MODULE FOCUS

- Research methodology (p. 116)
- Research fundamentals (p. 116)
- Research methods (p. 124)
- Research process (p. 127)

OUTCOMES

A student:
- H4.1 justifies and applies appropriate research methodologies
- H4.2 communicates ideas, debates issues and justifies opinions.
RESEARCH METHODOLOGY

The Independent Research Project (IRP) is internally assessed, which means that the task contributes a specific percentage to your HSC assessment mark. Your teacher will outline these details for you.

During the Preliminary course you would have undertaken class activities that related to various types of research methods, such as:

- designing and conducting an interview and analysing the data
- conducting and recording an observation, then presenting the findings
- collecting and recording data from existing case studies
- constructing a questionnaire and developing a tallying system to record data
- conducting a literature review from secondary data.

These research processes will now be combined and related to one specific topic that interests you and is linked to the Community and Family Studies course as you complete your Independent Research Project (IRP).

Before launching into your project it is important for you to reflect upon important aspects of research that will be central to the development of your IRP; this means they are fundamental to this research process. While you are addressing each of these syllabus areas you may also be working on applying that component to your IRP.

Research fundamentals

The purpose of research

The purpose of research is to advance knowledge, increase understanding, educate others and inform practice. Research primarily attempts to describe or explain things – what, when, where, how or why. It also provides the opportunity to find out new information and to increase our knowledge and understanding about a topic, phenomena or experience. For example, a research project may involve collecting data and reporting on the crime rates of different cities. Through identifying the variables or reasons why some cities have higher crime rates than others, there is the opportunity to advance knowledge and increase understanding about the incidence of crime. More importantly, there is the opportunity to use the results in education programs and to inform practice by developing preventative policing strategies that may, in the long term, reduce crime.

The focus of research – question or hypothesis

Every research study begins with a problem that the researcher would like to solve. Therefore, the first step is to identify a specific area of interest, ponder some relevant questions or describe a possible problem in relation to this area of interest. In general, it is important that the topic is narrow enough to study within the relevant context, but also broad enough to have practical or theoretical merit. As an HSC student, it is essential that your research topic is narrow enough to study within the context of your available resources and HSC course, but broad enough to have merit in the Community and Family Studies course you are undertaking.

To determine the focus of research is to define it and the format in which it will be written. A research focus can take the form of a research question or statement, or a hypothesis – so what is the difference between them?

Research questions

A research question asks whether a relationship exists between variables in a particular population. Similar to this are research problem statements, which present the idea, issue or situation that the researcher intends to examine in their study. Thus, research questions may be conceptualised as a statement or a question.

Hypothesis

In contrast to a research question, a hypothesis stipulates or predicts that a relationship among or between at least two variables in a given population exists. The advantage of a hypothesis over a research question is that the hypothesis puts the question into a form that can be tested. However, this can also mean that research findings will contradict the original statement and the researcher may be tempted to revise the original hypothesis.
See Table 4.1 for an example of a research topic that is expressed in each of these formats.

**Table 4.1** Comparison of formats used to focus research topics

<table>
<thead>
<tr>
<th>Research question</th>
<th>Problem statement</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will using entertainment technologies every day have an impact on the social wellbeing of school-age children?</td>
<td>Using entertainment technologies every day has an impact on the social wellbeing of school-age children.</td>
<td>Using entertainment technologies every day can have a negative impact on the social wellbeing of school-age children.</td>
</tr>
</tbody>
</table>

When deciding upon the focus of your research it is important that a minimum of two components be included in every research question, problem statement or hypothesis; for example, the population of interest and the variable to be measured. A well-written research question, problem statement or hypothesis uses the PICOT scaffold.

- **P** Population of interest – narrow the population by age or another characteristic
- **I** Issue of interest for the IRP
- **C** Comparison between variables to be researched
- **O** Outcome of the comparison
- **T** Time

Examples of this design tool are illustrated in Table 4.2.

**Table 4.2** Research topics supported by using the PICOT scaffold

<table>
<thead>
<tr>
<th>Focus of research</th>
<th>Research question</th>
<th>Problem statement</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research topic</strong></td>
<td>How do nursing homes contribute to meeting the needs of aged people in care and their families?</td>
<td>Participation in a support group improves morale in family caregivers of children aged 3–5 with Asperger’s syndrome.</td>
<td>Using entertainment technologies every day can have a negative impact on the social wellbeing of school-age children.</td>
</tr>
<tr>
<td><strong>P Population</strong></td>
<td>The aged</td>
<td>Children aged 3–5 years</td>
<td>School-age children</td>
</tr>
<tr>
<td><strong>I Interest</strong></td>
<td>Nursing home care</td>
<td>Asperger’s syndrome</td>
<td>Entertainment technologies</td>
</tr>
<tr>
<td><strong>C Comparison</strong></td>
<td>Those in care, their families, types of needs</td>
<td>Participation in support group, family caregivers, morale</td>
<td>Impact – negative or positive, wellbeing, types of entertainment technologies</td>
</tr>
<tr>
<td><strong>O Outcome</strong></td>
<td>Meeting the needs</td>
<td>Improves morale</td>
<td>Impact on social wellbeing</td>
</tr>
<tr>
<td><strong>T Time</strong></td>
<td>In nursing home</td>
<td>During use of support group</td>
<td>Everyday</td>
</tr>
</tbody>
</table>

**Think it through**

1. Refer to Table 4.1 and identify the difference between each format. Do you prefer one method over another? Justify your choice.
2. Evaluate the PICOT scaffold as it has been applied to each of the research topics in Table 4.2. How effective is it in terms of defining each research topic? Discuss your answer in a small group.
3. Examine the following research topic to identify components of PICOT: ‘Careers and women: the realities of success for women after 10 years of full-time employment in the workforce.’ Discuss your answers as a class.

**Sampling**

While deciding on research methodologies that are appropriate for your project, you will need to consider a suitable sample method, group and size.

The basic concept behind sampling is that while it would be ideal to be able to choose a large group of people for research, this is often impossible due to constraints, such as limited time, money or even access to people. By choosing a smaller sample of people, we can hope that the findings can be extended to the entire group. Therefore, the most important characteristic of the chosen sample is that it covers a cross-section of the population, and is representative of the group being considered.
Sampling methods

There are five common examples of sampling methods for you to consider.

1. A random sample involves selecting people so that everyone has an equal chance of being selected; for example, the weekly Oz Lotto draw is a random sample because every number has an equal chance of being selected.

2. A systematic random sample is obtained by choosing one number at random and then every nth unit after this random start (see Figure 4.1). For instance, by randomly selecting 2, and 3 as the n number, you could choose house number 2 and then select every 3rd house after that in your street to deliver your questionnaire to.

3. A stratified random sample involves a process in which the population is divided into strata (layers) groups and then random selection occurs within each strata (see Figure 4.2). This means that the researcher can ensure that there is a more balanced representation in each of the strata groups, and that the groups can be compared with each other in similar proportions to the general population.

4. A cluster sample involves dividing the population into clusters and random selection is made within the clusters (see Figure 4.3). For example, if the clusters are to be school roll-call groups, four roll-call groups are selected at random and then the researcher chooses five students from each of these groups. A researcher using this method doesn’t need to choose a specific part of the population to take their sample from.

5. Convenience sampling occurs when a researcher selects people because they are easily located, such as friends in a Year 12 peer group, or family members. These results tend to have the lowest credibility, as they can be biased and are not representative of the population.

![Figure 4.1 Systematic random sampling](image-url)
Sample group
You can identify or decide where the sample group is to be chosen from, or where there is a list to draw the sample from; for example, people from your neighbourhood or a specific community organisation, such as a child care centre.

