## 2.2    Information Gathering

All undergraduate psychology assessments will require you to read some material on the chosen topic. You need to decide what to read, and how much from the enormous amount of information available within the discipline of psychology and related areas. There are two important considerations that should guide your thinking on this issue. First, the information you are given about your assessment is the best guide to the topic and scope of the project. For example, you may be directed to a single assigned or key reading. Alternatively, a research report might require you to justify a hypothesis that requires you to find and read several sources to build your argument. The second broader consideration is that both undergraduate and postgraduate psychology courses in Australasian universities are based on a *scientist/practitioner* model of psychology. The aim of these programs is to build understanding of the **scientific method** and eventually to develop evidence-based practice. That is, practice is based on knowledge that has been gained using accepted methods of scientific study. As a result, assessments are designed to build skills in scientific inquiry and the scientific method. This broad aim will, therefore, guide the information you will use.

**The scientific method.** You will learn more about the scientific method throughout your psychology studies as it is the basis of modern psychology and other sciences. The scientific method is an approach to learning about the world that, in the simplest terms, involves (a) observation; (b) hypothesis generation; (*c*) hypothesis testing via data collection using methods that are as objective as possible; and (d) the development or revision of **theory** from findings (e.g., Popper, 1959). In addition, the scientific method requires that the hypotheses and eventually the theory must be phrased in such a way that if they turn out to be wrong this can be discovered (i.e., falsification); and the method and findings must be reported in such a way as to be able to be replicated. That is, any researcher following your procedure (i.e., participants, materials or measures, protocol) should find a similar result. In so doing, researchers in psychology can gain understanding about people that can be communicated, re-tested for increased confidence and refinement of findings, and used as the basis for new questions (for more about this see https://osf.io/ezcuj/wiki/home/).

The scientific method provides some pretty strict rules about *how* psychology research is undertaken, but there are many ways of conducting research that broadly fit this ideal. In undergraduate psychology, you are likely to come across experiments, quasi-experiments, correlational methods, observational studies, case studies, and other quantitative studies that use the scientific method. There is also extensive qualitative research in psychology that is focused on individuals' experiences and their meanings, but you are less likely to encounter it at undergraduate level. Nonetheless, the key thing to remember is that these many approaches have more in common than it might seem because they are all based in the scientific method. As a result, it is possible that any of these approaches might provide useful information for your assignments in undergraduate psychology units. So on to the next big question: How do I find quality sources?

**What is a quality source?** Different sorts of publications serve different purposes. Newspaper and magazine reports, as well as blogs, are written for the layperson who is not expected to be trained in the scientific method. Importantly, these sources can range from well-researched (e.g., *The Conversation* is an online magazine presenting articles by academics for a more general audience) to opinion pieces that may contain no verifiable information. In contrast, journal articles are usually written for people who are not only scientifically trained but are typically professionals working in the area or topic that the study examines. They tend to be peer-reviewed, which means that the information presented is judged to be of high quality and to contribute to knowledge on a very specific topic. In contrast, a textbook is likely to discuss a broad range of established theories and findings related to a general topic, although in much less detail than a journal article. As a result, how useful a particular journal article is depends on what you need it for.

You should always begin your information gathering by reviewing the assignment information. It will likely provide you with essential or recommended reading. However, you might like to get a basic orientation before you launch into the recommended reading. This can help you to not be overwhelmed by the terms – or by the theory, if it's not already familiar to you. In this case, a good place to start your researching for almost any assignment is your textbook. It should provide you with a general overview of the area of interest, is likely to provide you with definitions, and should mention one or more studies in that area with the full citations. It may be acceptable to cite your textbook in your first few research reports or essays, especially in the Introduction section as you define the topic and key concepts of your paper. However, in later years your lecturer or tutor will expect fewer textbook citations and many more references to specific journal articles.

If you need to find additional research for your assignment, you can try to find a review article on your topic. Reviews are not published in all psychology journals, but they will come up when searching databases, and most will include the term "review" in the title (see Chapter 7 for more on types of reviews). A relevant review will help enormously because it summarises a good deal of knowledge in that area. This is also true of meta-analyses, which go one step further and include a quantitative assessment of some aspect of the research that may or may not be relevant to your research but will also include a substantial critical review of the topic (see Chapter 7, Section 7.3.2, for an introduction to meta-analyses).

Some topics might allow or require you to consider people's views or popular opinion. For example, an essay might usefully compare academic and popular understandings. In such cases, you could include not only specific studies but also opinion pieces, which may be found in web pages, magazine articles, and perhaps even newspapers, television, or radio. The value of these materials lies in their ability to present debate or opinion, as well as demonstrating real-world applications or implications that may not have been directly studied. However, it is very important to understand that even well-researched and reasoned opinion pieces are not equivalent to research-based **evidence** as reported in journal articles. This is because the conclusion reflects different types of information (e.g., opinion versus data), as well as differences in the process of information gathering (e.g., the scientific method versus bibliographic research) and publishing (e.g., peer

review versus edited media). It is also worth noting that not all non-academic sources are of equal quality. For example, large publishers such as News Corp and Fairfax cater to different audiences, affecting both what is published and how it is presented (e.g., Hamborg et al., 2019). Even so, journalists observe professional standards and codes that include required levels of evidence. This may not be the case for an individual blogger or presenter. Assessment of source quality and selective use of non-academic sources is vital in any academic writing.

