

ACADEMIC SUCCESS

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University of Southern Queensland

Toowoomba



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The University of Southern Queensland acknowledges the traditional custodians of the lands and waterways where the University is located. Further, we acknowledge the cultural diversity of Aboriginal and Torres Strait Islander peoples and pay respect to Elders past, present and future.

We celebrate the continuous living cultures of First Australians and acknowledge the important contributions Aboriginal and Torres Strait Islander people have and continue to make in Australian society.

The University respects and acknowledges our Aboriginal and Torres Strait Islander students, staff, Elders and visitors who come from many nations.



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PREFACE

This book owes its origins to the open textbook *College Success*, written by Amy Baldwin. Baldwin's text aims to assist students' transition into tertiary study. Our team of learning advisors and librarians at the University of Southern Queensland have a similar desire to help new students flourish at university. Thus, the integration *College Success* with the wealth of knowledge and experience of our team made a natural union for our book. Now entering its third iteration, *Academic Success* has expanded in exciting ways that we never predicted.

In *Academic Success*, you will find an Australian perspective on the university experience, with content especially re-worked for Australian students. Our team has also contributed new discussions in areas such as English language and Maths foundations, working with information, writing assignments, being a successful First Nations' student, failing assessment, preparing for employment, life after graduation and many more. Our sincere thanks to each team member for their tireless efforts, enthusiastic support of the project and their valued work on this book. Please see [About the Authors](#) for the list of our contributors. We would also like to thank Samara Hoffmann for designing the cover and Dr Linda Clark for creating several of the figures appearing in the book. This third iteration of *Academic Success* includes the beautiful artwork of Aboriginal artist Kc Rae (Kacie Fahey). Thank you, Kc Rae, for enriching our perspectives with your valued contributions.

This book would not have been possible without the outstanding contribution of our Open Education Content Librarian Nikki Andersen. We offer our sincere thanks to Nikki for her expertise, insightful guidance and dedicated approach in stepping us through this new process. Nikki, you made the journey enjoyable, exciting and achievable. Thank you. We also extend our appreciation to Dr Adrian Stagg, Manager (Open Educational Practice) for his support, advice and expertise in open textbooks. Your vision and enthusiasm is inspiring and contagious. You have expanded our world. Our thanks also goes to our amazing leader, Debi Howarth (Student Learning and Development Manager). No project is possible without a dynamic person at the helm who not only sees the potential from the beginning but who also knows how to manage a project all the way through to the finish line. Debi, this entire book exists because you thought, "we can do this" and then you made it happen. Thank you for your outstanding leadership and for the opportunities you gave us to contribute to such an exciting venture.

Finally, Dr Wendy Hargreaves committed her substantial skill and enthusiasm to create a seamless project which harnessed the writing talents of our team. Her writing and editing expertise supported us in producing our first open textbook. Wendy's boundless energy and plentiful smiles provided the best possible environment for this creation. Thank you, Wendy.

Welcome to university. Congratulations on beginning the challenging and rewarding journey of becoming a tertiary student. It's an exciting time. It can also be a little daunting. Perhaps you've been busy enrolling in courses, exploring university websites and searching for the textbooks on how to become a mechanical engineer, a clinical psychologist or a secondary school teacher. Yet despite all those books, you may have noticed that one is missing. Where is the book that tells you how to be a student? Are you expected to already know how to write essays, study for exams and give presentations? Where will you learn those academic skills to help you not just survive, but thrive at university?

Academic Success is designed to help you with your journey. It's a handbook of the core skills for empowering students, whatever you are studying. Spending time learning and practising these skills will produce benefits that flow across all subjects throughout your years at university. Now that's a valuable investment. Not only can this knowledge improve your achievement, but it can also reduce the stress of being a student, and ultimately make your university experience more enjoyable.

Academic Success is divided into five parts reflecting different aspects of the tertiary experience you will encounter. *Part A: Successful Beginnings* addresses what it is like to be a new student at university. It begins with discussing the advantages of having a tertiary education. It then details the experiences of adjusting to university life and the benefits of connecting with the people who can support you through this time. There's also a chapter about succeeding as a First Nations student.

Part B: Successful Foundations introduces basic skills in English language and Maths, and techniques for accessing and working with information in your subject area. It will also explain the importance of academic integrity and acknowledging your sources of information. These chapters are valuable particularly if you're feeling unprepared for university or anxious about returning to study after years at home or in the workforce. They can build your confidence and prepare you for the new learning ahead. It is also a good place to check if there are any gaps in your understanding of the basic concepts you will rely on throughout your studies.

Part C: Successful Study Skills presents the everyday, core skills that successful students use while at university. These are methods applied by generations of students to manage time, set goals and beat procrastination. This discussion is followed by wealth of practical tips and tricks on reading efficiently, taking effective notes, organising a study space, and exploring ways to think critically, analytically and creatively about what you are learning.

Part D: Successful Assessment meets head-on the challenges of tertiary assessments. These chapters step you through the processes of writing assignments, constructing presentations, and preparing for exams. It also discusses what you can do if you fail an assessment to turn it into future success. These chapters contain the pointers that can help you convert your hard work into strong grades that will ultimately earn your degree.

Part E: Successful Futures explores what lies ahead when your university experience draws to a close. It has suggestions of what you can do *now* to assist your transition. There are ideas for

improving your readiness for work in your preferred profession and for increasing your appeal to future employers in a competitive job market. It also explores your options of pathways for your life after graduation. A discussion of postgraduate study can help you decide if you want to pursue more study.

Every chapter throughout the book concludes with a summary of key points. You can use these as a quick reminder of what you have learnt. Also be on the lookout for student stories in the chapters. These are short quotes from past and current students from diverse backgrounds, reflecting on their personal experiences at university. You will also encounter artwork by KC Rae and Sam Conway who bring a First Nations' perspective to discussions.

Commencing university is a rollercoaster ride. As a new student it is easy to be overwhelmed by the amount of new information, people and procedures that you encounter daily. It is a challenge to know where best to direct your time and energy. The advantage of reading *Academic Success* is that what you will learn can impact positively on every aspect of your journey. This book isn't about mastering one subject. It's about empowering you to master them all by building the skills that successful students use. Through this book, we can make the journey to academic success with you. Let's begin.

PART I.

PART A: SUCCESSFUL BEGINNINGS



Successful Beginnings

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BEGINNINGS

KRISTEN LOVRIC AND TYLER CAWTHRAY



Figure 1.1 Who are you and why have you decided to go to university? *Image by Naassom Azevedo used under CC-BY licence.*

INTRODUCTION

Who are you and why have you decided to go to university? Starting this chapter with *you*, the student, seems to make perfect sense. You are probably full of emotions as you begin this journey towards a degree and the fulfilment of a dream. Are you excited about meeting new people and *finally* getting to take subjects that interest you? Are you nervous about how you are going to handle your courses and all the other activities that come along with being a university student? Are you thrilled to be making important decisions about your future? All of these thoughts, even if contradictory at times, are normal and you may be experiencing several of them at the same time.

The decision to go to university is a choice that students make. You have made a *choice* to commit several years of hard work to earn a degree. In some cases, you may have worked long and hard to get here by getting good grades in high school. You may have even set yourself up financially and be earning money to pay for textbooks and other expenses. Now that you are enrolled in university, you have a clearer path to achieving your goals!

WHY UNIVERSITY?

- greater job satisfaction
- better job stability

- better outcomes for the next generation
- greater earning potential over time

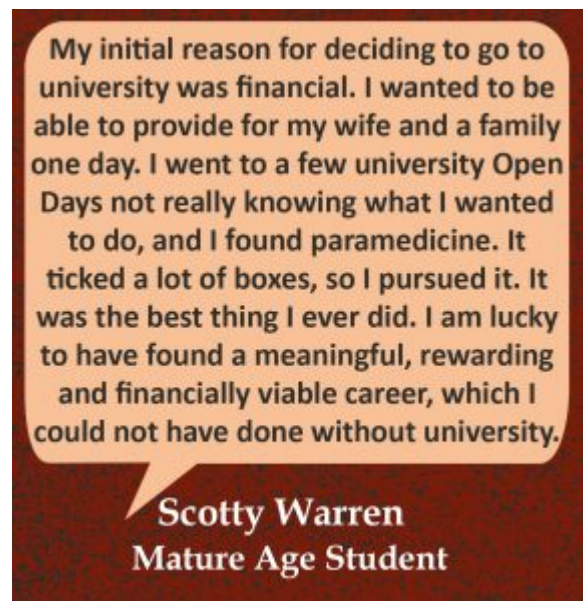
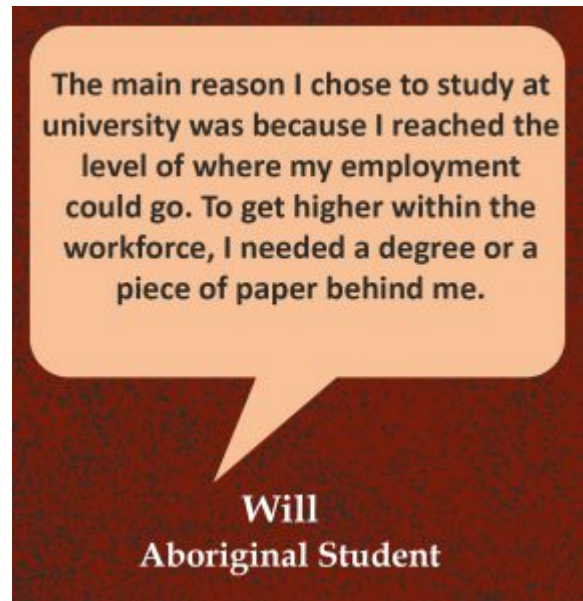
University also provides an opportunity to develop much needed soft skills. The National Association of Colleges and Employers (2019) in the United States has identified eight career-readiness competencies that university students develop:

- critical thinking/problem solving
- oral/written communication
- teamwork/collaboration
- digital technology
- leadership
- professionalism/work ethic
- career management
- global/intercultural fluency

There are few occasions that will provide you the opportunity to develop all of these skills in a low-stakes environment (i.e., without the fear of being fired!). You will learn all of this *and* more in your courses. It seems like a great opportunity, doesn't it? If you find yourself asking the question "What does *this* course have to do with my major?" challenge yourself to look for connections between the content and your larger educational, career, and life goals.

GROWTH MINDSET

The way you think about your university experiences can affect your journey and your success. Psychologist, Dr Carol Dweck (2016, p. 2) and her colleagues developed a model showing two contrasting approaches to thinking – a fixed mindset and a growth mindset. Someone with a fixed mindset views abilities as something they either possess or do not. It cannot be changed. In contrast, someone with a growth mindset sees abilities as something that can be learnt and developed (see **Figure 1.2**).