Sample size
The sample size refers to the number of participants that are actually selected for the research study. The nature of your research proposal will indicate what is appropriate; however, a suitable sample size for an IRP questionnaire would be about 20–30 people. This may be complemented by two interviews, a case study or two to three observations.
When choosing a sampling method, group and size, it is necessary that they suit the purpose of the research project, the resources available, the questions being asked and any limitations that you may have. Whichever method is selected, it should be documented in your research so that any indication of bias can be acknowledged.

**Check for understanding**

1. Jon has to find out how much time high school students at his school spend on homework and studying each week. He is able to access the database with a list of all enrolled students for his sample group.
   a. In this situation, the sample group has been provided. How would you advise him to distribute questionnaires to either a random or systematic random sample?
   b. Assume that he could also access information about each student’s year of enrolment and electives. How might you obtain a stratified random sample? How might you obtain a cluster sample?

**Types of data**

**Primary and secondary data**

Both primary and secondary data have purpose and value in the research process. Primary data are original, and the questions that the researchers ask are tailored to elicit the data that will help them with the specific purpose of their research study. Primary data are collected firsthand from individuals or groups who have been questioned, surveyed, interviewed or observed. It tends to be expensive to conduct and takes a long time to process.

Secondary data are based on the findings of other people’s research and found in reports, records or statistical information that were gathered and recorded by someone else. Secondary data tend to be readily available, are usually less expensive to obtain and can be analysed in less time. However, because such data were collected for a different purpose, they must be scrutinised well to find the relevant information.

**Qualitative and quantitative data**

The table below explains and compares qualitative and quantitative data in terms of their advantages and the common research methods used to collect them.

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Advantages</th>
<th>Common research methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative data</td>
<td>Subjective data that come from research that collects facts and information regarding people’s beliefs, feelings, attitudes and opinions to gain insight into the area.</td>
<td>• Observations</td>
</tr>
<tr>
<td></td>
<td>Subjective data can provide words and images to help us understand more about the ‘why’ and ‘how’ of a situation, and give examples to fill in the details.</td>
<td>• Interviews</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Focus groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Case studies</td>
</tr>
<tr>
<td>Quantitative data</td>
<td>Objective data that come from research that collects facts in the form of numerical data, which can then be analysed using counting, measuring and graphing.</td>
<td>Objective data can provide a good outline of ‘what’ is happening in a situation. It is more objective and reliable, and subject to less bias than qualitative research.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Experiments</td>
</tr>
</tbody>
</table>

**Sources of data**

**Individuals and groups**

Both individuals and groups can provide data that is current and in real time. Individuals may include your teacher, family members, friends, neighbours, experts or specialists in particular areas (for example, managers, doctors, dieticians, counsellors). Groups can include professional organisations (for example, local chamber of business), not-for-profit groups (for example, The Salvation Army,
Mission Australia), government agencies (for example, local councils, Centrelink, police), specialist
groups (for example, sporting associations) and medical and health authorities (for example, the
Australian Physiotherapy Association, Area Health Services).

Print and digital

Both print and digital sources can add depth and detail to the research process that would not be possible
if their data had to be personally sourced by the researcher. It is possible to access global data that are
far-reaching in scope and content.

**Print sources** include books, journals, magazines, newspapers and pamphlets.

**Digital sources** include the internet, computer programs, television and radio, statistics, podcasts,
webcasts and other multimedia resources.

Search engines are software programs that help users find information stored on a personal computer
or, more commonly, a network such as the internet. A search engine retrieves a list of documents, sites,
files, images, news or other data that include the keywords being searched for. The most popular search
engines include:
- Google
- Bing
- Yahoo!
- Ask
- AOL
- MyWebSearch
- WebCrawler
- InfoSpace
- Dogpile
- DuckDuckGo
- Info.com
- Lycos
- Blekko
- Yippy
- Webopedia
- Mahalo

Other websites that can be useful are related to media companies and government agencies, such as
the Australian Broadcasting Commission (ABC), the Special Broadcasting Service (SBS), Channel Nine and
the Australian Bureau of Statistics (ABS).

When using these sources, it is important that you are aware of and remember to evaluate their quality
and reliability. Specific criteria and evaluation questions that can be measured are listed in the table below.
Avoid user-created websites, such as Wikipedia, unofficial YouTube videos, blogs and forums, as these
sites can be edited by anyone, at anytime, which can make them unreliable.

Criteria for evaluating the credibility of print and digital sources

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Possible evaluation questions to consider</th>
</tr>
</thead>
</table>
| Authority    | • What are the author’s credentials?
|              | • Is the information published by a reputable authority? Are the sources properly cited?
|              | • Does the URL look reputable? |
| Accuracy     | • Is the text well written, without spelling and punctuation errors?
|              | • Is the information accurate? Accuracy can be reinforced if a source seems similar to other sources. |
| Currency     | • When was the source published? Is it up to date? There should always be dates listed. Check the date
|              | of publication, the date of the last update, and the date the research or statistics were gathered. |
| Purpose      | • What is the purpose of the information? Is it objective or factual? Does it state an opinion or try to
|              | influence? Who is the intended audience (scholars, researchers, the general public)? |
| Relevance    | • Is the source related to your topic? Does it provide you with further information? |

**Check for understanding**

1. As a class, brainstorm the advantages and limitations of each of the sources of data – individuals, groups,
   print and digital. What conclusions can you draw that will be relevant to your IRP research?
2. Your teacher will guide you to two websites. Use the criteria in the table to evaluate the suitability of these
   websites as data sources.
3. What are the key findings from the websites?
Reliability and validity

Reliability

If a research method has reliability, it could be used again under the same conditions with the same subjects and you would expect to obtain similar results – just like a test could be considered reliable if a person’s takes the same test twice and achieves the same score; that is, its ‘repeatability’ is high. It is important to remember that reliability is not measured: it is estimated.

The reliability of the results for your IRP can be assured by having organised systems and processes in place for preparing, conducting and recording primary data.

Validity

A research study that demonstrates validity should be based on a suitable research methodology and undertaken so that the results can be interpreted with a reasonable degree of certainty and provide some useful generalisations. For example, a research study that requires 15-year-olds to complete a questionnaire based on what they have eaten for the past three days may be valid, as most 15-year-olds would be able to accurately recall...
what they had eaten and complete written answers. In contrast, carrying out this research with four-year-olds would not be valid, as most four year olds would neither be able to accurately recall what they had eaten nor complete a written response.

The validity of the results for your IRP can be assured by having:

- completed sufficient reading of secondary data so that you are reasonably knowledgeable on your topic and will therefore not rely on biased judgements
- a good understanding of research methods
- more than one research method in your data collection.

**Check for understanding**

Explain how sampling contributes to reliable and valid research.

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**Ethical behaviour**

There are certain ethical considerations to bear in mind when conducting research. When people are involved in research, it is important to consider their feelings and all aspects of privacy.

**Respect**

As voluntary participants in research, individuals have rights that must be respected. During your research, you should:

- plan questions that are worded carefully so that they are not too personal and do not cause distress or offend
- be aware of the physical, emotional and social wellbeing of participants so that no risks are involved
- make sure that you have voluntary participation and informed consent – an individual must be made aware of the nature of the study and what is involved, and have given their verbal or written consent. If you are using children as subjects, it is necessary to obtain permission from the parent or guardian of each child
- offer the opportunity for the participant to see the final report and its findings.

**Integrity**

Professional integrity is important in research. A researcher must be honest and truthful because they are accountable for undertaking and presenting research without changing, modifying or suppressing any material. Data should be presented without bias or distortion and, if bias or subjectivity does occur, this should be mentioned with the interpretation or analysis of data. Making certain that the entire research process is thorough, reliable and valid will also contribute to its integrity. If, for example, a student runs short of time to hand out and collect questionnaires and instead uses fake participant names and answers, they are not only being dishonest, they are falsifying their data and undermining its integrity.