Using academic sources ensures a level of quality. What you need to be aware of is that publications vary in the way they report information, and this can affect their quality. Psychology, like other scientific disciplines, uses a method of peer review to decide if studies are worth publishing, which means that several well-qualified professionals have judged the article as being of sufficient quality to publish in a professional journal. This also means you can be confident that an article in a professional psychology journal is an acceptable one to cite in an assignment. That doesn't mean it is perfect or that you can't criticise it, but it does mean that the article has been found to make a meaningful contribution to the discipline.

**How do you find relevant articles?** You will almost always be given one or two journal articles as assigned readings. They may be provided to you via a link, or they may be accessible through web-based systems like Blackboard or WebCT. If, however, you are given only the full citation, we would strongly encourage you to try accessing it via your library rather than contacting your lecturer for the paper. These journal articles have been given to you because they are of specific relevance to your assignment. For this reason, it is *essential* you take the time to read them and understand why they have been assigned. These journal articles will probably give you a feel for the area in question and will help you find additional articles of relevance either by looking through the References section in these articles or by exploring articles which have subsequently cited them (e.g., by using the "*cited by*" link in Google Scholar or "*times cited in this database*" link in *PsycINFO*). Your textbook may also provide a context for your report, usually the classic journal articles for a particular area of psychology or authors whose other publications you can explore.

The next place to look is one of the popular online databases. Commonly used ones are *PsycINFO, PsycARTICLES, Scopus, Web of Knowledge, Web of Science*, and *Academic Search Complete*. Your library will probably have training sessions in-person or online on how to set up an account, undertake searches, and save articles. The earlier you learn these skills in your studies, the better! You can search databases by author, article title, abstract, or keyword. For your purposes, the keyword is most relevant. The more specific you can make the keyword, the better, because there is a huge body of literature available. If you just ask for "depression" you will get thousands of articles, and then how do you choose which to look at? If you are examining a particular group, say adolescents, add that to the keywords and limit the search (adolescents *and* depression). In this particular case, you will still get a large number of journal articles, so refining what you ask for as much as you can is a good idea (further discussion of how to search can be found on page 149).

Make a judgment, based on the title, of how relevant each journal article is to your particular assignment, then select the most pertinent ones and read the Abstract. Do this for a small number and, if they are easily available, briefly look through the articles. You will often find that several of the articles you look at will cite the same earlier articles. This is a clue that the earlier work is central to the area and is therefore worth looking at.

You should be able to access full-text versions of articles in the most frequently used journals dating at least back to the mid-1990s, and many more from much earlier. Because they are easily accessed, there is a temptation to use only modern journal articles; this will often be a good idea, as it will give you the contemporary view of the phenomenon and probably addresses all the progress made to date. However, it is valuable to bear in mind that many studies that are run as the basis of first-year research reports are replications of classic psychology research, which may mean you need to read several key papers from across the last five decades. This may involve locating hardcopies held in the Periodicals section of your library (or those of nearby universities).

One final point on the articles you use in your assignments is that although it is acceptable to use some secondary sources in first-year assignments, for example, "Smith et al. (1999 as cited in Jones et al., 2018)", this is often frowned upon by markers at other year levels. In later years, you are expected to have read the original study or to use another original source to make or support your argument. If you cannot access the primary source, do not simply cite it from the References of the journal article you do have, especially if this primary source is older, foreign, or a textbook. The fact that you have not read it is easily detectable (e.g., a simple search of your library's holdings will reveal the absence of the resource), and suggesting that you have used a journal article you haven't even read may also be considered a breach of academic honesty.

If your assignment supports the scope of using non-academic sources, for example, you might use internet material to report that a particular topic is popular or has received considerable attention in the sense of having many entries over a range of dates. You should use a search engine such as Google which allows you to choose the materials you are searching (e.g., images, news), as well as limiting the scope to specific languages or regions if this is important, via the *advance search* feature. Once the search is returned, you will need to use considerable **critical thinking**, as it is important to be selective and to use the most relevant and highest quality sources. Relevance will reflect the degree to which the source speaks directly to the point you are trying to make. This might mean using an internet poll, or *tweets* which can provide direct evidence for popularity or public sentiment. In such a case, quality is determined by the representativeness of the sample (e.g., news polls are typically conducted by organisations who undertake random sampling). In judging the source quality of opinion pieces, you might be tempted to use the authority of the author. We would caution against using this as basis for determining quality because even though a professor or government advisor may be a significant authority in a particular topic, an opinion piece by them outside that topic may only have the same worth as one by your next-door neighbour or the woman you see walking her dog in the morning.

Having selected the most relevant and highest-quality non-academic sources, you need to be careful how you report this material. Specifically, you need to make it clear whether you are reporting a matter of opinion, a public poll, tweets, or even unpublished research. Depending on the way the essay question is framed, you may then argue for or against the opinions expressed, using evidence from other readings or research. Remember the difference between an opinion and a well-supported argument is that the latter presents well-chosen, clearly described evidence. This is what your lecturer and tutors will be looking for.

