an opportunity for your own voice, your own analysis, how you make sense of it all (but again, don't say it as your opinion, offer it as a possible explanation). It's not sufficient to simply record what your participants said. You are supposed to be using their words as data to provide evidence for the themes constructed.

So, if using thematic analysis, the approach should be:

1. introduce a particular finding/theme/idea (i.e., say what it is that you are focusing on now)
2. present the data extract (evidence) to show the finding/theme/idea
3. analyse or interpret the finding/theme/idea by discussing the data extract in relation to the existing literature you talked about in the introduction.

Without this format the discussion of the themes will tend to be very brief and purely descriptive. You need to interpret what was happening as well as describe what happened. See Figure 6.2 below for an illustration on how it is done.

FIGURE 6.2 Discussion of themes

The following example is taken from Gullifer and Tyson (2010, p. 472) who explored students' perceptions of plagiarism:

> Similar to Ashworth, Bannister, and Thorne (1997), the participants indicated that despite making every effort to avoid plagiarism, there was a very real fear of inadvertent plagiarism. This was evident across all our focus groups, regardless of year of study or discipline. The participants perceived a relationship between the expressed fear and writing confidence, as expressed by the following participant:
>
> > *Yeah I quote way too much, like you are scared, I am scared to write my own words in case they are someone else's but I didn't know about it. (P1, Group 7, 215)*
>
> The loss of confidence implicit here may form a poor basis for learning. For instance, research investigating the impact of self-efficacy in learning indicates that students who exhibit confidence and self-esteem are much more likely to be successful at mastering the academic conventions (Archer, Cantwell, & Bourke, 1999; Ingleton & Cadman, 2002).

Gullifer, J., & Tyson, G. A. (2010). Exploring university students' perceptions of plagiarism: A focus group study. *Studies In Higher Education*, *35*(4), 463–481. doi:10.1080/03075070903096508

It is also important to ensure that the data supports your conclusion. Don't go beyond the data into mere speculation. You need to be able to provide evidence from the data to support the claims being made in your analysis. You need to analyse the extracts and really point out to the reader how the data provides the evidence you say it does.

It's always better to distinguish the data extracts from the main body of the text so that the reader is clear on the voices of the participants. It is recommended to block indent the data extracts in a new paragraph and make them single-line spaced (see Qualitative Research Report 2). For example:

> It is important to note the flexibility allowed in formatting quotes from your qualitative dataset. You may simply decide to indent them and use single-line spacing as shown here. This way they will stand out from the remainder of your report which is double-line spaced.
> (Lorelle)

Alternatively, some qualitative researchers prefer to italicise the quotes to make them stand out (see Qualitative Research Report 1). For example:

> *This makes them stand out from the text of the report so that it doesn't become confusing for the reader trying to work out what it is they are reading.*
>
> *(Lorelle)*

It is permissible to edit the data chunks if they are too long, repetitive or if only part of what was said is relevant. To do so, use square brackets with three ellipsis […] to show that some data has been deleted, or conversely square brackets around [inserted] words added to improve understanding of the quote. You can also leave out "ums" and "ers" if it doesn't add to the overall meaning of the data chunk without using square brackets. However, it's not very effective to use single words or short phrases out of the data to illustrate your analysis. It's much better to provide the whole (relevant) data extract and then draw attention to what is important about it.

It's never a good idea to use the same data extract twice. There should be enough data in your research to enable the single use of data. Decide where data fits best and use it there, just the once.

Using the literature and past theory in the analysis and interpretation section

The principles that underpin inductive qualitative research do not endorse "supporting" past theory, although it's fine to note similarities or differences. It is important to avoid "fitting" the data into the theory and then searching for data extracts. The problem with this approach is that it is not consistent with most qualitative research (unless it is deductive) and appears biased—as though you only chose data that fitted with the theory and ignored any that didn't.

Make sure that you tell your reader in the data analysis section (within the Method section) that you will be returning to the literature to find any relevant literature in support of your themes, or if no literature is found to state that you have found something novel.

6.3 Reflexivity and subjectivity in the analysis and interpretation section

LEARNING OBJECTIVE 6.3 Understand how to use reflexivity in qualitative research.

You have seen how reflexivity can play an important role in different sections of a qualitative research report. If relevant to your research approach, remember to use reflexivity throughout the Analysis and

Interpretation section of your report. You need to reflect on where you stand in relation to this research (i.e., your personal situation) and how that may have affected your data collection and analysis. You can reflect on unexpected reactions to the content of the interviews and try to see why you were affected in that way. You also need to reflect on possible alternative interpretations of the data to persuade the reader that it is a transparent and trustworthy qualitative report. Document your reflections in a reflexivity journal that starts when you begin working on your research. The reflexive journal is like a diary where you make regular entries documenting the decisions you make about your research. In student dissertations or research projects, you may be required to draw from the reflexive journal to discuss the context of the methodological decisions made, or the impact that you may have had as a researcher on how the data was shaped and co-produced with your participants. Qualitative Research Report 2 includes independent reflexive statements in both the Method, and Analysis and Interpretation sections.

Concluding your qualitative research report

It's not terribly effective to end a report with only a critique of the study. It leaves the reader thinking "Well, if it was so flawed, why did I bother to read it?" If the research only had one or two participants it does not mean that the analysis is flawed. You could end by saying that although the findings are limited to the meanings placed on the phenomenon by these few participants, it's quite possible that the findings presented in your study would resonate with many other readers' experiences. Also, once you've provided a short critique you could conclude by stating the good things about the findings and possible future research.

The key difference between a quantitative research report and a qualitative research report is that we are not looking for generalisability to the population or evidence of research control and the elimination of bias. A qualitative report does not set out to provide support for a particular theory or to explain phenomena. Rather the emphasis is to improve our understanding of a phenomenon or to critique discourses evident in language or other textual artefacts (e.g., images, poetry, and music). However, similar to a conclusion in a quantitative report is to summarise your findings, and the implications of how it adds to the body of knowledge of psychology.

Your conclusion (which does not necessarily need a separate heading) should make some points about how your research relates to the "big picture" that began the Introduction section. What does the research suggest about people's lives and the way they interpret and make sense of their own experience in the context of the culture they live in? In what way does your research provide additional understanding of the "big picture" issue that you discussed, over and above what has already been written about in the literature?

References

Unlike the other sections of the report, your References section must begin on a new page.

References should be listed in alphabetical order of the first author. A reference list is not a bibliography. A bibliography includes all the books, journals, etc. that have been read. There may be some that you have read but haven't cited in your report. You do not include these in a reference list. Only those works that you have actually read and cited in your report should be included in the reference list.

All the references in your reference list should be formatted using a hanging indent. It is your responsibility to find out how to format each citation included in the body of your report and to correctly format each reference entry in the reference list at the end of the report. Chapter 8 can assist you with these details, outlining why we need a reference list and how to construct one. This chapter also shows worked examples of how to format different types of references in your qualitative research report.

Final word

Be very careful to avoid plagiarism. Whether you are a first-year or a fourth-year student, you need to be very clear about what constitutes plagiarism and you should be at great pains to avoid it (see Chapter 1

for more information). Better to seek an extension or get a penalty for late submission than to try to finish a piece of work by copying the work of others and trying to pass it off as your own. If you do that, you may fail the assignment or you may even be failed in the entire course.

It is your responsibility to find out what constitutes plagiarism and how to avoid it. It is no defence to say "but this is the way I've always done it and nobody has caught me before". If you have any doubts about plagiarism versus paraphrasing, you can check your university policy on academic integrity, check with student services, or speak to any of your lecturers.

Enjoy the opportunity to apply qualitative research methods to answer intriguing questions about human behaviour and human experience. Qualitative research is concerned with process and seeks meaning in how people make sense of their lives and the world. In contrast, quantitative research is empirical in nature and is based on the scientific method. Qualitative researchers typically undertake fieldwork to study human behaviour in different contexts or situations to derive meaning from repeated patterns in the data; quantitative research involves using experiments or surveys to provide data that can be quantified, tabulated, summarised, and statistically analysed. Qualitative research methods include inductive techniques such as searching for trends or patterns in the data while quantitative research takes a deductive and objective approach. Both qualitative and quantitative research approaches have their strengths and weaknesses, however, using them in combination can be extremely effective.

CHECKLIST

Qualitative research

☐ Does your report investigate phenomena by interpreting human experience or the language that shapes it?
☐ Have you considered including a reflexive statement/s, depending on the type of report you have chosen to write?
☐ Have you taken care to avoid plagiarism?

Title page

☐ Does your title page include the title, your name, and educational institution?
☐ Is your title between 12 words or less?
☐ Does your title summarise the main theme of your report?
☐ Have you included a manuscript page number and the running head on every page of your report, including the title page?
☐ Have you numbered all pages consecutively, starting with a "1" on the title page?

Abstract

☐ Does your abstract commence on a new page after the title page?
☐ Is your abstract headed with "Abstract", centred at the top of the page?
☐ Is your abstract written in one paragraph without indentation?
☐ Does your abstract summarise the main contents of the report?
☐ Is your abstract about 150 to 250 words long?

Introduction

☐ Have you repeated (and centred) the title at the top of the first page of the report proper?
☐ Does your introduction begin with a "big picture" statement about the issue or problem that needs to be studied?
☐ Does the introduction of your report examine the past research critically?
☐ Have you looked at both sides of the arguments for and against?
☐ Have you identified how your research will contribute to what is already known?
☐ Have you developed a rationale for your research?
☐ Have you ensured any use of personal pronouns do not suggest bias?
☐ If you have included a reflective statement, does it describe your initial interest in the research area and how this research interest drove your research aims?

Methodology

☐ Have you included a Methodology section that discusses the underpinning methodological principles?
☐ Is your Methodology section headed with "Methodology", centred and in boldface?

Method

☐ Does your Method section commence one double-line space below the last line of the introduction, not necessarily on a new page?
☐ Is your Method section headed with "Method", centred and in boldface?
☐ Does your Method section adequately describe who participated in the study and how the study was conducted?
☐ Have you ensured to remove data that identifies the participants?
☐ Have you personalised the participants with pseudonyms?

Procedure

☐ Have you mentioned that you gained ethics approval and informed consent?
☐ Have you described how you recruited participants, protected confidentiality, and ensured participants were not adversely affected?

☐ Have you described any materials used, including an interview schedule, if relevant?

Data analysis

☐ Have you described exactly what you did to obtain your findings, including analysis and coding?
☐ Have you provided enough detail to convince your readers your analysis is credible?

Analysis and interpretation

☐ Is your Analysis and Interpretation section headed with "Analysis and Interpretation", centred and in boldface?
☐ Have you commenced this section with a brief overview of the themes and findings that you are going to discuss?
☐ Have you described the themes or textual analysis in detail, providing themes as subheadings as appropriate?
☐ Have you included data extracts (quotations) from participants as evidence for what you wrote?
☐ Have you referred back to the quotes to justify their importance in regard to the analysis?
☐ Have you included a summary at the end of each theme?
☐ Have you used personal pronouns judiciously and avoided personal opinions?
☐ Have you offered analysis of your data extracts?
☐ Does your data support your conclusion?
☐ Are your data extracts formatted to distinguish them from the body text?
☐ Have you used reflexivity in this section, where appropriate, including reflecting on possible alternative interpretations of the data?

Conclusion

☐ Is your Conclusion section headed with "Conclusion", centred and in boldface?
☐ Does your conclusion summarise your findings and imply how it adds to the body of knowledge of psychology?
☐ Does it explain how your research relates to the "big picture" that you mentioned in the Introduction?

References

☐ Does your reference list appear on a separate page following the conclusion?
☐ Is your reference list headed with "References", centred at the top of the page?
☐ Have you cross-checked the in-text citations to match the reference list entries?
☐ Have you formatted all in-text citations according to the specific requirements outlined in Chapter 7?
☐ Have you formatted your reference list according to the specific requirements outlined in Chapter 8?

Appendix

☐ Have you included any appendices, such as an interview schedule, if required?
☐ Are your appendices ordered as they are mentioned in your report?

KEY TERMS

content analysis Analysing information for meaning by systematically interpreting and coding textual material, including written, spoken, or visual communication.
critical discourse analysis Critically examining ways in which language is used in texts and contexts.
describing phenomena Delving into the personal experiences of participants and exploring participants' thoughts, feelings, and behaviours to gain insight into a problem.
discursive psychology A form of discourse analysis that examines the psychological themes in language used in everyday talk, texts, and images.
interpretation Interpreting the data for meaning and searching for patterns or themes in the data.

interpretative phenomenological analysis (IPA) An approach to psychological qualitative research with an idiographic focus, which means that it aims to offer insights into how a particular person, in a given context, makes sense of a specific phenomenon.

quantifying phenomena Using objective measurements and statistical analysis of data collected via surveys or experiments.

reflexivity Refers to the researcher reflecting on one's actions and attending systematically to the effect he/she has on the context and interpretation of knowledge.

subjectivity A human quality whereby someone's experience or judgement is influenced by personal feelings and opinions.

thematic analysis A form of qualitative analysis that involves identifying patterns or themes in a dataset.

APPLIED ACTIVITY

Have a quick look through the two example qualitative research reports provided at the end of this chapter. You will notice that there are slight variations in the formatting of the two reports, and that they are focused on different research topics, although both use thematic analysis to analyse and interpret the data. Both reports are well-written and formatted and show how flexibility is allowed in qualitative research reports.

Qualitative Research Report 1 outlines the theoretical framework for the research and demonstrates how a reflexive statement may be included in the Methodology section of a qualitative research report. It also demonstrates how to include an interview schedule as an appendix in a qualitative research report. Qualitative Research Report 1 further showcases the use of italics to make the quotes stand out from the main text in the report.

In contrast, Qualitative Research Report 2 provides a reflexive statement in the Method section to highlight the authors' personal involvement with the partner organisation and to acknowledge how this personal experience may influence interpretation of the data. It also demonstrates the use of block paragraph indents of data extracts and the use of single-line spacing to help the quoted material to stand out in the report. Qualitative Research Report 2 also includes an independent reflexive statement in the Analysis and Interpretation section of the report.

ACKNOWLEDGMENTS

Image: © Peter Muller / Getty Images
Image: © AmmentorpDK / Getty Images
Thank you to Dr Judith Gullifer for her leading and valued contribution to this chapter.

Qualitative research report 1

The Effects of the Neoliberal Agenda on

Participation and Learning in Higher Education

Melissa Collins

Charles Sturt University

Abstract

The knowledge economy has promoted debate over an individual's rights to higher education (HE) driven by the competing discourses of social inclusion, social justice, and widening participation. Terms such as participate and engage will mean different things to different students in light of socio-cultural contexts and the idea of an overarching definition is absurd in a social constructionist paradigm. It is therefore essential to explore in depth the dominant assumptions of taken-for-granted knowledge, and deconstruct this knowledge within the social contexts that the individual is constrained within HE. The purpose of this study was to explore in detail the impact of the neoliberal agenda on students' accounts of participation and learning in HE. Using a moderate social constructionist paradigm to recognise the impact of societal views on an individual's discursive practices within a HE setting, 3 students were invited to participate in semi-structured interviews. The completed transcripts were analysed using thematic analysis (TA) to identify topics and connections between concepts. Following the social constructionist TA, two main superordinate themes were developed: (1) A shift in power; and (2) the independent learner. Throughout the process it was evident the neoliberal agenda has vastly transformed the landscape of HE and how student identities are constructed by the shifting balance of power and advocacy of the independent learner.

The Effects of the Neoliberal Agenda on Participation and Learning in Higher Education

The rise of the knowledge economy has created discussions over an individual's rights to higher education (HE) driven by the competing discourses of social inclusion, social justice, and widening participation (WP; Burke, 2013a). Policies of WP, such as the Bradley review of Australian higher education (2008), are founded on neoliberal discourses of the knowledge economy which advocate that opportunities be made available to all capable people, regardless of background, to access HE. Although it is important to acknowledge the WP policies have empowered individuals, it is equally important to acknowledge that as a social justice project, WP policies fail to attend to social, historical, and contextual issues that create educational inequalities (Southgate & Bennett, 2014).

Ascendancy of this neoliberal discourse has, in turn, manifested a shift in the way institutions of HE have justified and defined their existence (Olssen & Peters, 2005). Policymakers now assert that HE must primarily serve an economic function in promoting individual employability, and a social purpose, by shaping an inclusive society where individual social mobility and social justice are visible (Leathwood, 2006). This has seen a gradual shift away from the liberal notion of HE as a public good to benefit society, towards a more neoliberal, masculine, and westernised concept of the independent learner whose intellectual capital will aid national economic growth (Morley & Lugg, 2009).

The concept of the masculinised independent learner was born from the rise of industrial capitalism where dependency was seen as shameful, and the proletariat that sought to obtain rank in society had to distinguish themselves from the naïve

(Leathwood, 2006). Work was constructed as a means of exhibiting independence and therefore white-working-class males were regarded as independent (Leathwood, 2006). This construct of the independent learner is one that is promoted in the discourses of educational policy, as a self-managing and self-reliant learner, and is seen as an essential construct in promoting life-long learning in order to gain skills for future employability (Leathwood, 2006).

Williams (2011) further argued that the promotion of employability through HE is socially constructing students into "consumers" of HE, reducing them to merely products of their own human capital. The term "consumer" is used here metaphorically to describe the attitude adopted by some students, defined by their expectations and sense of entitlement to HE; this socio-cultural construction is seen to advocate feelings of empowerment and behaviours of students exerting rights. Through this construction, learning and knowledge is not seen as an intellectually stimulating journey but a commodity that can be measured in contact hours, assessment methods, and degree certificates (Williams, 2012).

All of these factors have drastic consequences for educators as they impact the ability to critically and intellectually engage in meaningful conversations with students. It is essential for educators to encourage meaningful participation, and to work collaboratively with students in order to contest the destructive aspects of neoliberal educational reform and to make HE an intellectual journey once again (Lambert & Parker, 2006). The purpose of this study was to explore in detail the impact of the neoliberal agenda on students' accounts of participation and learning in HE.

Terms such as participate and engage will mean different things to different students in light of socio-cultural contexts and the idea of an overarching definition is absurd in a

social constructionist paradigm. It is therefore essential to explore in depth the dominant assumptions of taken-for-granted knowledge, and deconstruct this knowledge within the social contexts that the individual is constrained within HE. Given the lack of theoretical framework in this area, a rich and in-depth qualitative approach was considered important to focus on knowledge construction and contribute to theory generation (Saba, 2000).

Methodology

The focus of the current research was on the exploration on how neoliberal agenda has shaped how students experience participation and learning within HE. A moderate social constructionist paradigm was regarded as the most appropriate tool as I sought to recognise the impact of societal views on an individual's discursive practices within a HE setting.

Social constructionism postulates that the construction of knowledge and meaning is through the social participation of individuals within a social context. It concedes that multiple constructions of meaning can be created, influenced by cultural, historical, and linguistic factors of those engaged in the social interaction (Crotty, 1998). Social constructionism invites researchers to be critical of conventional knowledge which is based on an objective representation of the world (Burr, 2006) and therefore is best explored through qualitative tools such as interviews.

Although various qualitative data analytic approaches were considered, thematic analysis (TA) was chosen to identify patterns that are socially produced. TA conducted within a moderate social constructionist framework does not aim to focus on individual interpretations or motives, it instead aims to theorise the socio-cultural contexts of the individual narratives presented (Burr, 2015). TA is an idyllic method to deal with rich data gathered in interviews as it is exploratory and can be used to structure the data. It is

also not linked to any epistemological position and can draw on a social constructionist and Foucauldian derived principles (Braun & Clarke, 2006).

In using the social constructionism paradigm, the researcher and participant have dialectical transference where any knowledge, no matter how unbiased in the process of reporting, will still reflect the cognitive structure of its epistemic subject, and therefore, knowledge will always be constructed subjectively by the researcher (Lawson, 1993). Therefore, it is imperative that researchers reflect on how they may influence this interpretive process.

I believe it is not possible to write in an entirely impartial and dispassionate way, I have generally adopted the position of the advocate of the intellectual journey. As a student-researcher and participant I was unprepared for the journey I experienced during the research project. The uncomfortable experience cut to the core of my social identity as a student by dismantling my belief and value systems upon the realisation, to my dismay, that I was the epitome of the student-consumer. Following this insight, the narratives explored took on new meanings as I began to honour and locate my story within the dialogue, this unequivocally transformed how I interpreted and analysed the data.

Method

Participants

Three psychology students volunteered to take part in a semi-structured interview, while attending residential school at university. The 3 participants consisted of May, who is a 35-year-old Caucasian female, Saffron, who is a 48-year-old Caucasian female, and David, who is a 51-year-old Caucasian male.

Informed consent was obtained by briefing participants on the nature of the study, and advising that they had the right to withdraw from the study at any time.

The 3 participants sighted and signed a consent form agreeing to participate in the study. Participants were assured confidentiality, anonymity, and privacy prior to conducting the research by the use of pseudonyms and changing potentially identifiable information about the participants or others discussed.

Procedure

The research project was approved by the university ethics committee. The 3 participants acted as co-researchers and played roles of the interviewer and interviewee at least once in the research project, with the third member acting as an observer to provide feedback to the interviewer and interviewee. The initial interview schedule was created collaboratively with all students enrolled in the class, and later narrowed down by the co-researchers into 18 suitable questions pertaining to HE participation and learning (see the Appendix).

All interviews were semi-structured. The interview questions provided structure but also allowed flexibility to respond to issues deemed important for participants. The interviews were conducted in an empty lecture hall and typically ran for 13 to 25 min, and were recorded via audiotape. The interviews were transcribed by the interviewer and notation was taken of any prolonged silences, laughter, and sounds such as “um” “ah” in order to give depth and insight to the setting of the interview. Pseudonyms were prescribed for all interviewees (Draper, 2004).

Data Analysis

The completed transcripts were analysed using TA in order to identify topics and connections between concepts. The recursive process of TA was governed by the guidelines provided by Braun and Clarke (2006). This research utilised an inductive “bottom-up” approach in that the data was read and re-read for any themes relating to

how students have constructed themselves within the neoliberal era of education.

Following transcription of the data, I read the interview transcripts at least four times and changed the sequence to avoid "primed" idea generation. In familiarising myself with the data I logged any thoughts and ideas about the interesting features of the data. In doing this, I identified two main themes: Power and independence. This required going through each separate theme and identifying what made them distinct from the other themes and whether they completely captured important aspects of the participants' discourse.