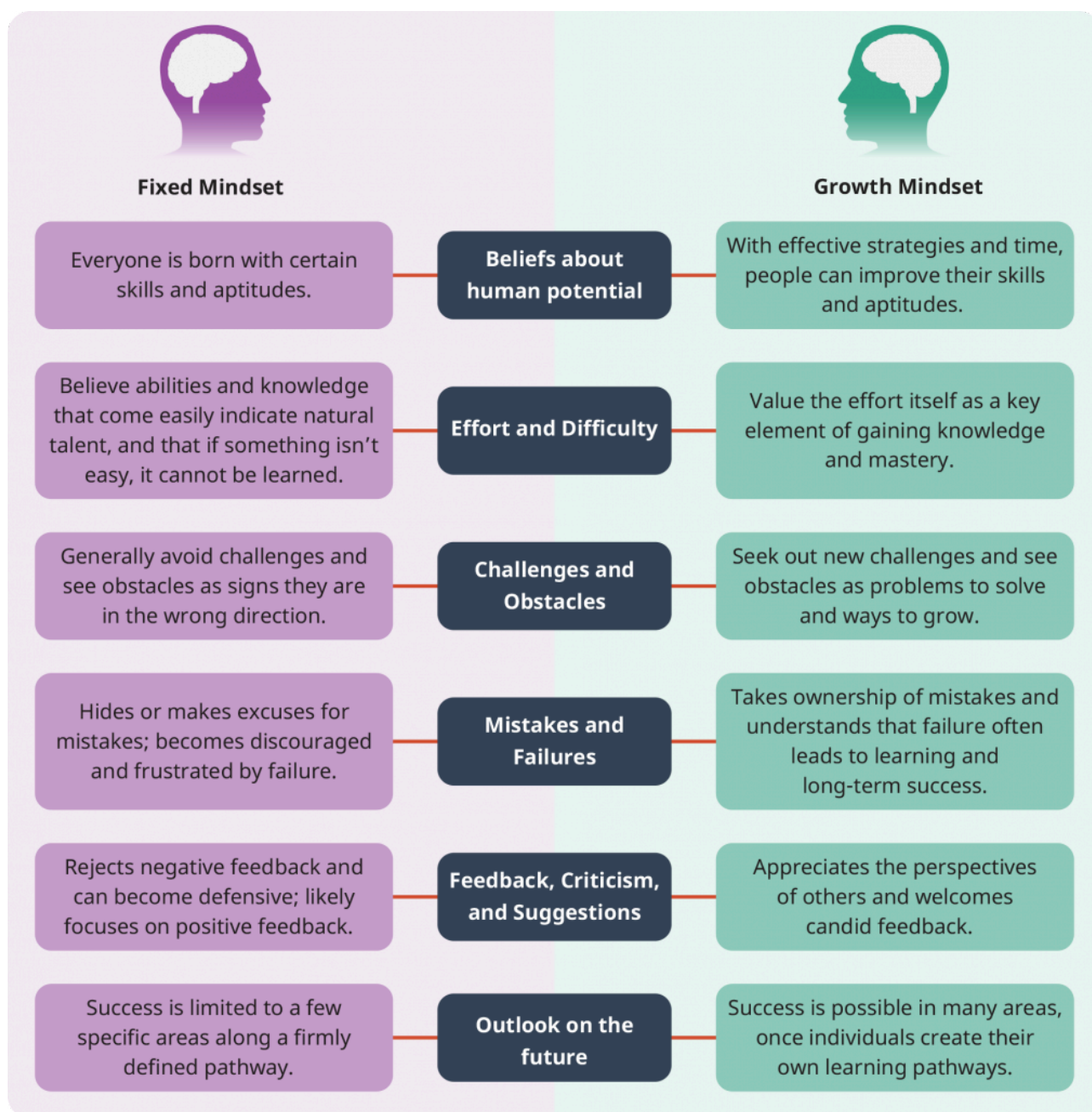


Figure 1.2 The differences between fixed and growth mindset are clear when aligned to key elements of learning and personality. Credit: Based on work by Dweck (2016).

Adopting a growth mindset can assist you to overcome challenges, and grow in knowledge and ability as you set out on your new university journey. As strange as it may seem, research into fixed versus growth mindsets has shown that if you believe you can learn something new, you greatly improve your ability to learn (Dweck & Leggett, 1988). At first, this may seem like the sort of feel-good advice we often encounter in social media posts or quotes that are intended to inspire or motivate us (e.g., *believe in yourself!*). However, in looking at the differences outlined in **Figure 1.2** between a fixed (i.e., *performance-goal-oriented* student) and a growth mindset (i.e., *learning-goal-oriented* student), you can see how each part of the growth mindset path would increase your probability of success when it came to learning.

Something you may have noticed is that a growth mindset would tend to give a learner grit and persistence. If you had learning as your major goal, you would normally keep trying to attain that goal even if it took you multiple attempts. Not only that, but if you learnt a little bit more with each try you would see each attempt as a success, even if you had not achieved complete mastery

of whatever it was you were working to learn. With that in mind, it should come as no surprise that Dr. Dweck found that those people who believed their abilities could change through learning (growth versus a fixed mindset) readily accepted learning challenges and persisted despite early failures (2016, pp. 2-5).

DOING THIS TOGETHER

Having a helpful mindset is one way you can put yourself on the pathway to academic success. Another powerful tool is to connect yourself with your fellow university students, academic and professional staff to make your journey together. If there is anything that you would like some assistance with when studying at university, talk to someone and let them know what you need. The secret about university success that not many people know is that successful students seek help. They use resources and they do that as often as necessary to get what they need. Your tutors and lecturers will expect the same from you, and your university will have all kinds of offices, staff, and programs that are designed to help.

These are called “help-seeking behaviours,” and along with self-advocacy, which is speaking up for your needs, they are essential to your success. As you get more comfortable adjusting to life in university, you will find that asking for help is easier. In fact, you may become really good at it by the time you graduate, just in time for you to ask for help finding a job! Review **Table 1.1** for a few examples of times you may ask for extra support. See if you can identify where at your university you can find the same or a similar resource.

TABLE 1.1 CHALLENGES, UNIVERSITY RESOURCES, AND POTENTIAL OUTCOMES

Type	Challenge	University resource	Potential outcome
Academic	Mastering the homework in your math class.	The university library, learning centre or math's learning advisors	A peer or professional tutor can walk you through the steps until you can do them on your own.
Health	You've had a great few days studying but are now tired and noticed that you have a slight cough.	The university health or medical centre	A licensed professional can examine you and provide care.
Social	You're looking for a group to belong to. Your classmates seem to be going in different directions and your roommate has different interests.	Student organisations and interest groups	Becoming a member of a group at university can help you make new friends.
Financial	You were granted a scholarship which was great but are now looking for ways to cover additional university expenses.	University Student Support or Wellness office	A student welfare counselor can provide you with information about your options for meeting your university expenses.

CONCLUSION

In conclusion, knowing who are you and why have you decided to go to university is an important first step to appreciating the magnitude of the choice you have now made to achieve your goals. This is exciting because a university degree is highly valuable and university graduates are more likely to experience greater job satisfaction, job stability, health and wellness, outcomes for the next generation, and earning potential over time. Starting to study at university will open the door to fantastic opportunities to develop your knowledge and skills and will test your mindset to overcome challenges. The best part is that you will be doing this together with your fellow students, academic and professional staff. This book will also provide you with assistance as you make the transition across the great divide – from high school, work, home or wherever you were at in life – to university student. Welcome aboard!

Key points

- The decision to go to university is a choice that students make to achieve their goals.
- University graduates are more likely to experience greater job satisfaction, better job stability, improved health and wellness, better outcomes for the next generation, and greater earning potential over time.
- Adopting a growth mindset can assist you to overcome challenges and grow in knowledge and ability as you set out on your new university journey.
- You will be doing this together with your fellow students, academic and professional staff.

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ADJUSTING TO UNIVERSITY

KRISTEN LOVRIC; LINDA CLARK; ANBARASU THANGAVELU; AND SARAH IRVINE



Figure 2.1 You will experience academic, cultural, emotional, financial, intellectual, and social adjustments at university. [Image](#) by [Andrea Piacquadio](#) used under [CC0 licence](#).

INTRODUCTION

University will not only expand your mind, but it may also make you a little uncomfortable, challenge your identity, and at times, make you doubt your abilities. It can be transformative for you as an individual and through you, transform your communities and the nation more broadly through the development of a “love of learning for its own sake and a passion for intellectual discovery” Bradley, et al., (2008). For this transformation to happen, however, it means that we will need to be open to the transformation and allow the changes to occur. This chapter will provide you with an understanding about types of adjustments in the first year, and what to expect of university culture and expectations. Next, your learning responsibilities as a university student and some information about what to expect in your first year will be explained. Finally, a summary of practical study experiences you may need, the challenges that you may encounter and hints about scholarship opportunities will give you the information you need to adjust to your new life as a university student.

ADJUSTMENTS IN THE FIRST YEAR

Flexibility, transition, and change are all words that describe what you will experience. Hazard and Carter (2018) describe six adjustment areas that first-year university students experience: academic, cultural, emotional, financial, intellectual, and social. Of course, you won’t go through these adjustments all at once or even in just the first year. Some will take time, while others may

not even feel like much of a transition. Let's look briefly at these adjustments to prepare for the road ahead:

- **Academic adjustment.** There are no surprises here. You will most likely—depending on your own academic background—be faced with the increased demands of learning at university. This could mean that you need to spend more time learning to learn and using those strategies to master the material. Asking for help early to develop your academic skills is highly recommended to help build your confidence. This is covered in more detail in the chapter [Successful Connections](#).
- **Cultural adjustment.** You will likely experience a cultural adjustment just by being at university because most campuses have their own language (modules, lectures, and tutorials, for example) and customs. You may also experience a cultural adjustment because of the diverse and multicultural environment that you will encounter.
- **Emotional adjustment.** Knowing that you may have good and bad days, and that you can still bounce back from the more stressful days, will help you find healthy ways of adjusting emotionally.
- **Financial adjustment.** Most students understand the investment they are making in their future by going to university. Even if you have most of your expenses covered, there is still an adjustment to a new way of thinking about university and living costs and how to pay for it. You may find that you think twice about spending money on entertainment or that you have improved your skills in finding discounted textbooks.
- **Intellectual adjustment.** Having an intellectual “a-ha!” moment is one of the most rewarding experiences of being a university student, right up there with moving across the graduation stage with a degree in hand. Prepare to be surprised when you stumble across a fascinating subject or find that a class discussion changes your life. At the very least, through your academic work, you will likely learn to think differently about the world around you and your place in it.
- **Social adjustment.** A new place often equals new people. At university, those new relationships can have even more meaning. Getting to know your lecturers can not only can help you learn more in your classes, but it can also help you figure out what career pathway you might want to take and how to get desired internships and jobs. Learning to reduce conflicts during group work or when living with others helps build essential workplace and life skills.

Think about what you have done so far to navigate these transitions in addition to other things you can do to make your university experience a successful one.

UNIVERSITY CULTURE AND EXPECTATIONS

Going to university—even if you are not far from home—is a cultural experience. It comes with its own language and customs, some of which can be confusing or confounding at first. Let's start with the language you may encounter. In most cases, there will be words that you have heard before, but they may have different meanings in a university setting. **Table 2.1** has a brief list of other words that you will want to know when you hear them on campus.

TABLE 2.1 COMMON UNIVERSITY TERMS, WHAT THEY MEAN, AND WHY YOU NEED TO KNOW.

Term	What it means	Why you need to know
Attendance policy	A policy that describes the attendance and absence expectations for a class.	Lecturers will have different attendance expectations. Read your course specifications to determine which ones penalise you if you miss too many classes.
Final exam	A comprehensive assessment that is given at the end of a term.	If your class has a final exam, you will want to prepare for it well in advance by reading assigned material, taking good notes, reviewing previous tests and assignments, and studying.
Learning	The process of acquiring knowledge.	In university, most learning happens outside the classroom. Your lecturer will only cover the main ideas or the most challenging material in class. The rest of the learning will happen on your own.
Plagiarism	Using someone's words, images, or ideas as your own, without proper attribution.	Plagiarism carries much more serious consequences in university, so it is best to speak to your lecturer about how to avoid it and review your student handbook's policy.
Study	The process of using learning strategies to understand and recall information.	Studying in university may look different than studying in high school in that it may take more effort and more time to learn more complex material.
Course specifications	The contract of a course that provides information about course expectations and policies.	The course specifications will provide valuable information that your lecturer will assume you have read and understood. Refer to it first when you have a question about the course.

In addition to its own language, higher education has its own way of doing things. For example, you may be familiar with what a teacher did when you were in high school, but do you know what an academic does? It certainly seems like they fulfill a similar role as teachers in high school, but in university academics' roles are often more diverse. In addition to teaching, they may also conduct research, mentor graduate students, write and review research articles, serve on and lead campus committees, serve in regional and national organisations in their disciplines, apply for and administer grants, advise students in their major, and serve as sponsors for student organisations. If your most recent experience has been the world of work, you may find that there are more noticeable differences between those experiences and university.