**Some web resources.** Having said all that, the web is great for generally exploring a topic. It allows you to narrow the scope of your inquiry, and possibly discover some of the names of researchers current in the field whose formal publications you can then access, as well as pointing to material that is both more controversial and more current than journal articles or books (i.e., it can take months or even years from draft to publication). In addition, publication biases like the tendency to publish only significant findings can affect what is available in academic journals far more than what appears on the internet. That is because almost all universities have websites, and many academics maintain their own pages discussing their current research, often with links to related material. In addition, sites like arXiv (https://arxiv.org/) include pre-prints of published works as well as those that are under review or have been rejected.

Below are some web addresses you may like to explore. In contrast to using a search engine to find a specific topic, these sites will help you negotiate academic materials on a topic. Some include both published and unpublished sources.

Here are sites maintained by the peak bodies of psychology in Australia and America:

> Australian Psychological Society: www.psychology.org.au
> American Psychological Association: www.apa.org
> Association for Psychological Science: www.psychologicalscience.org

These sites have a lot of information relevant to professional psychologists, which won't be of immediate relevance to you, although they will give you a flavour of what is important to psychologists. However, they do have links to student resources.

We're reluctant to give just a few sites in case they are somehow thought to be special. They aren't. They are just ones we've found when we've been looking. There are plenty more out there, and they may well be better than these. Having said that, here is one site that has copies of some of the most famous papers in the history of psychology and allows you to search them by author or topic:

> http://psychclassics.yorku.ca

A site for information within the general area of social psychology is:

> http://www.socialpsychology.org

A similar site maintained by the Society for Personality and Social Psychology, which has a students' corner, is:

> http://www.spsp.org

Some blogs that you may find interesting and useful are:

> https://theconversation.com/au
> https://www.sciencedaily.com/news/science_society/
> https://mindhacks.com/
> http://www.spring.org.uk/
> http://www.psychologicalscience.org/news/were-only-human
> http://www.badscience.net/ (more than psych, but good on science)

Happy searching – but don't get carried away!

## 2.3    Evaluating Internet Resources

This section has been called "Evaluating Internet Resources", but the advice applies equally well to various media such as magazines, newspapers, blogs, and podcasts. The quality of such material is enormously variable, and you should not even consider citing newspapers or magazines as sources on academic theory or scientific data. However, if you are asked to examine popular opinion or the public perception of psychological practices, media – including the internet sources – may be a good source of evidence.

The internet itself provides information on how to evaluate internet material. One website that we like (though there are others) is https://www.virtualsalt.com/evalu8it.htm by Harris (2018), which is specifically written to assist people in evaluating internet research sources. Harris (2018) suggests that a good way to evaluate material is to use a checklist with the acronym CARS, for Credibility, Accuracy, Reasonableness, and Support.

Credibility involves assessing and judging how likely the author is to be knowledgeable and trustworthy. For example, does the source include a named author? If so, what biographical information is provided? Is the author an expert in the field, or do they have relevant experience? Do they cite material from scientific sources, such as journal articles, which can be checked by you? Are they employed by a recognisable institution, and what sort (university, government department, research organisation)? While you are not expected to recognise the professional standing of particular individuals, you can at least be more confident of the trustworthiness of material on the home page of an academic at a university or major research institution than that of a person whose affiliation is unknown.

Accuracy covers a range of issues including breadth of material presented, whether specifics are provided, and whether there is bias present. All of these can be very difficult to assess if you are not already quite familiar with the topic. Try asking the question: Does the source provide a context and provide limits to the topic or effect being discussed? Few things are ever universally or unconditionally true. In terms of specifics provided, this will be dictated, at least in part, by the intended audience. For example, if it is aimed at a professional audience there should be more specific detail than if the intended audience is school children or the general public. Timeliness can also be important to accuracy because some topics (e.g., neuroscience) develop fairly quickly and therefore it is important to check the publication date. However, don't be too quick to judge journal articles published before you were born. Only those that

were incorrect have been updated and there are some things that are still as correct today as when they were first observed.

Harris (2018) describes reasonableness as a quality criterion that includes judgments of whether the article is fair, objective, moderate, and consistent. Just as with accuracy, this can be hard to judge if you don't know the topic well. Does the source present information in a fair and balanced way, including reporting information or arguments contrary to its own point of view? Is it trying to persuade by making you feel rather than think clearly about its arguments? This approach can often be detected by the use of ridiculous counter-examples (i.e., a "straw man") or sarcasm, and while we cannot be totally objective, it is essential to beware of articles written in strongly slanted ways. For example, the author's political or ideological views may guide what is presented and can be very noticeable if at odds with your own views but can be hard to identify if consistent with your views. Try asking yourself, "What does the writer gain or achieve from convincing me of their point of view?" Also, run reality checks on what seem like unusual or extreme claims. Because psychology deals with how people think and behave, you are already a good amateur psychology theorist or you wouldn't be able to function in society. If a claim seems contrary to your experience, look for more information, but try to keep an open mind. Moderate and conditional claims are more likely to be accurate.