**Privacy**

The right to privacy is a paramount consideration in relation to research ethics. Privacy can be protected and confidentiality and anonymity assured by:

- asking for permission prior to carrying out any primary research or recording any data using equipment such as a digital video camera or smart phone
- selecting numbers or letters to label research responses so that participants cannot be identified on the basis of their responses
- ensuring that data and opinions are not revealed to others
- processing raw data so that collective information is included in reports
- carefully storing data during the research process and then shredding data prior to disposal.

**Bias**

Bias can occur when the researcher or data are influenced in favour of one point of view or angle. The table on the next page shows examples of bias in research.
Examples of bias in research

<table>
<thead>
<tr>
<th>Research actions that can create bias</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking leading questions</td>
<td>'Why do you prefer family day care over other types of child care?'</td>
</tr>
<tr>
<td>Choosing a sampling method that does not reflect the age, gender or culture of the population</td>
<td>Distributing questionnaires to three males and 15 females</td>
</tr>
<tr>
<td>Recording data that supports your hypothesis rather than being objective</td>
<td>Omitting to document behaviours or actions during an observation; subjectively choosing some data results to interpret and analyse</td>
</tr>
</tbody>
</table>

Check for understanding

1. Assess the importance of ethical behaviour when conducting research. In your answer, refer to:
   a. sensitive research topics.
   b. confidentiality.
   c. research bias.
   d. crediting sources of data.

2. For the research proposal ‘Entertainment technologies have a negative impact on the social wellbeing of school-age children’, suggest strategies to ensure:
   • the privacy of the individuals.
   • the respect for the subjects of the research.
   • the minimisation of bias.

Research methods

Various research methods were undertaken during the Preliminary course and have been described in Question 1 of the Check for understanding activity below. These are:
- questionnaires
- interviews
- case studies
- observations
- literature reviews.

Check for understanding

1. Copy the table headings below into your notebook. Read the description of each research method, and then complete the table by summarising related ethical behaviour. One answer has been completed for you.

<table>
<thead>
<tr>
<th>Research method</th>
<th>Description</th>
<th>Related ethical behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires – open-ended questions</td>
<td>A set of formally prepared questions that seek information on a person's knowledge, beliefs, feelings, opinions, likes or dislikes</td>
<td></td>
</tr>
<tr>
<td>Questionnaires – closed questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structured interviews</td>
<td>A conversation between two or more people in which the interview has been planned with a set of predetermined questions developed by the researcher</td>
<td></td>
</tr>
<tr>
<td>Unstructured interviews</td>
<td>A discussion between two or more people in which the interview is more informal, with the researcher planning areas for discussion without developing the actual questions</td>
<td>Must ask permission to record interview</td>
</tr>
<tr>
<td>Case studies</td>
<td>A deep analysis of a situation</td>
<td></td>
</tr>
</tbody>
</table>
Independent Research Project

Your teacher will plan and explain how this module will be undertaken in your school. Perhaps there will be groups of lessons, with the teacher guiding you through explicit information and activities; or there may be less structured lessons to provide you with time to carry out your research independently. The IRP may be either fully completed in one term or integrated over more than one term with other HSC topics.

The focus of the IRP should be related to the course content of one or more of the following areas:

• individuals
• groups
• families
• communities
• resource management.

The IRP consists of three parts: the project plan, the project diary and the product.

1. Project plan:
• provides an initial summary and outline of the complete research process.

2. Project diary:
• is a record of an ongoing process
• records values, attitudes and feelings
• reflects honestly on problems encountered and their solutions
• records conversations, contacts, readings and sources of secondary data
• reflects the proposed timeline.

2. Compare qualitative and quantitative research based on:
• the purpose of the research
• sample size
• data collection
• data analysis
• research findings.

3. Work in small groups to evaluate the type/s of research method/s that best suits each of the following research topics. Use PMI charts similar to the one below as a scaffold for this activity.

• Investigating the communication and interpersonal relationship between adolescent twins
• Examining the employment of mothers after childbirth
• Studying local school children who catch a bus to school

4. Share your answers with your class.

<table>
<thead>
<tr>
<th>Research methods</th>
<th>Plus</th>
<th>Minus</th>
<th>Interesting</th>
<th>Evaluation comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires – open-ended questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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<tr>
<td>Unstructured interviews</td>
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<td></td>
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</tr>
<tr>
<td>Case studies</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Observations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature reviews</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

'Investigating the communication and interpersonal relationship between adolescent twins:'

<table>
<thead>
<tr>
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</tr>
<tr>
<td>Literature reviews</td>
<td></td>
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</tr>
</tbody>
</table>

Observations
A process of watching and recording the behaviours of participants; the researcher may be a participant or non-participant in the research activity.

Literature reviews
A logical and methodical way of organising the already existing body of knowledge about a topic.
The product:
- is independent; that is, it is the student’s own work, based on an area of interest related to the course content
- is research based, meaning that the students should ‘find something out’ or add to their existing knowledge
- should reflect the time and commitment allocated to it in the overall context of the course

Aim for an excellent IRP!

Students’ advice for the IRP

Best practices

As you can see from the student comments above, you will spend many hours on your project in and beyond the classroom. Therefore, it is important that you choose a topic that is interesting and stimulating and that will motivate you to learn more about your area of interest and complete the project well.

In the very early stages of your research process, you need to develop a plan that incorporates some form of time management. Key milestones or goals can be keyed into your smart phone with alerts set as reminders prior to due dates. Without time management, it is easy to become disorganised, ‘get lost’ in the process, run out of time and get into a terrible panic as ‘submission day’ approaches.

One way to develop a time-management plan is to break up the IRP process into a series of steps, each of which will assist you to complete each section of the IRP. Throughout this chapter, these steps are explained, and many ideas, scaffolds and student work samples are provided to assist you to develop an understanding of the requirements of the IRP. Feel a sense of success as you complete each step. Record them in your diary. Reward yourself! Share your news by telling your parents, friends and teachers.
Research process

As mentioned, one way to develop a time-management plan for your IRP is to break the IRP research process into a series of steps.

Remember that while these steps are written in a linear format, you will often find that you are completing two or three steps at the same time, almost in a parallel fashion.

<table>
<thead>
<tr>
<th>Steps</th>
<th>What to do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning for research</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Managing resources – being organised</td>
</tr>
<tr>
<td>2</td>
<td>Formulating a research proposal</td>
</tr>
<tr>
<td>3</td>
<td>Considering ethical behaviour in research</td>
</tr>
<tr>
<td>4</td>
<td>Proposing suitable research methods and sampling method and size</td>
</tr>
<tr>
<td>5</td>
<td>Developing the IRP project plan – submitting it for marking as required</td>
</tr>
<tr>
<td><strong>Conducting research</strong></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Accessing sources of data – primary and secondary</td>
</tr>
<tr>
<td>7</td>
<td>Collecting and recording data</td>
</tr>
<tr>
<td>8</td>
<td>Documenting actions and issues – writing in your project diary and submitting it for marking as required</td>
</tr>
<tr>
<td><strong>Interpreting research</strong></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Presenting research findings – as graphs, tables or written reports</td>
</tr>
<tr>
<td>10</td>
<td>Analysing research results</td>
</tr>
<tr>
<td>11</td>
<td>Drawing conclusions from research</td>
</tr>
<tr>
<td><strong>Presenting research</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Completing the organisation and presentation of your research product</td>
</tr>
<tr>
<td>13</td>
<td>Assembling your bibliography</td>
</tr>
<tr>
<td>14</td>
<td>Finalising your appendix</td>
</tr>
</tbody>
</table>

Check for understanding

1. In your own words, outline what is required for the IRP.
2. Describe how you are going to record your progress.

Think it through

1. Estimate how much time it will take to carry out each of the steps listed in the table above. Remember that you may need to allow time for people to complete and return letters and surveys, and to locate secondary sources of data.
2. Create a timeline based on your estimates and document it on a calendar. You can refer to the sample timeline scaffold below.
3. Using a phone or tablet calendar app, set alerts for your significant milestones or goals.