LEARNING IS YOUR RESPONSIBILITY

As you may now realise by reviewing the differences between high school and university, learning in university is your responsibility. Being able to stay self-motivated while studying and balancing all you have to do in your classes will be important. Taking ownership of learning will also hinge on the effort that you put into the work. Because most learning in university will take place outside of the classroom, you will need determination to get the work done. You will need to develop the ability to control your calendar to block out the time to study. You will learn more about strategies for managing your time and the tasks of university in a later chapter. Finally, a commitment to learning must include monitoring your learning, knowing not only what you have completed, but also the quality of the work you have done. Taking responsibility for your learning will take some time if you are not used to being in the driver's seat. However, if you have any difficulty making this adjustment, you can and should reach out for help along the way.

WHAT TO EXPECT DURING THE FIRST YEAR

While you may not experience every transition within your first year, there are rhythms to each semester of the first year and each year you are in university. Knowing what to expect each month or week can better prepare you to take advantage of the times that you have more confidence,

and weather the times that seem challenging. Review the table on First-Year University Student Milestones (see **Table 2.2**). There will be milestones each semester you are in university, but these will serve as an introduction to what you should expect in terms of the rhythms of the semester.

Table 2.2 Example overview of a semester and what you may be doing/experiencing in your first semester.

Before you start university	Your first few weeks		Break week	Your final weeks	Exam period
Orientation Week	Weeks 1-4	Weeks 4-7 or 8	Usually around week 7 or 8	Weeks 9-13 or 14	Week 14 or beyond
<ul style="list-style-type: none"> Experiencing homesickness or imposter syndrome Adjusting to the pace of university Meeting your teaching and support staff and colleagues on campus or online Attending events organised by the university or faculty 	<ul style="list-style-type: none"> Learning to access resources for support Discovering how to find your classes and where to go for help Changing adding/dropping courses as needed before the Census date Seeking help and advice with time and study management strategies 	<ul style="list-style-type: none"> Seeking help and advice on completing university assignments Completing first assessments for your courses and receiving initial feedback from your teaching staff 	<ul style="list-style-type: none"> No classes usually scheduled in break week Catch up on assessment and course readings Feeling more confident about abilities Seeking additional support as required based on feedback from first assessments 	<ul style="list-style-type: none"> Completing final assignments Planning for next semester and beyond Thinking about majors Balancing university with other obligations Staying healthy and reducing stress Handling the additional stress of the end of the semester 	<ul style="list-style-type: none"> Stay focused and revise exam material Seek additional help or support as required to complete exams Consolidate and reflect on your semester Focus on finishing strongly

A table is one way to communicate information about a semester, but it is not the only way. Some students may relate better to images with text. For example, **Table 2.2** could also be represented as a learning map, highlighting the important ideas and their sequence (see **Figure 2.2**).

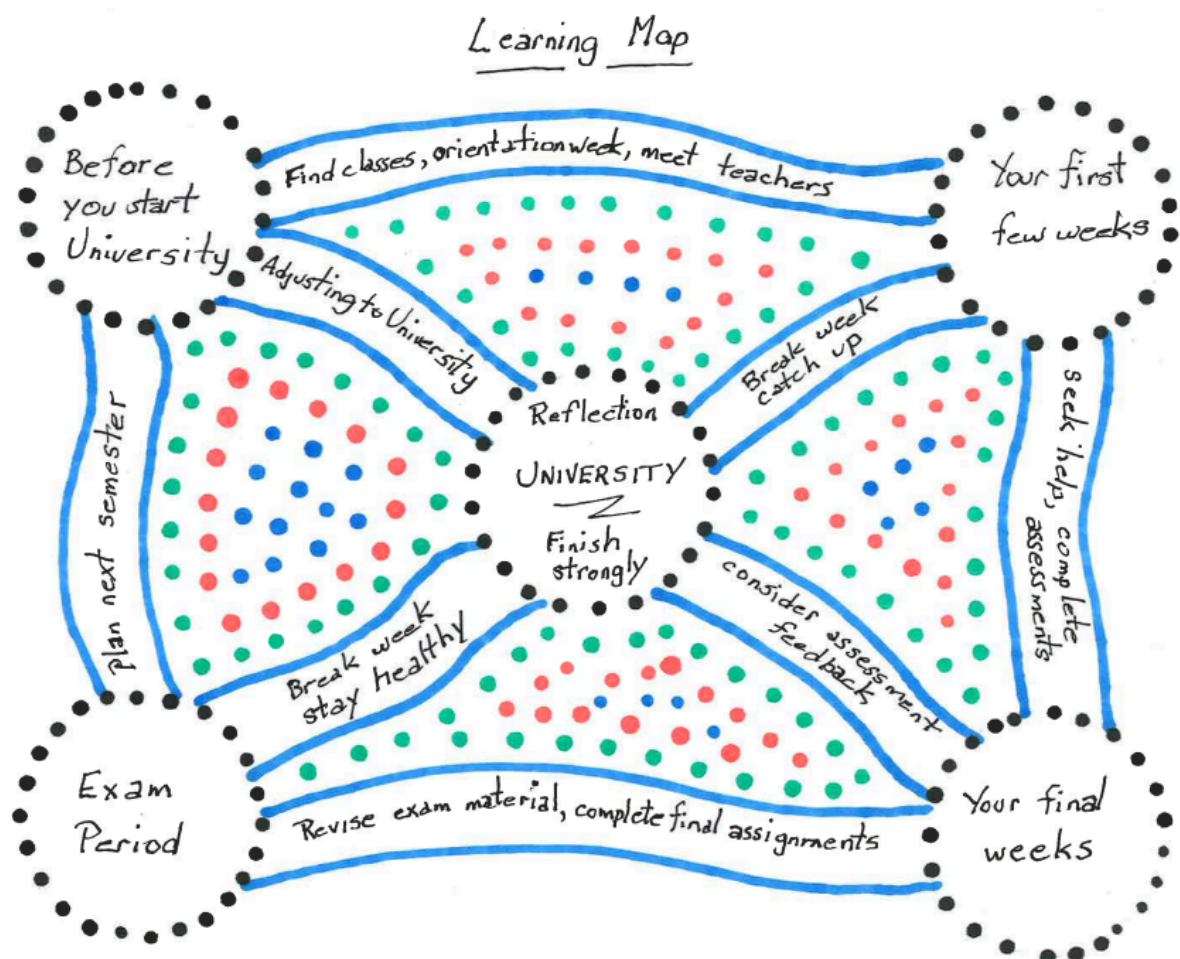


Figure 2.2 A learning map is another way to represent your semester. Image by Sam Conway.

PRACTICAL STUDY EXPERIENCES

Some universities may also require all students to participate in additional experiences beyond their regular coursework. Ask your university about details specific to your major or institution. One common practical study experience universities arrange for students is a placement. Placements are a type of fieldwork specifically required of students from courses such as engineering, nursing, human services, paramedicine and education. Placements may take place in hospitals, nursing homes, mental health facilities, schools or in the field. They provide students with the opportunity to practice skills that cannot be learnt in a regular classroom. During placements, students will interact with real staff, students and/or patients. Because they are new to the discipline, students participating in placements are more closely supervised by experienced professionals than those in other types of work experience. Thus, placements function very much like a real-world classroom and progress to more independent work through the degree. Before undertaking placements, students will need to complete certain coursework and background checks.

Placement for education students is a specific type of fieldwork undertaken by students who plan to teach in early childhood, primary or high school levels. Education students are often required to complete student teaching placements to obtain a teaching registration in their state. Students must often complete core education coursework prior to placement and must complete a background check prior to placement in a school setting. During their placement experience, students are usually paired one-on-one with an experienced teacher and have the opportunity to observe that teacher, get to know the students, understand the classroom culture, and participate in lessons as a teaching assistant as needed or appropriate. Students studying other fields such as health also have a placement component. All of this additional workload and need to plan for the next semester can seem overwhelming, but if you plan ahead and use what you learn from this chapter and the rest of the book, you will be able to get through it more easily. Your university or faculty will likely have a dedicated team or staff member who can help you with placement and be your contact if you have any questions.



Figure 2.3 Student teaching is an extremely important aspect of becoming a K-12 educator. The experience helps future teachers practice their skills and understand the complexity of working in the classroom. Image by seansinnit used under [CC-BY licence](#).

COMMON CHALLENGES IN THE FIRST YEAR

It seems fitting to follow up the expectations for the first year and practical study experiences with a list of common challenges that university students encounter along the way to a degree. If you experience any—or even all—of these, the important point here is that you are not alone and that you can overcome them by using your resources. Many university students have felt like this before, and they have survived and even thrived despite them because they were able to identify a strategy or resource that they could use to help themselves. At some point in your academic career, you may do one or more of the following:

- Feel like an imposter. Students who experience imposter syndrome are worried that they don't belong, and that someone will "expose them for being a fake." This feeling is common but trust the professionals. You do have what it takes to succeed.
- Worry about making a mistake. While students who worry about making a mistake tend to avoid situations where they may fail, students should instead embrace the process of learning, which includes—is even dependent on—making mistakes. The more you practice courage in these situations and focus on what you are going to learn from failing, the more confident you become about your abilities.
- Try to manage everything yourself. There will be times when you are overwhelmed by everything. This is when you will need to ask for and allow others to help you.
- Ignore your mental and physical health needs. If you feel you are on an emotional rollercoaster and you cannot find time to take care of yourself, then you have most likely ignored some part of your mental and physical wellbeing. What you need to do to stay healthy should be non-negotiable. Your sleep, eating habits, exercise, and stress-reducing activities should be your highest priorities.

- Forget to enjoy the experience. Whether you are 18 years old and living on campus or 48 years old starting back to university after taking a break to work and raise a family, be sure to take the time to remind yourself of the joy that learning can bring.

GRANTS AND SCHOLARSHIPS

Grants and scholarships are some things that can assist students with some of the financial challenges faced at university. Grants and scholarships are free money you can use to pay for university. Unlike loans, you never have to pay back a grant or a scholarship. While some grants and scholarships are based on a student's academic record, many are given to average students based on their major, ethnic background, gender, religion, or other factors. It is worthwhile investigating what options are out there.



Figure 2.4 Employers in certain fields, such as healthcare, may offer their own grants and scholarships. *Image by Janne Ranta used under [CCO licence](#).*

Private organisation grants and scholarships

A wide variety of grants and scholarships are awarded by foundations, civic groups, companies, religious groups, professional organisations, and charities. Your university scholarships office can help you find these opportunities.

Employer grants and scholarships

Many employers also offer free money to help employees go to school. A common work benefit is a tuition reimbursement program, where employers will pay students extra money to cover the cost of tuition once they've earned a passing grade in a university class. Check to see whether your employer offers any kind of educational support.

CONCLUSION

While university will expand your mind, adjusting to university may also make you a little uncomfortable, challenge your identity, and at times, make you doubt your abilities. This chapter has provided you with an overview about the types of adjustments you may need to make as you transition to university life. Some of the tips outlined may also assist you with a few of the challenges faced at university.

Key points

- There are six adjustment areas that first-year university students experience: academic, cultural, emotional, financial, intellectual, and social.
- Going to university is a cultural experience, even if you are not far from home.
- Learning in university is your responsibility. You will need to develop the ability to control your calendar to block out the time to study.
- Knowing what to expect each month or week can better prepare you to take advantage of the

times that you have more confidence and weather through the times that seem challenging.

- Some universities may require all students to participate in additional experiences beyond their regular coursework.
- Common challenges that university students encounter include feeling like an imposter, worrying about making a mistake, trying to manage everything yourself, ignoring mental and physical health needs, and forgetting to enjoy the experience.
- Grants and scholarships are some things that can assist students with some of the financial challenges faced at university.