The final criterion for judging quality is support, which refers to the evidence cited in support of the claims made (Harris, 2018). Claims of fact and statistics frequently come from other sources, and an argument is more credible if those sources are also credible. Does the author cite their own sources of information? For example, articles published in *The Conversation* are typically written for a general audience by academics on topics that they research or teach and frequently cite the academic's own research as evidence. Few media sources are as well evidenced. One solution is to find the most popular perspective (i.e., a few articles that agree with each other), which allows you to be more confident of the claims being made. However, that popular view may be all based on the same dubious source (e.g., eight glasses of water a day is widely cited as the ideal intake, but this view has no scientific support). A related idea is the "given-new" principle proposed by communication scholars, which suggests that, when giving new information, it is better understood if linked to something already known (Haviland & Clark, 1974). As a reader, this means you can compare what you are being told in the article with things you already know from other areas of your study. If the new information is totally inconsistent with something you have already learned, then you can afford to treat it as suspect, at least until proven otherwise.

The process of choosing what material is relevant to your particular writing project needs more than just being careful about the source. It also requires you to think critically about the content. This is the subject of the next section.

## 2.4   Critical Thinking

In the previous chapter we said that assignments in most of your university subjects, and especially in psychology, require you to demonstrate the skill of critical thinking. Critical thinking is not nitpicking or disagreeing with what you read. It involves gaining clear understanding of

the information that has been presented and being able to identify the strengths and weaknesses of this information. For the purposes of preparing an assignment in psychology, a definition of critical thinking is "a logical and rational process of avoiding one's preconceptions by gathering evidence, contemplating and evaluating alternatives, and coming to a conclusion" (Smith, 1995, p. 2). In practice, critical thinking is a **generic skill** of demonstrating your unbiased awareness of the strength of a position with regard to the evidence presented in support of it. The application of this skill maintains one of the major values of good science – an **organised scepticism** and a critical awareness of the need to support any claims you make with adequate evidence.

**Critical thinking and the scientific method.** You will probably have been told in some of your early lectures that psychology is a science because of the *way* it investigates thought and behaviour. The scientific method generally starts from an observation, which leads to conjecture about the way the world works, which becomes the basis for a prediction about what will happen, at least in that situation, in future. A hypothesis is the operationalised form of this prediction using variables that can be measured, which is then tested. The data collected is then considered against the hypothesis and is interpreted as support for (or against) the hypothesis. If support is found, this supports the theory (i.e., a series of predictions and mechanisms describing a larger phenomenon), which is revised and tested further. Even when the evidence you find supports your hypothesis, you can only gain support for your hypothesis or theory. This may be described as a "proof", but it does not mean your theory is proved. In this context, critical thinking is essentially a way of looking at the conclusions that have been drawn on the basis of the hypothesis, evidence, or theory, and asking whether those conclusions are warranted by the evidence put forward in support of them.

Deciding whether a researcher's conclusions are reasonable requires several things. You need to identify and assess their **assumptions**; to decide if their hypothesis is a good operationalisation of their prediction and whether it is a reasonable test of (at least part of) the theory; you need to determine if their sample is appropriate (e.g., representative of the population they draw the conclusion about, and of sufficient size to support what they say); and you need to determine whether the evidence, statistical or otherwise, actually supports the claim they are making. Finally, you want to spend a little time going beyond what the researchers have said and think about whether or not there might be extraneous factors that limit or confound their finding, or whether there is another explanation that fits the evidence.

Good critical thinking means looking at both sides of a position (or perhaps more, since there are often many possible explanations for any particular set of observations). Remember that research is itself an argument, since it comes to a particular conclusion on the basis of an argument and evidence. Even if you want to argue a particular case, it is good to be able to point out arguments against it, if only to say why they don't apply or are not reasonable. Being able to anticipate and respond to possible objections to your case strengthens your position and is a great way to demonstrate critical thinking.

**Assumptions.** Assumptions are unstated elements of a story or argument that are required to fit all the pieces together. Often, assumptions are basic, and seemingly obvious because they tend to be consistent with our belief, but that doesn't mean they don't warrant some careful thinking. For example, both academics and students would be likely

to consider reading, revising, and paced study essential to study, and would be likely to advocate focused sessions with breaks. We often assume or, worse, decry cramming, and few people would assume napping to be a key element of an effective study schedule. However, a study by Cousins et al. (2019) comparing cramming and napping to taking a break revealed both cramming and napping resulted in better performance on a memorised content 30 minutes later, and the benefits of napping were present even a week later! This is a nice example of what we can learn when an assumption is tested.