Analysis and Interpretation

It is important to note here the purpose of the study was to explore in detail the impact of the neoliberal agenda on students' accounts of participation and learning in HE. Following the social constructionist TA, two main superordinate themes were developed: (a) A shift in power; and (b) the independent learner.

Theme 1: A Shift in Power

A sense of empowerment in how students participate in HE was a consistent theme throughout all the interviews. This empowerment manifested itself in the form of student demands. One particularly salient example can be seen when May talks about how everyday life impacts on her ability to participate:

> *I have to do a test in another subject, but the problem is that they will only give us one week to do the test. I work full time so this is really hard for me cos I can only do it on weekends. I emailed them and said I couldn't do it and to change the date*.
>
> (May, p. 4)

May demonstrates a sense of entitlement in requesting the lecturer alter a due

date — no longer is the lecturer seen as the only authority holder. This sense of power and entitlement has likely been constructed through the socio-cultural view of the student-as-consumer (SAC). It is evident that as the SAC mentality becomes entrenched, students are expected to take on the personification of the customer, "the customer is always right", which has fostered a culture of compliance within HE (Molesworth, Scullion, & Nixon, 2011).

This SAC approach has facilitated a perceived shift in power from the provider (university) to the consumer (student) as students now have control over expectations and quality of service through evaluative surveys (Bunce, Baird, & Jones, 2016). One example is the expectation for lecturers to be increasingly accessible to students, as expressed by David:

> *I expect to be able to have my questions answered while doing my study. It comes down to the availability of our lecturers.*
>
> (David, p. 5)

This example shows how getting help is presented as a right; the account is solely self-centred, the student's time is viewed as precious, and the student demands service now when it is convenient for him, without regard for others. The idea that students hold lecturers and institutions to account for the services they provide may be seen as a positive development in student power. However, it could also be interpreted as suggesting that students know better than lecturers about what is needed in learning and teaching, thereby shifting the balance of power solely to the student.

The pressure to produce happy consumers has the potential to impact pedagogy, as it may drive lecturers to provide a service rather than advocate education as an intellectual pursuit, as illustrated in this comment:

> *I don't gain much from online lectures, they seem to be just a repetition of the readings.*
>
> (May, p. 3)

This sentiment of the lectures being least fulfilling in creating an intellectual journey was expressed by all of the participants and shows how treating education like a service can erode the quality of education provided.

The act of telling my personal experience stimulated an exploration of my identity as a student; it dawned on me that I was a SAC. The guilt of having unconsciously held power over my lecturers in forms of demands underpinned and drove the exploration of this theme.

Theme 2: The Independent Learner

The second prominent theme evident in all the interviews is the concept of the independent learner. The independent learner is thought of as an independent, autonomous individual (Leathwood, 2006), and this construct is expressed by Saffron:

> *I feel that we're supposed to be finding things out and learning as we go but, yeah I only tend to ask questions if I really can't do something.*
>
> (Saffron, p. 3)

In the above example, Saffron articulates the concept of independence as "thinking for yourself" and "taking initiative to do things yourself" with the perception that you should only ask for help when you absolutely have to.

Similar sentiments were expressed by May when asked about her preferred method of learning:

> *I prefer to study alone, um, as I find that I can use lots of different resources to help me understand the readings and the material at a greater depth.*
>
> (May, p. 3)

We see a similar sense of independence as having to take responsibility for oneself and being proactive in finding the answers. These students emphasise the importance of being an independent learner embodying the masculinised and westernised concept of participation and learning.

Leathwood (2006) argued that there are dangers in students constructing themselves as independent learners as it can be repressive rather than emancipatory. This is especially the case if the independent learner has been constructed not as a female, but as a white, middle-classed male who is unfettered by self-doubt. In this sense, students who construct themselves as independent learners may avoid or hesitate in asking for support, as its connotations of need and dependency has been pathologised by society (Burke, 2013b):

> *I really hesitate in contacting lecturers by email, and then contacting them again when they don't reply, I'm sure they're so busy…..I feel bad when I do.*
>
> (May, p. 4)

In this particular example, being seen as following-up lecturers has attracted negative connotation of feeling "bad". May's account suggests that the promoted westernised and masculinised concept of the independent learner may inadvertently make students feel that they need support or help or make them feel needy and inferior.

This concept of the independent learner presents difficulties for women and other non-traditional students that may be excluded from this normative model. As a woman myself, I have often felt the constraints to avoid displaying socially constructed, undesirable traits such as neediness when approaching lecturers. In turn, this has influenced how I have deconstructed and explored the notion of the independent learner while overlooking other themes.

Conclusion

Throughout the process it was evident that the neoliberal agenda has vastly transformed the landscape of HE. Student identities are constructed by the shifting balance of power and advocacy of the independent learner. Interestingly, although students found it acceptable to make demands of lecturers in certain circumstances using consumer discourse to assert their rights, in other circumstances there was a fear of exposing a weakness in themselves or a sense of dependency on the lecturer. It may be that the continual promotion of the westernised concept of independence and denunciation of dependence reinforce the construct of the independent learner where students are reluctant to seek help and where disadvantaged and non-traditional students suffer the most.

There are a number of limitations to bear in mind when interpreting the current findings. Firstly, by using TA there is a loss of continuity in the individual accounts where contradictions and discrepancies that may be revealing are left unaccounted for. Secondly, I have chosen to focus on areas of data and discourse which resonated with my personal experience as a student. In so doing, other themes which may have been equally important were overlooked. Despite these limitations, the study revealed interesting aspects of HE and emphasised the potential for future research to

transform the context of HE. We should aim to create an inclusive learning space that is co-created by students, lecturers, and WP policies and explore the socio-cultural underpinnings that promote positive and socially inclusive change in how students experience HE.

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Appendix

Interview Schedule

1. Can you describe your journey into your current study in Higher Education?
2. What does participation in university study mean to you?
3. Can you describe some positive experiences of participation in learning at university?
4. Can you describe some negative experiences of participation in learning at university?
5. Are there ways in which you feel participation in learning has changed?
6. How do you prefer to participate in learning at university?
7. What learning and teaching tools and styles have you found most beneficial to your participation?
8. What learning and teaching tools and styles have you found to be least helpful for your learning?
9. In what ways does being a distance education student impact your participation in learning at university?
10. What differences do you perceive there to be between on campus and distance education in relation to participation?
11. How does the isolation of being a distance student impact your participation in learning?
12. How do you experience participation in learning in relation to technology?
13. Can you describe some positive things about participation in learning in relation to technology?
14. Can you describe some negative things about participation in learning in relation to technology?

15 Are there ways interacting online has an impact on your participation that might be different from face to face?

16. What aspects of your life outside of university impact your participation in learning?

17. Are there ways that age (being a mature age student for example) has an impact on your participation in learning?

18. How do you think participation in learning at university should look?

19. Could you describe ways you think participation could be improved?

Qualitative research report 2

Programs that Support and Hinder Faith Development

Tanya Bond

University of Southern Queensland

Abstract

A number of focus groups were carried out amongst church members to evaluate programs run by Church X and to examine the impact those programs had on an individual's faith. The 40 participants answered questions about programs and then described their own experiences about how these programs contributed to their faith. Five specific types of programs were identified by participants as activities that impacted both positively and negatively on faith development: cell groups, women's ministry, bible studies, youth programs, and men's ministries. We suggest these types of programs enable individuals to form deeper social connections with like-minded others, provide opportunities for teaching and learning, as well as a chance for members to develop spiritual gifts such as leadership, all of which contribute to an individual's growing faith.

Programs that Support and Hinder Faith Development

Around 1.8 million Australians currently attend church each week with the number of people who regularly attend services on the decline (McCrindle, 2016). There are many reasons that people report for not attending church including irrelevance, disagreement and disbelief with church views, outdated services, concerns with ministers, and busyness (McCrindle, 2016). However, when examining church "health", church attendance is not the only indicator to be considered. Indeed, for religious organisations, a far more important concern is whether people are deepening their relationship with God. More specifically, are churches making a difference in the lives of people who attend programs and other activities? Thus, this research aims to evaluate the programs offered by a local church and to examine the impact these programs have on members' faith. Therefore, the research question is: What programs contribute to, or hinder, a person's faith?

While the impact that religion has on individuals is well researched, the more practical elements of church life is often neglected in the literature. Therefore, this research will evaluate the programs run by a local church and examine the impacts these programs have on an individual's faith. When there is limited literature to examine a topic, qualitative enquiry is an appropriate first step to assist in understanding (Creswell, 2009). Therefore, it is important that the methodology allows for a deeper understanding of the topic. Braun and Clarke (2013) suggested that focus groups allow for data collection from multiple perspectives at the same time. Focus groups allow for guided discussion on specific topics and are similar to social interactions, in that different points of view can be discussed and debated by participants (Braun & Clarke, 2013).

Method

Participants and Recruitment

Ethics approval was received from the host university before any research commenced. Initially, the researchers spoke to the church congregation to recruit participants, and those who were interested, received participant information sheets from church staff. The research was also advertised through the Church X Facebook page. Individuals emailed the researchers to register their interest. Participants were then contacted about times and dates that they were available and placed in a focus group. In line with recommendations by Braun and Clarke (2013), each group was limited to a maximum of 6 participants. Participation in the research was voluntary and no incentives were offered for participation. Focus groups were run until data saturation was reached (Morgan, 1997).

It is important to note at this point, that I am a member of Church X. I was interested in conducting this research because of my own experiences of programs that have been impactful in developing my faith but also programs that have hindered my faith development. During the focus group process, I was able to draw on my own experiences to understand what the participants were discussing. Furthermore, I acknowledge that insider research can influence the quality of the data produced as well as the interpretation of the data.

Forty church members (23 females) took part in this research. The participants ranged in age from 22 to 79 years ($M = 37.4$, $SD = 7.65$). Participants had a range of professions including retail workers, health and education workers, self-employed, homemakers, and retired persons. To ensure participant anonymity, pseudonyms were used (Braun & Clarke, 2013).

Procedure

Eight focus groups, with between 4 and 6 participants in each group, took place in Church X's hall. Participants received information about the research and consent forms from church staff. They then either emailed or phoned the researchers. The information sheet outlined the research, described the focus group procedure, confidentiality, withdrawal of data, and data security. Each participant brought their signed consent form to their allocated focus group. Each focus group was recorded for qualitative data analysis.

Each focus group commenced with a general overview of the study and some group rules (i.e., turn off your mobile phone) before commencing with general questions about church and faith designed to be a discussion stimulus. The researchers then asked more specific questions about the types of programs the participant attends at Church X. Additionally, participants were asked to describe the programs that contributed to and/ or hindered their faith. Finally, participants were asked whether they had any other thoughts or views they wanted to share, and were thanked for their time.

Data Analysis and Coding

The focus group data was then analysed using thematic analysis (TA), which was informed by Braun and Clarke (2006). TA allows for theoretical flexibility, and allows for the reporting of patterns in the data and interpretation of the data (Braun & Clarke, 2006). As such, TA is appropriate for this research which was largely exploratory and sought to identify specific categories within the data.

Six steps need to be completed for a thematic analysis. Firstly, it is important to become familiar with the data (Braun & Clarke, 2012) and this was done by

reading transcripts of the data several times to become familiar with the focus group responses. The second step involved the generation of codes which aided in the interpretation of the data (Braun & Clarke, 2012). The questions centred on each participant's experiences of programs run by Church X, but also allowed for additional interpretation of the data. When coding the responses, a main theme was firstly identified and then coded for facilitator (faith contributor) or inhibitor (faith hindrance). For instance, the response "I do not to participate in a cell group as I have had little success in the past with connecting with others and experienced poor teaching from the leaders" would be coded as *Cell groups* (main theme) and then identified as an inhibitor.

The third step involved searching for main themes (the programs identified) in the data (Braun & Clarke, 2012). These main themes informed the overall story of programs and faith. It should be noted that two independent coders examined each transcript in order to address interrater reliability.

The fourth step involved reviewing the coded responses against each main theme (Braun & Clarke, 2012). At this stage it became clear that many people identified similar programs and that these programs were seen both positively and negatively. Additionally, a number of programs were mentioned once or lacked detailed descriptions by the focus group participants. Only programs mentioned multiple times were included in the findings. Each category (i.e., program mentioned) was named as a way to inform the overall story (Braun & Clarke, 2012). Finally, a scholarly report of the analysis was produced, as shown in the following section (Braun & Clarke, 2012).

Analysis and Interpretation

The church members were specifically asked about their experiences with the programs run by Church X. The analysis identified five types of programs that contributed to faith development, and these are outlined in Table 6.1. This table provides a summary of the main themes (programs frequently mentioned by participants). Each main theme will be described below in more detail with descriptions of the facilitators and inhibitors. Furthermore, the discussion will be accompanied by relevant quotes to aid in clarity of understanding.

Table 1

Summary of Main Findings

Main theme	Key descriptors
Cell groups	(Facilitator) Social connection, in-depth teaching
	(Inhibitor) Leader knowledge, difficulty with attendance, no care or concern
Women's ministry	(Facilitator) Social connection, informal mentoring, leadership opportunities
	(Inhibitor) Cliquey
Bible study	(Facilitator) Teaching, increased knowledge
	(Inhibitor) Basic, leader knowledge
Youth programs	(Facilitator) Good for children, family involvement
	(Inhibitor) Does not suit everyone
Men's ministry	(Facilitator) Social connection
	No inhibitors mentioned

Cell Groups

This main theme described programs run by a specific leader in either their homes or at the church where group members came together regularly each week to discuss a specific topic (e.g., prayer). Cell groups were seen as facilitating faith when the participants discussed how cell group members encouraged and supported each other in their faith development. Typically, this was done by providing a safe place for people to honestly and authentically seek God:

> I like coming to cell groups because people miss me when I am not there and phone me to check how I am going.
> (Kathy)

> Attending cell group each week means that I get to ask questions with people who are also struggling with the same spiritual issues.
> (Daniel)

Cell groups were also seen as inhibiting faith when there was no opportunity for deeper learning or teaching, or for genuine social connection with like-minded others. Unfortunately, this lack of connection meant that individuals felt devalued by their church community and potentially, felt no one cared about them either personally or spiritually. Additionally, the leaders themselves were seen as a "stumbling block" with participants questioning whether some leaders were knowledgeable enough to lead teaching sessions:

> I hate sitting in cell group and no one speaks or responds to the leader's questions or sharing. I'm wasting my time and learning nothing. I get really frustrated when I ask questions and no one has no clue what I am talking about.
> (Jason)

> I have tried connecting with others but no one phones me back or seems interested in me as a person.
> (Narelle)

Women's Ministry

This main theme described different programs run specifically for women and includes seminars (e.g., spiritual women), regular meet-ups (e.g., monthly women's breakfasts), and spiritual retreats. These ministries provide an opportunity for women to discuss a broad range of issues (i.e., spiritual issues and parenting issues), a place for mentoring between generations, and time away from parenting and caring responsibilities where women could focus on their own needs. This ministry also provided opportunities for women to develop leadership skills:

> Each month I look forward to attending women's breakfasts. I can have time out from my family but also recharge my energy.
> (Sonia)

However, these events were also seen as inhibiting faith as many participants felt uncomfortable attending by themselves, and had experienced rejection from other attendees. This meant that these women no longer attended women's events:

> I went to the spiritual retreat recently and no one spoke to me. When I tried to sit with a group, I was told the chairs were all reserved for friends! What about me? I'm their spiritual sister, I will never go back.
> (Michelle)

Bible Study

This main theme incorporated programs which focused on bible learning and teaching. This instruction could be done formally through study books, with participants completing weekly homework which was discussed in a group setting. These study groups are regularly held and facilitated faith by examining the meaning behind different biblical passages and then members participating in in-depth discussion:

> Going to study group regularly means that I get a deeper understanding that goes beyond the familiar bible stories I grew up with.
> (Phillip)

The only downside of these groups seems to be the types of studies used, with some studies considered basic and not challenging.

Youth Programs

This main theme includes all programs run for primary and high school aged children. This could be activities run throughout the week (e.g., Wednesday Kids Club) or during the church service. Many participants had either attended these programs as a child or had children or grandchildren who were attending these programs. Youth programs were seen as nonthreatening and children could bring non-church friends along. For parents, the enthusiasm their child showed for these programs provided an encouragement for their own faith:

> I love when my kids hear something about God that excites them. It rubs off on me and I feel enthusiastic about developing my own God relationship.
> (Krissy)

However, the youth programs run did not suit every child and this could have negative impact on the family and the child's faith:

> My child went to youth but didn't fit in. May is more serious and quieter than the other kids…. This left her devastated and no longer wanting to attend church which was hard on our family. She still doesn't come to church and it breaks my heart.
> (Jenny)

Men's Ministry

This main theme is similar to *women's ministry*, however, these programs are run specifically for men. Programs include Valliant Man, Significance for Men, and

men's retreats. These activities contributed to faith as opportunities often arose during the program when men could have profound and meaningful conversations about life and spiritual matters with other male attendees. Additionally, organic mentoring often arose from these activities:

> When I am with other men I don't feel I have to change to be someone I am not. I don't have to speak about feelings or stuff, I can just hang out and talk about life.
> (Geoff)

> I just go along and listen. When someone talks about what's going on with their kids or work, it helps me realise I am not the only one who has some issues with their life.
> (Nathan)

Interestingly, no participant discussed inhibitors with regards to men's ministry.

Reflexive statement

It is well-known that qualitative research can be influenced by the interpretations of the data by the researcher, and no more is this obvious than when insider research is undertaken. Reflexive research acknowledges that researchers both acknowledge and reflect on their role in the research (Braun & Clarke, 2013). While I was able to understand the types of programs run by Church X, at no time did I give examples of my own experiences in these programs to the participants. I thought it was important to maintain the boundaries of researcher and church member. Furthermore, given the importance of faith in my own life, I thought the research was important to undertake to understand more deeply the impact that programs can have on a person's faith.

Summary and Conclusion

This study aimed to evaluate the programs offered by Church X and to examine the impact these programs have on faith. The focus groups allowed participants to

discuss with other church members the various programs, and the researchers identified five types of programs that impacted on a church member's faith development: cell groups, women's ministry, bible study, youth programs, and men's ministry. Participants identified both positive and negative impacts that these programs had on their faith. This should not be surprising given that each person is at a different stage of their faith journey and has different needs and requirements in developing their faith. This research has allowed for a better understanding of the programs being run at Church X and their impact on members' faith. More specifically, Church X plays an active role in providing opportunities for their members to develop their faith by running different types of programs. However, for some participants, those same programs contained barriers that could hinder a person in the growth of their faith.

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CHAPTER 7

In-text citations

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

- **7.1** cite the work of others in your writing
- **7.2** correctly reference within the text
- **7.3** use quotations in your writing
- **7.4** understand the different citation exceptions
- **7.5** acknowledge secondary sources in your writing.

7.1 Acknowledging other works

LEARNING OBJECTIVE 7.1 Cite the work of others in your writing.

In this chapter you will learn the correct procedures for **in-text citations**, in which you acknowledge the sources of information you have drawn on.

In-text citations are important for two main reasons. First, they acknowledge the original source of information you have included in your work. When you use someone else's findings or ideas in your work, you must cite the author. Failure to do so is considered **plagiarism** (see Chapter 1).

Second, in-text citations provide the information needed for the reader to locate the original source, if required. They also help the reader to locate the source in the alphabetical reference list at the end of your essay or report.

You must cite the source both when you quote directly from another author's work, and when you **paraphrase** their findings, ideas, or beliefs. Source information from **refereed scientific journals** whenever possible; they are more reputable than non-refereed sources such as newspapers and popular magazines. Be cautious about using information obtained via the internet, especially if it comes from a non-refereed source.

All the sources that you have cited in your text should be included in the reference list at the end of your essay or report.

7.2 General forms for in-text citations

LEARNING OBJECTIVE 7.2 Correctly reference within the text.

The APA manual stipulates the author–date method of citation. In this method you indicate in the text the surname of the author (or authors) and the year of publication (the date). There are two main approaches to citations: They can be placed either at the end of the sentence or within the sentence, immediately following your reference to them.

When the citation is placed at the end of the sentence, the author's surname and the year of publication appear in parentheses separated by a comma. For example:

> The study found overwhelming evidence of this condition (Senior, 2010).

When the citation is integrated into the sentence, and the author's surname is part of the narrative, only the year appears in parentheses. For example:

> Senior (2010) found overwhelming evidence of this condition.

Alternatively, when the citation is integrated into the sentence, but the author's surname is not part of the narrative, the parentheses contain both the author's surname and the year of publication. For example:

> Past research (Senior, 2010) has found overwhelming evidence of this condition.

Within this general framework there are a variety of more specific citation procedures. Examples of the most common are given in the following sections.

Single author

Work by a single author is cited according to the general form already given. For example:

> Smith (2008) compared activists and nonactivists.
>
> In a recent study of smokers and nonsmokers (Jones, 2009) …
>
> In 2009, Crook's study of elite athletes showed that …

Two authors

The method for citing two authors is practically the same as that used for one author. Where the authors' surnames are integrated into the narrative, the word "and" is used between them. Where the authors' surnames are included in parentheses, the ampersand (&) symbol (located above the number 7 on your computer keyboard) is used instead. For example:

> Dean and Morris (2009) examined whether introspective reports predict performance.
>
> Research has examined the relationship between introspective reports and performance (Dean & Morris, 2009).

The surnames of both authors must be included every time the work is cited. Cite multiple authors in the order in which they are listed in the published work. Do not include author initials or suffixes (such as Jr.) in the in-text citation.

Include the year of publication in the first in-text citation. You omit the year from subsequent in-text citations as long as the study cannot be confused with other studies cited. However, you *must* include the year of publication in all subsequent citations that enclose both the author and the year in parentheses. For example:

> Carmody and Ryan (2010) found evidence to support the developmental theory. Carmody and Ryan also found that … The study showed that the children developed confidence with experience (Carmody & Ryan, 2010).

When the first citation comprises both the author and year enclosed in parentheses, you *must* include the year in all subsequent citations within the paragraph. For example:

> Early detection was shown to be vital to success of the treatment program (McLeod & Olliver, 2009). McLeod and Olliver (2009) found …

Three, four, or five authors

Sometimes works have more than two authors. In the case of three, four or five authors, cite all the authors' surnames in the first instance. Note the comma before the "and" (or &). For example:

> Fogarty, Machin, and Burton (2008) examined …

or

> Previous research (Fogarty, Machin, & Burton, 2008) examined …

On second and subsequent citings, abbreviate the reference by using the first author's surname only, followed by the words "et al." (an abbreviation for the Latin *et alia*, meaning "and others") and the year of publication if it is the first citation of the work within a paragraph. A full stop must be included in "al.".