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SUCCESSFUL CONNECTIONS

KACIE FAHEY; DEBI HOWARTH; SARAH IRVINE; LEIGH PICKSTONE; AND BIANCA RETALLICK



Figure 3.1 Creating successful connections is an important part of university. Image by [Ivan Samkov](#) used under [CC0 licence](#).

INTRODUCTION

University can be intimidating. Thousands of unknown faces, cryptic messages emblazoned on PowerPoints and an unending list of acronyms that can be confusing and confronting. One way to ensure you don't get lost in the jungle is to make successful connections to the support services offered at university. This chapter begins by discussing the importance of asking for help at university, and then helps you to create your own support contact list. Next, it considers the types of varied support staff and peers you can access, followed by a look at the inclusivity of all students at universities, especially those with a disability. The chapter concludes by explaining the value of reaching out for support to maintain your mental health while studying.

ASKING FOR HELP

At university, there are many individuals and support services who can help you plan your path. Students grapple with unfamiliar university paperwork and technology with little assistance as they proudly tackle perhaps newfound roles as adult decision-makers. Seeking help is a strength, not a weakness, particularly when that help comes from well-informed individuals who have your best interests in mind. When you share your goals and include others in your planning, you develop both a support network and a system of personal accountability. Being held *accountable* for your goals means that others are also tracking your progress and are interested in seeing you succeed.

When you are working towards a goal and sticking to a plan, it's important to have unconditional cheerleaders in your life as well as people who keep pushing you to stay on track, especially if they see you stray. Knowing who in your life can play these supportive roles will allow you the opportunity to confidently immerse yourself in the university experience.



Figure 3.2 At university, there are many individuals and support services who can help you. [Image by Kampus Production](#) used under [CC0 licence](#).

YOUR SUPPORT CONTACT LIST

When you start a new job, go to a new school, or even fill out paperwork at a new doctor's office, you're often asked to provide contact information for someone who can assist in making decisions and look out for your best interests in the event of an emergency. Academic decision-making and planning doesn't involve the same level of urgency, but it's useful to have in mind the people in your personal life and university life who motivate and support your plans, or can assist you in setting them. Prepare your support call (text, email, or direct message) list now so that all you have to do is pick up your phone to get the support you need. Keep in mind that one person can fulfil more than one role. Use the following table to create your list.

Table 3.1. Support contact list

Who knows your interests? Knows what you love or what you hate to do sometimes even before you do? Who can list your strengths and weaknesses without bias? This is the person who can support you when you are deciding on a degree program or major.	Name of individual(s):
Who knows the university degree and program details, policies, procedures, and technological systems? This is the person who can support you when you are drafting your plan.	Name of individual(s) or office:
Who knows the career and graduate school opportunities available to someone in your major or programme? This is the person who can support you in planning for activities beyond your courses.	Name of individual(s) or office:
Who is another student in this course with you? This is the person with whom you can double check instructions or check your understanding of a topic.	Name of individual(s):
Who is your biggest cheerleader who you can contact when you're feeling discouraged or unmotivated? This is the person who can support you when plans need to change.	Name of individual(s):
Who has successfully navigated all of this university planning in the past and is now working in a career that interests you as well? This is the person who can become your mentor.	Name of individual(s):

ACADEMIC ADVISORS

All universities provide resources to assist you with your academic planning. Academic advisors may also be called success coaches, mentors, or counselors. They may be staff members, or faculty members who may provide advisement as an additional role to their teaching responsibilities. Regardless of what your university calls this role, academic advisors are individuals who are able to assist you in navigating the puzzle of your academic plan and piecing your courses and requirements together with your other life obligations to help you meet your goals.

An advisor is an expert on your university and its major requirements and policies, while you are the expert on your life circumstances and your ability to manage your study time and workload. It is also an advisor's responsibility to understand



Figure 3.3 Universities have Academic Advisors to help you succeed. [Image](#) by [Solent Creatives](#) used under [CC-BY licence](#).

the details of your degree requirements. This person can teach you how to best utilise university resources to make decisions about your academic and career path. An advisor can help you connect with other university staff and faculty who might be integral to supporting your success. Together with your advisor, you can create a semester-by-semester plan for the courses you will take and the special requirements you will need. Even if your university does not require advising, it is wise to meet with an advisor every semester to both check your progress and learn about new opportunities that might lend you a competitive advantage in entering your career. Common functions that academic advisors can help you with include:

- Setting educational and career goals
- Selecting a major and/or minor
- Understanding the requirements of your degree
- Navigating the online tools that track the progress of your degree
- Calculating your Grade Point Average (GPA) and understanding how certain choices may impact it
- Discussing your academic progress from semester to semester
- Assisting with time management strategies
- Connecting with other support and resources at the university such as counseling, tutoring, and career services
- Navigating institutional policies such as grade appeals, admission to special programs, and other concerns
- Strategising how to make important contacts with faculty or other university administrators and staff as necessary (such as discussing how to construct professional emails)
- Discussing transfer options, if applicable
- Preparing for graduate school applications

LECTURERS AS LEARNING PARTNERS

In primary and secondary education, the teacher often has the dual role of both instructor and authority figure for students. Children come to expect their teachers to tell them what to do, how to do it, and when to do it. University learners, on the other hand, seem to work better when they begin to think of their lecturers as respected experts who are partners in their education. The change in the relationship for you as a learner accomplishes several things: it gives you ownership and decision-making ability in your own learning, and it enables you to personalise your learning experience to best fit your own needs. For the lecturer, it gives them the opportunity to help you meet your needs and expectations, rather than focusing all their time on trying to get information to you.



Figure 3.4 Ask your lecturers for guidance and recommendations, and above all, demonstrate to them that you are taking a direct interest in your own learning. [Image](#) by [LinkedIn Sales Navigator](#) used under [CCO licence](#).

The way to develop learning partnerships is through direct communication with your lecturers. If there is something you do not understand or need to know more about, go directly to them. When you have ideas about how you can personalise assignments or explore areas of the subject that interest you or better fit your needs, ask them about it. Ask your lecturers for guidance and recommendations, and above all, demonstrate to them that you are taking a direct interest in your own learning. Most lecturers are thrilled when they encounter students who want to take ownership of their learning, and they will gladly become a resourceful guide for you.

MENTORS

When making academic decisions and career plans, it is also useful to have a mentor. A *mentor* is an experienced individual who helps to guide a *mentee*. A good mentor for a student engaged in academic and career planning is someone knowledgeable about the student's desired career field, is more advanced in their career than an entry-level position, or who is skilled and qualified as a Career Development Practitioner. This person models the type of values and behaviours that are essential to a successful career, and helps the student better understand their own values and strengths.

Your university may be able to connect you with a mentor through an organised mentorship program or through the alumni association. The Career Development service, available to the student body at many Australian universities, may offer Work Integrated Learning opportunities and the chance to connect with potential mentors (Hora et al., 2020). Additionally, student/staff partnership projects facilitate connection between students and potential mentors (Cook-Sather et al., 2014). Remember, you can also find a mentor by reaching out to family, friends, and contacts who work in your field of interest, and through applying for membership of professional associations and organisations related to your field.

PEERS

Aside from the professional support personnel there will be opportunities to learn from more experienced students who can help you understand coursework and the university environment in a less intimidating way (Kimmins, 2013). Study groups and Peer Assisted Learning programs are offered at many Australian universities. These programs are academic support programs rather than mentoring programs, providing opportunity for students to study collaboratively with peers to improve their academic learning skills, to develop connections, and to become more comfortable with the university environment (Pascarella & Terenzini, 2005). By learning with other students, you can share the learning and study journey in your chosen discipline.



Figure 3.5 Mentors and peers are an important part of making successful connections at university. Image by [mentatdgt](#) used under [CC0 licence](#).

PEERS AS MENTORS

Peer mentoring occurs through both formal and informal processes at many universities. Programs facilitated through the university often take place throughout the first few months of

the academic year; participating can help you become accustomed to university life (Shaniakos, T., Penttinen, L., & Lairio, M., 2014). Connection with a peer mentor can assist you to become part of the learning community, and to learn about the range of supports available to you (Christie, 2014).

Peer mentors and mentees are people of similar age and experience, who work together to strengthen social supports, to share information, to give feedback, and to nurture friendship (Terrion, J.L., & Leonard, D, 2007). Because peer mentors are similar in experience to you as a mentee, they can help smooth the way as you step into a new environment (Christie, 2014).

STUDENTS WITH DISABILITIES

Studying as a Student with a Disability

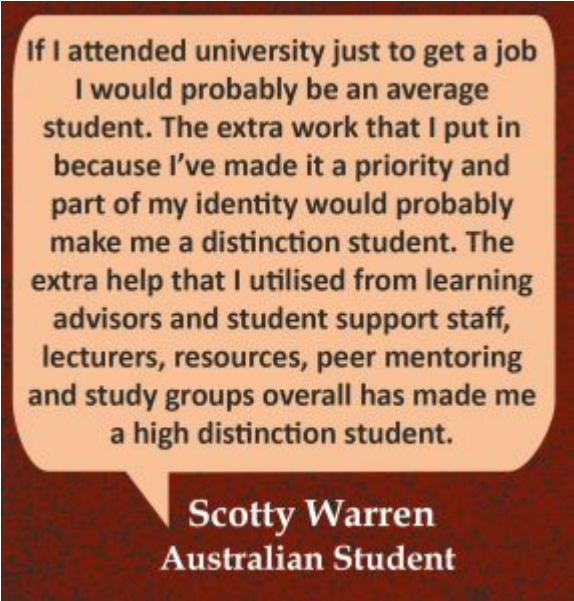
Students with disabilities make valuable contributions to university life and academia, therefore it is important to ensure accessibility and support are widely available and commonplace. By making your educational institution aware of your individual situation regarding living with a disability, or caring for others with a disability, you will give yourself the best chance of study success. This does not mean you have to let every university staff member know about your particular situation, but it may be useful to let lecturers, tutors and disability officers know of your specific circumstance. Just like anyone else, under the law, students with disabilities are entitled to the same education that universities provide to students without disabilities. While studying with a disability can still create challenges for students, significant progress has been made over the past few decades as the government, learning institutions, and students gain a greater awareness of accessibility needs. Now, students with disabilities find that they have more appropriate student services, campus accessibility, and academic resources that can make attendance and academic success possible. Due to this increased support and advocacy, Australian universities have seen an increase of students with disabilities enrolled in study.

Policy and Legislative Environment

Universities in Australia are governed by State and Commonwealth legislation, in particular the *Disability Discrimination Act 1992* (Cth). This legislation requires that all people should be given equal rights, equal opportunity, and equal access to education. Australian universities are required to make provisions for access to their facilities, online and face-to-face services, and academic supports for all students including, those who have a disability. Higher education institutions also have policies and procedures, as well as staff, to ensure the right settings and equipment are available to enable all students to demonstrate their ability and capabilities for successful study. Policy and procedure must demonstrate and promote the inclusion of all students across campuses.

Accessibility and Disability Support

Each university will typically have a dedicated support team for students with disabilities, including those students with mental health and wellbeing concerns. Support staff in institutions can assist students to access all necessary support to ensure they can be included within university life and successfully complete their study. Students may have access to reasonable adjustments for assessment and should seek assistance from disability support areas if there are problems



If I attended university just to get a job I would probably be an average student. The extra work that I put in because I've made it a priority and part of my identity would probably make me a distinction student. The extra help that I utilised from learning advisors and student support staff, lecturers, resources, peer mentoring and study groups overall has made me a high distinction student.

Scotty Warren
Australian Student

in accessing facilities, classes, online or face-to-face study requirements. Fostering an inclusive community of scholars is a fundamental objective of Australian universities, as inclusive environments encourage innovation, growth, and learning.