There are some common types of assumptions in psychology research. For example, research involving interventions often assumes that the thing to be changed is undesirable (e.g., prejudice-reduction interventions assume prejudice is negative, or that reducing prejudice is the right thing to do). Another very common assumption is that groups that are formed by random assignment from a population are equivalent. This assumption is actually pretty reasonable; for example, randomly assigning students from the same cohort to two groups makes it unlikely that these groups will differ in demographics, or education level, handedness, socio-economic status or other potential characteristics. However, sometimes it just doesn't work out that way (see Figure 2.1 for an example), and you can't be sure unless you have checked. The only way to be sure is to measure it and see. Moreover, if the researchers are random sampling from two

**Figure 2.1**

*Mean (and SD) Pre-intervention Scores for Male Privilege Awareness*
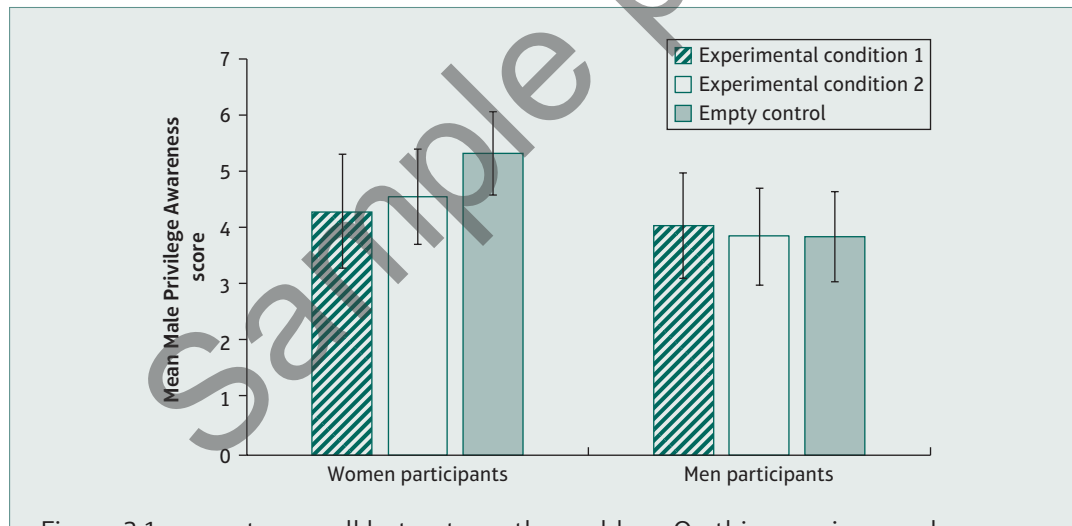


Figure 2.1 presents a small but noteworthy problem. On this occasion, random assignment of participants resulted in important significant difference between experimental groups at baseline. Specifically, this research used a male privilege awareness intervention to reduce sexism (Kaufmann et al., 2017). To be sure that any effect on our dependent variable was because of the intervention, we measured male privilege awareness, gender identity endorsement, and motivation to respond without prejudice pre-intervention. A significant interaction between participant gender and experimental condition was found for male privilege awareness $F(2, 207) = 3.10$, $p = .047$, $\eta_p^2 = .03$. No significant effects were found for the other measures, however, and this made the effects of the male privilege awareness intervention very challenging to interpret. For example, we could not simply attribute changes in sexism to our intervention.

While your sentences will vary in length to convey differentially complex ideas, it is generally better to keep your sentences short. Paragraphs should consist of several sentences (i.e., one sentence is NOT a paragraph). However, paragraphs should not be too long. The average paragraph should be about half a double-spaced page in length.

A paragraph should contain only one main idea. In a review of research (e.g., the Introduction to a research report), you might describe a study in a single paragraph. For example, you might have a sentence describing the aim or hypothesis of the study, another describing the size and nature of the sample, a further sentence or two providing a succinct description of the method, and then a sentence on the major conclusions that are relevant to your own study. This can usually be done in about two-thirds of a double-spaced page (about 200 words). Alternatively, if you are describing how a particular theory has been applied to a variety of contexts, you might use a paragraph to describe the theory, and then refer, in the next paragraph, to several studies that have applied the theory in various practical situations in only a sentence or two each.

Fluency is also improved by avoiding jargon and preferring short words to long ones. You should also use the specific terms rather than more general ones (e.g., happy rather than positive mood), and you should use these terms consistently, since accuracy, even if a bit repetitive, is preferred over novelty. That said, markers are more impressed if you describe a theory in your own words than they are by fancy words or quotations from journal articles. If something is accurately described in simple words, your marker can be confident that you understand it. If a quotation is used, it is not always clear that you understand what it means. If unusual words are used, the marker may suspect plagiarism. Also, avoid using a thesaurus to help you create interest in your writing. Frequently, students who do this end up using words that are imprecise and it impairs the quality of the work.

One way to test whether your writing is fluent is to read it aloud, or, better still, get someone else to do so. Although there is a difference between material written to be read and material written to be spoken (e.g., a speech or a lecture), anything that is poorly written will sound clumsy when read aloud. This is not a foolproof system, because normal conversation is often appallingly ungrammatical. However, it will help you identify long sentences and unexpected topic changes, as well as repeated words or incomplete sentences.

**Abbreviations and acronyms.** A matter of relevance to fluent expression is the use of abbreviations or **acronym**s. You may find it useful to abbreviate commonly used names, especially if you're using them often in the Introduction or Method sections and need to reduce your word count. However, it is asking too much of your marker to remember a lot of acronyms as they read, and it inhibits fluent expression, so you should be very selective in choosing what you abbreviate.

Always introduce the abbreviation the first time the term is used, thus: "Smith and Jones (2017) used the Minnesota Multiphasic Personality Inventory (MMPI) to test …". When using the name of the test later, you must refer to it as the MMPI. You should not introduce an acronym for a term used only once or twice. Similarly, do not use an

abbreviation for single words like extraversion and neuroticism, because the single letters E and N are counted as whole words, so you don't save anything off your word count.