<table>
<thead>
<tr>
<th>Week number</th>
<th>Key actions to do</th>
<th>Time</th>
</tr>
</thead>
</table>
Planning for research

Steps 1–5, below, are the preliminary steps towards both developing an understanding of aspects of the research process, and refining your research proposal, which will be presented for marking as the IRP project plan.

Step 1: Managing resources – being organised

To assist your organisation, you will need to establish a system that suits you. Time management is essential. Complete the Think it through activity on page 127 to establish a proposed timeline. You also need to keep your data organised. Examples of items that may be useful for filing and recording include a display folder, a small exercise book (for your IRP diary), a USB drive and document storage folders. Another option is to record information on smart phone or tablet apps. As you acquire information, add it into the appropriate file or folder immediately to ensure sources of information aren’t lost. Whichever system you choose, remember to back up your information in case of a computer or app crash.

Step 2: Formulating a research proposal

The focus of the IRP should be related to the course content of one or more of the following areas:

- individuals
- groups
- families
- communities
- resource management.

Choosing your research topic is not an easy task, so it may take quite some time before an appropriate topic is determined. Brainstorming and having discussions with other people are possibly the best ways to begin. Think about and discuss:

- areas of possible interest and/or vocational interest – this project could lead to a career path!
- resources that are accessible locally and available to you, bearing in mind that a variety of resources, especially primary sources, will enhance your project.

Think it through

1. Go to the NSW Board of Studies, Teaching and Educational Standards (BOSTES) website. You can link to it directly via http://cafs.nelsonnet.com.au. Here, you can access the Community and Family Studies Syllabus to review the Preliminary and HSC content for ideas. As a class, brainstorm possible ideas that interest you. See Figure 4.4 on page 129 for some brainstorming ideas related to the ‘Families and Communities’ or ‘Parenting and Caring’ modules.

2. Now personalise this process by brainstorming possible ideas that interest you. See Figure 4.4 on page 129 for some brainstorming ideas related to the ‘Families and Communities’ or ‘Parenting and Caring’ modules.

3. Develop a mind map that will enable you to identify further topics related to your area of interest. See Figure 4.5 on page 130 for an example.

4. Consider the suitability of some of these possible topics by answering these questions:
   - a. Why does this research topic really interest me?
   - b. Where can I get information?
   - c. Where can I get help?
   - d. What information do I already have?
   - e. What ideas do I like the best?
   - f. How do some of these topics relate to each other?

A positive response to these questions indicates a real interest and a feasible research topic. Remember that you should select a topic that you are genuinely interested in. A genuine interest will keep you going throughout the project.
Once you have narrowed your ideas down, start writing the ideas as research goals by using key terms to begin the statement. For example, ‘For my Independent Research Project I intend to …

- investigate (plan, inquire into and draw conclusions about) …
- evaluate (make a judgement based on criteria, determine the value of) …
- demonstrate (show by example) …
- compare and contrast (show how things are similar or different) …
- examine (inquire into) … ‘.

Once you are happy with the concept and scope of your research goal, keep refining it until you have developed a suitable research question, problem statement or hypothesis. Remember to refer to the PICOT scaffold when writing your research question, problem statement or hypothesis (see page 117). This will mean that the research topic is specific and concise and that a clear direction and purpose will be achieved for your project. Do not be concerned if further modifications are made as you develop your research proposal during planning steps 3–5. This is common in the research process as you identify suitable sources of data and research methods.
Step 3: Considering ethical behaviour in research

Mandatory participation in the HSC: All My Own Work program is designed to help HSC students to follow the principles and practices of good scholarship. This includes understanding and valuing ethical practices when locating and using information as part of their HSC studies. Three of the modules covered – ‘Acknowledging Sources’, ‘Plagiarism’ and ‘Copyright’ – will assist you to understand the regulations that directly relate to the completion of your IRP. You can directly link to the HSC: All My Own Work website via http://cafs.nelsonnet.com.au.

Dealing with the ethical issues of respect, integrity, privacy and bias have been outlined on page 123.

**Think it through**

Based on the information that you identified in the activities on pages 124–5, answer these questions in relation to your research proposal.
1. How will you deal with the ethical issues of respect, integrity, privacy and bias?
2. Name three research methods that would be most suitable for your research. Give reasons why they are suitable.
3. What human and non-human resources are available to assist you in using these research methods?

Step 4: Proposing suitable research methods and sampling method and size

Once you have established your research goals, you will need to examine the research methods, sampling method and sample size that best suits your research. Research methods that collect quantitative data include questionnaires, surveys and interviews, while qualitative data are more commonly obtained from observations, interviews, questionnaires and case studies. When selecting types of research, it is often valuable to combine both qualitative and quantitative methods. The objective data from quantitative research, on the one hand, can provide a good outline of ‘what’ is happening in a situation and the more subjective data from qualitative research, on the other hand, can provide words and images to help us...
understand more about the ‘why’ and ‘how’, as well as giving examples to fill in the details. Before you decide on appropriate methods, it would be wise to review your knowledge of:

1 research methods (see page 124)
2 sampling methods and size (see pages 117–19).

Refer to the Preliminary course sections for detailed information on:

- Structured and unstructured interviews: pages 34–6
- Observation: pages 51–4
- Case studies: page 61
- Questionnaires: pages 82–6
- Literature reviews: pages 107–8

**Step 5: Developing the IRP project plan, submitting for marking as required**

Having completed research proposal steps 1–4, you should be able to revise your mind map initiated in Step 2 so that it includes the research question, problem or hypothesis, ideas for the direction of your research, possible research methods, suggested primary and secondary sources of data and sampling method and size. This information will provide the basis of your IRP project plan. See Figure 4.6 for a sample scaffold for this mind map.

The IRP project plan outlines and allows you to consolidate the future directions for your project. It is a formal means of writing about the progress of your project so far; it also allows you to provide this information to your teacher and to receive feedback on its suitability and appropriateness for the ongoing progress of your research process. The student sample in Figure 4.7 on page 132 has been annotated to indicate content and layout for the project plan.

**Primary sources of data (both quantitative and qualitative)**
- Questionnaire:
  - for staff
  - for families
- Interview families
  - Observation – too personal
- Case study?

**Sampling method**
- Identify all nursing homes in my local area
- Random selection of four

**Research question**
How do nursing homes contribute to meeting the needs of aged people in care and their families?

**Secondary sources of data**
- Digital:
  - Internet
  - Find specific sites: aged, nursing homes, carers
  - ABS
  - organisations that support
  - types of services
- Print:
  - books, pamphlets
  - journals

**How am I researching?**
- Specific needs – health, adequate standard of living (shelter), safety and security
- Families as primary carers
- Formal carers
- Aspects of nursing home service
  - confidentiality, location and staff

**Organise**
- Diary
- Bibliography record

**Ethical behaviour**
- Respect
- Integrity
- Privacy
- Bias

---

**Figure 4.6 Sample IRP project plan mind map**
How do nursing homes contribute to meeting the needs of aged people in care and their families?

The topic that I have chosen is related to the course content area of groups and the research will focus upon people who belong to the group known as the aged. According to the Australian Bureau of Statistics, the aged refers to individuals who are 65 years of age and over and who have specific needs to be met for optimum wellbeing. The specific needs that are of major importance in this research will most likely be adequate standard of living (shelter), health, security and safety.