Within a paragraph, when the authors are introduced as part of the narrative, you cite only the year of publication in parentheses. You can then omit the year from subsequent in-text citations as long as the study cannot be confused with other studies cited. For example:

> Fogarty, Machin, and Burton (2008) found that learning approaches predicted academic success. Fogarty et al. also found that …

However, you *must* include the year of publication in all subsequent citations that enclose the authors and the year in parentheses. For example:

> Fogarty, Machin, and Burton (2008) found that learning approaches predicted academic success. Fogarty et al. also found that … The study further showed that the personality trait Conscientiousness positively predicted use of a strategic learning approach (Fogarty et al., 2008).

However, in instances where two references with the same year shorten to the same first author, cite the surnames of the first authors and of as many of the subsequent authors as necessary to distinguish the two references, followed by a comma and "et al.". For example, Fogarty, Machin, and Burton (2008) and Fogarty, Albion, and Hoare (2008) both shorten to Fogarty et al. (2008). Therefore, subsequent citations for these two works would be Fogarty, Machin, et al. (2008) and Fogarty, Albion, et al. (2008), respectively.

Six or more authors

Where there are six or more authors, use the first author's surname followed by the abbreviation "et al." and the year in the first and subsequent citations. However, in the reference list, provide all authors' names for works up to and including seven authors. For eight or more authors, include in the reference list the first six authors' names, followed by three ellipsis points (…), and include the final author's name. Therefore, in the reference list, you include the first six authors, omit all subsequent authors (replacing their author details with an ellipsis) but include the name of the last author.

For example, a work by Bidgood, Burton, Fox, Coorey, Fielder, Ryan, Lawrence, and Gibson (2008) would appear as follows in the first and subsequent text citations:

> Bidgood et al. (2008) examined the intrinsic motivation of the touch football players. Bidgood et al. showed that all players were highly motivated to succeed.

In the reference list (see Chapter 8), this reference would be formatted as follows:

> Bidgood, K., Burton, B. B., Fox, L. J., Coorey, M., Fielder, M., Ryan, K., … Gibson, A. J. (2008). *This example shows how to format citations of eight or more authors*. Brisbane, Australia: Wiley.

Again, if two references shorten to the same form, cite the minimum number of author surnames necessary to distinguish the two references, followed by a comma and "et al.". For example, consider the following two references:

Fahey, Shine, Robinson, Bryant, French, and Collins (2004)

Fahey, Shine, Bryant, French, Hillocks, and Quinn (2004)

In the text you would cite them, respectively, as:

Fahey, Shine, Robinson, et al. (2004) and Fahey, Shine, Bryant, et al. (2004)

Same work in one paragraph

You will sometimes cite the same work several times in one paragraph. Include the year of publication in the first citation in each paragraph. Do not include the year of publication in the second and subsequent citations within the paragraph, as long as it is clear that they come from the same work. *Exception*: You *must* include the year of publication in all subsequent citations that enclose both the author/s and the year in parentheses. You would also need to include the year in all subsequent citations within a paragraph *if* the first citation comprises both the author/s and the year in parentheses. For example:

Mander, West, and Storlie (2007) examined the determinants of job satisfaction. Mander et al. found that opportunity for advancement had a direct impact on satisfaction levels. Their results also suggested that perceptions of equity and obtainable rewards (e.g., pay and promotions) affected job satisfaction (Mander et al., 2007).

Similar results have been found in studies investigating the role of personality in job satisfaction (Hom & Griffeth, 2009). Hom and Griffeth (2009) showed that positive affect and work motivation positively predict job satisfaction, reinforcing the views of Mander et al. (2007) …

Authors with the same surname

Authors' initials are not usually included in a citation. The exception is when you cite two or more authors with the same surname in your text. In these cases, you need to include their initials to distinguish between authors. You should include the initials even if the year of publication differs between authors. For example:

A. Richardson (1994) and J. T. E. Richardson (1991) found …

P. C. Collins and Buckle (1965) and T. A. Collins and Thompson (1973) studied …

Multiple works by the same author

Sometimes you will refer within one citation to several works by the same author. In these cases, you do not need to repeat the author's surname for each work; simply note the author's surname in the first

instance, then list in chronological order the year of publication for each work cited. If a work is in press, place it last. Note this applies only to works cited within the same parentheses. For example:

> Previous studies of individual differences in the vividness of visual imagery (Marks, 2000, 2001, 2006, in press) found …

Same author and same year of publication

You may want to cite several works by the same author (or authors) that are published in the same year. In these cases, add lowercase letters of the alphabet to the years of publication so that you can distinguish between them. You add the suffix to each work according to the alphabetical order of the first word of the titles (excluding the articles, "A" or "The"). For example, two 1977 works by Richardson—"The meaning and measurement of memory imagery" and "Verbaliser–visualiser: A cognitive style dimension"—would be cited as Richardson (1977a) and Richardson (1977b) respectively.

Additional examples are now shown.

> Results indicate … (Lee, 2009a). The main finding … (Lee, 2009b).
>
> Several studies (Coorey & Bidgood, 2005, in press-a, in press-b) …
>
> Past research (Coleborn, 2007a, 2007b) …

Two or more works within the same parentheses

You will sometimes need to include works by several authors in the same parentheses to acknowledge similar findings or statements by a number of researchers. In these cases, list the works in alphabetical order according to the author's surname. If a work has two or more authors, use the surname of the first author to decide the alphabetical order. Use a semicolon to separate the works cited. As a general rule, order multiple citations within the same parentheses in the same order in which they appear in the alphabetical reference list. For example:

> Past research (Cullin, 2000; Lamont-Mills, 2009; Skuja & Thompson, 2007) examined …
>
> Several studies (Ferguson, 2002; Goh & Coates, 2004; Macquarie & Heritage, 2010) …
>
> Research evidence (Bullock & Tanzer, 2005; Johnson, 2003, 2004; Ropolo, 2006a, 2006b) …

No publication date

You may need to cite a work that has no publication date. In this case, cite the author's surname, followed by the letters "n.d.", meaning "no date". Note the full stop after each letter. For example:

> Fallon (n.d.) found …
>
> The main finding … (Mavor, n.d.).

You may also refer to an article that has been accepted for publication but is yet to be printed. In this case, use the words "in press" instead of citing a year of publication. For example:

Boden (in press) found …

Research evidence … (Marx, in press).

Online media

You may sometimes need to cite works obtained through online sources, including online databases, online journal articles, and specific documents from the internet. Be careful about the sources of works that you obtain online. Wherever possible, they should be **refereed** publications or scholarly journals that have a reputable academic standing, rather than information that has not been subject to peer review.

To cite works obtained online, simply use the author–date method as previously described. See Chapter 8 for directions on how to include online sources in a reference list.

Personal communications

You may wish to cite personal communications such as telephone calls, face-to-face interviews or conversations, letters, memos, or emails. In these cases, give the initials and surname of the person you communicated with, the words "personal communication", and the full date of the communication—month, day, and year—in that order. In the first example, the first author is Mary-Lou Coorey, hence her initials are shortened to "M.-L." to indicate the hyphenated first name.

M.-L. Coorey (personal communication, April 18, 2008) …

… (A. J. Gibson, personal communication, October 17, 2009).

Since these sources cannot be accessed by others, you should not include them in the reference list. You would cite them in the text only. You should exercise your judgement to ensure personal communications, including online networks, have scholarly relevance. Some forms of personal communication are recoverable, and these should be referenced as archival materials.

Latin abbreviations

Latin abbreviations are sometimes used in citations to save space. However, only certain abbreviations are acceptable in APA format, and they may be included only in parentheses. The full English term must be used in the main text. Acceptable Latin abbreviations and their meanings are now shown.

, etc.	, and so forth
cf.	compare
e.g.,	for example
viz.,	namely
i.e.,	that is
vs.	versus, against

Here is an example of how to use an abbreviation in the text of your essay or report.

> Several studies have examined the role of working memory. For example, Baddeley (2004) found …

or

> Several studies (e.g., Baddeley, 2004) have examined the role of working memory …

Another example is below.

> Authors use Latin abbreviations to conserve words or to express an idea more explicitly (i.e., authors use them to express an idea more clearly or precisely).

An exception to the general rule of only using Latin abbreviations in parentheses is the "et al." abbreviation. This Latin abbreviation, meaning "and others", may be used either in the main part of the sentence or in parentheses. For example:

> Swannell, Dickinson, and Stevens (2002) examined how children learn social behaviours through modelling. Swannell et al. noted that …
>
> This earlier finding supports previous research (Swannell et al., 2002) …

7.3 Quotations

LEARNING OBJECTIVE 7.3 Use quotations in your writing.

Quotations require special treatment when using the author–date method. A **quotation** involves reproducing material in your text that has been taken, word for word, from another author's work (or some other communication). You need to provide the specific page number of the work you have quoted, as well as the author and year of publication. The page number is listed at the end of the citation. Page numbers are not included in citations that paraphrase another author's work, rather than quoting directly from it.

Use quotations only when they illuminate the point you are making, when they cannot easily be paraphrased, or when they make a significant supplementary statement on the topic. Rather than quoting directly from another author, it is often better to put this information in your own words, and acknowledge the source of the idea by providing an in-text citation.

Quotations of fewer than 40 words

Short quotations may be integrated into your text, enclosed in double quotation marks. When the material you quote itself contains text inside quotation marks, use single quotation marks within the double quotes. For example:

> Tehan (2003) argued that "short-term memory decreases with age" (p. 112). It has been noted in the literature that "manager role enactment is the 'holy grail' of communication" (Fox, 2010, p. 74).

Quotations of more than 40 words

A long quotation (more than 40 words) should be set off as a separate block of text, starting on a new line. The author and year of publication should be included in an introductory sentence in your main text. The quoted block of text is indented 1.27 cm (1 tab) from the left margin. Thus, the block quotation should start in the same position as a new paragraph. Where a new paragraph is needed within the block quotation, indent the first line of each new paragraph a further five spaces. No quotation marks are needed, unless the text itself includes quoted material. The page number of the quotation is included at the end, after the full stop, in parentheses. Note that there is no full stop after the closing parenthesis. In the example that follows, the introductory sentence does not indicate the start of a new paragraph.

Richardson (1969) described memory imagery as:

> The common and relatively familiar imagery of everyday life. It may accompany the recall of events from the past, the ongoing thought processes of the present or the anticipatory actions and events of the future. Though it may occur as a "spontaneous accompaniment" to much everyday thought of this kind, it is far more amenable to voluntary control than all other forms of imagery. (p. 43)

In the following example, the introductory sentence indicates the start of a new paragraph.

Scholars need to learn how not to plagiarise the work of others and to uphold the standards of academic integrity:

> When you attempt to copy another author's work and pass it off as your own, you commit plagiarism. It is considered an extremely serious offence in the academic world. Authors work extremely hard on their own research

in order to produce fresh and original ideas. Simply copying the results of that research and pretending they are your own work is the academic equivalent of theft because you have stolen someone else's intellectual property. This is dishonest and fraudulent.

You are expected to come up with original ideas of your own; this is the key to achieving success in an academic discipline …

Lifting pages of text directly from someone else's work without attribution is the worst form of plagiarism. Paraphrasing someone else's thoughts, dressing them up in slightly different words and pretending they are your own work, is a more subtle form … You demonstrate your understanding of the material when you discuss what it means in your own words, rather than repeating what someone else has written. (Burton, 2007, pp. 12–13)

Quotations from online documents and websites

For quotations from online documents or websites, use the author–date citation method already described. Include a page or paragraph number if available. If paragraph numbers are visible, use them in place of page numbers. Use the abbreviation "para". For example:

> The Electronic Frontier Foundation (EFF, 2009, para. 12) is "the leading civil liberties organization working to protect rights in the digital world. Founded in 1990, EFF actively encourages and challenges industry and government to support free expression, privacy, and openness in the information society."

If the online document includes headings, and neither page nor paragraph numbers are visible, cite the heading and the paragraph number. For example:

> Ornstein (2006) argued that "in many religions and belief systems, such as Buddhism, meditation leads to a deepened understanding of reality" (Discussion section, para. 2).

In cases where no page or paragraph numbers are visible, shorten the heading (about four words) in quotation marks and include the paragraph number. For example:

> "Knowing how to extinguish behaviour is important in everyday life, particularly for parents" (Williams & Johnston, 2007, "Extinguishing Learned Behaviours," para. 3).

In this example, the full heading was "Extinguishing Learned Behaviours of Children: Key Lessons Learned.")

7.4 Exceptions within the author–date method of citation

LEARNING OBJECTIVE 7.4 Understand the different citation exceptions.

The author–date citation method requires that you include both the author surname and the year of publication the first time a work is cited in a paragraph. Note the following exceptions within the author–date method of citation. Some of these exceptions have been covered previously in the chapter but are repeated here for additional emphasis.

Use of "et al."

Works with three to five authors should have all surnames included in the first citation. Subsequent citations should include only the surname of the first author followed by "et al.". Note that the year of publication is included in the first citation of each new paragraph. However, you do not need to include the year of publication in the second and subsequent citations within a paragraph if this work cannot be confused with other studies. *Exception*: you *must* include the year of publication in all subsequent citations that enclose both the author/s and the year in parentheses. You would also need to include the year in all subsequent citations within a paragraph *if* the first citation comprises both the author/s and the year in parentheses.

Sometimes separate works with three or more authors have a first author with the same surname and are published in the same year. In these cases, you should include as many surnames as you need to distinguish the references, and then add the "et al." abbreviation. For example:

> White, Ashton, and Brown (2007) and White, Sheehan, and Ashton (2007) both discussed these hypotheses. However, White, Ashton, et al. merely reviewed the literature, whereas White, Sheehan, et al. tested the hypotheses through in-depth quantitative research.

Works with six or more authors would normally be abbreviated to the first author's surname plus "et al." from the first citation. Thus the following works could both be abbreviated to Broadfoot et al. (2008):

> Broadfoot, McLeod, Fahey, Simpson, Donpon, and Hansen (2008)
>
> Broadfoot, McLeod, Robinson, Fox, Renouf, and Crook (2008)

Again, to distinguish between these sources you would abbreviate them as follows:

Broadfoot, McLeod, Fahey, et al. (2008) …

Broadfoot, McLeod, Robinson, et al. (2008) …

No individual author

There are two common exceptions to the author–date citation rule: where an organisation, rather than one or more individuals, is listed as the author; and where no author at all is listed.

Organisational authors

Where an organisation rather than an individual is listed as the author, write the full name of the organisation the first time you cite the work. You can abbreviate the name in subsequent citations if the organisation is well known. If not, continue to use the full name. An example of an organisational author readily identified by its abbreviation is now shown.

The Australian Psychological Society (APS) is the peak body for professional psychologists in Australia. The APS (2002) provides full details of the 37th annual conference to be held at the Royal Pines Resort on the Gold Coast.

An example of an organisational author that is not well known, and would therefore need to be cited in full in every instance, is now shown.

Case Western Reserve University (2012) …

No author

Where a work is not attributed to any author, cite the first few words of the text (normally the title) and the year. Use double quotation marks when citing the title of an article or chapter; italicise the title of a book, brochure, magazine, or report.

For example:

Recent articles on smoking ("Smoking Bans," 2017) …

The handbook *Tutor Training* (2018) …

The author of a work may alternatively be listed as "Anonymous". For example:

One article (Anonymous, 2015) …

Year and author integrated in text

In rare cases, both the year and the author are integrated into the text of an essay or report. In these cases, you do not need to repeat the author and year in parentheses. For example:

In 2009, Izadikhah developed …

… as proposed by Hong in 2005.

Distinguishing between major and minor citations

Sometimes your citation will include what you consider a major work, and others that are of lesser importance. In these cases, you can distinguish between them by using a phrase such as "see also" before the minor sources, which then follow in alphabetical order. For example:

> (Shephard, 2005; see also Sheehan & Neisser, 2009; Wallace, 2008)
>
> (Pellegrino & Mumaw, 2001; see also Lansman, 2004, 2005; Zhang & Daeaves, 2004)

Citing from online documents and websites

Sometimes you will cite work from online sources, such as websites or online pages and/or reports. You should aim to include the same elements, in the same order (i.e., where possible use the author–date method), as you would for citing a fixed-media source. In the reference list, you would add as much retrieval information as possible to locate the source (see Chapter 8). Use "(n.d.)" for the year of publication if there is no date available for the document.

Errors in material being quoted

You may sometimes notice a spelling or punctuation error in the material you are quoting. In such a case, you must quote the original without correcting the error. However, you can insert the word *sic*, italicised and bracketed (i.e., [*sic*]), immediately after the error to advise the reader that the error is in the original. For example:

> Bennett (2016) stated that "day-to-day events in the workplace may effect [*sic*] an employee's level of job satisfaction" (p. 18).

For the sake of brevity and clarity you may choose to omit unnecessary material from within a passage you are quoting. In this case, use three ellipsis points (…) to indicate the omission. Where you omit material between sentences, you should follow the full stop with three ellipsis points.

For example:

> "Gender also did not interact with relationship type…. The mean difference scores for attitudes of friends and strangers showed no correlation with gender" (Pocock & Palmer, 2017, p. 55).

7.5 Citing a secondary source

LEARNING OBJECTIVE 7.5 Acknowledge secondary sources in your writing.

Always try to obtain the original source of material and cite primary sources in your work. However, sometimes—when you have read about it in another work but cannot access the original source—you must rely on a secondary source.

The citation of secondary sources requires a variant of the author–date method. In **secondary citations**, you must acknowledge both the primary and secondary source of the information. That is, you must cite both the original work you have drawn on, and the immediate source you obtained it from. To do this,

include the primary source first, then insert the words "as cited in" before the secondary source. The primary source has the earlier year of publication and is listed prior to the words "as cited in". For example:

> … (Ray, Griffin, & Downey, 2007, as cited in Riedel, Lichstein, & Dwyer, 2010). In Gustafsson's (1984) study (as cited in Carroll, 1998) it was shown

However, include only the secondary source—the one you have actually seen—in the reference list. Using this example, you would include only "Carroll (1998)".

Here is another example of a secondary citation:

> People often try to remember things for a particular purpose (Gruneberg, Morris, & Sykes, 2002, as cited in Burton, Westen, & Kowalski, 2015).

The secondary source (not the original work) is then included in the reference list, as follows:

> Burton, L., Westen, D., & Kowalski, R. (2015). *Psychology: Australian and New Zealand edition* (3rd ed.). Brisbane, Australia: John Wiley & Sons.

CHECKLIST

- ☐ Whether you paraphrase another author's ideas, findings or beliefs or quote directly from another author's work, you must acknowledge the original source of an idea with an in-text citation.
- ☐ Use the author–date method of citation in the text of your essay or report, and note the exceptions to this general rule.
- ☐ Always insert the year after the author surname (or surnames) the first time the work is cited in a paragraph. The year does not need to be included in the second and subsequent citations (per paragraph), unless it could be confused with a different work. *Exception*: you *must* include the year of publication in all subsequent citations that enclose both the author/s and the year in parentheses. You would also need to include the year in all subsequent citations within a paragraph *if* the first citation comprises both the author/s and the year in parentheses.
- ☐ When a citation is placed at the end of the sentence, or if the author's surname is not part of the narrative, place both the author surname and year in parentheses separated by a comma.
- ☐ When a citation is integrated into a sentence, and the author's surname is part of the narrative, include only the year in parentheses.
- ☐ For a two-author work, always cite both surnames in the text. Use "and" to separate the two surnames in the text; use the ampersand (&) between the surnames if the citation is placed in parentheses.
- ☐ For three, four, or five authors, include all the author surnames the first time the citation occurs. In subsequent citations use the first author's surname followed by "et al.".
- ☐ For six or more authors, cite only the first surname followed by "et al." for the first and subsequent citations.
- ☐ Include initials in a citation only if you are citing two or more authors with the same surname.
- ☐ Several studies by the same author should list the years of publication in chronological order in parentheses.
- ☐ Use lowercase letters of the alphabet to distinguish between several works by the same author with the same year of publication.
- ☐ List two or more works within the same parentheses in alphabetical order, using semicolons to separate the works cited.
- ☐ Be careful about the sources of works that you obtain online. Make sure they have a reputable academic standing (see Chapter 1) and use author–date citation to identify the source.
- ☐ Personal communications may be cited in text but should not generally be listed in the reference list.
- ☐ Direct quotations must follow the wording, spelling, and punctuation of the original source even if incorrect. Errors in the original may be indicated by the insertion of "[*sic*]".
- ☐ When citing a direct quotation from a source, be sure to give the author surnames, the year of publication, and the page number (or paragraph number for quotations from online documents).
- ☐ Quotations of fewer than 40 words should be integrated into your text, enclosed in double quotation marks.
- ☐ Quotations of more than 40 words should be in a block format, indented five to seven spaces (1 tab) from the left margin (like a regular paragraph indent).
- ☐ Note the special cases for use of the Latin abbreviation "et al.".
- ☐ Spell out the name of organisational authors in the first citation. Thereafter, if the organisation is easily identified by its abbreviation, use the abbreviation followed by the year of publication.
- ☐ If a work has no author, cite in the text the first few words of the reference list entry (usually the title) and the year.
- ☐ Note how to integrate the year and author in the text and how to distinguish between major and minor citations.
- ☐ If you cite from an online document or website, try to use the author–date method, the same as you would for citing a fixed-media source.

☐ When making in-text citations of secondary sources, remember to cite both the original work you have drawn on and the immediate source you obtained it from. Include only the secondary source (the one you actually read) in your reference list.

KEY TERMS

in-text citations In-text acknowledgements of the sources you have used, citing the author and the year of publication.
paraphrase Summarise someone else's ideas or opinions in your own words.
plagiarism Using someone else's ideas or published words in your own work without acknowledging their source.
quotation Material reproduced word for word from another author's work or some other communication.
refereed Reviewed rigorously by experts in the field.
refereed scientific journals Periodicals containing scholarly research articles that undergo a rigorous review process by experts in the field before publication.
secondary citations References to the work of one author as cited in another author's work.

APPLIED ACTIVITIES

The following exercises allow you to practise citing works by a single author, or by two or more authors, several studies by the same author, and two or more works in the same parentheses. Mark corrections directly on the page and compare your responses with the correct answers in Appendix 1.

1 (a) Other studies examined the treatment of insomnia through mass media (Oosterhuis and Klip, Journal of Social Science and Medicine, 2007).