**Similar words having different meanings.** Students frequently use the words "effect" and "affect" interchangeably. They are words you will frequently find yourself using in psychology. They are easy to misuse because both can be used as either a verb or a noun. However, "affect" is used as a verb ("level of lighting affects visual acuity") except where it is used as a synonym for emotion or mood ("the procedure induced a positive affect"). In contrast, "effect" is usually used as a noun ("the effect of level of self-esteem on ..."). Students also confuse "than", which is used to describe a comparison (I am better *than* you), and "then", which describes a timing (e.g., participants self-reported their height *then* their weight).

**Emphasis and the use of different fonts.** Another problem of working in changing times is how much you should take advantage of new technology. Many academics, being used to writing for publication, will argue that you should not use different font forms (like **bold** or *italics*) for emphasis in your research report or essay. If in doubt, don't use them. There is a good case for arguing that you should be able to make the required emphasis by the appropriate use of language. The writing style in this book is also more conversational than you should use in your assignments, because this book is essentially an instruction manual and was written as if you were being spoken to. In contrast, your assignments are formal academic documents and so should take a formal and professional tone.

Use the same size and style font throughout your written work. Do not use larger font sizes for headings. However, note the use of bold type in headings, described in the Method section of Chapter 5. The APA 7th ed. *Publication Manual* states that you should use a single font throughout but permits you to choose from serif font options of Calibri 11-point, Arial 11-point, or Lucinda Sans Unicode 10-point, or sans-serif fonts Times New Roman 12-point, Georgia 11-point, or normal Computer Modern 10-point.

Your tutor or lecturer will probably be able to easily call to mind other examples of writing style that bother them. While not of great significance in terms of marks, the presence of such irritants may just tip the balance to your disadvantage if the marker is judging whether the assignment is worthy of, say, a high Pass or a Credit grade.

## 2.7    Using the Correct Tense

An element of writing style that often confuses students is the **tense** used. The rule of thumb is that reviews and research reports should be written in the past tense as your assignment is a story of what has been done previously. This even applies to your own hypotheses which were developed before conducting the research (see Figure 4.3 in Chapter 4 for examples of aims and hypotheses). However, there are exceptions. The exceptions occur when you refer in your report to something that is happening at the time the reader is reading your report. For example, in the Method section you might

say, "The questionnaire used is included as Appendix A". Present tense is used because it is true as the reader is reading. Similarly, in your Results section you might say, "These results are summarised in Table 2", since it is also true as the report is being read. Finally, in your Discussion, having reported (in the past tense) whether or not your hypotheses were supported, you will interpret your results, identify limitations, and draw conclusions in present tense. For example, "These results suggest that …", "Limitations are…", and "I conclude …". In these cases, present tense is used because, although the results were supported (or not), they have implications for the present and future.

Essays are typically written in the present tense, except where you are reporting something that has already happened, including previous research, or an argument that was made. This is because you are trying, in the present, to convince the reader of your point of view. For example, you might say that "Smith (2005) performed a study …" when describing what Smith did in the past, and "Smith (2005) argued that …". In contrast, you might say "I argue, consistent with Smith's contention", which mixes these tenses, reflecting that you are active in presenting your argument, based on points of view other than your own.

## 2.8    Inclusive and Bias-free Language

It is important, in the interests of accuracy and equity, to use neutral and respectful or **bias-free language**. This means the language we use to describe individuals or groups of people recognises people's identity (i.e., where they have provided a description of their identity, this should be used) and humanity before their group memberships (e.g., people with a physical disability or mental disorder rather than disabled or mentally disordered people). Another important consequence of this approach is that is important to avoid negative or condescending labels (e.g., victims of abuse, addicts) or euphemisms (e.g., special needs). For more on how this should be considered in writing research reports, see Chapter 5 (p. 88).

Since the 6th edition of the APA *Publication Manual*, it has been a priority for writing in psychology to address longstanding language biases. For example, gender-biased language, which has accepted the use of masculine nouns, is addressed by requiring researchers to use neutral pronouns when the context includes both genders (e.g., humankind rather than mankind, chairperson rather than chairman). Much research, especially Martyna (1978), suggests that readers of both genders think of male persons even when the context suggests that both genders are included. The best solution is to use plural pronouns. Instead of writing "The individual who displays prejudice in his personal relations is …", write "Individuals who display prejudice in their personal relations are …". The APA 7th ed. *Publication Manual* also supports avoiding using s/he, which disturbs the flow of the writing, by using "they" if the gender is not known. Further examples of gender-neutral writing are presented in Figure 2.2. On the other hand, avoid carrying this sensitivity to extremes. If all your subjects are male, of course you should use "he" and "him" when referring to individuals among them.

**Figure 2.2**

*Examples of Gender-Neutral Language*

**Original:** "If a subject has a strong tendency to give socially desirable responses in self-description, is it unreasonable to believe that he may also reveal this tendency in his behavior in a learning situation where he is aware of what would be considered socially desirable, namely to learn fast, to do his best?" (Edwards, 1957, p. 89)

**Revised:** If participants have a strong tendency to give socially desirable responses in self-description, is it unreasonable to believe that they may also reveal this tendency in their behaviour in a learning situation where they are aware of what would be considered socially desirable, namely to learn fast, to do their best?