Through my research I hope to identify how well nursing homes, as a form of shelter/housing suitable for the aged, are able to meet the various needs of this group. Nursing homes are described as long-term care facilities that provide 24-hour skilled nursing, assistance with activities of daily living and health services. I thought it would also be important to consider the families of the aged, as they often have a relationship with carers at the nursing home due to the special nature of the care required. Their needs will also be examined.

The primary research methodologies that I will be using are questionnaires and interviews.

• A questionnaire will enable me to ask various questions related to how needs are satisfied by carers (paid and volunteer staff) in nursing homes. A cluster sampling method will be used to identify firstly nursing homes, then staff within these facilities. The data collected can then be used to create statistics as well as some qualitative information.

• Structured interviews will be conducted with carers as well as family members with an aged person in care. These will be carried out after the questionnaires so that I can ask more detailed questions and hopefully gain a better idea of their actual feelings, opinions and experiences. As I have made contact with nursing homes for the questionnaire, I will hopefully have access to carers who are able to be interviewed also.

Secondary sources of data will include:

• digital sources – from the internet I have located Aged Care Connect, Nursing Home Inspector and Nursing Home Info, which are good starting places for my secondary research

• print sources of data – our school library has Family Matters journals and the local council library has a carers talk and relaxation tape that may be useful.

Ethical behaviour is very important when conducting questionnaires and interviews. As there may be some personal questions, I need to reassure the person that their confidentiality and privacy will be kept. I will not ask for names and instead will number the papers. I will also inform the person that if a question is too personal and they feel uncomfortable, not to answer it. I will also make sure that the interviews are made at a convenient time for the interviewee. This is treating them with respect.

While conducting research, writing up data and conclusions, I must make sure that I keep an open mind and that I don’t have a biased opinion. I cannot let my opinions get in the way as it may cause conflict and I may not be able to see the accurate information.

Timeline of key actions

• Week 1: Decide on topic for IRP, organise a filing system and diary (diary entries 2 x week). Consider suitable research methodologies.

• Week 2: Find, read and document secondary data; record bibliographic details. Write project plan, submit for marking. IRP diary, submit for marking.

• Week 3: Work out sample group, make contact with people from nursing homes to gain support for my research

• Weeks 4–5: Conduct primary research.

• Week 9: Proofread and complete presentation of PowerPoint and palm cards, bibliography and appendix.

• Week 10: IRP due, submit for marking.

For my final product I am planning to do a multimedia presentation. There will be approximately 15–20 PowerPoint slides and a speech that focuses on how I conducted my research, the results and conclusions. I am choosing PowerPoint as it has a professional look, is interesting for others to look at and is both fun and challenging to put together.

Figure 4.7 Sample IRP project plan
Conducting research

Steps 6–8 are the action steps in which you actually put the research into practice. You will access, collect and record data and evidence and, in your diary, document your activities and propose solutions to issues if they arise.

Step 6: Accessing sources of data – primary and secondary

Your first step should be to search secondary data for what has already been written about your chosen topic. Look at both digital and print sources of data (refer to page 121 for more information). Libraries are a good place to start; you could access your school library, a local public library or a TAFE or university library. Often librarians can give suggestions about where to look for sources of information, as well as provide assistance in developing your researching skills.

This preliminary reading should help you formulate the questions you want to ask in your own research. It is also the beginning of your literature review.

Literature reviews

A strong literature review:

- has points that are organised into issues or themes that relate to a student’s research proposal
- demonstrates that the student has carried out background reading as a means of familiarising themselves with their research topic
- provides a context for a student to show what previous research has found and sets a framework for the new information that can be identified in this research.

### SIGNPOST

**INTERACTIONS BETWEEN RESIDENTS, FAMILIES AND STAFF**

At a great care home...

- Staff are easily identifiable by role and name
- Staff care for the same group of residents every day
- Routines are flexible and organised around residents’ care needs
- Residents are treated with respect and dignity
- Staff are attentive and keen to offer support if a person is upset
- Staff are actively seeking information about the person requiring care
- Staff look as though they have enough time to spend with residents
- Staff are available to talk with families

### INTERACTIONS BETWEEN RESIDENTS, FAMILIES AND STAFF

#### LOOK — WHAT YOU SEE

<table>
<thead>
<tr>
<th>HOME 1</th>
<th>HOME 2</th>
<th>HOME 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
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</table>

#### LISTEN — WHAT YOU HEAR

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<th>HOME 1</th>
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<th>HOME 3</th>
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</tbody>
</table>

#### FEEL — WHAT YOU EXPERIENCE

<table>
<thead>
<tr>
<th>HOME 1</th>
<th>HOME 2</th>
<th>HOME 3</th>
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<tbody>
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</tbody>
</table>

### NOTES

- Ideas for possible interview questions for carers
- Information related to staff meeting specific needs

Annotating secondary sources of data

The table below may assist you to make notes as a part of your literature review. Consider the points or topics that you want to find information about and create a separate column for each point. As you read through a source of data, record information – words, phrases, main ideas – under the appropriate column. If you are stuck for ideas or a starting point, use the PICOT notes that you documented when writing your research question, problem statement or hypothesis.

<table>
<thead>
<tr>
<th>Secondary data</th>
<th>Issue 1</th>
<th>Issue 2</th>
<th>Issue 3</th>
<th>Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After each reading, reflect upon the following questions.

- What have you learned?
- How does it fit into your research topic?

Take a few minutes to write responses to these questions.

The draft for your literature review may be organised in a number of ways.

- Chronological – by publication date
- Thematic – by specific ideas or themes that developed as you were reading
- Systematic – by a system or format that works for you, such as the place you located the research.

After reviewing your notes, identify suitable headings and subheadings. Under each subheading, try to summarise your notes into 1–2 sentences or points, each with a supporting explanation and example. Repeat this process.

Later on in the research process you may also use some of this secondary data for a comparison, discussion and analysis of your results.

As you find appropriate secondary data, you should record all of the publication details so that you can easily find your sources again, and use them to compile your bibliography. Remember that if you use other people’s ideas or quote from other people’s findings, you will need to acknowledge this. The referencing scaffold in the table below may be used for collating bibliographic and referencing information.

A referencing scaffold

<table>
<thead>
<tr>
<th>Author surname, initial</th>
<th>Title of book, magazine, journal or website</th>
<th>Title of article from magazine</th>
<th>Publication date, website date (last revised)</th>
<th>Volume no. of journal, magazine, encyclopedia</th>
<th>Publisher or organisation and place</th>
<th>URL and date accessed or page no. of article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beattie, K.</td>
<td>Communication and team-building</td>
<td></td>
<td>2014</td>
<td></td>
<td>Nelson, Melbourne</td>
<td></td>
</tr>
</tbody>
</table>

**Step 7: Collecting and recording data**

No matter what forms of secondary data you use, the most important source of data for your project should be your own primary data. Your primary data may include interview, survey or questionnaire responses, and observation details, from individuals, organisations or groups.

Your research methods will form the foundation of your primary data. They need to be prepared, distributed and collected in a logical, thoughtful and systematic manner to be most effective. Depending on the research methods selected, you will need to:

- create a draft set of questions
- pilot the method and evaluate its effectiveness
- refine the draft questions
• print interview questions or questionnaires so that they are ready to use
• organise equipment, such as a smart phone or tablet with a recording app or a digital video camera
• arrange for individuals or groups to be interviewed or surveyed
• conduct the data collection; for example, carry out interviews or observations or distribute and collect questionnaires.

Questionnaires and surveys
When conducting research, it is important to inform the respondent about the nature and purpose of the survey, and to note that the data collected will be confidential. This information may be stated verbally to the respondent at the beginning of an interview, written at the beginning of a questionnaire, or included in a covering letter (see Figure 4.8).

To ensure the success of your research, spending time writing good questions is essential. The following checklist and annotated questionnaire (see Figure 4.9 on pages 136–7) illustrate typical questions and layout ideas for you to consider.