(b) Jackson (2004) used biofeedback to treat asthma. Jackson (2004) described a number of weaknesses in the study.

(c) Mimeault and Morin (1999) demonstrated the effectiveness of self-help treatments. Mimeault et al. showed that cognitive-behaviour therapies help participants to improve their quality of life.

(d) Burge, Klein, and Dearnaley (2008) used pharmacological methods to treat anxiety in children, and Hauff and Burt (2004) used it to reduce depression. In addition to pharmacological methods, Burge et al. (2008) used cognitive-behavioural therapy to help children cope with everyday events.

(e) Barkley, King, Gill, and Marshall (2003) investigated the effects of violence in children's television. Barkley, King, Gill, and Marshall used an experimental

design with randomisation to demonstrate the effects of watching *Terminator* among Australian high school children.

(f) Roberts, Kyllonen, Burton, Stankov, Fogarty, Kleitman, Garlick, and Pallier (2000) found no gender effects in the data.

(g) Patients' sleep patterns before the treatment were disturbed and fragmented (Fahey and Robinson, 2006).

(h) Future research should incorporate a randomised double-blind drug (Waschbusch, Terry, & Toleman, 2005: Waschbusch & Toleman, 2002: Waschbusch & Toleman, 2009).

(i) Contemporary approaches (Pretty, 2009; Bramston, 2003) focus on the role of cognitive processes in observational learning.

(j) Expectations about alcohol's effects can sometimes have as much impact on behaviour as the drug's direct effects on the nervous system (Daniec, Collins, & Fox, 2007). Daniec, Collins, & Fox showed that such effects are shaped by culture and experience.

2 Choose the correct citation:

(a) (Doolan & Oliver, 2007; McDonald, 2002; Tan, 2008)
(b) (Zhou, 2003, 2005, 2006)
(c) (Doolan & Oliver, 2007; Tan, 2008; McDonald, 2002)
(d) b and c
(e) a and b

3 Choose the correct citation:

(a) Previous research (Rawsthorne, & Elliott, 2008; Prince, 2004; Bates, 2006)
(b) Previous research (Batorowicz, 2004, 2001; Lynn, Lock, Myers, & Payne, 2007; Tanner & Byrne, 2006)
(c) Previous research (Chess & Thomas, 2001, 2002; Katz & Hass, 2008; Olson, Vernon, Harris, & Jang, 2003)
(d) b and c

4 Correct the following in-text quotation:

Rottenberg (2003) argues that "The main question is whether the beneficial effect of sleep deprivation is related to increased wakefulness or to the sleep suppression." (page 9).

5 Correct the following in-text quotation:

> Westen, Burton, & Kowalski (2006) distinguished between the different types of mood disorders. Westen, Burton, and Kowalski (2006) defined dysthymic disorder as: "A chronic low-level depression lasting more than two years, with intervals of normal moods that never last more than a few weeks or months. The effects of dysthymic disorder on functioning may be more subtle, as when people who are chronically depressed choose professions that underutilise their talents because of a lack of confidence, self-esteem or motivation. Dysthymic disorder is a chronic disorder characterised by continuous depression punctuated by bouts of major depression." (page 624).

ACKNOWLEDGMENTS

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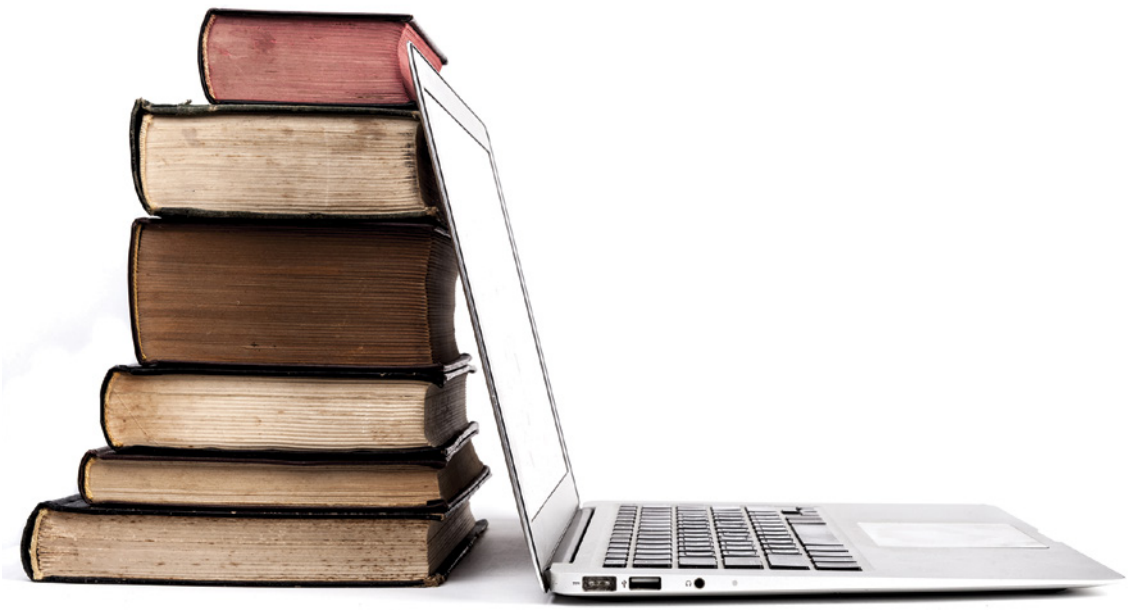
CHAPTER 8

Reference list

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

- **8.1** use APA style to create a reference list
- **8.2** apply the hanging indent to reference entries
- **8.3** correctly format the different types of reference entries
- **8.4** correctly order the reference list.



8.1 Creating a reference list

LEARNING OBJECTIVE 8.1 Use APA style to create a reference list.

In this chapter you will learn the correct procedures for assembling a reference list in APA style. The APA format is the standard style throughout the world in the psychology discipline and must be followed when writing your essays and research reports.

A **reference list** provides full publication details of the information sources you have cited in your essay or report. The reference list has two main purposes: first, to identify and acknowledge the source of the information; second, to enable the reader to retrieve the original author's work, if required. To fulfil these purposes, it is important that the reference list contains the full publication details of each work in the correct APA format.

The reference list contains *only* those works you have cited in your text. Personal communications are not included in the reference list. Where you have consulted a secondary source but cited both primary and secondary sources in the text, only the work you actually consulted (i.e., the secondary source) should be included in the reference list. See Chapter 7 for more information on secondary citations and personal communications. References should be listed in alphabetical order, according to the first author surname.

In contrast, a **bibliography** lists all works *consulted* in writing your essay or report, not just those you cited in the text. APA publications require reference lists, not bibliographies.

In-text citations should match the reference list entry that appears at the end of the essay or research report. You should always obtain the publishing details from the original publication itself, not from the reference list of another secondary source. This will ensure that your reference entry is correct and up-to-date. It also indicates that you have seen and used the original work, rather than simply copying the reference from another work.

8.2 APA reference style

LEARNING OBJECTIVE 8.2 Apply the hanging indent to reference entries.

The style of referencing recommended by the APA is used when preparing material for publication as well as in theses, dissertations, and student essays and research reports.

The key features of APA referencing style are as follows.

- *Page layout:* Start the reference list on a new page at the end of your essay or research report. Centre the word "References" at the top of the page; do not underline, italicise, or bold this heading. All the reference entries should be double-line spaced, with no extra line spaces between each entry.
- *Indents:* A hanging indent is used. That is, the first line of the reference entry is set flush left and the subsequent lines are indented five to seven spaces, or one tab space.
- *Titles:* The title of the publication in each reference is italicised.

8.3 General form of reference entries

LEARNING OBJECTIVE 8.3 Correctly format the different types of reference entries.

This section outlines the elements required in each reference in your list and the way they must be presented. In your essay or report you may cite information from a variety of sources—for example, periodicals (journals or newspapers), books, magazines, and the internet. Full publication details for each must be included in the reference list to ensure that a reader has sufficient information to identify and retrieve each source.

You may cite an article that has been accepted for publication but not yet printed. In this case, add "in press" in parentheses instead of a year of publication. Do not give a year of publication until a work has actually been published.

Also, if there is no date for the work, write "n.d." in parentheses instead.

Although there are small variations in the way the various information sources are listed, all contain essentially the same elements—author, year of publication, title of work, title of publication, and publishing details.

The exact requirements for the main types of information sources are set out in the rest of this chapter. A description of the requirements is given, followed by specific examples of how each item should be referenced.

Periodicals

Periodicals are sources of information that are published on a regular basis, such as journals, newspapers, magazines, and conference proceedings.

Journals

Journals are one of the most commonly cited sources in academic reference lists. The general form of reference for a journal article contains the following elements, in this order: author, year of publication, article title, journal title in full, volume number, and page numbers—that is:

Author, A. A., & Second Author, B. B. (Year of publication). Title of article: All parts included. *Journal Title, Volume Number*, page or pages.

Each of these elements must be presented in a particular way, as follows:

- The surnames of the authors are always entered first, followed by their initials. Include a full stop and single space between the initials of each author. Where there are two or more authors, use the ampersand (&), located above the number 7 on your computer keyboard, before the last author, rather than the word *and*. Include a comma before the ampersand.
- The year of publication is always in parentheses, followed by a full stop.
- In the article title, an initial capital is used only for the first word and any proper nouns, as well as the first word following a colon. The titles of articles are not italicised. The article title ends with a full stop.
- In the journal title, the first letter of every main word is capitalised. The volume number is written in numerals only, with no *vol.*, and follows immediately after the title. Both the title and the volume number are followed by a comma and one space. The journal title and volume number are italicised. The issue or part number is not normally included unless each issue of the journal has page numbering that starts from "1" (see example that follows).
- The page numbers include the first and last page of the article. They should be written in numerals and in full, with no *pp*. and no spaces either side of the hyphen or en dash. For example, write 92–97, not 92–7.

Examples of references to journals are now provided.

One author:

Bremner, J. D. (2005). Effects of traumatic stress on brain structure and function: Relevance to early responses to trauma. *Journal of Trauma Dissociation, 6*, 51–68.

Two authors:

Duckitt, J., & Fisher, K. (2003). The impact of social threat on worldview and ideological attitudes. *Political Psychology, 24*, 199–222.

Up to and including seven authors (include all authors' names):

Bleidorn, W., Arslan, R. C., Denissen, J. J. A., Rentfrow, P. J., Gebauer, J. E., Potter, J., & Gosling, S. D. (2016). Age and gender differences in self-esteem: A cross-cultural window. *Journal of Personality and Social Psychology*, *111*(3), 396–410.

Eight or more authors (include first six authors' names, use three ellipsis points, and include final author's name):

Sanfilipo, M., Lafargue, T., Rusinek, H., Arena, L., Loneragan, C., Lautin, A., … Wolkin, A. (2000). Volumetric measure of the frontal and temporal lobe regions in schizophrenia: Relationship to negative symptoms. *Archives of General Psychiatry*, *57*, 471–480.

As mentioned earlier, if each issue of a journal has page numbering that begins from "1", then include the issue number within the volume number. Note that there is no space between the volume number and the issue number that is enclosed in parentheses. In addition, the issue number is presented in normal typeface (i.e., no italics). For example:

Fergusson, D. M., Horwood, L. J., & Swain-Campbell, N. R. (2003). Cannabis dependence and psychotic symptoms in young people. *Psychological Medicine, 33*(1), 15–21.

Newspapers and magazines

The general form for a newspaper article includes the author's name, the date of publication (year, month, and day), the title of the article, the name of the newspaper, and the page number(s). Precede page numbers with "p." or "pp." If an article appears on discontinuous pages, give all page numbers, separating the numbers with a comma (e.g., pp. 1, 4, 7–8). The format is now shown.

Orreal, J. (2009, September 20). City bursts into full bloom. *The Sunday Mail*, p. 23.

Sometimes newspaper articles do not identify the author. In these cases, list by the title of the article, and include all other elements as now shown.

Numbers add up for accounting students. (2009, September 23). *The Chronicle*, p. 24.

The format for magazines is very similar. The exception is in the page number element. For newspapers, you include "p." (for one page) or "pp." (for more than one) followed by the page number(s)

written numerically. For magazines, you include only the numbers, written numerically and in full. For example:

Fandray, D. (2008, May). The new thinking in performance appraisals. *Workforce*, 36–40.

Laurie, V. (2007, April 28–29). Tough love. *The Australian Magazine*, 20–23.

Morieson, J. (2006, May). Communicator makes his mark. *Superfunds, 247*, 32–33.

Proceedings of meetings and symposia

Proceedings of meetings and symposia can be published in periodical or book form. Published proceedings should capitalise the name of the symposium. Include the name of the city and state (if American) or city and country (if outside of America). The example that follows shows the proceedings published in book form:

Burton, L. J., & Dowling, D. G. (2005). In search of the key factors that influence student success at university. In A. Brew & C. Asmar (Eds.), *Higher education in a changing world. Research and development in higher education: Vol. 28. Proceedings of the 2005 Higher Education Research and Development Society of Australasia annual conference* (pp. 68–78). Sydney, Australia: University of Sydney.

The example that follows shows the proceedings published in periodical form:

Fahey, K. M. (2008). How to reference published conference proceedings. *Proceedings of the 12th International Conference of Documentation, 103*, 321–329.

Regularly published proceedings are often referenced in a similar way to periodicals. However, if only an abstract of the article appears in the proceedings, then insert "[Abstract]" after the article title but before the full stop.

See the section on electronic media for examples of how to format articles, including journal and newspaper articles, retrieved online.

Non-periodicals

Non-periodicals refer to information sources published on a one-off basis, such as books, book chapters, encyclopedias, dictionaries, manuals, and reports.

Books

The general form of reference for a book includes the author or editors, the year of publication, the title of the book, and the publishing details—that is:

Author, A. A. (Year of publication). *Title of book*. City, State: Name of Publisher.

Each of these elements must be presented in a particular way, as follows.

- The author's surname is printed first, followed by his or her initials.
- The year of publication is placed in parentheses, followed by a full stop.
- The title of the book is italicised. Use a capital letter for only the first word of the title and any proper nouns. If the title of a book includes a colon, capitalise the first letter of the word following the colon.
- The "well-known city rule" is no longer in effect, so the state (or country, for non-US publishers) is included for all publishers. However, there is one exception to this rule: If the work is published by a university whose name includes the name of the state, don't repeat the state in the publisher location.
- The publishing details should include the place of publication, followed by a colon, then the name of the publisher. For a United States publisher, list the abbreviated state after the city; for non-US publishers, list the country after the city. The one exception to this rule is that if a university whose name includes the state also published the work, don't repeat the state in the publisher location; in this instance only include the city for place of publication. To keep the reference short, omit words such as *Co.*, *Publishers*, or *Inc*. from the name of the publisher. Consult the *APA Publication Manual* for further information on US state abbreviations. Some of the more commonly used state abbreviations are listed in Table 8.1.

TABLE 8.1 Abbreviations for US states

State	Abbreviation	State	Abbreviation
California	CA	New York	NY
Colorado	CO	North Carolina	NC
Connecticut	CT	Ohio	OH
Florida	FL	Pennsylvania	PA
Georgia	GA	South Carolina	SC
Hawaii	HI	Tennessee	TN
Illinois	IL	Texas	TX
Massachusetts	MA	Utah	UT
Michigan	MI	Virginia	VA
Minnesota	MN	Washington	WA
New Jersey	NJ	Wisconsin	WI

Examples are shown below.

Burton, L. J., Lawrence, J., Dashwood, A., & Brown, A. (2013). *Producing pedagogy.* Newcastle upon Tyne, England: Cambridge.

Huron, D. (2006). *Sweet anticipation: Music and the psychology of expectation*. Cambridge, MA: The MIT Press.

Pelling, N. J., & Burton, L. J. (Eds.). (2017). *The elements of applied psychological practice in Australia: Preparing for the national psychology exam*. New York, NY: Routledge.

Another example of an edited book reference follows below.

McInerney, D., & Van Etten, S. (Eds.). (2005). *Research on sociocultural influences on motivation and learning. Focus on curriculum: Vol. 5*. Greenwich, CT: Information Age.

Some books have several editions. In these cases, cite the edition number, as now shown.

Burton, L., Westen, D., & Kowalski, R. (2009). *Psychology: Australian and New Zealand edition* (2nd ed.). Brisbane, Australia: Wiley.

For a revised edition of a book, include "(Rev. ed.)" after the book title.

Chapter in an edited book

The general form for a chapter in an edited book includes the author of the chapter, the year of publication, the chapter title, the book editors, the book title, the chapter page numbers, and the publishing details (include state for US publishers; include country for non-US publishers).

Author, A. A., & Author, B. B. (Year of publication). Title of chapter. In A. Editor, B. Editor, & C. Editor (Eds.), *Book title* (pp. xxx–xxx). City, State: Name of Publisher.

Note the following details.

- Unlike the format for the author's name, the editors' initials come before their surnames. "Ed." or "Eds." is included in parentheses after the editors' surnames and before the book title, with a comma separating "(Eds.)" from the book title.
- The page numbers of the chapter are listed in parentheses after the name of the book. The abbreviation "pp." is used before the numerals.

An example is now shown.

Ladson-Billings, G. (2003). New directions in multicultural education: Complexities, boundaries, and critical race theory. In J. A. Banks & C. A. McGee Banks (Eds.), *Handbook of research on multicultural educations* (pp. 50–65). Madison, WI: Jossey-Bass.

Another example is now shown.

Mann, S. (2003). Coping and social support. In A. M. Nezu, C. M. Nezu, & P. A. Geller (Eds.), *Handbook of psychology: Health Psychology: Vol. 9* (pp. 51–74). Hoboken, NJ: John Wiley.

Encyclopedia or dictionary

Encyclopedias and dictionaries are referenced in a similar way to books. For example:

Reber, A. S., & Reber, E. (Eds.). (2001). *The Penguin dictionary of psychology* (3rd ed.). London, England: Penguin.

Technical and research reports

Technical and research reports are treated the same as books. Note in the example below, no state is included because the University of Washington published this work and the name of the university also includes the state. For example:

Handcock, M. S., & Gile, K. (2007). *Modeling social networks with sampled data* (Technical Report No. 523). Seattle: University of Washington.

Unpublished meetings and symposia

In your essay or report you may use information obtained from an unpublished source. In this case, include the same elements as used in referencing published documents, in the same style, and include whatever extra information is required to enable readers to locate a copy if they want to. For example:

Dorman, M. (2000, August). *Helping university students to learn APA referencing through use of interactive COOL TOOLS*. Paper session presented at the international conference of Technology in Teaching and Learning in Higher Education, Samos Island, Greece.

Worth, E. (2000, October). *The criterion related validity of the Revised Vividness of Visual Imagery Questionnaire*. Poster session presented at the 35th Annual Conference of the Australian Psychological Society, Canberra, Australia.

For symposium contributions, give the year and month of the symposium or meeting in the reference. For example:

Burton, L. J. (2008, July). Examining the relationships between personality, learning approaches, and academic achievement: A longitudinal study. In O. Wilhelm (Chair), *Recent developments in selection and guidance in higher education*. Symposium conducted at the 29th International Congress of Psychology, Berlin, Germany.

Doctoral and master's dissertations and theses

For these sources, include the name of the author, the year the dissertation or thesis was submitted, the name of the work, then the words "Unpublished doctoral [or] master's dissertation [or] thesis" in parentheses. Also include the name and location of the university through which it was completed. For example:

McIlveen, P. F. (2008). *An investigation into my career chapter: A dialogical autobiography* (Unpublished doctoral dissertation). Queensland University of Technology, Brisbane, Australia.

Electronic media

Electronic media have rapidly become an important source of information; they have gone from being the exception to the rule (APA Publication Manual, 2009). APA style has been adapted to cover the variety of new electronic and internet sources. In most cases, the same basic elements as used in a reference to a fixed-media source (i.e., a printed document) are included. The main difference for internet sources is that you must include at the end of the reference a retrieval statement noting from where you obtained the information. Wherever possible, however, you should reference specific documents rather than general web pages. Providing a **digital object identifier (DOI)** is the preferred way to identify an online source. A DOI is a unique alpha-numeric string assigned by a registration agency—the International DOI Foundation—to identify electronic content and provide a persistent link to its location on the internet. All DOI numbers begin with a 10 and contain a prefix (a unique set of four or more digits assigned to an organisation) and a suffix (assigned by the publisher) separated by a slash.

The APA Publication Manual recommends that you include DOIs for both print and electronic sources, if available. If you include the DOI, no further retrieval information is needed to identify the electronic content. It is now recommended that you provide the internet address, the secure *https* or *http* and the simple URL prefix *doi.org* with the DOI. An example is shown below:

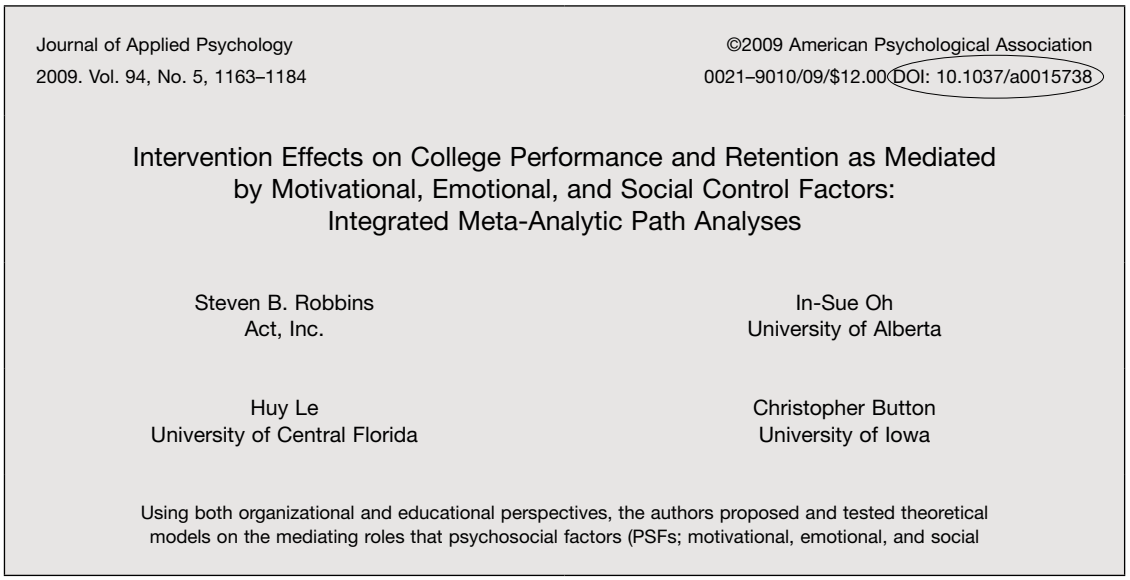
Beccaria, L., Rogers, C., Burton, L., & Beccaria, G. (2016). The role of health-promoting behaviours for on-campus and distance students. *Distance Education, 37*(1), 22–40. http://dx.doi.org/10.1080/01587919.2016.1158768

The APS recommends a consistent approach to referencing DOIs throughout your reference list. Currently, all formats below are accepted in manuscripts or papers:

- https://doi.org/10.9876/xyz000002506
- http://dx.doi.org/10.9876/xzy000002506
- doi:10.9876/xyz000002506

The DOI can be located on the first page of the electronic journal article (see Figure 8.1), near the copyright notice or it can be found on the database landing page for the article. In Figure 8.1, the DOI appears on the second line of text in the header, aligned with the right margin.