**Original:** "With sufficient analytical subtlety we can tease out the connections from the behaviour of the man in his actual life situation – without the false situation of controlling and manipulating." (Cattell, 1965, p. 20)

**Revised:** With sufficient analytical subtlety we can tease out the connections from the behaviour of people in their actual life situations – without the false situations of controlling and manipulating.

**Original:** "The goal of the individual includes his expectations for the future, his wishes, and his daydreams. Where the individual places his goals will be determined fundamentally by two factors, namely, by the individual's relations to certain values and by his sense of realism in regard to the probability of reaching the goal." (Lewin, 1948, p. 113)

**Revised:** The goals of individuals include their expectations for the future, their wishes, and their daydreams. Where individuals place their goals will be determined by two factors, namely, by the individual's relations to certain values and by their sense of realism in regard to the probability of reaching the goals.

For the use of gender-neutral language other than pronouns, a thesaurus should help keep you out of trouble. Don't use the collective nouns "man", use "people" or "humanity". Don't write "man an observation station", say "staff" it. Children need "nurturing", not "mothering". While there are some fairly easy fixes to the language of gender bias, the issue of gender bias is not trivial nor is bias limited to gender. If you encounter the bias in a researcher, it is worth pausing and thinking about the broader issues (e.g., if the research is framed in biased language, is the language the only issue with the research?).

Avoiding language bias is also an important part of good communication. You need to choose your words carefully so that it is quite clear whom you are speaking of. For example, when writing about people of different ages, it is probably more useful and is definitely more accurate to provide age ranges rather than to use the terms "young adults"

and "older adults" or even "younger children" and "older children". Similarly, for diverse populations, the term "other" should be avoided because it provides no information about the group except that they do not belong to the majority group. We hope that this consideration is noted in the research being conducted as well (e.g., participants are not being asked to specify their gender from the options "men", "women", or "other"). This also applies to issues of sexuality. For example, participants should not be asked to respond to the terms "heterosexual", "homosexual" or "other, please specify". In the first instance, the term homosexual is unlikely to be a term people identify with, and secondly, it is far more informative and respectful to use people's own terms.

Likewise, recognition of the equal value of all ethnic and culture groups can be easily incorporated by researchers and authors by avoiding listing only dominant or high-status groups and aggregating small numbers of participants (e.g., "the sample included $n = 4$ participants from Japan, $n = 17$ from Indonesia, and $n = 28$ from Australia", rather than "participants were Australian $n = 28$, or Asian $n = 21$"). There is also clear advice on avoiding the terms "race" and "racial" due to the lack of scientific evidence for these concepts. If you need to refer to ethnic or cultural groups, you should be as specific as is accurate, and capitalise the terms (e.g., Aboriginal Australians, Māori).

Ask your proofreader to watch out for language that is specific, accurate, and inclusive. If you feel you have to use exclusive or biased language, make sure your proofreader recognised and agrees with your stated justification.

## 2.9   Proofreading and Redrafting

**Always proofread drafts.** A distressing number of assignments are handed in for marking with clear evidence that they have not been **proofread**. This behaviour is throwing marks away. It suggests to the marker that you do not care very much about the quality of the assignment, have poor time-planning skills, or both. Apart from minor evidence of carelessness, such as typographical errors (typos), it is not unusual to find some rather strange expression in undergraduate reports, such as long sentences, erratic punctuation, or the misuse of psychological jargon.

A sign that you have done a good job on your report is that your work could be read and understood by a non-academic. We will say more in Chapter 4 about having a friend, parent, or sibling read your work to indicate just how clear your writing is. If they find that something you have written is unclear, don't argue with them or try to clarify your points verbally – you won't have this opportunity with your marker! If they have read it conscientiously, they are always right – by definition, if a proofreader cannot understand your writing, your writing is unclear. Even if their suggestions for fixing it are wrong or stupid, readers are never wrong if they have found something unclear.

You may ask a fellow student to proofread for you, as long as they are not writing the same research report or essay. Of course, this means that you should also be prepared to do

the same for them. This is essentially what happens in the real world of publishing. Writers usually get peer reviews before submitting their work for publication. Some students see their fellows as competitors, particularly third-year students. This is unfortunate and is inaccurate – your mark will not depend on others' marks. Being prepared to give and receive criticism, and keeping that criticism focused on the writing and not the writer, is good preparation for later work experience.

**After proofreading, what then?** Having received some constructive criticism, you need to start the long task of polishing and rewriting. It is worth noting that any assignment that includes a fair bit of freedom in argument or format (e.g., essays), might need even more rewriting! Make sure your time management has allowed for this.

**Time management.** Most assignments are set so that you have several weeks before they are due. You should make a timetable of what needs to be done and do your best to stick to it. The checklists in Section 5.11 (research report); Section 6.8 (essay); Chapter 7 (reviews); and Chapter 8 (other assignments) are good starting points. There are no foolproof guidelines, because students work at very different rates. However, experience has shown that students are less stressed if they get some writing done early, and writing can even help to clarify what you do and don't understand. It is easier to correct and elaborate on something already written than to try to hold material in your head then write it all at once. The steps involved in getting started are described in Section 4.4.