It is important to have questions that:
• are easy to understand
• use clear, simple language
• avoid introducing bias by using emotive or descriptive words
• ask only one question at a time
• are listed in a logical and meaningful order
• begin with easy questions to put people at ease
• have a clear layout with plenty of space for respondents’ answers
• are limited to a manageable number
• use a variety of question types: pre-coded questions are quick and easy to answer and tally during analysis; attitudinal scales and questions are useful for finding out about a person’s opinion; open-ended questions allow for more detailed reasons, thoughts and opinions to be expressed.

Wednesday April 23
Dear Victoria
My name is Jacqueline Baker and I am a Year 12 student at River High School, on the north coast of NSW. I am currently studying 2 Unit Community and Family Studies, which is a Higher School Certificate course that requires the completion of an Independent Research Project. I have decided to do my research project on ‘Careers and women: the realities of success for women after 10 years of full-time employment in the workforce’, in which I am examining the management of resources by women in paid employment.

I would greatly appreciate your assistance by completing my questionnaire. Please use the pre-paid envelope provided to return it to me. All responses will be kept anonymous and confidential.

Thank you for taking the time to complete and return my questionnaire.

Yours sincerely
Jacqueline Baker

Figure 4.8 A sample covering letter to accompany a questionnaire
This questionnaire is designed to examine the management of resources by women in paid employment. Your willingness to complete the questions is appreciated. All responses will be anonymous and remain confidential.

Please indicate answers by either ticking the boxes, circling the numbers or writing your answer on the lines provided.

1 Current position?
Customer Service Manager for Australia

2 Formal qualifications?
SIA – Financial Markets

3 Informal qualifications (e.g. experience in the workplace)?
Customer service for the past 7 years, prior manager of small centre, prior sales and support

4 Number of work hours per week?

☐ 10–20
☐ 21–30
☐ 31–40
☐ 41–50
☐ 51–60
☐ 61+

5 Over the past three years, which human resources do you consider to have contributed to your success? Please circle the appropriate ranking.

<table>
<thead>
<tr>
<th>Ability to set and achieve goals</th>
<th>Never</th>
<th>Occasionally</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confident nature</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Conflict resolution skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Creativity</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Effective communication skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>High expectations for self</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>High self-esteem</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Loyalty</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Networking skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Other (please specify)

6 Indicate the limitations, if any, that have been placed on you throughout your career.
☐ Discrimination (male vs female)
☐ Discrimination (appearance, age, race)
☐ Difficulty in balancing family and work
☐ Money limitations
☐ Relationships with colleagues
☐ Pay inequality (male vs female)
☐ Sexual harassment
☐ Lack of qualifications
☐ Difficulty in managing stress
Other (please specify)

7 A good leader has many unique qualities. Rank the following personal traits that make a good leader. Please circle the appropriate ranking.

<table>
<thead>
<tr>
<th>Trait</th>
<th>Never</th>
<th>Occasionally</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to set and achieve goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Confidence</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Conflict resolution skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Determination</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Effective communication skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Intelligence</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Personal interaction skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Team-building skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Vision for the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Other (please specify)

8 Please list what you consider to be your personal strengths.

Ability to handle multiple projects and be organised

Do you make attempts to enhance your personal strengths?
☐ Yes
☐ No

Can you explain how?
Not as often as I should – I always feel I am too busy

(continued)
9 Please list what you consider to be your personal weaknesses.

**Confrontation**

Do you make attempts to manage these weaknesses?

- Yes
- No

Can you explain how?

**By working through issues and facing them**

10 Do you consider yourself successful in the workplace?

- Yes
- No

If yes, is being a success in the workplace all you thought it would be?

- Yes
- No

Why?

**Can be rewarding when good feedback received**

11 List your short-term goals (6 months–1 year).

**Ensure operational functions within organisation are working satisfactorily based on customer feedback**

12 List your long-term goals (1–5 years).

**Travel overseas**

13 Is reaching these goals a high priority for you?

- Yes
- No

14 What is your age?

- Under 18
- 18–24
- 25–29
- 30–34
- 35–39
- 40–44
- 45–49
- 50+

15 Marital status?

- Married
- De facto
- Single
- Divorced/separated

16 Do you have any children?

- Yes
- No

If yes,

- Baby
- 0–2 years
- Toddler
- 3–5 years
- School age
- 6–17 years
- Young adult
- 18+

Thank you for completing this survey. Your time and responses are greatly appreciated.

---

**Interviews**

Interviews involve personal contact with the respondent. This may be face to face, via email or over the phone. For both structured and unstructured interviews, be well prepared by having considered your questions and how you are going to record the respondent’s answers. It may be a good idea to record the interview on a smart phone or tablet with a recording app, or on another type of digital recorder; however, you will need to gain the permission of the respondent beforehand to do this during the interview. Alternatively, make sufficient notes during the interview on a pre-formatted document (see Figure 4.10 on page 139), and be prepared to follow this up with a longer report immediately afterwards. This helps to create a relaxed environment, which means that the person will feel more comfortable and provide more valuable answers.

Begin the interview by identifying yourself and explaining the purpose of your research and how the data is to be used. During the interview, show that you are interested by maintaining eye contact, speaking slowly and ensuring that you provide sufficient time for the respondent to consider their answer before prompting or asking the next question.
Planning
1. At what age did you decide to start a family?

2. Did you and your partner consciously plan to have children? How did you do this planning? Can you give some examples?

Expectations
3. During pregnancy, each parent-to-be experiences different feelings, such as happiness, contentment, anxiety and nervousness. Can you describe your experiences? What did you do to cope with these feelings?

4. Did you expect that your child would be easy to care for? Why or why not?

Reality
5. After the birth of your child, did you feel that you were well prepared? Can you explain?

6. As new parents, many parents admitted that they sought advice on different aspects of parenthood. How did you do this? How did it help you/your partner?

7. As a parent, consider the three phases – planning, expectations and reality. Which do you feel was the:
   a. easiest? Why?
   b. hardest? Why?

Figure 4.10 Sample structured interview questions for IRP related to preparing for parenthood
Observations
To ensure that you are prepared for an observation, you will need to consider:
- when and where the observation is to take place
- how it is to be planned
- whether you will be a part of the group or just the observer.
Also, think about what type of evidence you expect to see and design a format for recording this evidence. There are different types of data-recording sheets you could use, such as a graphic record called a sociogram (see Figure 4.11) or a tally sheet (see Figure 4.12). Alternatively, the observation may be recorded using a digital video recorder or smart phone; however, prior permission will need to be sought from the participants and a data-recording sheet developed afterwards based on the identified behaviours.

Observation
A research method that requires the researcher to watch and record the behaviours of their subjects; the researcher may be a participant or non-participant in the research activity.

Case studies
A case study provides a narrative of a particular individual, family, group or situation (see Figure 4.13 on page 140). Developing a case study requires the use of multiple sources of information, such as interviews and observations, which may be collected on more than one occasion to ensure that a detailed profile on one issue can be provided. Case studies are therefore useful in achieving a deep analysis of a situation and for answering the ‘how’ and ‘why’ questions in the research rather than ‘who’, ‘what’ and ‘when’.

Figure 4.11 A sample sociogram

Figure 4.12 A sample tally sheet
Case study

Grace and Kurt have been married for 18 years. Grace is 37 and Kurt is 42. They have two children: Max aged 19 and Corey aged 14.

Grace and Kurt have endured many hardships during their marriage – the loss of a child being one of them – and neither has been satisfied with the relationship. Over the last three years, both partners have considered separation and divorce, but they have been reluctant to do so because of the children and the financial implications. Grace has worked periodically over the last ten years, usually doing freelance art work for a design company.