FIGURE 8.1 Location of digital object identifier (DOI) in journal article



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Intervention Effects on College Performance and Retention as Mediated by Motivational, Emotional, and Social Control Factors: Integrated Meta-Analytic Path Analyses

Steven B. Robbins
Act, Inc.

In-Sue Oh
University of Alberta

Huy Le
University of Central Florida

Christopher Button
University of Iowa

Using both organizational and educational perspectives, the authors proposed and tested theoretical models on the mediating roles that psychosocial factors (PSFs; motivational, emotional, and social

If, however, no DOI has been assigned to the electronic content, provide the home page URL of the journal or the book or report publisher. You do not need to include a retrieval date. You should also make sure that the web address (i.e., the uniform resource locator, or URL) is typed correctly so that readers can easily find a copy of the reference material on the internet. Typically, you should provide the following components of a URL:

http://www.psychology.org.au/community/topics/addictions/

In this example, the first part of the URL is the *protocol* (the hypertext transfer protocol, or http) followed by a colon and two forward slashes (e.g., http://). This is followed by the *host name* (to identify the server on which the files reside), which is often the home page of the organisation (e.g., http://www.psychology.org.au), and finally the *path to the document* is listed.

When you use an aggregated, searchable database to obtain electronic information, you do not have to include database information as the journals included in a database may change over time. Simply format the electronic content based on whether or not the DOI is available.

The requirements for the most common electronic media sources are now outlined.

Online journals

Articles in an electronic journal are essentially referenced in the same way as a published journal, with the addition of either the DOI or the retrieval statement at the end. An example of a journal article with a DOI follows.

Robbins, S. B., Oh, I. S., Le, H., & Button, C. (2009). Intervention effects on college performance and retention as mediated by motivational, emotional, and social control factors: Integrated meta-analytic path analyses. *Journal of Applied Psychology, 94*(5), 1163–1184. doi:10.1037/a0015738

An example of a journal article without a DOI (when a DOI is not available) follows.

Midford, R. (2005). Australia and alcohol: Living down the legend. *Addiction, 100*(7), 891–896. Retrieved from http://www.addictionjournal.org/

Online newspapers and magazines

An example of an online newspaper article follows.

Foreshew, J. (2009, September). Tool aids distance students. *Australian IT*. Retrieved from http://australianit.news.com.au/

An example of an online magazine article follows.

Mumford, G. (2009, September). Preventing cyber attacks. *Monitor on Psychology, 40*(8). Retrieved from http://www.apa.org/monitor/

Online books, technical reports, and theses

For books or book chapters available online, provide the electronic retrieval statement instead of the place of publisher location and name. If the content has been assigned a DOI, include this at the end of the reference in place of the retrieval statement. An example of an electronic version of a print book follows.

Griffin, E. (2008). *Microsoft visual web developer 2008 express edition* [Safari Books Online version]. Retrieved from http://maurice.bgsu.edu/search/y

For technical and research reports retrieved online, identify the publisher as part of the retrieval statement (unless the publisher is also the author). For example:

> Land and Water Australia. (2007). *Northern Australia irrigation futures – final technical report. Providing new knowledge, tools and processes to support debate and decision making regarding irrigation in northern Australia* (Report No. PRO71453). Retrieved from http://lwa.gov.au/products/pr071453

An example of a doctoral dissertation retrieved from the web follows.

> Rousaari, S. (2008). *Microarrays in lung cancer research: From comparative analyses to verified findings* (Doctoral dissertation, University of Helsinki). Retrieved from http://www.hiit.fi/node/851

Online forums, discussion groups and newsgroups

Messages posted to a newsgroup, online forum, or discussion group are referenced using a form similar to online journal articles, but with the following provisos.

- Use the subject line of the message as the article title; do not italicise it.
- Include the words "Online forum comment" in square brackets after the article title and before the URL.
- Add the retrieval statement at the end.

For example:

> McKeon, C. (2008, December 12). How to motivate yourself [Online forum comment]. Retrieved from http://www.usq.edu.au/group/higherdegrees/comments

Electronic mailing lists and blog posts

Emails from individuals should be cited as personal communications and not included in the reference list. However, your reference list should include email communications that have been made public on the internet. Messages posted to an electronic mailing list or blog are referenced using a form similar to online journal articles, with the following provisos.

- Use the subject line of the message or blog as the article title; do not italicise it.
- Include the words "Electronic mailing list message" in square brackets after the article title and before the URL. For blog messages, use the words "Web log message" instead.
- Add the retrieval statement at the end.

Examples are now shown.

> Meyers, D. (2007, January 4). Re: Defining happiness [Electronic mailing list message]. Retrieved from http://tech.groups.yahoo.com/group/SocialNetwork/message/839

Fox, A. J. (2009, September 9). Re: Caring for future generations [Web log message]. Retrieved from http://socialblogs.com/sustainability/2009/09/_the_necessary_prerequisites.php

Websites

References sourced from the internet should include the same basic elements as those to written documents, adding a retrieval statement to the end. When no author is identified, begin the reference with the title of the document. The retrieval statement should outline the address of the website. For example:

Measurement of psychological impairment in matters of civil litigation. (2001, April 6). Retrieved from The Australian Psychological Society website: http://www.psychology.org.au/assets/files/measurement_of_psych_impairment.pdf

The British Psychological Society, Leicester, United Kingdom. (2001). *Careers and development*. Retrieved from http://www.bps.org.uk/careers-portal

Other sources

The sources already discussed, notably journal articles and books, tend to be the most frequently cited in student assignments. However, you can derive information from many other sources especially with the continued evolution of electronic media. You may wish to include non-routine information immediately after the article title to help identify its source—for example, "[CD]", "[Abstract]", or "[Monograph]". The APA referencing style for a variety of these sources is now described.

Abstracts

An **abstract** offers a concise overview of the contents of an essay or research report. You will normally obtain abstracts in one of two ways—as the original source, or from another secondary source. Note that you should not rely on information from abstracts; wherever possible, read and cite the full article.

Abstracts as original sources

A reference to the abstract of a journal article obtained from the original source uses almost the same format as one to the full article. The only difference is the inclusion of the word "Abstract" in square brackets immediately after the article title. The general form is now shown.

Author, A. (Year of publication). Title of article: All parts included [Abstract]. *Journal Title*, *Volume Number*, page or pages.

Here are some examples:

Brown, S. D., Tramayne, S., Hoxha, D., Telander, K., Fan, X., & Lent, R. (2008). Social cognitive predictors of college students' academic

performance and persistence: A meta-analytic path analysis [Abstract]. *Journal of Vocational Behavior, 12*, 1–11.

Walker, L., & Hill, A. J. (2009). Obesity: The role of child mental health services [Abstract]. *Child and Adolescent Mental Health, 14*, 114.

Abstracts from secondary sources

Where the abstract is contained in another publication, you must include details both of the abstract itself, and of the secondary publication it was contained in. Most abstracts are now accessible via the internet. If the abstract was obtained online, you must note this in your reference. Include the database name and abstract item number (if applicable) for material of limited circulation. Alternatively, your retrieval statement might include the URL. Examples of how to format abstracts from a secondary source are now shown.

Cooper, M. D. (2000). Towards a model of safety culture. *Safety Science, 36*, 111–136. Abstract retrieved from INFOTRAC database (Accession No. 123498).

Rutter, M., Pickles, A., Murray, B., & Eaves, L. (2001). Testing hypotheses on specific environmental causal effects on behavior. *Psychological Bulletin, 127*, 291–324. Abstract retrieved from http://www.apa.org/

Silvers Gier, V., & Kreiner, D. S. (2009). Memory of children's faces by adults: Appearance does matter. *Applied Cognitive Psychology, 23*(7), 114–120. Abstract retrieved from http://www.interscience.wiley.com

As in the previous examples, no full stop is used following a URL.

Audiovisual media

Audiovisual media include motion pictures, audio or television broadcasts (including podcasts). Examples of how to reference them in your work follow.

Motion picture

McLean. J. (Producer), & Lee, S. (Director). (2005). *Life down under* [Motion picture]. Australia: Australian Broadcasting Corporation.

Music recording

Barnes, J. (2009). A fool in love. On *The rhythm and the blues* [CD]. Melbourne, Australia: Liberation label.

In the in-text citation, include the track number: "A Fool in Love" (Barnes, 2009, track 9).

Episode from a television series

Ross, B. (Writer), & Koina, W. (Director). (2006). Reality bites [Television series episode]. In C. Healy (Executive producer), *Sex and the City*. New York, NY: Fox Broadcasting.

Podcast

Donnelly, R. (Producer). (2009, March 3). *Dealing with stress* [Audio podcast]. Retrieved from http://www.shrinkrapradio.com/

8.4 Ordering the reference list

LEARNING OBJECTIVE 8.4 Correctly order the reference list.

Note the following conventions.

- Entries are listed alphabetically, according to the author's surname.
- Where a work has two or more authors, its position is based on the surname of the first author.
- Where several works by the same author are included, list them chronologically, starting with the oldest work and finishing with the most recent.
- Some authors may have several works published in the same year. In this case, order the references alphabetically according to the title. To distinguish between them, add a lowercase letter to the year of publication (e.g., 1999a, 1999b), based on the alphabetical order of the title.
- Some works will have the same first author but different co-authors. In these cases, place them in order alphabetically, according to the surname of the second author.
- One-author entries precede multiple-author entries beginning with the same surname.

An example of how a list should be ordered is now shown.

Collins, P. C., & Buckle, T. (2003).

Collins, T. E., & Milne, S. J. (2000).

Doherty, J. R. (2004a). Preparing …

Doherty, J. R. (2004b). The rate of …

Doherty, J. R. (2005).

Doherty, J. R., & Fahey, K. (2007).

Doherty, J. R., & Lee, L. (2007).

Doherty, J. R., & Lee, L. (2009).

Doherty, J. R., Lindgard, R., & Surawski, P. J. (2010).

Doherty, J. R., & Thompson, R. S. (2008).

Fielder, M. S. (2003).

Fielder, M. S. (2006).

Fielder, M. S., & Robinson, J. (2005).

Gibson, A., Bidgood, K. M., & Coorey, M. L. (2003).

Gibson, A., Bidgood, K. M., & Fox, A. (2008).

Gruber, K., Burton, L. J., Albion, M., Quinn, A., Hampton, R., &

Collins-Gearing, B. (2006).

McNally, P., Stevens, D., Swannell, P., Lovegrove, W., Tanzer, S.,

Dickson, A., … Timmins, K. (2009).

Special cases for ordering references

A number of special cases are not fully covered by these basic principles. The way you treat these cases is now outlined.

- When deciding the alphabetical order of references, treat the prefixes *Mac*, or *Mc* as they are actually spelled, not as if they were all spelled *Mac*.
- Surnames originating from languages other than English can start with articles or prepositions such as *de*, *von*, or *van*. In some cases, these prefixes are considered part of the surname; in others, they are not. Where they are, decide the alphabetical order based on the prefix. Where they are not, disregard the prefix and alphabetise according to the main part of the surname.
- Some documents, such as newsletters and journal articles, may identify as the author a group or organisation (e.g., the Department of Family Services) rather than a specific person. In these cases, place in alphabetical order according to the first significant word of the group or organisation name. For example:

  Australian Family Association. (2001, May–June). Computer porn and the Internet. *Family Update: Newsletter of the Australian Family Association*, *17*, 1–3.

- Some documents do not identify an author at all. In these cases, the title becomes the first part of the reference, which is placed in alphabetical order based on the first significant word in the title. Anonymous works (those signed "Anonymous" by the author) should be placed in alphabetical order according to the word *Anonymous*.

CHECKLIST

☐ Make sure you start the reference list on a new page; include the running head and page number in the manuscript page header.
☐ Write the word "References" (with an initial capital) at the top of the page, centred.
☐ Do not underline, italicise, or bold this heading; do not include any page borders or justify the text.
☐ All reference entries should be double-line spaced.
☐ Do not include any extra line spaces in between each reference entry.
☐ Include only those works you have cited in the text.
☐ Check that all reference entries use a hanging indent.
☐ Check that the title of the publication is italicised in each reference.
☐ Check that the ampersand (&) is used to separate multiple author surnames and initials.
☐ Print journal article references should contain the following elements: author/s, year of publication, article title, journal title (italics), volume number (italics), and page numbers.
☐ Check that you have included a DOI or a URL retrieval statement at the end of the references to electronic media (and print media, where available), including online journal articles, online books or theses, and other information sourced from the internet.
☐ Note the general form for referencing newspapers, magazines, proceedings, technical reports, and other sources such as electronic mailing lists and abstracts.
☐ Book references should contain the following elements: author/s, year of publication, title of book (italics), city, state, name of publisher.
☐ Note the general form for referencing an unpublished work or student thesis.
☐ Note the general form for referencing online forums, discussion groups and newsgroups.
☐ Note the general form for referencing audiovisual media.
☐ For entries with no author, arrange alphabetically by the first main word of the article title.
☐ Order references alphabetically, according to the first author's surname. One-author entries precede multiple-author entries beginning with the same surname.
☐ Note how to order works by multiple authors. Arrange alphabetically by the surname of the first author, then the second author and so on.
☐ Note how to order multiple works by the same author. Arrange by year of publication, the earliest first.
☐ Note how to order work by the same author published in the same year. Place a lowercase letter (a, then b, then c etc.) immediately after the year within the parentheses.
☐ Check whether you have any references that qualify as special cases (e.g., surnames with prefixes, organisational authors, or no author). Note how to order and reference such works.

KEY TERMS

abstract A concise overview of the contents of an essay or report.
bibliography A list of the publication details of all works you consulted when researching your work, not just those cited in your text.
digital object identifier (DOI) A unique alpha-numeric string to identify electronic content and provide a persistent link to its location.
reference list A list of the full publication details of the information sources you have cited in your text.

INTERNET ACTIVITIES

The following exercises require you to access some online databases and/or journals to locate specific articles. Once you have located the appropriate articles, write the references for these four works, as they should appear together in your reference list. Use the words "ANSWERS TO INTERNET ACTIVITIES" as your running head and the reference list should be numbered page "7". Compare your responses with the correct responses in Appendix 1.

1. Access the ScienceDirect online database on the web by typing the following URL in your web browser: http://www.sciencedirect.com/. Search the online database for an article by Sidani, Miranda, Epstein, Bootzin, Cousins, and Moritz that was published in 2009 in volume 47, issue 10, of the journal *Behaviour Research and Therapy*.
2. Access the PSYCarticles database on the American Psychological Association website by typing the following URL in your web browser: http://www.apa.org/psycarticles/covlist.html. Search the database for an article by Suinn and Borrayo that was published in 2008 in volume 39, issue 6, of the journal *Professional Psychology: Research and Practice*. You will be able to freely access and cite the abstract.
3. Access the ScienceDirect online database on the web by typing the following URL in your web browser: http://www.sciencedirect.com/. Search the online database for an article by Raedeke, Focht, and Scales that was published in 2007 in volume 8, issue 4, of the journal *Psychology of Sport and Exercise*.
4. Access the American Psychological Association website by typing the following URL in your web browser: http://www.apa.org/journals. Search the online journals for an article by Rutledge, Park, and Sher that was published in 2008 in volume 76, issue 3, of the *Journal of Consulting and Clinical Psychology*. The full article is freely available as a selected article.

APPLIED ACTIVITIES

Write the references for the following documents in APA style. Put them together in a complete reference list. Use the words "ANSWERS TO APPLIED ACTIVITIES" as your running head and the reference list should be numbered page "5". Compare your responses to the correct responses in Appendix 1.

1. *Edited book:*
   Editors: H. W. Marsh, R. G. Craven, and D. M. McInerney
   Year of publication: 2003
   Book title: International advances in self research: Volume 1
   Publication information: Greenwich, Connecticut by Information Age Publishing
2. *Chapter in an edited book:*
   Chapter author: Judy Kearins
   Chapter title: Children and cultural difference
   Chapter page numbers: pages 167 to 176
   Editors: Pat Dudgeon, Darren Garvey, and H. Pickett
   Year of publication: 2000
   Book title: Working with Indigenous Australians: A handbook for psychologists
   Publication information: Perth, Australia by Gunada Press
3. *Electronic journal article with DOI:*
   Article authors: Keith C. Herman, Sharon F. Lambert, Wendy M. Reinke, and Nicholas S. Ialongo
   Year of publication: 2008
   Article title: Low academic competence in first grade as a risk factor for depressive cognitions and symptoms in middle school
   Periodical title and publication information: Journal of Counseling Psychology, volume 55, issue 3, pages 400 to 410
   DOI: 10.1037/a0012654

4 *Print journal article (no DOI):*
Article authors: A. Graybeal, J. D. Sexton, and J. W. Pennebaker
Year of publication: 2002
Article title: The role of story-making in disclosure writing: The psychometric properties of narrative
Periodical title and publication information: Psychology and Health, volume 17, pages 571 to 581

5 *Electronic journal abstract without DOI:*
Article authors: David Welch and Richie Poulton
Year of publication: 2009
Article title: Personality influences on change in smoking behavior
Periodical title and publication information: Health Psychology, volume 28, issue 3, pages 292 to 299
URL: http://www.apa.org/psycarticles/

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Image: © Maxx-Studio / Shutterstock.com

CHAPTER 9

How to end

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

- **9.1** identify ways to polish your work
- **9.2** understand the general formatting requirements in APA style
- **9.3** prepare your work for submission
- **9.4** take on feedback to improve in the future.

9.1 Polishing your work

LEARNING OBJECTIVE 9.1 Identify ways to polish your work.

By now you will have worked your way through the steps outlined in the flow charts for writing essays and research reports (Figure 4.1, Figure 5.1 and Figure 6.1) and be confident in putting together a first draft. But the finishing touches you give to your assignment will make it the best work possible. You may be tempted simply to hand in a draft without further revision. This is a sure way to lose marks.

Make certain you allow enough time to revise and redraft your work. It is highly unlikely that a first draft of any assignment will receive top marks—they go to students who spend hours revising their work and checking that each sentence reads as it should.

The checklists at the end of each chapter in this book are handy guides when revising your draft. Run through these checklists to ensure that your work complies in every respect. The sample essays and research reports at the end of Chapters 4, 5 and 6 provide valuable models of structure and style when you are polishing your own work.

Also, check that you have covered all the criteria your lecturer will apply when marking your work. Lecturers will often make these criteria available to students. Double-checking against the set criteria is a simple way to maximise your marks.

This chapter outlines how you should put your essay or report into its final form for submission to your lecturer or tutor for marking.

Revise and rewrite

Completing a first draft is a major achievement. Producing a structure for your work, and organising your ideas and arguments around that framework is challenging! Now is the time to refine what you have written—to make sure the work flows as smoothly as possible and is organised in the most logical way.

A good way to revise your work is to start by checking that you have fulfilled the broad requirements of your essay or report, and then to become increasingly specific, until you examine your work paragraph by paragraph, and finally sentence by sentence. In other words, first check that you have covered all the key elements, such as (in a report) the introduction, the method, the results, the discussion, and the reference list. Within these broad sections, check that your arguments have no fallacies and are supported by the evidence.

Next, move one layer down to check how your paragraphs flow. Ensure that each paragraph builds on the previous one, deals with one major point, and then links smoothly to the next paragraph. Make sure the paragraphs are not too long or too short.

Then drop one further level to examine each sentence. Are they grammatically correct? Are there any that seem out of place or unnecessary? Do they flow together to form a coherent paragraph? Are they too long? Is there some variation in length?

This process may seem pedantic and overly time-consuming, but it is an effective way to make sure your work is of the highest quality. This revision is well worth the effort.

A useful technique for checking how well your paper flows is to complete an outline. Go through each paragraph and summarise its main content in one sentence. Putting these sentences together gives you an outline of your paper and an idea of how well it flows. This technique can help you identify any structural problems or poor connections between paragraphs. You can then go back and revise your work to improve the flow.

Revising the essay structure

As outlined in Chapter 4, an essay must follow a set structure. One of the most important things to consider when revising an essay is whether it fits this structure.

An essay needs:

- an introduction that presents the topic, states the purpose of the essay, and outlines the main points you will argue

- a body that critically evaluates the past literature, and presents evidence for and against the argument being put forward
- a conclusion that summarises the main points you have made and discusses the implications.

Also, check that the title page, abstract, and reference list have been completed and formatted correctly.

Revising the sections of a research report

Quantitative research reports also have a set structure, as outlined in Chapter 5. Research reports are made up of a number of sections, each of which has its own requirements. When revising a quantitative research report, check that it is divided into the following sections.

- *Introduction:* This section begins by introducing the broad research topic. It then critically reviews the relevant literature, identifying how your current research will contribute to what is already known. This section finishes by outlining the specific details of your research aims and research hypotheses.
- *Method:* This section describes the participants, materials, and procedures used in conducting your study.
- *Results:* This section describes the findings of your study. First, this section summarises the data collected. Next, it describes the results of statistical analyses as they relate to the hypotheses and research questions in the study.
- *Discussion:* This section discusses the conclusions you can draw from these findings. The discussion first examines the support or non-support for your research hypotheses. Then it discusses your main findings and whether or not your current results provide support for earlier findings reported in the literature. This section ends by deliberating on the broader implications of your findings and by considering possible future research directions.

Also, check that the title page, abstract, reference list, and any appendices have been written and formatted correctly.

See Chapter 6 for the recommended sections of a qualitative research report: *Introduction, Methodology, Method, Procedure, Data Analysis, Analysis and Interpretation*. As noted in this chapter, there will always be some divergences in the structure of qualitative research.