Disabilities can be physical, cognitive, or mental; because of this, reasonable adjustments are made in conjunction with each individual student's needs, to ensure adequate and specific supports. If you need assistance, please contact your student disabilities and wellbeing unit who can help you with settling into university life and discuss the support available for your study. You may also find that your university has peer support groups for people with a disability. These can be a great way to connect with other students who may be able to share further information regarding available supports.

LGBTQIA+ STUDENTS AND ALLIES



Figure 3.6 Progress Flag. Image by Kc Rae Aboriginal artist used under [CC-BY-NC-ND licence](#).

Studying as a LGBTQIA+ Student

The Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual/Aromantic+ (LGBTQIA+) communities face disproportionate challenges in contrast to their cisgendered and heterosexual peers, particularly regarding their experiences within educational settings (Cutler et al., 2022). Challenges can be rooted in stressors that cause LGBTQIA+ students to feel tokenised, misunderstood, or victimised (Cutler et al., 2022). Many universities are addressing these concerns by establishing LGBTQIA+ safe spaces on campuses, creating dedicated staff positions to support LGBTQIA+ students, developing pride networks and establishing LGBTQIA+ social clubs. If you are an LGBTQIA+ student, you have a right to feel safe while studying.

Safe Spaces

LGBTQIA+ safe spaces are typically physical spaces that can be located on campus where LGBTQIA+ students can study, meet with peers, and engage with university staff, all within the safety of a harassment, judgement and hate free zone. With the recent shift towards online learning, many universities now also offer virtual safe spaces for their LGBTQIA+ students via the university's learning management system. Again, these virtual spaces are safe for LGBTQIA+ students to engage authentically with their studies, with each other, and with staff who are allies, or who are LGBTQIA+ community members themselves. Safe spaces are often an excellent place

for students to ask questions, find resources, and be safely and appropriately referred to other university supports (Harpalani, 2017).

Pride Networks

Pride and ally networks are increasingly becoming commonplace at universities and provide both students and staff a pathway to connecting, whether they are LGBTQIA+ themselves, or are passionate allies who are interested in driving equity and advocacy. These networks provide empathetic, and sensitive support and guidance as LGBTQIA+ students navigate their way through university (Cutler et al., 2022). Members often must complete specified ally training to ensure these networks are informed and safe. Pride and ally networks are helpful in connecting LGBTQIA+ students with academic support, health and wellness guidance, and peer mentoring across the university. While these networks are helpful in navigating the formal aspects of university life, LGBTQIA+ social clubs help build informal peer connections which are beneficial for peer-to-peer learning, managing study stress and networking (Cutler et al., 2022).

Inclusive Environments

It is important to remember that all universities will have a Code of Conduct that students and staff must follow, which will typically outline the university's stance on harassment or inappropriate behaviour, including towards LGBTQIA+ community members. Beyond this, Federal and State discrimination legislation in Australia provides guidance regarding acceptable behaviours which we must all abide by. Developing inclusive practices is an important skill to curate while studying at university as it is a desirable skill in the contemporary work environments (Lantz-Deaton & Golubeva, 2020). If you are an LGBTQIA+ student who has experienced discrimination at your institution in Australia, you will likely have access to advocacy and wellbeing supports, as well as formal complaint processes.

STUDENTS FROM CULTURALLY AND LINGUISTICALLY DIVERSE BACKGROUNDS

Culturally and Linguistically Diverse Students in Higher Education

Culturally and Linguistically Diverse (CALD) students are essential to the make-up and success of universities. Australian universities over the decades have had richly diverse populations and frequently welcome many international students on their shores each year. In 2023, just over 324,000 international students arrived in Australia to study in the January to April period (Department of Education, 2023). Enabling and empowering culturally and linguistically diverse students within higher education institutions will strengthen the way in which we enrich our university communities, promote inclusive learning environments, and cultivate new perspectives and ideas. By embracing the diverse backgrounds, languages and experiences of students, university communities can develop respect and understanding, where students can freely express themselves and succeed in their studies.

To be successful at creating an enriched and vibrant culture, it is important for universities to establish good quality support services, to ensure student success. As many Australian universities have been established from a westernised and neo-liberal foundation, supporting all culturally and linguistically diverse students will require providing a range of supports in different areas.

Support Services and Student Life

Most higher education providers have a great range of support services available for students who may have additional cultural or linguistic requirements. For example, the university may offer

English language support services and resources like appointments with language educators to keep you on track with your studies, academic English workshops, special tutorial groups, peer support groups, English conversation clubs, mentoring, self-help resources and more. All services are usually free for students and are conducted throughout your study journey. There is also support for you to observe any religious practices, and there should be safe places provided to pray, wash hands and feet, and safely practice your faith. Some universities may offer a chaplaincy service, or multi-faith service that supports the university community to practice their faith. Contact your university for more information on how to access these services.

Feeling a sense of belonging is important for students, particularly if you come from a different cultural or linguistic background. Many universities offer opportunities to join student events, cultural groups or clubs. These groups may hold special events during the year to celebrate significant cultural festivals or holidays, or they might organise opportunities to meet on a regular basis for social occasions. These clubs and societies can be a great way to meet other students, make new friends and feel connected to the university community.

Rights and Advocacy

Most universities also uphold a diversity and inclusion framework or policy, to ensure all students and staff feel safe and respected during their interactions with the university. There are policies and procedures in place for students who have experienced racism or discrimination, and it is important to seek out support and report any kind of unsolicited language or exclusionary practices. Seeking help and reporting racism or discrimination will not affect your grades or study success, and each case should be handled seriously and dealt with swiftly.

STUDYING AS A WOMAN

Traditionally, the university has been a male dominated institution, and it has only been in the last century that female participation in both graduation rates, and in staff and leadership roles has increased. Fortunately, female participation in higher education has grown exponentially over the last couple of decades across the world. According to a recent UNESCO report (2021), female enrolment globally in higher education tripled between 1995 and 2018, and not only do women now make-up the majority of undergraduate students, they are also more likely to complete their studies than their male counterparts. In Australia, this trend is also reflected in the 2021 census that shows that 58% of higher education students are women (Department of Education, 2022). These figures indicate that women are well and truly engaged and actively participating in higher education studies.



Figure 3.7 Study Sisterhood. Image by Kc Rae Aboriginal artist used under [CC-BY-NC-ND licence](#).

Study Sisterhood depicts the unique and powerful bond that women have with each other when congregating in historically male-dominated spaces. The mountains lining the bottom of the piece represent the women who have come before us, who paved the way for female representation in educational spaces. The variety in colours and sizes of women in the upper-left portion of the image is a nod to the diversity that is embedded in the female experience, from cis women to trans-women, to women-of-colour. Lastly, the upper-right corner represents the ‘winds of change’ that is brought on by intersectional feminism. Kc Rae.

It is important to note however, that higher education institutions remain largely patriarchal in their structures, culture, design, and processes (O’Connor, 2020). Women within these institutions, whether students or staff, continue to find themselves at disadvantaged within the system and must overcome barriers established and maintained by patriarchal systems that perpetuate their inequality. Although it is a great time to be a woman in the higher education system, nevertheless, the patriarchal culture of the institution can still have an impact on the way women study and operate.

Non-traditional Areas of Study for Women

Female and non-binary students may be interested in studying in an area that happens to be more male dominant and ‘less traditional’, such as STEM disciplines. In 2021 in Australia, about 16% of all domestically enrolled students were of women studying in non-traditional areas (Department of Education, 2022). Being a woman in these areas of study, you may face additional challenges. However, many universities wish to help break through these disparities by offering opportunities through scholarships and bursaries to help incentivise more women to study in the STEM disciplines. Look for what scholarships and opportunities are available to you by contacting your chosen university.

Female Students on Campus

Regardless of where you study, it is necessary to ensure that women feel safe and respected, both on campus and in online study. Many universities run ongoing campaigns around safety and respect while at university, and often publicise resources and/or a contact person, group or organisation who can provide support during your studies. This could include a student union or guild who can provide advocacy assistance to students and may provide resources to the university community about feeling safe and respected on campus, such as posters, social media support groups and events.

You may also find that there are particular interest groups specific to women and gender diverse students such as clubs, societies, and associations relevant to different faculty areas of study, post-graduate and more. Across Australia, there are a wide range of women's networks that often run through the university that support women in higher education. Membership to these women's networks is usually low cost or free and provides a valuable opportunity to network with other women and attend guest speaker presentations and networking events throughout the year. Many universities also offer health services to students which can include specific support for women's and family health.

Safety and Respect

Alarmingly, in 2021, a report by University Australia (Heywood et al., 2021) reported that 1 in 6 students has been sexually harassed in an Australian university context and 1 in 20 has reported sexual assault. If you have ever been the target of sexual assault, domestic and family violence, harassment, or intimidation, it is important that you seek help for your personal, physical, emotional and psychological safety. It is against the law to harass or assault someone regardless of their position in society, or their relationship to you, so it is important to report it if you can. There are a range of support services not just in your university community, but also in the broader community as well; and any allegations can be made via the local police in your area. It is also essential that you take care of your mental health during such a distressing time. There are a range of free and confidential counselling services available to you in Australia, such as free counselling provided by the university and various community organisations (e.g., 1800RESPECT.org.au and lifeline.org.au).

Female intersectionality in Higher Education

Intersectionality is a term coined by Crenshaw (1989) that sheds light on the experiences of women of colour in the United States, and nowadays is used more broadly on a global scale to identify the varied intersections of identity such as race, culture, colour, sexuality, etc that an individual may encompass that impact their experiences of discrimination. In a higher education context, it is important to not only recognise intersectionality in individuals, but also work to actively ensure that each student feels empowered to succeed in their studies. Be sure to connect in with university networks, staff, colleagues, family and friends, and build a strong network of people who can support you and empower your decision making as you embark on your study journey.

DIVERSE ECONOMIC, LOCATION, AGE AND LIVING EXPERIENCES

Diverse identities and minority cohorts include more than race, ethnicity, nationality, gender or sexuality; these additional diverse identities can also influence a student's experience and success at university. Therefore, it is important to understand what support and guidance might

be available. Below is a table outlining some of the typical supports Australian universities may provide to several other priority student cohorts.

Table 3.2 Diverse Identities and Minority Cohorts

Cohort	Supports
Low-income	Students from low-income backgrounds may find it useful to engage with their university's wellbeing, welfare and support staff as these staff can provide guidance and assistance with accommodation, scholarship applications, navigating Centrelink processes, and financial literacy and budgeting. Furthermore, discussing career goals with your university's careers and employability team can be a great way to help you keep on track with your studies. Balancing work and survival with study can be challenging, and your university is there to help manage that balance (Carnevale & Smith, 2018).
Rural and Remote	Students studying in rural and remote locations, or relocating from rural and remote locations to study, may find the transition to virtual study, or to a new location overwhelming (Partridge et al., 2021). It may be beneficial to talk to university welfare and wellbeing staff about accommodation support, mental health and counselling supports, and rural and remote specific scholarships. University Information and Communications Technology (ICT) departments can also be helpful in assisting rural and remote students in maximising the usability of the technology used to study. If you are a student from a rural or remote community it is important to stay engaged with your course content, peer mentoring, and social clubs virtually, as engagement can be helpful in managing stressful study periods and navigating the university experience.
First in Family	Navigating university as the first person in your family to do so can be an overwhelming process (King et al., 2019), but your university is there to guide you. Don't be afraid to ask for help, or to clarify something. It may be useful to engage with a support or success officer who can help you understand the admissions and enrolment process, as well as refer you to other services if you need them. Engaging in peer-to-peer learning is a fantastic way to learn alongside others in an informal setting. Lastly, meeting with your university's Academic Advisors can be a great way to develop academic skills that will support you throughout your study journey.
Mature Aged	Juggling studying with work, family or caring commitments can be a stressful experience for matured aged students (Heagney & Benson, 2017), but many universities have supports in place to assist in easing the impacts. Some universities offer on-campus child-care or medical services which you may wish to utilise to reduce commuting times. Whether you are new to study or are returning after a significant period away, your university's Learning Advisors can assist with time-management and semester planning, academic writing, referencing, and other key study skills, and your wellbeing team can help support your mental health and wellbeing while you study.
Incarcerated	Studying while being incarcerated can be challenging (Marcus et al., 2019), but it does not have to be a journey you take alone or without support. You may be eligible for certain scholarships or bursaries to help pay for your study, books, or other key aspects of your learning. You may also be able to access information from Academic Advisors and Career Advisors to help you build your academic skills and prepare you for your future career. Chat to your Education Officer about what may be available to you.
Victims-survivors of Domestic and Family Violence	Many victims-survivors of domestic and family violence experience challenges during their study due to external influences, and they will often have intersecting diverse identities which may compound the challenge of studying (Lewer, 2019). However, universities offer several supports which victims-survivors of domestic and family violence may find useful in supporting their success. Many universities will offer security escorts on-campus, as well as safety apps for mobile devices, counselling, wellbeing, medical services, financial assistance (such as guidance with applying to Centrelink), and accommodation support. You are under no obligation to disclose your domestic violence experiences to your institution.