**Relation between effort and grades.** A common complaint of many students is that they put an enormous amount of time and effort into their assignment but did not get the grade they expected. Although there is some relationship between effort expended and grade awarded, this assumes that the effort is being applied to things that will help (i.e., that drafts do improve). For example, reading more papers rather than starting writing won't necessarily help your final product, and this is especially true for tasks you find difficult! Redrafting your writing is hard work. Make sure that the feedback you receive is really addressed in the next draft.

**What to look for when redrafting.** The sorts of things to look for when rewriting a draft are: Is there a clear topic sentence in each paragraph, preferably at the start? Are all your sentences really sentences? Is there only one major point per paragraph? Do the paragraphs vary in length, without being too short or too long? Have you avoided single-sentence paragraphs? Are the links between sentences or paragraphs logical and coherent?

Not only should your drafts be read for clarity of argument and expression, your final version should also be proofread for typos or printing errors (e.g., orphaned headings; that is, a lonely subheading at the bottom of a page). The ease with which word-processing programs allow you to cut-and-paste words, sentences, or paragraphs leads to the possibility of all sorts of errors. If you can't get someone else to proofread the final version, leave it for a day and proofread it yourself. Finally, do not forget to keep a copy, either on a USB or cloud-based backup service, or as a hardcopy.

## 2.10 The Physical Presentation of Your Assignment

Your university (e.g., library, computer labs, student union) will provide you access to word-processing, internet, and printing facilities if you need them. You should, however, be aware that, if you are working across multiple machines, you will need to check your final submission carefully for formatting errors (e.g., repagination, font changes, orphaned headings – and even to make sure the file still opens!).

**Typing, spacing, margins, page numbers.** The APA 7th ed. *Publication Manual* wisely acknowledges that students are far more likely to be submitting to a school or faculty than to a journal, which means there is some institutional flexibility about assignment content and presentation. However, in the absence of specific guidelines from your institution, the APA guidelines presented in this book are recommended.

The following suggestions may sound unduly simplistic, but too often they are ignored by undergraduates and can lead to unnecessary deduction of marks. First, you may be required to submit electronically or in hardcopy, although the latter is increasingly uncommon. If you are submitting a hardcopy, check your institution's or lecturer's preference for single- or double-sided printing, page numbers, running heads, indenting, and the need to use an institutional coversheet.

If there are no specific guidelines from your institution and given the options afforded by the APA 7th ed. *Publication Manual,* we recommend Times New Roman 12-point font, double-spaced (and don't play with the margins!). We suggest indenting (i.e., the first line of each paragraph, except for the Abstract) using the tab key to ensure consistency instead of extra spacing between paragraphs. Also, ensure your pages are numbered in the upper right-hand corner, so that if by some mischance the pages are separated or are carelessly assembled in the wrong order, it is immediately apparent. This may save you marks.

In terms of the information you will need to provide on the Title Page, we provide an in-depth description in Chapter 5 (Section 5.1) and an example in Figure 5.2 (p. 78). Again, these suggestions should be followed only if consistent with your lecturer or tutor's advice, or in the absence of institutional guidelines.

**Appendices.** There are no consistent expectations about Appendices in undergraduate research reports, so check with your tutor or lecturer about their expectations. It is particularly unlikely that you will need to include Appendices for material provided to you by teaching staff, unless you have specifically found a need to refer to it in the research report. Appendices that are included but are not referred to in the main text of your assignment are likely to be marked down (see Section 5.7 for more about using Appendices in research reports).

Essays do not normally require Appendices. The only exception might be if you have access to a rare or unusual document that would not be available to the average reader. In that case, you could include it as an Appendix.

**Getting advice.** Be aware that most lecturers and tutors will not usually read drafts. If you need advice on your work, you should consult your lecturer or tutor with specific questions ready. Lecturers and tutors may be available via consultation hours, although these can be limited so do not be afraid to have questions written down. Your lecturer or tutor will appreciate your forethought. In addition, most institutions now have discussion boards accessible over the internet through programs like Blackboard or WebCT. Students can "post" questions or comments and tutors, lecturers, and fellow students can post replies. These are a very effective means of communication, since you can access them at your convenience, as can the staff member, and it saves the staff member answering the same question many times, since any other student can read the questions and answers. However, staff monitoring these discussion boards are frustrated if they do find themselves answering the same question repeatedly, so be sure to glance through previous posts to see if your query has already been answered.

**Submit in a folder?** Once upon a time, students routinely thought about how to submit hardcopy assignments. Those days are in the past. However, if you have a reason to submit a hardcopy of your assignment, check with your lecturer or tutor about whether your report should be in a folder or pocket. It is actually much easier to mark an assignment with a single neat staple in the top left-hand corner (yes, we are old enough to remember the misty past) and whatever you do, avoid those folders where each page is in a separate sleeve! Taking pages out individually to write comments on them is guaranteed to try the fairmindedness of any marker! If you do choose a folder or non-transparent sleeve, make sure that your name, your tutor or lecturer's name, the subject and year level, and day and time of your class are clearly marked on the outside of your folder.