Revising the in-text citations

When revising your work, it is important to check that you have appropriately acknowledged the original source of an idea with an in-text citation. You must include an in-text citation if you paraphrase another author's ideas, findings or beliefs, or quote directly from another author's work. Double-check you have correctly used the author–date method to cite the sources accessed to write your essay or research report. Be sure to cross-check your work against the checklist provided in Chapter 7 before submitting it for assessment.

Revising the reference list

Students often lose marks because they do not adhere to APA style when compiling the reference list. It is crucial that you check the reference list carefully so that you give yourself the best chance of maximising your mark. The following are some of the main points you should check in your reference list (for more detail, see Chapter 8).

- Start the reference list on a new page immediately following the end of the main text.
- Make sure that every citation you make in the text of your essay or report is included in the reference list.
- Also, make sure that every work in your reference list is cited somewhere in the text.
- List all references alphabetically according to the first author's surname.
- Set flush left the first line of each reference and indent the second and any subsequent lines (i.e., apply the hanging indent format to the whole reference list).
- Use italics for the title of the book or journal from which your reference is drawn.
- Double-line space the reference list, but do not include extra line spaces in between each reference entry.

Proofread

By the time you have written a first draft, revised it, and made changes where necessary to improve the structure and flow, you are almost ready to hand in your work. However, it is vital that you read through your work one last time to ensure it is in the best shape possible for submission. You may be tempted to skip this last step, believing that you have already checked and revised your work sufficiently. But this is where you can pick up minor errors and spelling mistakes that would detract from the professionalism of your submission.

In the final check, examine the logic and flow of your argument one last time, but also review the more mechanical aspects of your paper—for instance, check that there are no typographical mistakes, that tables fit onto one page, that figures are legible, and that no words are missing.

It is a good idea to have someone else proofread your paper. It is amazing how easy it is for writers to miss simple mistakes in their own work. A second person, who is perhaps not so familiar with the topic, can often pick up typing errors or flaws in your arguments more readily.

If you cannot find someone else to look over your paper, a good idea is to read it aloud to yourself. Reading the words aloud can help you pick up errors that you might skip over if you only scan them visually. Another useful technique is to put the paper aside for a while after finishing it before you go back for the final check.

The following are particular areas you should review during this proofreading stage.

- Check the spelling in your paper. Most word processing software packages these days include a spell-checker function, which can be useful in picking up some errors. However, do not rely solely on this audit. It will not pick up all errors: for example, it will not inform you when a word has been used incorrectly rather than spelled wrongly; nor will it recognise many specialist terms used in the psychology profession. Also, be aware that spellchecking functions load different versions of English, with different spellings for the same words—for example, American English or Australian English. Unless otherwise advised, you should use Australian spelling in your work. However, remember to retain the American spelling if you are quoting directly from a source that uses American spelling. Remember also to retain the American spelling when you list the full publication details of American publications in your reference list.

- A good practice is to keep a thesaurus and dictionary handy to check on words you are unfamiliar with.
- Some software packages will check your grammar. This can be useful but also frustrating, since it relies on the computer program's perceptions rather than the nuances that only the human mind can register. As with spell-checking, do not rely on the grammar-check function. Make sure you check the grammar yourself.
- Check your punctuation carefully, too. It is easy to leave out full stops, put in extra spaces, forget to capitalise a heading, or use bold, italics, or underlining inappropriately. But it is also easy to check through your work and concentrate solely on the punctuation, to ensure it is correct.

9.2 General tips for presentation

LEARNING OBJECTIVE 9.2 Understand the general formatting requirements in APA style

Presentation should be an important consideration when completing your paper. By this stage you have written a first draft, revised and redrafted it, checked the logic and structure of your arguments, and proofread your work to pick up spelling and typographical errors. The last step is to compile the essay or research report ready to hand in to your lecturer. The way the work is actually presented has a significant bearing on the impression you make, so it is important that you take the time to polish its final appearance. This section provides general tips on the presentation of your work.

Typed or handwritten?

Typing your work is a much better option than handwriting it. Typewritten work creates a far more professional impression and makes it easier to incorporate APA requirements, such as italics and consistent indentation. Handwriting tends to look sloppy and is frequently hard to read, especially in long reports when the writer's hand becomes tired. Some lecturers may not even accept handwritten assignments, so check with them first.

Most essays or reports today will be created using a word processing package and then printed out. Make sure you use good-quality white paper and that the printer's ink cartridge is not producing faint type. Print on only one side of the paper.

Font

Many word processors offer a huge variety of fonts and typographical effects. This can sometimes prove tempting to students, who try to jazz up their work by using these features creatively. Do not give in to this temptation! APA style has set requirements concerning type size and font, and you must stick to them.

Use a serif font such as Times or Times New Roman. (A serif font features small lines finishing off the main strokes of some letters. Serif fonts are easier to read than sans serif fonts.)

Use a 12-point type size throughout. Never use a larger point size for headings or on the title page.

Margins

The APA publication manual requires that uniform margins be used in your work. Leave a 2.54 cm (i.e., 1 inch) margin at the top, bottom, left-hand, and right-hand sides of the page. This is often the default setting for margins in word processors. However, some lecturers like a slightly larger margin—4 cm—on the left-hand side of the page because this allows room for them to write comments when marking your work. Check with the lecturer of your institution on their specific requirements before using a larger left-hand margin.

Borders

Do not include any borders around the pages of your essay or research report.

Spacing

Double-line spacing is standard APA style and should be used throughout your essay or research report. However, as noted in Chapter 6 (see Qualitative Research Report 2), to distinguish data extracts from the main body of the text, you may apply single-line spacing to the block indenting of data extracts to form a new paragraph.

Use one space after all punctuation. Exceptions include the periods in abbreviations (e.g., p.m., U.S.) or colons in ratios (e.g., 13:1). Space twice after punctuation marks at the end of a sentence, such as after a full stop (period).

Paragraph indents

In the main part of your essay or research report, indent the first line of each paragraph 5 to 7 spaces (or half an inch). For consistency, use the tab key, as the default settings in most word processing programs are acceptable. Note that you also indent the first line of every footnote. The only exceptions to this requirement are (a) the abstract, which should have no indent, (b) block quotations, (c) titles and headings, (d) table titles and notes, (e) figure captions, and (f) reference entries that apply the hanging indent. Remember to indent only the second and subsequent lines of each entry in the reference list.

Justification

Do not justify the right-hand margin of your text; allow the lines to end unevenly. The left side of your text should be justified, with the exception of the indented first line of each paragraph.

Starting on a new page

If you are writing an essay, you should start the title page, abstract, essay body, and references on a new page. Remember that in the main text of your essay the introduction, body, and conclusions directly follow each other, without being divided by headings and without starting on a new page.

If you are writing a research report, start the title page, abstract, introduction, references, each table and figure (unless placed within the body of the report), and any appendices on a new page.

Also, make sure page numbering is in the correct format. See Chapters 4, 5 and 6 for more details.

Ordering the pages

Each page of your essay or research report should include a running head and page number in the header (see Chapter 4). The only exception to this requirement is artwork for figures. Pages are arranged in the following order, and numbered consecutively, as follows.

- Title page—include a running head, title, name, and institution (separate page, numbered page 1)
- Abstract (start on a separate page, numbered page 2)
- Text of essay or report (start on a separate page, numbered page 3)
- References (start on a separate page)
- Appendices (start each on a separate page)
- Footnotes (listed together, start on a separate page)
- Tables (start each on a separate page)
- Figure captions (list together, start on a separate page)
- Figures (place each on a separate page).

Length

Lecturers will normally set a word limit for an essay or research report. Check that your work is within 10 percent either side of that word limit. Most word processing software packages today have a "word count" function that will tally the number for you instantly. Many lecturers will deduct marks if the work is either too short or too long, so it is essential to comply with the limit.

9.3 Submitting your work

LEARNING OBJECTIVE 9.3 Prepare your work for submission.

The end of your journey is now in sight. You are ready to hand in the result of all your hard work. All that remains is for you to add the final touches and your job is done.

Cover sheets

Staple the pages of your report together, rather than handing it in as a bundle of loose pages. Unless the pages are stapled, there is a chance that individual pages will be misplaced. Stapling the report only in the top left-hand corner makes it easier for the marker to flip through and write comments. Do not put the assignment in a plastic sleeve folder.

In many universities you are required to attach a standard cover sheet to the front of your work. On the cover sheet you will fill in details such as your name, student number, the name and number of the course, the name and number of the assignment, the name of your lecturer, and the date of submission.

If your university does not use a standard cover sheet, it is a good idea to attach your own including this information. This professional touch will help to ensure that if your work is misplaced, it can still be delivered to the right person for marking.

A cover sheet contains information needed to identify you, the course, and your lecturer. It can be in many different formats, depending on the university. The title page, on the other hand, is the first page of your assignment (i.e., essay or research report) and must be presented in APA format.

Late assignments

Lecturers set assignment deadlines for good reasons—they need sufficient time to mark all the assignments while at the same time giving students sufficient time to prepare them. Treat deadlines seriously. Many universities automatically deduct marks for late submissions, unless an extension to the due date has been negotiated with the lecturer. If you do need an extension, make sure you approach your lecturer in advance of the due date.

Backup copies

Never run the risk of disaster by keeping only one draft of your final essay or research report. If you have only one file saved electronically, a power surge or defective computer could see months of hard work vanish into thin air. Keep a copy on the hard drive of your computer, but also keep a backup copy on a USB or external hard drive that you store in a separate place. Every time you make changes to the version on your hard drive, copy them to the backup version.

When you submit your assignment, print it out a second time or photocopy the original so that you have another hard copy on hand. This can be useful if the lecturer for some reason needs another copy in a hurry.

Keep both the printed version and the copy you have stored on a backup disk until after the lecturer has returned your marked assignment. Again, this provides security in the event that your original assignment has been lost or damaged.

9.4 Constructive feedback

LEARNING OBJECTIVE 9.4 Take on feedback to improve in the future.

When lecturers return your marked assignment, you will often find that they have written comments and corrections on it. Do not lose heart—this is part of the learning process. The important thing is that you treat any comments as constructive feedback and learn from your mistakes. There may be simple reasons why you have lost marks, and unless you take the time to reflect on the comments your lecturer has made, you could lose marks for the same reasons in subsequent assignments.

If you remain unsure where you went wrong even after reading the marker's comments, make sure you approach your lecturer to find out more. Where you recognise that you have made an error, take the time to go back and work out what you should have done differently. All this will ensure that you are better placed for success in future assignments. Good luck!

CHECKLIST

Before submitting your essay or research report for marking, you should check the following points.

General

☐ Have you covered all the criteria that will be applied when your work is marked?
☐ Have you revised your work, examining the content of each paragraph?
☐ Have you checked that all sentences are grammatically correct?
☐ Have you proofread your work for spelling and typographical errors?
☐ Have you made sure your punctuation is correct?
☐ Have you checked the layout of all pages?
☐ Have you typed your work using a clear 12-point serif font?
☐ Are your margins correct and uniform?
☐ Is your assignment double-line spaced throughout?
☐ Have you checked that there are no extra line spaces between paragraphs?
☐ Is the first line of each paragraph indented?
☐ Have you made sure you have not justified the right-hand margin of your work?
☐ Have you checked the content of your abstract?
☐ Is the abstract written in one paragraph without any indentation?
☐ Have you checked that your title page, abstract, and reference list start on a new page?
☐ Have you double-checked the content and format of your title page and reference list?
☐ Have you checked that the in-text citations match the reference list entries?
☐ Is your paper within 10 percent either side of the set word limit?
☐ Have you stapled your work after adding a front cover sheet?
☐ If you are unable to meet the assignment deadline, have you applied for an extension prior to the due date and attached any supporting documentation?
☐ Have you kept a backup copy of your work?

Essays

☐ Have you double-checked your essay against the checklists provided at the end of Chapters 4, 7, and 8?
☐ Does your essay follow the set structure: introduction, body, and conclusion?
☐ Have you compared your essay against the sample Good Essay at the end of Chapter 4?

Research reports

☐ Have you double-checked your research report against the checklists provided at the end of Chapters 5, 6, 7 and 8?
☐ Does your research report include the following sections: introduction, method, results, and discussion?
☐ Have you checked the layout of each table or figure?
☐ Have you checked whether any appendices are required?
☐ Have you compared your quantitative research report against the sample Good Report at the end of Chapter 5?
☐ Have you compared your qualitative research report against the example qualitative reports at the end of Chapter 6?

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Image: © Brothers Good / Shutterstock.com
Image: © Photodisc / Getty Images, Inc.

APPENDIX 1

Answers to questions and activities

Chapter 2 review questions

1. (b) Moss (2006) showed the same results.
2. (c) The group improved its scores by 5%.
3. (c) Kohlberg's moral reasoning theory emphasises not only developmental stages but also moral dilemmas.
4. (d) The three broad categories of psychoactive drugs are (a) depressants, (b) stimulants, and (c) hallucinogens.
5. (a) antisocial behaviour

Chapter 2 applied activities

1.

Operant Conditioning

Skinner's Experiments

Principles of reinforcement.

Continuous reinforcement.

2. (a) Researchers have linked information-processing speed to scores on IQ tests.
   (b) The three-factor solution in Study 2 replicated our findings in Study 1.
   (c) Marshall and Holding (2003) proposed that our actions can modify our attitudes.
   (d) The team of experts was to formulate one solution.
   (e) The children who displayed acceptable behaviour were allowed to play outside for the remainder of the day.
   (f) The chimpanzees that learned sign language were also trained to use computer-mediated language.
   (g) The participants rated their motivation on a 5-point scale ranging from 1 (*no motivation to do anything*) to 5 (*highly motivated to succeed*).
   (h) Different cultural groups—Australians, Middle Easterners, and North Americans—have displayed different perceptions of personal space.
   (i) Researchers in the field of developmental psychology support one main assumption: Development is a lifelong process.
   (j) Using the skill performance scale, the judges rated the gymnasts.
   (k) The tasks that the first group solved were randomly ordered; those that the second group solved were in a fixed order.
   (l) Baillie (2009) showed that parents of delinquent youngsters are often unaware of their children's whereabouts. Delinquency was assessed by the Parenting Skills Test (PST).
   (m) The confederate appeared either happy or sad in the study.
   (n) The 31 males in this study rated their female partners highly when their female partners were supportive of their needs.

Chapter 3 applied activities

1. A critical evaluation of Professor Smart's research follows:
   - *Extensive literature review?* No literature is reviewed.

- Identify the source:
  - Author: I. M. Smart
  - Publication date: unpublished study
- Analyse the key arguments:
  - No theoretical framework is provided for the study.
  - Argument has not been developed.
  - It is unclear how "teaching effectiveness" is being tested or operationalised in the study.
- Examine the research methodology:
  - *Who were the participants?* Fifty-seven students enrolled in the Foundation Psychology course (21 males and 36 females).
  - *Is the sample representative of the target population?* No. The sample size is small (only 11% of students enrolled in the course were sampled). Also, the researcher has not determined whether the distribution of characteristics of the sample reflects those of the target population. What proportion of students were males and what proportion were females? What were the ages of the sample participants? What was the study mode of students in the sample and in the course?
  - The sample was not formed through random selection. Every student enrolled in the Foundation Psychology course did not have an equal chance of being included in the sample (e.g., not every student goes to the library or the refectory during the lunch hour). The sample is therefore not representative and the results should not be generalised to the target population.
  - *What scales were used to measure teaching effectiveness?* Was an interview format or a self-report scale used?
- Evaluate the results:
  - *Have appropriate analyses been used?* This cannot be determined from the information provided.
  - *Are the results presented clearly?* No data were presented.
  - *Are the results interpreted properly?* No. The researcher has not considered alternative explanations for the results. Perhaps only students with particular characteristics frequent the library or refectory during their lunch hour. Also, perhaps the students provided socially desirable responses to their lecturer. The results may be biased and should be treated with scepticism.
- Analyse the conclusions and implications:
  - *Are the conclusions based on logical reasoning?* No. The conclusion that "Overall, students were very happy with her teaching of the Foundation Psychology course" does not flow logically from the evidence presented.

2. A critical evaluation of the research by Lynette Sutherland follows:
   - *Extensive literature review?* Yes. A number of citations are provided to support the findings of past research in the field (e.g., Hoffman & Hobson, 1986; Schuler, 1980; Wallis, 1986).
   - Identify the source:
     - Author: L. Sutherland
     - Publication date: 1992
     - Place of publication: Unpublished honours thesis
     - *Refereed and peer-reviewed article?* No.
   - Analyse the arguments:
     - *Are the arguments based on sound theory?* Yes, Holland's (1985) hexagonal theory is outlined, and additional research evidence is provided to support the argument that person–environment fit is linked to occupational stress (e.g., Pennebaker and colleagues; Van Harrison, 1978).
     - *Have both sides of the argument been addressed?* Both positive and negative affectivity were examined as predictors of job stress and strain. However, more information on research that refutes Holland's (1985) theory is needed.
     - *Are the terms properly defined?* Yes. Clear definitions of stress, strain, congruence, positive affectivity, and negative affectivity were provided.

  - *Does the evidence support the argument?* Yes. The results (as reported by the author) indicate that negative affectivity is related to job stress. The hypotheses were supported.
  - *Any fallacies in the arguments?* No.
- Examine the research methodology:
  - *Who were the participants?* 154 full-time working adults (79 males and 75 females).
  - *Is the sample representative of the target population?* No. The sample did not comprise equal numbers of adults working in the six typologies advocated by Holland's (1985) theory. A large proportion of the sample was employed in social occupations. A larger, more representative sample is required.
  - *What measures were used?* Occupational Stress Inventory (OSI), Self-Directed Search (SDS), and Positive and Negative Affect Schedule (PANAS). All measures are published self-report scales.
- Evaluate the results:
  - *Have the appropriate analyses been used?* This cannot be determined from the information provided.
  - *Are the results presented clearly?* No. The specific data were not presented (to conserve space here!).
  - *Do the results support the hypotheses?* Yes. The author reports that the main findings do support the research hypotheses.
  - *Are the results interpreted properly?* This cannot be determined without the data. Therefore, you should be sceptical of the results.
- Analyse the conclusions and implications:
  - *Are the conclusions based on logical reasoning?* Yes. The conclusion flowed logically from the evidence presented in the study. However, more information on the data analyses is required to establish that the results are reliable and were interpreted with insight. The conclusions should be treated with scepticism.
  - *How important are the study's findings?* The practical implications of the research study were discussed in terms of job selection and recruitment procedures (i.e. to minimise the vulnerability of workers to stress-related illnesses and work difficulties). The research also outlined the importance and benefits of the current methodology (e.g., using an individual's actual occupation as the environmental measure). Directions for future research were provided.

Chapter 7 applied activities

1. (a) Other studies examined the treatment of insomnia through mass media (Oosterhuis & Klip, 2007).
   (b) Jackson (2004) used biofeedback to treat asthma. Jackson described a number of weaknesses in the study.
   (c) Mimeault and Morin (1999) demonstrated the effectiveness of self-help treatments. Mimeault and Morin showed that cognitive-behaviour therapies help participants to improve their quality of life.
   (d) Burge, Klein, and Dearnaley (2008) used pharmacological methods to treat anxiety in children, and Hauff and Burt (2004) used it to reduce depression. In addition to pharmacological methods, Burge et al. used cognitive-behaviour therapy to help children cope with everyday events.
   (e) Barkley, King, Gill, and Marshall (2003) investigated the effects of violence in children's television. Barkley et al. used an experimental design with randomisation to demonstrate the effects of watching "Terminator" among Australian high school children.
   (f) Roberts et al. (2000) found no gender effects in the data.
   (g) Patients' sleep patterns before the treatment were disturbed and fragmented (Fahey & Robinson, 2006).
   (h) Future research should incorporate a randomised double-blind drug (Waschbusch, Terry, & Toleman, 2005; Waschbusch & Toleman, 2002, 2009).
   (i) Contemporary approaches (Bramston, 2003; Pretty, 2009) focus on the role of cognitive processes in observational learning.
2. (e) (both a and b are correct)
3. (c) Previous research (Chess & Thomas, 2001, 2002; Katz & Hass, 2008; Olson, Vernon, Harris, & Jang, 2003).

4. Rottenberg (2003) argued that "the main question is whether the beneficial effect of sleep deprivation is related to increased wakefulness or to the sleep suppression" (p. 9).
5. Westen, Burton, and Kowalski (2006) distinguished between the different types of mood disorders. Westen et al. defined dysthymic disorder as follows:

> A chronic low-level depression lasting more than two years, with intervals of normal moods that never last more than a few weeks or months. The effects of dysthymic disorder on functioning may be more subtle, as when people who are chronically depressed choose professions that underutilise their talents because of a lack of confidence, self-esteem or motivation. Dysthymic disorder is a chronic disorder characterised by continuous depression punctuated by bouts of major depression. (p. 624)

Chapter 8 Internet activities

Your reference list should be double-line spaced. The works should be ordered alphabetically, according to the first author's surname. Your reference list should start on a new page, include a running head and page number, and look something like the following:

ANSWERS TO INTERNET ACTIVITIES 7

References

Raedeke, T. D., Focht, B. C., & Scales, D. (2007). Social environmental factors and psychological responses to acute exercise for socially physique anxious females. *Psychology of Sport and Exercise, 8*(4), 463–476. doi:10.1016/j.psychsport.2006.10.005

Rutledge, P. C., Park, A., & Sher, K. J. (2008). 21st birthday drinking: Extremely extreme. *Journal of Consulting and Clinical Psychology*, *76*(3), 511–516. doi:10.1037/0022-006X.76.3.511

Sidani, S., Miranda, J., Epstein, D. R., Bootzin, R. R., Cousins, J., & Moritz, P. (2009). Relationships between personal beliefs and treatment acceptability, and preferences for behavioral treatments. *Behaviour Research and Therapy*, *47*(10), 823–829. doi:10.1016/j.brat.2009.06.009

Suinn, R. M., & Borrayo, E. A. (2008). The ethnicity gap: The past, present, and future. *Professional Psychology: Research and Practice*, *39*(6), 646–651. Abstract retrieved from http://www.apa.org/psycarticles/

Chapter 8 applied activities

Your reference list should be double-line spaced. The works should be ordered alphabetically, according to the first author's surname. Your reference list should start on a new page, include a running head and page number.

ANSWERS TO APPLIED ACTIVITIES 5

References

Graybeal, A., Sexton, J. D., & Pennebaker, J. W. (2002). The role of story-making in disclosing writing: The psychometric properties of narrative. *Psychology and Health*, *17*, 571–581.