It is important to remember that universities are diverse places, where people from a variety of backgrounds, experiences, and walks-of-life come together – your time studying at university is a perfect opportunity to reap the benefits of being involved in such a diverse community. Diverse environments improve your empathetic abilities, critical thinking skills, innovation, and prepare you for post-graduation experiences.

MENTAL HEALTH RESOURCES

Entering university is a significant transition, therefore it is important to know what mental health services are available at your university to help support and balance your wellbeing throughout your study. Many Australian universities host health services, including counselling services, which students can access, or, if the help required is beyond their scope, they can assist in referring you to off-campus supports. Most university students feel anxious, lonely, or depressed at some point during the year. We all have bad days, and sometimes bad days string into weeks. It's OK to feel bad. What's important is to acknowledge and work through your feelings whether that be formally, such as with a counsellor, or informally, such as talking issues out with a trusted friend. Stress and anxiety are common mental health concerns students may encounter; however, students can develop healthy coping mechanisms, and balance, to reduce the impact stress, anxiety, and perfectionism may have on their studies.



Figure 3.8 Taking care of your mental health is incredibly important, especially when you find yourself in a new environment such as a university. Image by Jan Vašek used under [CCO licence](#).

Stress

Like with any new adventure, starting to navigate university and its requirements can be stressful. Your ability to manage stress, maintain loving relationships, work effectively, and rise to the demands of university all impact your emotional and mental health. Feeling stressed can be perfectly normal, especially during exam time. It can motivate you to focus on your work, but it can also become so overwhelming you can't concentrate. It's when stress is chronic (meaning you always feel stressed) that it starts to damage your body. Stress that hangs around for weeks or months affects your ability to concentrate, makes you more accident-prone, increases your risk for heart disease, can weaken your immune system, disrupt your sleep, and can cause fatigue, depression, and anxiety (University of Maryland Medical Center, n.d.). Talking with a university counsellor may help you learn skills to manage your stress levels.

Anxiety

We all experience the occasional feeling of anxiety, which is quite normal. Unfamiliar situations, meeting new people, driving in traffic, and public speaking are just a few of the common activities that can cause people to feel anxious. It is important to seek help when these feelings become overwhelming, cause fear, or keep us from doing everyday activities. Anxiety disorders are one of the most common mental health concerns, and while there are many types of anxiety disorders, they all have one thing in common: "persistent, excessive fear or worry in situations that are not threatening" (National Alliance on Mental Illness, n.d.). Physically, your heart may race, and you may experience shortness of breath, nausea, or intense fatigue. Talk with a mental health care professional if you experience a level of anxiety that keeps you from your regular daily activities, including study.

Coping Mechanisms

Taking care of your mental health is incredibly important, especially when you find yourself in a new environment such as a university. Knowing what you are feeling and how to get help if you need it is imperative to ensuring your tertiary experience is positive and successful. In conjunction with formalised help, such as with a counsellor, you can implement your own healthy coping strategies to assist your mental wellbeing. The table below outlines some strategies to reduce stress, manage anxiety, and improve self-care practices. (See Table 3.3)

Table 3.3 Strategies to Reduce Stress, Manage Anxiety and Improve Self-care

Technique	Description
Exercise	Exercise comes in all shapes and sizes – from hitting the gym for a 90-minute session, to dancing in your loungeroom for 15 minutes to your favourite tunes. Exercise can help boost your energy and your mood (Headspace, 2021).
Fuel your body	Your brain requires a constant supply of energy to function. What you eat and are exposed to have a direct impact on its processes, your mood, and your ability to make good decisions. Eating a balanced diet can improve your sleep and concentration, which may help reduce stress and anxiety levels (Headspace, 2022).
Box Breathing	Box Breathing is a breath technique that can be done inconspicuously to help you refocus and recalibrate during peak times of stress or anxiety. To do box breathing you need to: breathe in for four seconds; hold for four seconds; breathe out for four seconds and hold for four seconds (Black Dog Institute, 2021)
Journalling	Journalling can help identify personal patterns in your emotions, note down helpful affirmations, and set goals (Headspace, 2018).
Meditation and Mindfulness	Meditation and mindfulness practices do not have to be an hour-long session of sitting cross-legged on the floor – it just has to be intentional and meaningful. Activities that allow you to be present and in the moment are most useful, such as yoga, colouring, grounding (meditation which includes a physical connection to nature e.g., standing barefoot on grass), or body scans (dedicated meditation that focuses on your body's experiences and feelings in the moment) (Beyond Blue, 2022).

While this table does not provide an exhaustive overview of mental illnesses and their impacts on one's study career, it does outline how universities may be able to assist you in navigating mental health concerns while studying.

CONCLUSION

Navigating your way through university can, at first, be difficult and confronting. However, as explored throughout this chapter, there are multiple ways in which students can maximise their study experience, such as – asking for help and developing a list of support contacts, setting goals to help maintain accountability, engaging with Academic Advisors to assist in developing academic skills, and engaging with lecturers, mentors, and peers for formal and informal knowledge sharing experiences. Students from marginalised cohorts and with diverse backgrounds can access several supports tailored to their unique needs, which are designed to assist in improving their experience navigating their study journey. Lastly, universities offer supports for mental wellbeing, which are useful for students to access if study becomes difficult and confronting.

Key points

- All universities offer a range of learning support services. These can include academic advisors, mentors and peer support services and/ or programs.
- Your lecturers can also assist you. Use clear communication to tell them what you need help with. This can lead to a positive working partnership.
- Australian universities are working towards building inclusive learning environments and opportunities for all students.
- Students from, and with, diverse backgrounds and lived experiences will have access to a number of study supports.
- Universities provide a variety of tailored supports for students; with a disability, who are LGBTQIA+, that are women, who are from CALD communities, and who may be from other diverse backgrounds, such as mature aged students, incarcerated students, and remote students.
- Universities also offer a range of supports, for students to use to support emotional wellbeing and mental health, such as counselling and wellbeing services.

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KACIE FAHEY



Figure 4.1 On Country. Image by Kacie Fahey used under [CC-BY-NC license](#).

INTRODUCTION

Tertiary education is a crucial element in closing the education gap between First Nations students and non-Indigenous students. Higher levels of education have been linked to improved outcomes in employment, health, life expectancy, income, and mental wellbeing within First Nations communities (Australian Institute of Health and Welfare, 2021). This chapter outlines several ways that First Nations students can build a deadly support network to help them reach their study goals, as well as provides supports to non-Indigenous students wishing to improve their allyship when they study and work alongside First Nations Australians.

BUILDING THE 'UNI' IN COMM-UNI-TY

The Australian higher education sector has made several necessary commitments to moving towards reconciliation, decolonisation, and recognition of historical barriers in accessing education by First Nations people. To this end, many universities offer an array of supports

to help First Nations students to successfully navigate and complete their study journey. These supports are both formal and informal and are typically enacted through specified roles within the university's structure, and through specific programs, units, and clubs. For First Nations students, it is important to access and utilise these services and supports when you feel like you may need some guidance in your studies. Accessing supports and resources early is the best way to maximise their impact; there is never any shame in asking for help.

Many Australian universities have a dedicated department or unit that specialises in First Nations student support. These units are culturally safe spaces for First Nations students to study, as well as to seek support with, or referrals to, a range of other services. Services may include:

- Admission and enrolment support
- Orientation programs
- Academic skills support
- Indigenous tutoring schemes
- Support with scholarships and bursaries
- Accommodation assistance
- Culturally safe advocacy.

In addition to a First Nations unit or department, many higher education institutions also embed First Nations-specific staff and roles throughout teaching teams, administrative services and academic support. This ensures First Nations students are comprehensively supported throughout their institution. As a First Nations student, engaging with First Nations staff, services and supports can be a very useful tool in improving your study experience and building your university support community.

As well as the formal supports mentioned above, there are several informal and social supports at university that First Nations students can often access while studying, including:

- Peer-to-peer learning and peer group study sessions
- University friends
- Mentors
- Clubs and associations
- Sports teams.

These informal supports are a great way to build positive relationships that can support your study, your wellbeing, and your overall university experience. Your university may host yarning circles, culture events, First Nations-specific peer-to-peer learning programs, and casual meetups for First Nations students and staff. You may also find that your Student Guild supports a First Nations student social club, which can be a culturally safe space to talk about anything from university to whether damper is better with butter or honey.

Your university support community is just like your personal support mob. They are there to guide you and help you achieve your goals. So, reach out to your First Nations supports and start building your 'uni mob' today!

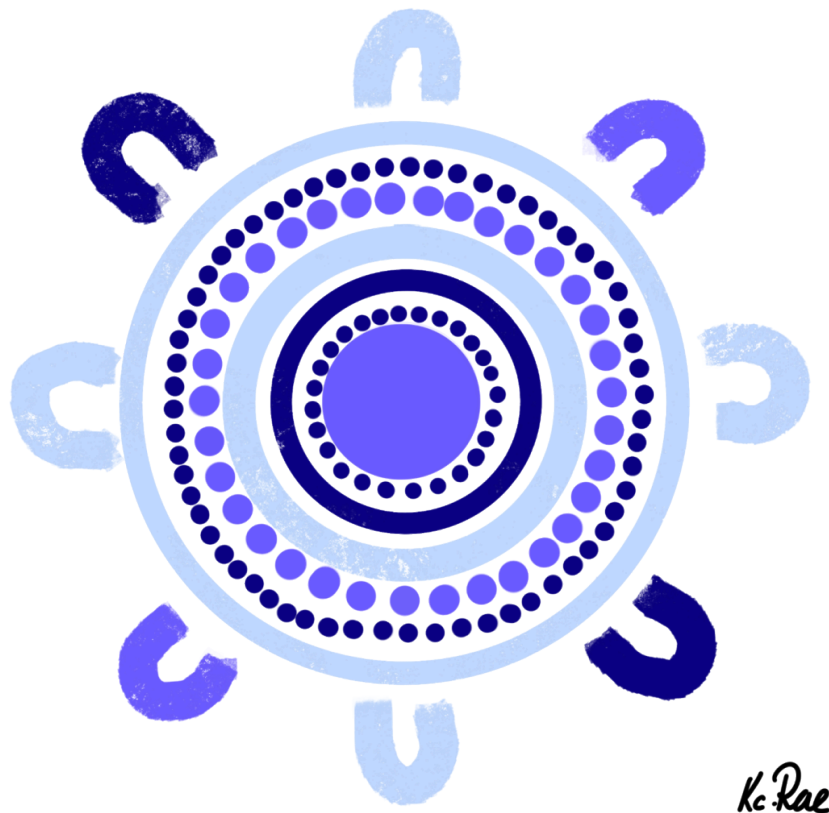


Figure 4.2 Uni Community. Image by Kc Rae Aboriginal Artist used under [CC-BY-NC-ND license](#).