Conflict increased so much in the family that Grace, after seeking legal advice, decided to move out of the family home. She moved to another suburb, taking Corey with her. Corey is not happy with the situation or his new school, and wants to move back in with his father and return to his old school. Max is still living at home with his father but is contemplating moving out and sharing a flat with some of his friends.

Grace is legally entitled to a certain amount of money as part of the property settlement; for her to receive this, the house must be sold and the proceeds divided between Grace and Kurt. This will mean that Kurt will also have to buy other accommodation. If Corey does move back in with his father, it may only be a temporary situation until the house is sold.

Grace has obtained a contract for more stable work but is finding it difficult to pay for rent, food and other living expenses with the money she is earning. When the house is sold and the money has been settled, she would also like to use the money to purchase accommodation. However, she realises that given her limited skills, she may have difficulty finding a job that pays enough for her to meet mortgage repayments and provide for other needs and wants.

Figure 4.13 Narrative, or case study, may be chosen to summarise the data collected from interviews and observations

Step 8: Documenting actions and issues – writing in your project diary

Your project diary is a record of the steps you take during the development of your IRP. Your diary should clearly indicate the kind of work done at school, in the library or outside school hours. You will probably be asked to show your diary to your teacher at regular intervals; during this time, make sure you ask questions and get further help with your project. The diary should have one or two entries for each week, outlining what you have done or intend to do towards completing your work for that week. Assessment of the diary takes place on the date set by your teacher, but you must have already completed diary entries before this date.

What should go in the diary?

Information you may like to include in your diary includes:

• an outline of project progress
• a description of sources of data
• a description of methods used to collect secondary and primary data
• a discussion of positive and negative experiences
• personal opinions and comments
• problems you have had with parts of your project, and how you solved them
• decisions you make.

You may choose to write in an exercise book, a commercial diary or to use a smart phone or tablet app. It does not matter what type of diary you choose to use, as long as you can hand it in to your teacher easily, for feedback and marking purposes. Figure 4.14 on the next page illustrates a diary format you could use.
<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Result</th>
<th>Further action/reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri 18</td>
<td>Lately I have been researching my secondary data and completing the questionnaire. I showed Mr T and he gave me good advice. I no longer need to search the internet, hooray!</td>
<td>Mr T's advice was very helpful. I needed to think more clearly and simplify my questions. I think I've found all of my secondary data.</td>
<td>Now I'm planning to finally complete my questionnaire, and hand it out. First I'm going to pilot it on my parents — and accept their constructive criticisms. Then in the same week I will hand out my good copy of the questionnaire, get them back, and start tallying and analysing the answers.</td>
</tr>
<tr>
<td>Sat 19</td>
<td>Today I have piloted my questionnaire on my parents. I found the mistakes I have made and how to adjust them to suit my respondents.</td>
<td>Piloting my questionnaire was a good decision. My parents gave me good advice on where I need more lines, and better wording of questions.</td>
<td>I've now adjusted my questionnaire — fixed up all the mistakes and as far as I can see, it's practically flawless. Hey! I am going to take it home and print it — and get my dad to photocopy as many copies as I need. I will give them out to my sample group. I will send some with stamped envelopes so I can get them back quickly.</td>
</tr>
</tbody>
</table>

Figure 4.14 Sample IRP diary entry

**Interpreting research**

Once you have conducted your research, you need to present the findings, analyse and interpret the results and draw conclusions. The form that this takes will depend on the type of research methods chosen. Steps 9–11 outline processes to support you through this stage.

**Step 9: Presenting research findings**

There are two basic ways that data can be presented: quantitatively or qualitatively.

Quantitative data is in a numerical form, so it can be counted and then presented through the use of bar, line or pie graphs; or tables with statistics or percentages. Remember that quantitative data needs to be collated or tallied, then converted into percentages so that valid comparisons can be made in graphs or tables (see Chapter 3, page 84). The most common forms of graphs are illustrated in Figures 4.15–17 on the next page.

Qualitative data, such as interview data, is descriptive and often cannot be reduced to numerical form. It is often presented as a written report that describes the main ideas and trends that emerged from the research, and it includes quotes and anecdotes (see Figure 4.18 on the next page).
In order to explore the roles in the decision-making process, fathers were also asked whether they believed that the starting of families was a mutual decision undertaken by themselves with their partners. Although partners were more likely to instigate or broach the subject (only three fathers stated that they instigated the discussion of starting a family with their partner), the majority of fathers ($n = 25$) indicated that the decision to start a family was a mutual one.

'It definitely was a mutual thing that we both thought about, and just went into it with open eyes, I guess. It wasn’t accidental.' (Adam, Primary caregiver, 25, 1 child)

'Having kids was a joint decision and I thought that it was really important that I too have a part in it.' (Dave, Clerical officer, 45, 2 children)

Joint decision-making of this kind sometimes reflected wishes to pursue equal or active levels of involvement as fathers.

Step 10: Analysing research results

Now is the time to consolidate all of your information, including your literature review and your primary data, which should be collated in graphs, tables or written reports. All of this data should be included in an analysis of your results. You should be completely familiar with your data — read it and reread it! Such familiarity will help you visualise what you have found during the research process and bring out the main features of the data in your written project. If you know your data inside out, the analysis will flow more easily.

Thus, before you can interpret your research findings, you need to analyse them. This means that you describe what you can see in the evidence provided in your graphs or tables. This is done by identifying the trends that you can see in your presented data. You could ask yourself questions, such as:

- what was the most common response?
- what feeling was expressed by most of the people I spoke to?
- were there any differences/similarities between the age groups/gender groups/cultural groups in my sample?
- what were the most frequent results?
The main objective of this research was to identify the teenage perceptions and acceptance of different relationships. The primary and secondary data display many different attitudes and values of today's teens, and, unfortunately, a lot of misconceptions and intolerance of homosexuality in our society. Considering the research focus was the 'typical' teenager's views on relationships, it was very difficult to end up with a random sample group from different peer groups and ages to get a broad range of answers. It should also be noted that more females actually answered and returned the survey. This has created some bias in the results.

Remember also that analysis and interpretation do not only come at the end of your research – they occur as you are designing and working on your research. Every time you ask a question or observe some situation, you should ask yourself ‘What does this mean?’ You should continually reflect on your data. Making a note of these in your diary is an effective means of recording your thoughts and information.

The data collected suggest that part-time work does have a large effect on a student's studies. This figure shows that 70% of students stated that work occasionally affected their studies, with 37% of students stating that it had a negative impact. 10% of students stated that work occasionally causes them to become too tired to concentrate on their studies, and 56% of students said that occasionally their standard of study dropped. Students also stated that part-time work limits their time to study occasionally, and occasionally gives them a break from studying. These results indicate that part-time work has a negative impact on a student’s studies.

Figure 4.19 A complex column graph with text data analysis

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Result</th>
<th>Further action and/or reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon II</td>
<td>I have tried to collect back all of my questionnaires but some people have not responded.</td>
<td>This means that my statistics won’t be ‘even’ as I have too many females compared with males in my sample group now.</td>
<td>Maybe I could hand out some more to just boys, but I don’t think I have enough time left, especially if the second group of males don’t return them either. Will need to note this in my report as I’m sure it will influence the results.</td>
</tr>
</tbody>
</table>

Figure 4.20 Student diary entry, with text data analysis below, noting ongoing reflection
The next step is to identify possible reasons for the patterns and relationships you have found. This is the time that your literature review can be invaluable to support, or even challenge, what you have found through your primary data. Consider the following:

- Are your results similar or consistent with other studies or knowledge about this topic?
- Can you provide evidence from your secondary data that supports what you found?