Herman, K. C., Lambert, S. F., Reinke, W. M., & Ialongo, N. S. (2008). Low academic competence in first grade as a risk factor for depressive cognitions and symptoms in middle school. *Journal of Counseling Psychology*, *55*(3), 400–410. doi:10.1037/a0012654

Kearins, J. (2000). Children and cultural difference. In P. Dudgeon, D. Garvey, & H. Pickett (Eds.), *Working with Indigenous Australians: A handbook for psychologists* (pp. 167–176). Perth, Australia: Gunada Press.

Marsh, H. W., Craven, R. G., & McInerney, D. M. (Eds.). (2003). *International advances in self research: Vol. 1*. Greenwich, CT: Information Age.

Welch, D., & Poulton, R., (2009). Personality influences on change in smoking behavior. *Health Psychology*, *28*(3), 292–299. Abstract retrieved from http://www.apa.org/psycarticles/Answers to questions and activities

APPENDIX 2

Key to errors in bad essay

Bad essay

[1]Insomnia Treatments[2] 1

Title:[3] Critically Evaluate Different Treatments of Insomnia in Adults.[4]
5

Name:[6] J. Doe
5

University:[7] University of Nonames[8]

1 Use 12-point type throughout essay, including running head and page numbers (p. 212).
2 On the title page, "Running head:" should be included in the manuscript page header, flush left, with the running head itself following in uppercase (p. 62_. On following pages, omit "Running head:" (p. 62).
3 Don't include "Title:"; centre title on line (upper- and lowercase (u/lc)), with no punctuation at end (p. 62).
4 Title would be more informative if it started with noun instead of verb (p. 62).
5 Title, your name, and educational institution should be double-line spaced (p. 62).
6 Don't include "Name:"; centre full name on line (u/lc) (p. 62).
7 Don't include "University:"; centre educational institution on line (u/lc) (p. 62).
8 Centre title of essay, your name, and educational institution vertically in the upper half of page (p. 62).

[9]INTRODUCTION[10]

[11]Insomnia is defined as a lack of satisfaction in the amount of sleep each night.[12] People who experience insomnia may have problems falling asleep (sleep onset insomnia), remaining asleep at night, and early morning awakenings[13] (Riedel Lichstein and Dwyer,[14] 1995 page 55[15]). The 3[16] different treatment methods of insomnia I[17] will be discussing in this assignment are [18]1. Pharmacological therapy, 2. Self-help therapy, and 3. Cognitive behaviour therapy. According to the articles reviewed, [19] these treatment methods are currently the main treatments for insomnia, yet none guarantee a cure for insomnia.[20]

21

[11]People over 65 years of age are likely to suffer from chronic sleep disorders.[22] Statistics indicate that 30-40% of individuals throughout their lives (insomnia is more common among ladies[23] and the elderly)[24] [25] will suffer from insomnia at some point in their lives and that 10-20% of these people will continue this on a long-term scale (Hryshko-Mullen et al., 2000[26]). A lot of[27] people who suffer from insomnia report multiple and prolonged awakenings in the second half of the night,[28] and increased daytime napping (Campbell, 1998). Also, people with insomnia tend to display higher levels of psychological distress and report impaired daytime functioning (Mimeault and Morin, 1999[29]).

21

1 Use 12-point type throughout essay, including running head and page numbers (p. 212).
2 On the title page, "Running head:" should be included in the manuscript page header, flush left, with the running head itself following in uppercase. On following pages, omit "Running head:" (p. 62).
9 Abstract is missing (p. 63).
10 Don't use heading "INTRODUCTION"; rewrite essay title (u/lc, centred) on top line (p. 63).
11 Indent first line of each paragraph 5 to 7 spaces or $\frac{1}{2}$ in (p. 213).
12 Don't right justify text (p. 213).
13 Non-parallel construction; rephrase: "falling asleep . . . , remaining asleep . . . , waking" (p. 33).
14 In-text citation should read: "(Riedel, Lichstein, & Dwyer, 1995)". Note commas after each name; use "&" in parentheses (p. 173).
15 Don't include page number when not a direct quote (p. 178); (format would be "p. 55 not page 55") if formatting page number for a quote (p. 179).
16 Spell out numbers below 10 (p. 27).
17 Be careful about using personal pronouns (p. 63).
18 Use letters in parentheses (not numbers) in series (p. 25). Alternatively you may use bulleted or numbered lists.
19 Be specific cite using author–date system (p. 172).
20 Argument incomplete. Unclear what treatment you will argue for (p. 66).
21 Don't leave line spaces between paragraphs (p. 213).
22 Include reference to support statement; this material is better placed in intro paragraph after insomnia is defined (p. 172).
23 Discriminatory language: change "ladies" to "women", "elderly" to "older persons" (p. 38).
24 Use 2 sentences for 2 ideas (p. 38).
25 Statement in parentheses needs citation (p. 172).
26 First citation should include all author surnames unless there are six or more authors (p. 173).
27 Superfluity: change "a lot of" to "many" (p. 36).
28 No comma needed (p. 16).
29 Use "&" inside parentheses (p. 173).

[11]In the following studies to be reviewed, patients were all adults who kept a sleep log or diary to establish a baseline.[30]

[11]The most commonly used method to treat insomnia is pharmacological therapy.[12] [31] This involves the patient[32] taking medications to help them[33] get to sleep, such as benzodiazepines. Patients show[34] short-term improvements in sleep latency, total time slept[35] and quality of the sleep (Hryshko-Mullen et al., 2000).

21

[11]The studies showed that the longer patients[32] used medications to control their insomnia, the less effective the medications became (Hryshko-Mullen et al., 2000; Mimeault et al.,[36] 1999). For example, when using Benzodiazepines[37] for long periods of time there can be some side-effects, such as poor memory.[38] A patient[39] can become dependent on the medication he/she is using to help him/her cure his/her insomnia instead of trying to find other ways to improve sleep. Perhaps relaxation, stimulus control guidelines, sleep hygiene[35] or sleep restriction might help improve sleep quality?[40] [41] In comparison with other treatment methods such as cognitive-behaviour therapy, the studies showed that medication was not effective in the long term.[42]

21

1 Use 12-point type throughout essay, including running head and page numbers (p. 212).
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11 Indent first line of each paragraph 5 to 7 spaces or $\frac{1}{2}$ in (p. 213).
12 Don't right justify text (p. 213).
21 Don't leave line spaces between paragraphs (p. 213).
30 Avoid one-sentence paragraphs (p. 38).
31 Support statement with reference (p. 172).
32 Describe participants when discussing study findings relevant to different treatment approaches (p. 89).
33 Incorrect grammar: change "patient" to "patients" to agree with "them"/"their" (p. 30).
34 Use past tense for results of past research (p. 32).
35 Include a comma before *and* or *or* in series (p. 16).
36 Use both surnames in 2-author citations (p. 173).
37 Do not capitalise (p. 22).
38 Describe negative side-effects to better develop argument (p. 66).
39 Use plurals to avoid overuse of *his/her* (p. 31).
40 Don't pose questions; write as a statement, and support with a reference (p. 172).
41 Briefly define concepts listed (p. 50).
42 Statement too broad; need more specific information about study and follow-up (p. 48).

[11]Riedel, Lichstein, and Dwyer[43] (1995) examined the affect[44] of self-help therapy for individuals suffering from insomnia. Self-help therapy involves a series of sessions where a qualified psychologist counsels the patient[33] about their[45] insomnia. Riedel et al. (1995)[46] stated that self-help therapy usually works better if used in conjunction with cognitive-behaviour therapy.[47] This is because the cognitive-[12] behaviour technique teaches patient[32] to better understand their insomnia. A lot of [27] patients[32] report[34] that they can control their sleep patterns by adjusting their lifestyle as required.

[11]The third treatment option of cognitive-behaviour therapy was discussed by a number of studies[12] (Hryshko-Mullen et al.,[43] 2000, Mimeault and Morin,[29] and Riedel et al.,1995).[48] CBT[49] is a combination of two separate types of[50] treatment. Treatments such as cognitive-behaviour therapy for insomnia were developed as an alternative to medication (Riedel et al.).[51] In the cognitive part, educational activities are used to change irrational beliefs about sleep. In the behavioural part, sleep restriction procedures are used to remove stimuli associated with arousal states (Hryshko-Mullen et al.,[52]). In a study by Morin C.M., Colecchi C., Stone J., Sood R., & Brink D.[53] (1999), patients[32] were told to go to bed only when they were ready to sleep and to get up and do something in another room if unable to fall asleep within fifteen or twenty[54] minutes. These procedures helped to regulate the sleep-wake cycle. Patients[32] learned to link the bedroom with sleep rather than with

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11 Indent first line of each paragraph 5 to 7 spaces or $\frac{1}{2}$ in (p. 213).
12 Don't right justify text (p. 213).
27 Superfluity: change "a lot of" to "many" or give percentage (p. 36).
29 Use "&" inside parentheses (p. 173).
32 Describe participants when discussing study findings relevant to different treatment approaches (p. 89).
33 Incorrect grammar: change "patient" to "patients" to agree with "them"/"their" (p. 30).
34 Use past tense for results of past research (p. 32).
43 This is not first citation of this study, so use first author name plus "et al." (p. 173).
44 Spelling: "effect", not "affect" (p. 21).
45 Don't use plural adjective ("their") with singular noun ("patient") (p. 30).
46 Don't include year of publication in second citation in same paragraph when the authors are first introduced as part of the narrative (p. 174).
47 Build on point to develop argument e.g., define techniques used in CBT (p. 66).
48 Provide active link statement to introduce next treatment under discussion—e.g., "Cognitive-behaviour therapy has been used extensively to treat insomnia in adults (e.g., Hryshko-Mullen et al., 2000; Mimeault & Morin, 1999; Riedel et al., 1995)" (p. 65).
49 In first instance, use full name followed by abbreviation in parentheses (p. 22).
50 Superfluity: delete "types of" and change to "treatments" (p. 36).
51 Sentence does not follow last one logically; delete (p. 44).
52 Include year of publication in second citation in same paragraph if first citation in paragraph comprises both author/s and year in parentheses (p. 174).
53 Delete initials (p. 172).
54 Use numerals for precise time (p. 27).

feelings of frustration and anxiety typically associated with not being able to sleep when in bed (Morin, Colecchi, Stone, Sood, & Brink, 1999).[43]

21

[11]Sleep hygiene was used as part of this cognitive-behaviour treatment and involves increasing patient awareness and challenging irrational beliefs about their insomnia and how much sleep they need[55] (Declerck, Schreuder, & Verbeek,[56] 1999). According to Declerck et al.[57] patients[32] also learn[34] the important relationship between sleep and other health factors such as diet, exercise, caffeine[35] and alcohol.

21

[11]There were some disadvantages to this method,[58] though[59] (Riedel et al., 1995, Mimeault,[36] 1999[60]). These included:
[61]1. Some[62] patients[32] may have been taking sleep medication,
[61]2. Some[62] patients[32] may have exaggerated their sleep improvements, and
[61]3. Most[62] of the samples in the studies were volunteers who did not suffer from chronic insomnia. [63]

21

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11 Indent first line of each paragraph 5 to 7 spaces or $\frac{1}{2}$ in (p. 213).
21 Don't leave line spaces between paragraphs (p. 213).
32 Describe participants when discussing study findings relevant to different treatment approaches (p. 89).
34 Use past tense for results of past research (p. 32).
35 Include a comma before *and* or *or* in series (p. 16).
36 Use both surnames in 2-author citations (p. 173).
43 This is not first citation of this study, so use first author name plus "et al." (p. 173).
55 For better flow, integrate sentence into previous paragraph (p. 37).
56 Cite authors in order listed in published work (p. 173).
57 Citation should read "Verbeek et al." (p. 173).
58 Unclear reference; change "this method" to "the sleep hygiene treatment" (p. 30).
59 Restate at start of paragraph the name of method being discussed (p. 65).
60 Cite studies alphabetically and separate by semicolon (p. 176).
61 Capitalise first word and indent first line of each point; include full stop at end of each sentence; delete "and" after second last point in series (p. 25).
62 Describe study outcomes with precision (p. 50).
63 Discuss implications of disadvantages in detail (p. 51).

CONCLUSION[64]

[11]Comparison of each of the treatments revealed that cognitive-behaviour therapy treatment would seem to be the most effective treatment for long-term management of insomnia.[65] [66] In contrast, pharmacological therapy or medication was more effective in the short term.[67] Medications were shown to have negative daytime affects[44] such as poor memory, fatigue[35] and loss of concentration.[68] Patients are also likely to suffer from withdrawal and get rebound insomnia when they stop taking the medication.[68] [69] [70] [71] Overall, a large amount of research suggests that pharmacological methods are more effective when used in conjunction with cognitive-behaviour therapy.[72] More research is needed in this area before conclusions can be made about the best treatment of insomnia.[73] [74]

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11 Indent first line of each paragraph 5 to 7 spaces or $\frac{1}{2}$ in (p. 213).
35 Include a comma before *and* or *or* in series (p. 16).
44 Spelling: "effect", not "affect" (p. 21).
64 Don't use heading "CONCLUSION" in short essays (under 2000 words) (p. 66).
65 Briefly summarise main benefits of CBT covered in essay body (p. 67).
66 Long-term effectiveness of CBT not covered in critique of this treatment (p. 67).
67 Short-term effectiveness of pharmacological therapy not covered in essay body (p. 67).
68 Don't introduce new material in your conclusion (p. 66).
69 Cite research evidence supporting this statement (p. 172).
70 Briefly summarise pros and cons of self-help therapy as treatment (p. 66).
71 Essay body needs more discussion on effectiveness of self-help therapy (p. 66).
72 Sentence doesn't follow logically from essay body; research on combining therapies inadequately critiqued in essay (p. 65).
73 Be more specific on directions for future research (p. 49).
74 Essay (853 words) does not meet 1500-word required length (p. 67).

REFERENCE LIST[75]
21

[76] [77]Riedel, B.[78] W., Lichstein, K.[78] L.[79] & Dwyer, W.[78] O. 1995,[80]
[81]Sleep compression and sleep education for older insomniacs:[82] self-help versus therapist guidance,[83] [84]Psychology and Aging, vol.[85] 10, no. 1,[86] pp.[87] 54-63.
21

Hryshko-Mullen, A. S., Broeckl, L. S., Haddock, C. K., & Peterson, A. L. 2000,[80]
[81]Behavioural treatment of insomnia:[82] the wilford hall[88] insomnia program,[83] Military Medicine,[84] vol.[85] 165, no. 3,[86] pp.[87] 200-7.[89]
21

Mimeault, V.[79] & Morin, C. M. 1999,[80] [81]Self-help treatment for insomnia: Bibliotherapy with and without professional guidance,[83] [84]Journal of Consulting and Clinical Psychology, vol.[85] 67, no. 4,[86] pp.[87] 511-19.[89]
21

1 Use 12-point type throughout essay, including running head and page numbers (p. 212).
2 On the title page, "Running head:" should be included in the manuscript page header, flush left, with the running head itself following in uppercase. On following pages, omit "Running head:" (p. 62).
21 Don't leave line spaces between paragraphs (p. 213).
75 Heading should be "References", centred on top line (p. 190).
76 List references in alphabetical order (p. 190).
77 References should be in hanging indent format (p. 190).
78 Add single space between each initial (p. 191).
79 Add comma after initial(s) and before "&" (p. 191).
80 Put year of pub. in parentheses and follow by full stop (p. 191).
81 Don't underline (or italicise) title of journal article (p. 191).
82 Include only one space after colon and capitalise first word that follows (p. 191).
83 Use full stop, not comma, after article title (p. 191).
84 Italicise title of publication (p. 191).
85 Don't use "vol." before journal volume number (p. 191).
86 Don't include issue number unless continuous pagination in journal (p. 191).
87 Don't use "pp." before journal page numbers (p. 191).
88 Capitalise proper nouns (p. 191).
89 Write numerals in full in number ranges (p. 191).

Morin, C. M. et al.[90] 1999,[81] Behavioural and pharmacological therapies for late life insomnia: a randomized controlled trial,[83] [84]JAMA,[91] vol.[85] 281, no. 11,[86] pp.[87] 991-9.[89]
21
93 94

[92]Oosterhuis, A., & Klip, E. C. (1995). The treatment of insomnia through mass media, the results of a televised behavioural training programme. Social Science and Medicine, 45, 1223-1229.

[94]Verbeek, I., Schreuder, K., & Declerck, G. (1999). Evaluation of short-term nonpharmacological treatment of insomnia in a clinical setting. Journal of Psychosomatic Research, 47, 369-383.

1 Use 12-point type throughout essay, including running head and page numbers (p. 212).
2 On the title page, "Running head:" should be included in the manuscript page header, flush left, with the running head itself following in uppercase. On following pages, omit "Running head:" (p. 62).
21 Don't leave line spaces between paragraphs (p. 213).
81 Don't underline (or italicise) title of journal article (p. 191).
83 Use full stop, not comma, after article title (p. 191).
84 Italicise title of publication (p. 191).
85 Don't use "vol." before journal volume number (p. 191).
86 Don't include issue number unless continuous pagination in journal (p. 191).
87 Don't use "pp." before journal page numbers (p. 191).
89 Write numerals in full in number ranges (p. 191).
90 Don't use "et al." in reference list; include all author names (p. 191).
91 Don't abbreviate journal names (p. 191).
92 Oosterhuis and Klip (1995) not cited in essay, so delete from reference list (p. 190).
93 Campbell (1998) cited in essay body; provide full reference in reference list (p. 190).
94 The references for Oosterhuis and Klip (1995) and Verbeek, Schreuder, and Declerck (1999) are in correct format. Check the reference list from the Good Essay for the correct formatting of the remaining references (p. 81).

APPENDIX 3

Key to good essay

Good essay

Insomnia in Adults: A Critical Evaluation of

Different Treatment Methods[3]

Jan Silcock[4]

The University of Southern Queensland[5]

1 Running head (p. 62).
2 Manuscript page number (p. 62).
3 Title is no longer than 12 words (p. 62).
4 Name (p. 62).
5 Institution (p. 62).

Abstract[6]

[7]Insomnia is defined as difficulty in falling asleep, difficulty in remaining asleep, or [8]waking early in the morning. Insomnia is most prevalent in women and in older persons. This essay critiques different treatments of insomnia in adults:[9] pharmacological therapy, exercise programs,[10] and cognitive-behaviour therapy. Research evidence indicates that pharmacological therapy is effective in the short term but can have negative side-effects when used in the long term. Moderate levels of exercise can also help to promote sleep quality in adults in the long term. Cognitive-behaviour therapy helps to challenge faulty thinking and behaviours associated with insomnia. The short-term benefits of cognitive-behaviour therapy are evident when it is used either alone or in combination with pharmacological therapy. It will be argued that cognitive-behaviour therapy provides the best long-term results.[11]

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7 Abstract not indented (p. 63).
8 Parallel construction (p. 33).
9 Colon (p. 17).
10 Use comma before *and* or *or* in series (p. 16).
11 Abstract complies with word length (p. 63).

Insomnia in Adults: A Critical Evaluation of Different Treatment Methods[12]

[13]According to Rathus (1999), the three main sleeping problems associated with insomnia are "difficulty falling asleep (sleep onset insomnia), difficulty remaining asleep through the night, and early morning awakening" (p. 217).[14] Insomnia is more prevalent in adults, especially women and older persons[15] (Mimeault & Morin, 1999). Research indicates that up to 10% of adults experience chronic insomnia (Mellinger, Balter, & Uhlenhuth, 1985, as cited in Mimeault & Morin, 1999),[16] resulting in poor daytime functioning at home and in the workplace. Insomnia can also impact negatively on social and personal relationships (Hryshko-Mullen, Broeckl, Haddock, &[17] Peterson, 2000). It is therefore important to find treatments that are effective in the long term and have minimal side-effects. Current treatment methods of insomnia include pharmacological therapy, exercise programs, and cognitive-behaviour therapy (CBT).[18] It will be argued that CBT provides long-term improvements in sleep behaviour.[19]

Pharmacological therapy involves prescribing sedative-hypnotic drugs such as zolpidem or a benzodiazepine. Such medications appear to offer short-term benefits such as repatterning sleep after a long period of disruption (Hryshko-Mullen et al.,[20] 2000). However, benzodiazepines such as temazepam[21] may create tolerance and

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12 Title used to introduce essay (p. 62).
13 Indent first line of each paragraph (p. 213).
14 Direct quote (p. 179).
15 Non-discriminatory language (p. 38).
16 Secondary citation (p. 183).
17 Citations in parentheses use *&* (p. 173).
18 Abbreviations (p. 22).
19 Argument is outlined (p. 45).
20 Use of *et al*. (p. 173).
21 Do not capitalise because not a trade name (p. 22).

dependence over time (Riedel, Lichstein, & Dwyer, 1995), with rebound insomnia occurring on withdrawal (Morin, Colecchi, Stone, Sood, & Brink, 1999). Mental confusion and memory loss can also result from long-term use of benzodiazepines (McDowell, Mion, Lyndon, & Inouye, 1998).

Monti, Alvarino, Cardinali, Savio, and[22] Pintos (1999) examined the effects of melatonin replacement therapy. Melatonin is an endogenous neurohormone involved in sleep whose naturally occurring levels decrease with age (Monti et al.).[23] Ten adults (eight women) aged between 66 and 86 years spent nine[24] nights in the sleep laboratory. Monti et al. used three stages of assessment: baseline (placebo), treatment (3 mg[25] melatonin), and withdrawal (placebo). Data collected from polysomnographic recordings indicated that melatonin replacement therapy was effective in the short term. Half of the participants (four females) showed a reduction in the number of nocturnal awakenings after five nights. This suggests that melatonin replacement therapy may produce an increase in total sleep time and sleep efficiency. The results further indicate that melatonin is free from side-effects, since rebound insomnia was not evident.[26] However, participants interviewed at the completion of the study revealed that they did not notice any improvement in their quality of sleep. Further research is required to establish the role subjective perceptions of sleep play in insomnia.

The Monti et al. (1999) study has a number of limitations.[27] These include the very small sample size and the lack of a control group. A larger and more

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2 Manuscript page number (p. 62).
22 Citations outside parentheses use *and* (p. 173).
23 Second citation of study within same paragraph and author/s introduced as part of the narrative (p. 175).
24 Numbers below 10 (p. 27).
25 Numbers with units of measurement (p. 28).
26 Discussing implications (p. 49).
27 Balancing the arguments (p. 50).

representative sample is required to examine whether the results can be generalised to other age groups and to men. Furthermore, the long-term effectiveness of melatonin replacement therapy remains unknown, since there was no follow-up.