“This piece depicts how both your personal mob and your ‘uni mob’ provide wrap-around, holistic support as you journey through your study experience. While family, friends, Aunties, Uncles, Ancestors, lecturers, support officers, study peers and First Nations uni programs all offer a variety of supports, they are all there to ensure that you not only succeed, but also enjoy your study experience.” Kc Rae, Aboriginal artist.

YARN STRONG

Yarning is fundamental in establishing strong, reliable, and trustworthy connections in your university community. Whether it’s yarning with your lecturers, peers, support staff, or tutors, it’s important to be an active listener who is genuinely invested in hearing from other parties.

But what is yarning? Yarning is a valuable form of communication in Australian First Nations cultures and takes the form of one person speaking while another person, or group of people, genuinely and actively listens. Terare and Rawsthorne (2019) describes yarning as storytelling that utilises sound, silence, and non-verbal cues. Yarns can be quick, long, funny, serious, or informative, and their aim is to create knowledge, understanding and genuine connection (Bessarab & Ngandu, 2010; Walker et. al., 2014). All yarns carry meaning (Phillips et al., 2018) and are useful in developing connections that support help-seeking during your study journey. You can use yarning to build peer relationships, seek out mentors, discuss the stressors of studying, share study tips and tricks, or share concerns about the challenges of working and being a student. Yarning aims to build a judgment-free dialogue that encourages knowledge-sharing and learning, and because of this, yarning has been shown to have positive impacts on one’s health and wellbeing

(Terare & Rawthorne, 2019) which is useful in maintaining balance physically, mentally, and spiritually.

Yarning helps us learn from others and be reflective of those learnings. By engaging in yarning authentically, you will be able to better engage with your 'uni mob' and create deeper and more meaningful connections that will help support you throughout your study.

TWO-WAY LEARNING

Two-way learning, or both-way learning, is a learning paradigm which notes that there is togetherness to be found by non-Indigenous and First Nations people learning from each other's perspectives (Johnston & Forrest, 2020). Two-way learning encourages us to "walk in both worlds" and amplifies First Nations ways of knowing, being and doing (Johnston & Forrest, 2020). If you are a non-Indigenous student, university is a fantastic time to engage in two-way learning as higher education institutes are often full of diverse students and staff who may wish to share their cultural knowledge with you, in an exchange of learning. If you are a First Nations student, two-way learning is a fantastic opportunity to share culture and knowledge, which supports truth-telling efforts and reduces individualised racism (Johnston & Forrest, 2020). Two-way learning benefits all parties involved by making them more engaged learners, and more reflective communicators. Additionally, this learning process assists with decolonial efforts, advocacy and allyships, as well as awareness raising and education about First Nations cultures and practices (Johnston & Forrest, 2020).

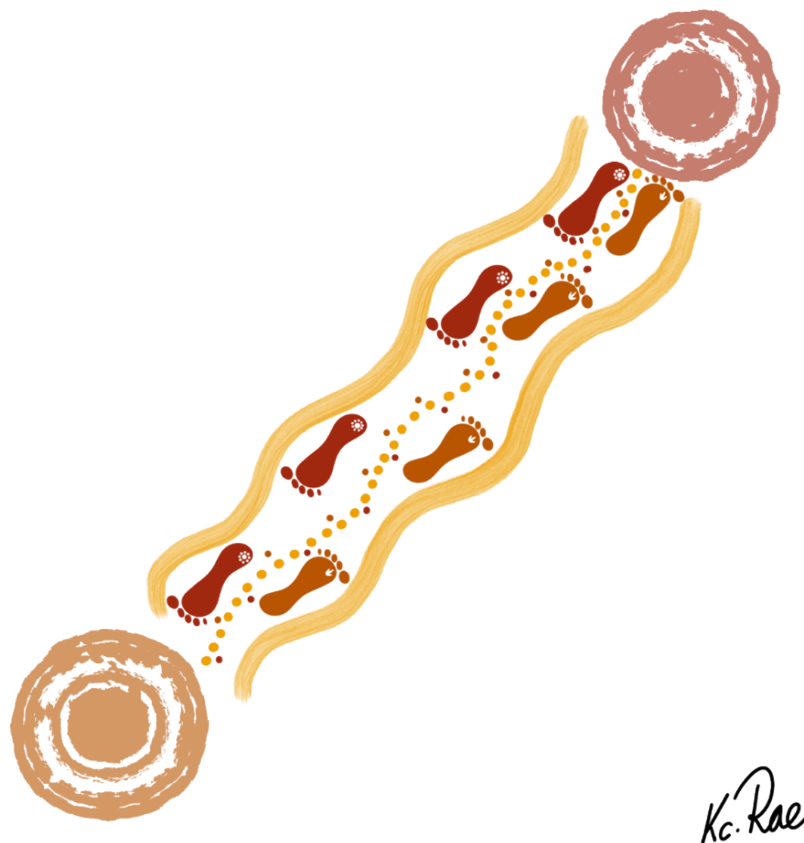


Figure 4.3 *Sharing Both-ways*. Image by Kc Rae Aboriginal Artist used under [CC-BY-NC-ND license](#).

“This image depicts the two-way or both-ways learning process. Notice how the footprints, or tracks, are travelling from both locations to the other? In this piece, a deep red represents one group, and a burnt orange another. Along their journey to each other’s site of knowledge, they are sharing their own ideas and experiences, depicted by the small dots in their associated colours. This piece reminds us that two-way learning is not a one—directional transaction.” Kc Rae, Aboriginal artist.

INCLUSIVE LANGUAGE

Inclusive language is important in making everyone feel safe, valued, and respected (see the chapter [Successful Connections](#) for further discussion). It is a powerful element of your academic writing toolkit that ensures your writing is relevant, accurate, and respectful (Diversity Council Australia, 2016). Learning how to write respectfully about First Nations Australians, their communities, and their cultures is a beneficial skill for all university students to learn as it has applications throughout many industries and professions. Below are some examples to guide you in writing respectfully about First Nations Australians (see **Table 4.1**). It is important to note that while there is no single guideline on when to utilise certain terms, or whether terms are interchangeable, your higher education institution may have a respectful languages guide or appropriate terminology guide that you can use to assist your writing. There are many terms in the table below that may not be familiar to you. To make sure you understand them and are using them appropriately you are encouraged to do some additional reading, refer to the Glossary at the end of this book, or talk with a First Nations advisor or support officer at your university.

Table 4.1 Guide to writing respectfully about First Nations Australians

Category	Inclusive and Appropriate Terminology
People and positions	Aboriginal* Torres Strait Islander* First Nations* First Peoples* First Australians* Indigenous* Elders* Aunty* Uncle* Country Specific (e.g., Kamilaroi* people)
Nations and groups	Country (e.g., Wakka Wakka Country*) Traditional Custodians* Traditional Owners* Land (e.g., Bundjalung land)
Historical events and truth-telling	Invasion Colonisation Stolen Invasion Day* Day of Mourning* Survival Day* Pre-invasion history Pre-European history
Spirituality	The Dreaming* Dreaming stories Creation stories Spiritual beliefs Lore
Ceremonies and significant events	Smoking Ceremony Acknowledgment of Country* Welcome to Country* Sorry business Men's business Women's business

* As a sign of respect, these words or phrases should be capitalised at all times (Australian Public Service Commission, 2023; Australians Together, 2020).

CONCLUSION

Universities are places that welcome and include all students, including First Nations students. As a First Nations student there are many opportunities for you to connect with your 'uni mob' who will be there to support, guide, and celebrate with you as you work towards your study and career goals. As a non-Indigenous student, you can listen to, and learn from, First Nations

perspectives, and contribute to inclusive environments. Whether you are a First Nations student or non-Indigenous student, university is a fantastic time to grow and build unique connections.

Key points

- Universities offer First Nations-specific supports, which may include tutoring, academic skills support, enrolment guidance, peer group development, and wellness support.
- Yarning is a useful tool for both First Nations and non-Indigenous people to use in establishing respectful communications.
- Two-way learning helps build cultural connections between First Nations students and staff, and non-Indigenous students and staff.
- Inclusive language is beneficial for all students while studying and for their future professions.

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PART II.

PART B: SUCCESSFUL FOUNDATIONS



Successful Foundations

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ENGLISH LANGUAGE FOUNDATIONS

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Figure 5.1 Every institution and every course in Australia has its own English entry level requirements. *Image by [Sasin Tipchai](#) used under [CC0 licence](#).*

INTRODUCTION

Welcome to the English Language Foundations chapter. Here, we are going to discover some of the academic English foundational skills required for study at university. Firstly, we will look at levels of English proficiency that are usually required for academic study. In the second half of this chapter, we will examine some of the mechanics of academic writing including grammar and techniques to enhance your academic writing skills. If English is not your first language, you may find this chapter especially beneficial.

ENGLISH ENTRY LEVEL REQUIREMENTS

Every institution and every course in Australia has its own English entry level requirements, so it is always best to first look at what requirements your institution states you must have before studying a particular course. If English is not your first language, you may be required to undertake an English proficiency test, examples of which include: IELTS (International English Language Testing System) Academic, Pearson PTE (Pearson Test of English) Academic, TOEFL (Test of English as a Foreign Language internet-based test), CAE (Cambridge English: Advanced) and OET (Occupational English Test) (Studies in Australia, 2020). Each testing system scores participants according to a scale. Please always check with your institution about what requirements you need to enter your preferred university course.

ACADEMIC ENGLISH

Writing is the main way to show your understanding of a particular topic or concept in your course. It is important to work on improving your writing skills as in most courses, you are assessed on your written work. Academic English is the particular style of English that is used at the university level. It is important to note that every person entering university studies for the first time, needs the time to learn and develop their understanding of what Academic English is and how they can apply it to their own writing. In the sections below, you will see what some of the basics of academic writing are and you will see some key rules and explanations of Academic English. Further into the chapter, you will also be able to learn about some of the basic grammatical structures of academic writing as well as some techniques for applying academic writing to your work to make it stand out.

ACADEMIC ENGLISH BASICS

If you are new to university, it is normal for academic writing to seem a little daunting. Academic writing can sometimes feel like you are learning a whole new language, even if you feel you are proficient in English. Remember, we all have to start somewhere, and therefore it is helpful to familiarise yourself with the basics of academic writing. Fortunately, there are many great support services available to support you at university as you develop your academic literacy and by following a few guidelines, you will also be well on your way to communicating effectively in the academic context. Let's look at some do's and don'ts of academic writing:

Do's

Write clearly and concisely

- This is important not only so your writing is clear, but also so that you can stick to the word count.
- For example: it is better to say, "the research data" rather than "the data from the research".

Reference your research and information

- Referencing is an essential skill to learn throughout your university studies as it helps you to credit the sources of information you are using.
- For more information on referencing, check out the next chapter on [Working with Information](#).

Write in third person

- Writing in third person means to write from the perspective of other people rather than yourself. It is better to name other researchers/professors/academics by their name (in the appropriate referencing system) to support what you are saying. For example, it is better to say Smith (2020) believe that.... Rather than say "I believe that..."
- Please note however, that first person is sometimes acceptable for some assignments when you are asked to reflect. In this case a balance of first and third person may be used. You can read more about reflective writing in the [Writing Assignments chapter](#).
- You can also read more about how to use third person below in the section 'techniques for academic writing'.

Plan your writing

- Planning is an important early step before you start writing and can help you to focus and answer all parts of the assignment question. Check out the [Writing Assignments chapter](#) in this book for more information.

Do Not's

Use slang words or colloquialisms

- Academic writing is considered formal, so informal language including slang and colloquial/idiomatic expressions should be avoided in writing (Uni Learning, 2000).
- For example, avoid saying, “Managing climate change is easier said than done” because easier said than done is a colloquial expression. It would be better to write, “Managing climate change can be difficult in practice.” This example is more formal and academic, and therefore more appropriate for academic writing.