Citing other sources gives you a chance to justify, explain or contrast with your analysis. For example: ‘From my reading/secondary data, I feel that the trends shown could be the result of … This evidence is supported by … on page …’. Figure 4.21 demonstrates how a student integrated secondary and primary data.

Adolescents sometimes feel they have many friends because they are popular, though this is not always the case according to Sourry and Tolley (2014).

‘Popularity refers to being generally well known, frequently invited to activities and admired by many acquaintances, but it does not necessarily mean a close, intimate relationship with those people.’

During my observations of the friendship group, a ‘popular’ adolescent was seen to ‘chat’ with her peers but it wasn’t very long before she was ‘chatting’ briefly with another, then another. This could have been because she was more interested in appearing to be popular, by having contact with many ‘friends’, rather than having close and sincere friendships.

Figure 4.21 Student sample analysis of statements

Check for understanding

To practise analysing data, review the data provided below. Then answer the following questions.

1. Describe what you can see in the graph.
2. Identify the trends. What are the extremes or unusual patterns?
3. How could you account for these trends?
4. What would you expect the trend to be for the current year? Explain why.

Step 11: Drawing conclusions from research

Once you have analysed your data, you must draw conclusions in relation to your initial research question, problem statement or hypothesis. (Do not be concerned if the hypothesis upon which you have conducted your research has been proven incorrect. This is not unusual and does not mean you have to start again! However, this does need explaining in the conclusion.) Before you write this section, read through the whole project and make notes on any key points that your data shows and place them in a logical order.
Knowledge gained through primary and secondary research has allowed broad conclusions to be made as to the reality of success for women within the workplace. For a successful career to be a worthwhile life experience, the positive aspects need to clearly outweigh the negatives. Effective management of human and non-human resources is a necessary process to achieve this balance. Successful women in the workplace have the ability to utilise and interchange both human and non-human resources for the purpose of achieving.

Need satisfaction is essential to an individual’s wellbeing. Career women should be able to satisfy their physical, social, emotional and intellectual needs. However, this is clearly not the case as they may not be completely satisfied emotionally when an imbalance between work and other areas of their life often exists. Successful women within the workplace may not achieve 100% need satisfaction and therefore positive wellbeing. The reality of success for women in the workplace suggests a difficulty in balancing family and work. Women are attempting to take on more duties and responsibilities than they have the time or energy to perform effectively unless of course they are a super mum. Balance combined with success can be achieved at a greater level if the woman is single and childless, as is the trend for many women in high-power jobs today. Stress and inequity on the basis of gender are limitations that are also imposed on successful career women.

Success for women within the workplace may result in poor health. On average, while they have acceptable diets, they exercise less and participate less than adequately in leisure.

The reality of success for women within the workplace is not as glamorous and desirable as first imagined. Achieving success is hard work; it represents a very high level of commitment and self-motivation. A career for many women holds their pride, their sense of belonging and their status. Despite all the negative aspects of pursuing a career and achieving a work–family balance, these women have careers because they choose to. When articulating the reality of a successful career, personal feelings of satisfaction and achievement can be difficult to measure and are often the single contributing factor as to why these women choose to lead such demanding lives.

**Figure 4.22 Sample concluding statements**

**Presenting research**

When you have finished your conclusion, the remaining steps 12–14 are related to the organisation and presentation of your IRP. Your teacher will have provided guidelines on how and when this should happen.

**Step 12: Completing the organisation and presentation of your research product**

Your IRP may be presented in a variety of different forms; it will most likely include written text or verbal information, as well as tables, graphs and relevant photographs or diagrams. It should have a professional presentation style, which can be achieved by using a range of technologies. Figure 4.23 illustrates a multimedia presentation with palm cards as an example.
Palm Card 2

- 45% of males preferred Boxercise [comment on stereotype]
- Males were least interested in pilates and yoga [comment further on stereotype]
- Most popular classes for females were spin and yoga
- No clear favourite for females
- Females were least interested in AbCrunch

Palm Card 3

- **Strength** – extent to which muscles can exert force by contracting against resistance (e.g. holding or restraining object or person)
- **Power** – ability to exert maximum muscular contraction instantly in explosive burst of movements. The two components of power are strength and speed
- **Agility** – ability to perform a series of explosive power movements in rapid succession in opposing directions (e.g. ZigZag running or cutting movements)
- **Balance** – ability to control the body’s position, either stationary (e.g. a handstand) or while moving (e.g. a gymnastics stunt)

Figure 4.23 Presentation of a multimedia product, including PowerPoint slides and palm cards

Your IRP should contain a title and table of contents, both of which will assist in providing a systematic and organised approach to the presentation of your product, while an acknowledgement statement provides an opportunity to recognise the support and help that may have been provided to you during the research process.

The introduction can be developed from the project plan that was submitted for marking early in the research process (see Figure 4.7 on page 132). Remember to make adjustments or changes if they occurred during the active research process. Your introduction should answer the following questions.

- What was the research project about?
- How did the research relate to the selected area of the Community and Family Studies course?
- What types of research methodologies and sampling methods were chosen and why?

Your introduction should also define terms and concepts.

The main section, or body, of the product will consist of the steps in the research process that you have undertaken. It should include:

- a concise description of the secondary data collected, followed by a summary of the findings (literature review)
- an explanation of the primary data collected, as well as the presentation and explanation of the results, illustrated in tables, graphs or written reports
- an analysis of the data as it relates to the research question, problem or hypothesis and that integrates references to both primary and secondary data
- a conclusion, which is a summary of the key findings, as well as suitable recommendations, if appropriate.

Lastly, you will need to include the bibliography and appendix.

Rarely does anyone complete a precise, accurate and quality IRP without developing a first or second draft. Therefore:

- **draw together the information and data collated in steps 9–11**
- **rework your information to present it clearly and to ensure your discussion flows logically**
- **develop the final copy, eliminating any repetition and rewording sentences if the meaning is unclear**
- **read what you have written, preferably aloud – if anything is unclear to you, it will be unclear to the reader.**
Once the above is complete, do an overall check to ensure that:
• no spelling errors remain in the written text
• oral presentations are easy to understand
• electronic data are defined and easy to read
• all items are clearly labelled.

Step 13: Assembling your bibliography
It is essential that you keep accurate details of all the resources you use as you go. If you don't have a system for doing this from the start, you may find that you can't recall the details of a book or magazine article you used and your bibliography will be incomplete. By using the referencing scaffold provided on page 134 you may save precious time at the end of the project because you won't need to search for those details, or go back to look for books or internet articles that you used.

The layout and punctuation required for a bibliography can be prepared according to a variety of styles, such as Harvard, Oxford, APA and MLA. APA style is used in this book.

The entries in a bibliography are ordered alphabetically according to the last name of the primary author (that is, the author listed first).

The data collected by primary research methods should be included in the main section of the project; however, if a research method included a survey or questionnaire form that was taken directly from another source, that should be included in the bibliography.

Think it through

1 Look on the Charles Sturt University website for specific details on referencing using the American Psychological Association (APA) style of referencing. You can link to this directly via http://cafs.nelsonnet.com.au.

2 Common examples of references and bibliographic details have been included in the following table. Copy the table headings into your notebook and add your own IRP examples.

<table>
<thead>
<tr>
<th>Type reference</th>
<th>Bibliographic details</th>
<th>Example</th>
</tr>
</thead>
</table>

(continued)
**Step 14: Finalising your appendix**

An appendix contains material that is relevant to your research process but is not appropriate for inclusion in the IRP product. This could include copies of interview questions, a blank questionnaire and completed questionnaires, copies of raw data that were collected before they were put into tables or graphs, newspaper articles and photographs. Each item should be numbered and titled. It may be easy to place each item in a plastic sheet protector and then organise them in a folder. The appendix should be completed and available with the final product.

Now that your project is complete, reward yourself. Congratulations! Celebrate!

**REFERENCES**