Exercise offers an alternative approach to the treatment of insomnia in adults.[28] A study by King, Oman, Brassington, Bliwise, and Haskell (1997) found moderate exercise in the late afternoon/early evening[29] to be sleep enhancing. A total of 19 men and 29[30] women aged between 50 and 76 years were randomly assigned to either the treatment or the control group. The treatment group engaged in low-impact aerobics, brisk walking,[31] and stationary cycling for a 16-week trial period. They also completed sleep diaries and underwent treadmill exercises to establish baselines. The participants were blind to the treatment aims to lower expectations of improved sleep. The exercise group showed a high exercise adherence rate of 93.6%. The results of the King et al. study indicated that exercise needed to be maintained for about eight weeks or longer[32] to produce the following sleep improvements: reduced sleep onset latency and increased sleep maintenance. The wide age range of participants suggests that results may be generalisable to older persons who experience insomnia (Riedel et al., 1995).

The study by King et al. (1997) has a number of methodological flaws.[33] A small proportion of participants were taking sleep medication, with women receiving hormone replacement therapy in some cases. Therefore, the extent to which exercise alone is

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28 Link statement between paragraphs (p. 209).
29 Slash/solidus (p. 21).
30 Numbers above 10 (p. 27).
31 Comma (p. 16).
32 Use words to represent approximate time (p. 28).
33 Balancing the arguments (p. 50).

responsible for the positive treatment results is unclear.[34] Further research in this area should include polysomnographic data to better measure sleep quality in participants. Participants were also described as having moderate rather than severe sleep complaints at baseline. It is therefore difficult to establish the extent to which exercise offers an effective long-term treatment approach for chronic sufferers of insomnia.

In contrast to pharmacological therapy and exercise, CBT targets the underlying factors associated with insomnia, such as poor sleep habits and stress.[35] CBT allows people to take responsibility for their own treatment either in a self-help format or with therapist guidance (Mimeault & Morin,[36] 1999). The cognitive component of CBT identifies and challenges an individual's faulty beliefs concerning sleep (Hryshko-Mullen et al., 2000). For example, some insomniacs believed that 8 hr sleep was necessary for quality sleep. The behavioural component of CBT seeks to change behaviours that contribute to poor sleep (Hryshko-Mullen et al., 2000).[37] Participants are educated on sleep hygiene factors (e.g.,[38] smoking, alcohol, and caffeine intake) and how these contribute to sleep problems. Stimulus control procedures aim to make the bedroom environment more conducive to relaxation and sleep. This involves removing stimuli associated with arousal states such as eating, reading, working, and watching television (Hryshko-Mullen et al., 2000).[37] Sleep restriction is used to repattern an individual's wake–sleep cycle. Time for sleep is limited quite severely in the initial stages,[39] then

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34 Discussing the research evidence (p. 102).
35 Link statement between paragraphs (p. 209).
36 Two authors (p. 173).
37 Include year of publication in subsequent citations in same paragraph if first citation in paragraph comprises both author/s and year in parentheses (p. 175).
38 Latin abbreviations (p. 177).
39 Commas used to link elements of sentence (p. 25).

increased gradually as sleep efficiency improves. Relaxation therapy is also used to promote sleep (Hryshko-Mullen et al., 2000).[37]

Hryshko-Mullen et al. (2000) used CBT and stress management procedures to treat 42 military personnel (22 females) who reported sleep maintenance problems. The average age of the group was 53.6 years.[40] CBT was used in six training sessions. Two individual treatment sessions were also administered both during and after the program. Participants maintained sleep diaries throughout the trial and showed a 53%[41] decrease in sleep onset latency and a 40% decrease in waking after sleep onset. Participants also reported improved sleep efficiency, suggesting that CBT was effective in the short term.[42] There is some evidence to support the long-term effectiveness of CBT with improvements maintained around the three month follow-up.

There are a number of factors that limit the generalisability of the Hryshko-Mullen et al. (2000) results.[43] These include the absence of a control group and the underrepresentation of women in the sample. Furthermore, the extent to which the results can be generalised to non-military adults remains questionable. Further research using more representative samples is needed.

A study by Morin et al.[44] (1999) treated chronic insomniacs by administering pharmacological therapy and CBT either separately or in combination. The 78 participants were randomly allocated to one of four groups: (a) CBT, (b) pharmacological

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2 Manuscript page number (p. 62).
37 Include year of publication in subsequent citations in same paragraph if first citation in paragraph comprises both author/s and year in parentheses (p. 175).
40 Use numbers to represent precise time (p. 28).
41 Numbers representing percentages (p. 27).
42 Discussing the implications (p. 50).
43 Balancing the arguments (p. 50).
44 Use of *et al.* (p. 173).

therapy, (c) CBT and pharmacological therapy, and (d) placebo.[45] A total of 72 participants (six[46] withdrew) completed treatment in over 8[40] weeks. Outcome measures—[47]daily sleep diaries, polysomnography, and clinical rating scales—[47]were taken before and after treatment. Follow-up measures were taken 3, 12, and 24[40] months after treatment. The posttreatment results indicated that a combination of CBT and pharmacological therapy was more effective than either treatment alone in the short term. Improvements in sleep maintenance and sleep efficiency were also noted in the long term. However, CBT outperformed the pharmacological and combined treatments at the 24-month follow-up. This supports the short-term benefits noted by Hryshko-Mullen et al. (2000)[48] and indicates that sleep improvements are better sustained over time with CBT.

In conclusion,[49] pharmacological therapy is an effective short-term approach to the treatment of insomnia. Given the negative side-effects associated with pharmacological therapy, however, the value of other treatment approaches merits further investigation. Lifestyle factors such as moderate exercise can have positive effects and offers a healthy alternative to pharmacological therapy.[50] In contrast, CBT is cost effective and shows positive results in alleviating symptoms in the long term. CBT may be used alone or in combination and is most effective[51] when tailored to meet the individual needs of the chronic insomniac.[52]

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2 Manuscript page number (p. 62).
40 Use numbers to represent precise time (p. 28).
45 Point form to list items in a series (p. 25).
46 Numbers below 10 (p. 27).
47 Em dash (p. 18).
48 Compare and contrast research findings (p. 61).
49 Conclusion (p. 66).
50 Briefly summarise main benefits of each treatment (p. 67).
51 Argument made in favour of one treatment (p. 66).
52 Essay (1445 words) meets 1500-word target (p. 67).

References[53]

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1 Running head (p. 62).
2 Manuscript page number (p. 62).
53 Start reference list on new page (p. 190).
54 Reference list in alphabetical order (p. 190).
55 References use hanging indent format (p. 190).
56 Example of journal reference (p. 191).
57 Example of electronic journal article reference, no DOI (p. 199).
58 Example of electronic journal article reference, with DOI (p. 199).

Morin, C. M., Colecchi, C., Stone, J., Sood, R., & Brink, D. (1999). Behavioural and pharmacological therapies for late life insomnia: A randomised controlled trial. *The Journal of the American Medical Association, 281*, 991-999. Retrieved from http://jama.ama-assn.org/

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Riedel, B. W., Lichstein, K. L., & Dwyer, W. O. (1995). Sleep compression and sleep education for older insomniacs: Self-help versus therapist guidance. *Psychology and Aging, 10*, 54-63. Retrieved from http://www.apa.org/psycarticles/

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2 Manuscript page number (p. 62).
59 Example of book reference (p. 193).

APPENDIX 4

Key to Good Quantitative Research Report

Good report

Similarity in the Attitudes and Activity Preferences of

Friends and Strangers[3]

Nancey Hoare[4]

University of Southern Queensland[5]

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3 Title is no longer than 12 words (p. 62).
4 Name (p. 62).
5 Institution (p. 62).

Abstract[6]

[7]A survey was carried out among university students and their friends to determine whether same-sex friends were more similar than same-sex strangers in their attitudes and preferred activities. The 756 participants each completed an attitudes and activities survey and they were later grouped into 198 friend or 180 stranger dyads. Results indicated that the attitudes of friends were more similar than those of strangers on the issues of abortion and law and order, but not on environmental or multicultural issues. However, the study found no differences between friends and strangers in the similarity of the activities they preferred. Further research is needed to clarify the role of similarity in friendship. This research needs to consider the strength of values behind particular attitudes, the duration of the friendships, and whether using more specific categories of activity types could produce different results.[8]

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2 Manuscript page number (p. 62).
6 Abstract heading, centred (p. 63).
7 Abstract not indented (p. 63).
8 Abstract within recommended word length (p. 86).

Similarity in the Attitudes and Activity Preferences of Friends and Strangers[9]

[10]Many researchers have been interested in determining what characteristics form the foundations for interpersonal relations. Similarity has been emphasised as one of the main predictors of interpersonal attraction and friendship development (Vaughan & Hogg,[11] 1995). Some other influencing factors include physical attractiveness, proximity, familiarity, and availability (Vaughan & Hogg, 1995). Several studies (e.g., Fink & Wild, 1995; Kandel, 1978; Lea & Duck, 1982; Werner & Parmelee, 1979[12]) examined whether friends were more similar than strangers in terms of such factors as leisure activities, attitudes, and values. These studies have produced mixed results. Some researchers have found similarity of attitudes or values to be more predictive of liking. Others have found similarity of activities to be more influential (Vaughan & Hogg, 1995).[13]

According to Heider's Balance Theory (1946, as cited in Vaughan & Hogg, 1995[14]), individuals prefer to have relationships with those whose attitudes are consistent with their own. This avoids negative psychological tension. For example,[15] individuals who are strong advocates of industry may not be attracted to people who are passionate about environmental protection. Such polarised beliefs are likely to create tension within a relationship. Balance Theory proposes that friends with such

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11 Two-author citation (p. 173).
12 Multiple citations listed in alphabetical order (p. 176).
13 Year of pub. included after first citation within same paragraph if first citation in paragraph comprises both author/s and year in parentheses (p. 172).
14 Secondary citation (p. 183).
15 Do not abbreviate outside parentheses (p. 177).

polarised beliefs try to maximise[16] congruency either through mutual influence or by changing their own attitudes and behaviours (Fink & Wild, 1995[17]).

Values serve as the foundations upon which attitudes are formed and may impact upon friendship development (Vaughan & Hogg, 1995[17]). Lea and Duck (1982) found that similarity on values which people either strongly endorse or reject significantly influence friendship in the development (i.e., during the first 6[18] months) compared to values about which they are indifferent or neutral. Lea and Duck also found that participants most often chose people who shared uncommon values as their friends. McCarthy and Duck (1976) conducted a study on attitude similarity of 30 same-sex dyads in different stages of friendship development. They found that dissimilarity in attitudes appears to be attractive in the tentative stages of friendship development (i.e.,[19] 1 to 6[18] months); however, established friendships of about twelve[20] months' duration favoured total attitude similarity.

Alternatively, it has been argued that activity similarity is more predictive of liking. Werner and Parmelee[21] (1979) compared the attitudes and activities of 24 same-sex friends. They found that friends had greater similarity in their activities than their attitudes. No gender effects emerged in their study. Likewise, Kandel (1978) found similarity was significantly higher on behaviours than on attitudes in a study of 1879 same-sex adolescent friendship dyads. Kandel's study revealed that although similarity varied greatly on different dimensions, the highest attitude and activity similarity for both males and females was drug-related.

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17 Year of pub. cited at least once in each paragraph (p. 172).
18 Numbers representing precise time (p. 27).
19 Latin abbreviation (p. 177).
20 Use words to represent non-precise time (p. 28).
21 Two-author citation (p. 173).

The present study aimed [22] to determine whether same-sex friends are more similar than same-sex strangers in their attitudes and preferred recreational activities. From the research examined, it was anticipated that irrespective of gender, similarity of both attitudes and activities influences friendship development. It was hypothesised[23] that same-sex friends would show more similar attitudes to the environment, abortion, multiculturalism, and law and order than would same-sex strangers. It was also hypothesised that same-sex friends would be more similar than same-sex strangers in the active, passive, social, and creative activities they preferred.

Method[24]

Participants[25]

The 756 participants in this study consisted of 396 undergraduate psychology students from the University of Southern Queensland (USQ)[26] and 360 of their same-sex friends. Of the two conditions in the study, the friend dyads consisted of 109 males and 287 females, with ages ranging from 17 to 52 years, and a mean age of 26.98 years[27] (*SD*[28] = 5.49). The stranger dyads consisted of 71 males and 289 females, with ages ranging from 17 to 78 years, and a mean age of 28.43 years (*SD* = 6.29). Eighty-three percent[29] of the participants were Anglo-Australians and 69% were Christians. Students received course credit for their participation. Participation by the students' friends was voluntary, with no incentives offered.

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22 Research aims written in past tense (p. 32).
23 Hypotheses should not be numbered (p. 87).
24 Method heading (Level 1) (p. 89).
25 Level 2 heading should be flush left, bold, upper- and lowercase (p. 89).
26 Abbreviation (p. 22).
27 Descriptive statistics about age of participants (p. 91).
28 Statistical symbols (p. 93).
29 Numbers at the beginning of a sentence (p. 29).

Materials[25]

The 28-item Attitudes and Activities Survey was constructed to measure participants' attitudes and activity preferences. The first 16 items of this survey were designed to measure attitudes towards four topics: the environment, abortion, multiculturalism, and law and order. Each topic consisted of four[30] direct statements (e.g., "Abortion is morally wrong"), and participants were instructed to rate the strength of their agreement to the statement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).[31] Scores for each attitude topic could theoretically range between 4 and 28.[32]

The last 12 items in the survey were designed to measure activities in four categories: active, passive, social, and creative. Each category comprised three items (e.g.,[19] "Visiting people"). Participants were instructed to rate their enjoyment of each of the activities on a scale from 1 (*not enjoyable*) to 4 (*very enjoyable*).[31] Thus, scores for each of the four activity categories could theoretically range between 3 and 12.[32]

A demographic data sheet that asked for information such as gender, age, nationality, and student status was also included.

Procedure[25]

All 396 student participants received two copies of the survey. They were instructed to complete one copy and recruit a same-sex friend to complete the other. Apart from being the same sex, the chosen friend also had to meet the following criteria:

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19 Latin abbreviations (p. 177).
25 Level 2 heading should be flush left, bold, upper- and lowercase (p. 89).
30 Numbers below 10 (p. 27).
31 Scale anchors (p. 27).
32 Numbers that represent scores on a scale (p. 27).

They had to be [33](a) at least 17 years of age, (b) not currently enrolled in the Social Processes of Behaviour course, (c) not a relative, and (d) a close friend rather than just an acquaintance. Participants were instructed to complete the surveys and return them to the USQ[26] in sealed envelopes provided to ensure anonymity of responses. Half of the student surveys were kept together as intact friend dyads, while the remainder were separated and randomly paired with another participant of the same sex to form stranger dyads. Questionnaire pairs that did not meet the required criteria were discarded ($N = 18$).[28] The course lecturer scored and analysed the data using the Statistical Package for Social Scientists (SPSS, standard version 6.1.2, 1995[34]).

Results[35]

An initial analysis of the data found no significant gender differences on any of the attitudes or activities. Gender also did not interact with relationship type. Therefore, data for males and females were pooled and results are presented for the combined data. The mean difference scores for attitudes of friends and strangers are presented in Table 1.[36]

The results from Table 1 indicate that with an alpha level of .05,[37] friends were more similar than strangers in their attitudes towards abortion, $t(179) = 2.85$, $p < .01$.[38] A significant mean difference[39] was also observed between friends and strangers on their attitudes towards law and order, $t(179) = 1.97$, $p < .05$.[38] There

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2 Manuscript page number (p. 62).
26 Abbreviation (p. 22).
28 Statistical symbols (p. 93).
33 Points in series (p. 25).
34 Statistical package described (p. 92).
35 Results heading (Level 1) (p. 90).
36 Table numbers (p. 96).
37 Level of probability (p. 92).
38 Reporting statistics (p. 91).
39 Reporting statistically non-significant findings (p. 92).

were no significant differences between friends and strangers in their attitudes towards environmental or multicultural issues ($p > .05$).[39]

Table 2[36] presents the mean difference scores for preferred activities of friends and strangers. As shown in Table 2, the preferences of friends and strangers for active, passive, social, and creative activities did not significantly differ ($p > .05$).[39]

Discussion[40]

[41]As anticipated, males and females paired with either friends or dyads reported similar attitudes and preferred activities. This finding supports[42] the results of Werner and Parmelee (1979) and Kandel (1978) where same-sex friends were sampled. The results provide partial support for the hypothesis[43] that friends would have more similar attitudes than strangers. Results indicate that friends were more similar than strangers in their attitudes towards abortion and law and order issues, but no more similar in their attitude towards multicultural or environmental issues. Values might have influenced participants' responses to the attitude survey items. The four attitude categories touch on topics that could be considered controversial in present-day society. As a result, those topics might evoke strong emotional responses from participants who feel quite strongly about them.[44]

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2 Manuscript page number (p. 62).
36 Table numbers (p. 96).
39 Reporting statistically non-significant findings (p. 92).
40 Discussion heading (Level 1) (p. 102).
41 Begin discussion with summary of main findings (p. 102).
42 Use present tense to discuss the results (p. 102).
43 Discuss support or non-support of hypothesis (p. 102).
44 Detailed analysis of the results (p. 103).

For example, 69%[45] of participants in this study hold Christian beliefs. For those people, abortion issues may have a higher value than environmental or multicultural issues.[46] These people may not be willing to compromise their values for friendship. Also, strong personal safety issues might have influenced responses to the law and order items. The strength of such personal opinion might not have been as great for items relating to multicultural or environmental attitudes. Given that previous research by Lea and Duck (1982) found a relationship between strongly accepted values and friendship development, value judgements could have influenced the present results. While friends may influence each other's attitudes to some degree, it may be that higher-valued attitudes need to be more congruous than values that an individual regards as less. Dissimilarity on important values could cause an imbalance of cognitions. As a result, friends may try to influence each other to change their attitudes on these issues, to correct this imbalance.

Duration of friendship is a variable that may have confounded the effects of attitude similarity in the present study.[47] McCarthy and Duck (1976) found that in the early stage of friendship development (1 to 6 months), individuals prefer others who are mildly or highly dissimilar in their attitudes. In this study, while students were instructed to recruit a close friend, there were no limitations on the length of acquaintance. Therefore, some friendships may have been in the tentative stages,

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45 Numbers that represent percentages (p. 27).
46 Discuss the implications of the findings (p. 103).
47 Discuss limitations of the study (p. 103).

where dissimilarity of attitudes may be more attractive. To address this limitation in future research, participants could be asked to indicate how long they have been friends.[48] Another option is to apply a restriction to long-lasting friendships (i.e., friends about six months or more).[49]

The results did not support the hypothesis that friends would be more similar than strangers in the active, passive, social, and creative activities they preferred.[43] These findings differ from those of previous studies (e.g., Kandel, 1978; Werner & Parmelee, 1979), where activity similarity was reported to be higher between friends than strangers. This could be attributed to the types of activity items used in the present survey. The 12 activity items were very general (e.g., listening to music), which most people are likely to enjoy to some extent. There were no survey items relating to more specific, uncommon, or deviant activities. Further research could incorporate more specific items (e.g., playing tennis and knitting), less common activities (e.g., hang gliding, bull riding, and rock collecting), or more deviant activities (e.g., legal or illegal drug use), to determine whether they would exert a stronger influence on friendship development than the more subdued activities used in this study.[48]

A further limitation of the study was the wide age range. Differences in developmental stages might have influenced attitude and activity preferences.[47] Friends at different developmental stages may engage in different types of activities.

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43 Discuss support or non-support of hypothesis (p. 102).
47 Discuss limitations of the study (p. 103).
48 Suggestions for further research (p. 103).
49 Use words to represent non-precise time (p. 28).

Attitudes may also vary in importance depending on participants' ages. Future research could overcome this problem by analysing different age groups separately.

[50]Overall, the results of the study suggest that people do not have to be similar in all of their attitudes and preferred activities to become friends. It may be that similarity of attitudes associated with strongly held values is important in friendship development, but those that are less value-laden may not be as important. Further research could include a measure of values, consider the friendship duration, and cover more diverse activities to clarify the role of similarity in friendship.

1 Running head (p. 62).
2 Manuscript page number (p. 62).
50 Conclusion (p. 66).

[51]References[52]

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[54]Kandel, D. B. (1978). Similarity in real-life adolescent friendship pairs. *Journal of*[55] *Personality and Social Psychology*[56], *36*, 306–312. Retrieved from http://www.apa.org/psycarticles/

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McCarthy, B., & Duck, S. W. (1976). Friendship duration and responses to attitudinal agreement-disagreement. *British Journal of Social and Clinical Psychology, 15*, 377–386.

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Werner, C., & Parmelee, P. (1979). Similarity of activity preferences among friends: Those who play together stay together. *Social Psychology Quarterly, 42*, 62–66.

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2 Manuscript page number (p. 62).
51 Start reference list on new page (p. 190).
52 References heading (p. 190).
53 References listed in alphabetical order (p. 203).
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58 Example of book reference (p. 193).

[59] [63]Table 1

Mean Difference Scores for Attitudes of Friends and Strangers[60]

Relationship type[61]	Attitude topic							
	Abortion		Law		Environment		Culture	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Friend[a]	6.12	0.18	2.98	0.47	2.96	0.23	4.49	0.39
Stranger[b]	8.97	0.12	4.95	0.34	3.29	0.25	5.01	0.56
Difference *t* statistic	2.85**		1.97**		0.33		0.52	

[62]*Note*. Mean differences scores could theoretically range from 0 to 24, with lower scores indicating greater similarity of attitudes. Law = law and order. Culture = multiculturalism.

[a]$n = 198$ for friends. [b]$n = 180$ for strangers.

*$p < .05$. **$p < .01$.[64]

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[59] [63]Table 2

Mean Difference Scores for Preferred Activities of Friends and Strangers[60]

Relationship type[61]	Activity category							
	Active		Passive		Social		Creative	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Friend[a]	1.92	0.31	1.54	0.42	1.77	0.54	2.67	0.71
Stranger[b]	2.06	0.15	1.59	0.33	1.64	0.60	2.43	0.69

[62]*Note*. Mean differences scores could theoretically range from 0 to 9, with lower scores indicating greater similarity of preferred activities.

[a]$n = 198$ for friends. [b]$n = 180$ for strangers.

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