Write sentences that are too long or too short

- Sentences that are too long can be difficult for the reader to follow.
- Similarly, sentences that are too short can sound ‘choppy’ or disjointed.
- Try to keep your sentences roughly between 15-25 words. You can also have sentences that are longer and shorter than this, but if you aim for this length, it will assist in making your writing coherent.

Use contractions

- Contractions are when we shorten two words together as one word. For example, ‘do not’ becomes ‘don’t’. Although contractions are common in our everyday spoken life, they are not commonplace in academic writing. You should always use the full words rather than the contracted forms of words while writing in academia.
- For example, do not write, “It doesn’t seem accurate to label the author’s words as exceptional.” Instead you should write, “It does not seem accurate to label the author’s words as exceptional.”

Be overly emotive in your language

- Academic writing is often described as being ‘objective’, which means that it relies on evidence-based research and practice to support arguments.
- The opposite of objective is subjective, which relies on emotions to support a position, and is therefore considered less effective. Therefore, it is important to avoid emotive ways of backing up your arguments, as they are not considered as reliable as evidence from good quality research.
- For example, avoid using a sentence like “It is such a shame that too many people do not take advantage of the benefits of exercising every day.” Instead, it would be better to say, “Research suggests that exercising every day has many health benefits.”

GRAMMAR FOR ACADEMIC WRITING

Review of parts of speech

Parts of speech are what we call the different words that make up a full sentence. It can be useful to familiarise yourself with the parts of speech in a sentence so that you can recognise where the different parts of speech normally go in a sentence and can also help you understand where you may need to make improvements in your own writing. Here are some of the most common parts of speech:

TABLE 5.1 PARTS OF SPEECH

Part of speech	Explanation/examples
Noun	A noun is the name of a person/place or thing. e.g. Australia, tree, internet, climate change
Pronoun	Pronouns replace the name of a noun with something else. e.g. It, he, she, they, that
Verb	A verb is a 'doing' word in a sentence. e.g. Examine, explain, write, is, suggest
Adjective	An adjective is a describing word and is used to describe nouns. e.g. vibrant, big, small, credible, extensive, limited
Adverb	An adverb is a describing word used to describe verbs. They often end in 'ly'. e.g. confidently, quickly, smoothly, slowly, knowingly
Preposition	Prepositions shows the relationship between nouns or noun phrases. e.g. on, at, in, over, into, through, from, of, with
Article	Articles refer to particular nouns and/or modify the noun. There are only three articles in English: e.g. a/an/the
Conjunction	Conjunctions are important words that help to link words or phrases together in a sentence. e.g. and, however, but, because, since, also

Sentence structures

There are four main types of sentence structure in English, each described below. In your academic writing, try to use a mixture of sentence types, rather than sticking to just one or two. By having a variety of sentence types in your writing, you can improve your coherence and cohesion between ideas and help the reader make sense of your argument.

Simple sentences

Simple sentences only require one subject (a noun or noun phrase), and what is known as a 'predicate' which is the information about the subject and contains the verb (or verb phrase).

The research is completed.

'The research' = the noun

'is completed' = the predicate

Compound sentences

Compound sentences make up at least two *independent clauses*. Independent clauses are parts of a sentence that have at least a subject and a verb. Importantly, the independent clauses **must** be joined together with one of the following conjunctions: for, and, nor, but, yet, so. For example:

The research is completed, and the assignment is finished.

'The research is completed' = independent clause one

'and' = conjunction

'the assignment is finished' = independent clause two

If we consider the two independent clauses, they make sense on their own and therefore are considered independent clauses.

Complex sentences

Complex sentences are made up of at least one independent clause and one *dependant clause*. A dependant clause also contains a subject and a verb, but it relies on the other information in a sentence for it to make sense. Complex sentences can be joined together by any other conjunction not listed above for compound sentences. For example:

I completed the research which was difficult.

'I completed the research' = independent clause

'which' = conjunction

'was difficult' = dependent clause

In this example you can see that the dependent clause relies on the information in the independent clause for it to make sense.

Compound-complex sentences

Finally, compound-complex sentences as you may guess, are a combination of compound and complex sentences. These sentences can be useful for conveying complex ideas and information. For example:

I completed the research which was difficult, but I still managed to submit my assignment on time.

'I completed the research which was difficult' = complex sentence clause

'but' = conjunction

'I still managed to submit my assignments on time' = independent clause

Example paragraph using a mixture of sentences

Can you identify the simple, compound, complex and compound-complex sentences in the paragraph below?

Study is an important aspect to a students' life. Students may take on a variety of tasks such as studying, working and socialising which can impact negatively on their study success. However, study should be a key priority for those students who wish to succeed, despite what challenges they may encounter. Each student has a different style and each university has its own expectations of students. Managing these expectations may be tough, but over time you will become more confident as a student. Overall, students who focus on their study are successful students.

Punctuation rules

Using punctuation correctly is essential to success at university. Knowing the rules about how to use punctuation marks correctly can not only improve the logic and flow of your sentences, but also can improve the quality of your writing. Take a look at the table below which outlines the main punctuation marks used in academic writing and consider the explanation and examples.

TABLE 5.2 PUNCTUATION RULES

Punctuation mark	Explanation of use	Example of use
. Full stop	To show the end of a sentence. Usually one or two spaces is required on the keyboard before starting a new sentence, but check your formatting and referencing requirements.	I went to university today.
, comma	Commas show pauses between ideas in sentences and also help to break up clauses in a sentence.	1. Today I studied chemistry, went to work, and had my dinner. 2. Harry, a good friend of mine, came over on the weekend.
: colon	A colon is used before listing a series of ideas that are related to the information that was presented before the colon.	There are three main parts to an essay: an introduction, body, and conclusion.
; semi-colon	A semi-colon helps to join together two independent clauses within a sentence. Think of it as a longer pause than a comma, but not quite a full stop as the ideas in the sentence are related to each other.	I finished my assignment on the weekend; now I can relax and watch Netflix.
— Em dash	Em dashes have a variety of functions in a sentence. In academic writing, you may see them used to emphasise elements within a list, or to show a change of thought or idea within a sentence.	1. Students, admin staff, professors, researchers— these are all types of people you will meet on campus. 2. Many students believe it is a difficult assignment —I hope the professor covers it in the next class.
... ellipsis	Ellipsis in academic writing usually shows the reader where there is information from a source that is taken out from the original.	"One of the most significant reasons why we procrastinate...is a lack of planning."
() parentheses	Parentheses, also known commonly as 'round brackets', show additional information in a sentence. They are also used in many referencing systems as well to credit authors within a paper.	1. I enjoy my physics class the best (not chemistry) because the teacher is so engaging. 2. Significant research (Smith, 2020; Jones, 2014) demonstrates that...
[] brackets	Brackets, also known as 'square brackets' are used in academic writing to show additional information within a quote that was not from the original source.	"It is commonly referred to [in Australia] as the tyranny of distance."

Transition words

Transition words are very important to help link your ideas together between your sentences

and between your paragraphs. They help to improve coherence and cohesion in your writing and should be evident in most, if not all, pieces of writing you do at university. Look at the transition words image below and take note of how different transition words are used to show different ideas.

TABLE 5.3 TRANSITION WORDS AND PHRASES

For continuing an idea	For providing a contrast view	For showing cause and effect	For showing sequence	For concluding	For restating a point or giving an example
Additionally... In addition... Moreover... Because... Consequently... Clearly, then... Furthermore... In the same way... Continuing this idea... Also... Pursuing this further...	In contrast to these... Unlike the previous example... Different from this... Despite these findings... Contrary to these findings... In opposition to... Nevertheless...	Following... In response to... Therefore... As a result of... For this reason... Thus... Due to this... Consequently... The reaction...	The first [concept/aspect]... The second [concept/aspect]... The third [concept/aspect]... Firstly, Secondly, Finally... After...Afterwards... As soon as... In the first place... In the meantime... Later... Meanwhile... Next...	Therefore... This... Hence... In final analysis... In conclusion... In final consideration... Indeed	In other words... Specifically... For instance... One such occurrence... This is demonstrated by... To illustrate... Also... To demonstrate... This is supported by...

Verb tenses

When writing, it is important to be mindful of the tense you are using and to be consistent, particularly when you are highlighting results from research or a study. Check out the below table for an overview of the common tenses used in academic study.

TABLE 5.4 TENSES

Tense	Explanation	Example
Simple present tense	You use the simple present tense in writing when: • stating your main points • giving an overview of your topic • giving the opinion of the writer you are referring to	1. Smith (2009) states that... 2. The moon revolves around the earth. 3. It seems to be the right choice.
Simple past tense	You use the simple past tense to: • give the findings of past research • recall something that happened in the past and the action is completed.	1. The study revealed that, in 1998, 35% of children played violent video games. 2. He was a smoker in those days. 3. She went to the gym at seven every evening.
Present perfect tense	You use the present perfect tense: • to show that research in a certain area is still continuing. • when you write a general statement about past research.	The present perfect tense is formed with have + past participle verb. 1. He has lived in Australia for two years. 2. The research has shown that... 3. Researchers have found that...

When you use a reporting verb in the past tense you must change the verb tense used by the other person.

Tenses in reported speech

- Present simple – past simple (The report found that 90% of participants agreed with...)
- Present perfect – past perfect (...found that 27% of the patients had responded favourably...)
- Past simple – past simple or past perfect (...found that most students planned / had planned their semesters...)

General tips for using tenses in academic writing:

- Using the past tense or the present perfect tense is most common when writing the literature review and/or the describing past events such as research. For example, ‘the authors **researched**...’ or ‘the authors **have researched**...’
- You should also use past tense to describe the results, because the results are a result of past actions. For example, ‘the participants results **increased** after the intervention’.
- However, when you wish to discuss the implications of results and the possible conclusions that can be drawn from the evidence or research, it is best to use the present tense. For example, ‘these results **indicate** that...’

Subject-verb agreement

Subject-verb agreement refers to how both the subject and the verb must agree with each other in a sentence based on whether it is singular or plural. For example, if the subject is singular, then the verb must also be singular, and if the subject is plural, then the verb must also be plural. Take a look at the examples and explanations below of some of the most common mistakes when it comes to subject-verb agreement.

Subject-verb agreement with ‘to be’

When you use the verb **to be** (e.g. am/is/are/was/were), remember to change the form according to the subject:

- I **am** / **was**
- you, we, they **are** / **were**
- she, he, it **is** / **was**

Remember this when you use any verb in the **continuous tense** or in the **passive voice**. For example:

- Those students [‘they’] **are having** problems with referencing.
- We **were having** dinner when she arrived.
- It **was made** in Bangladesh.

Subject-verb agreement with ‘to have’

When you use the verb **to have** in the present simple, it goes with the subjects I, you, we, they. However, if the subject is third person singular (he, she or it) then the verb should be ‘**has**’.

I, you, we, they **have**

she, he, it **has**

- The past simple, however, is always **had**.
- Remember this when you use any verb in the **perfect tenses**

For example:

- I **have** been to France.
- My sister ['she'] **has** never **been** to France.
- We **had finished** dinner when she arrived.

Subject-verb agreement with other verbs

When you use a verb in the **present simple** and the subject is the third person singular (he, she or it), add an -s to the verb:

- Professor Smith **lives** nearby.

Remember that there can only be one -s ending: either on the subject or on the verb:

- That car **costs** too much.
- Those cars **cost** too much.

Remember also that you must not add an -s to **modal verbs** (can, could, will, would, shall, should, must):

- e.g. It **can** be rather difficult.

Using modals

Modal verbs (e.g. can, may, must) are auxiliary verbs, which means that you use them with main verbs to do the following:

- show ability, probability or necessity
- give advice or permission
- They can express the present, past or future tense.
- You must not use '-s' with the third person singular. For example:

He must study hard this weekend.

Modal verbs are useful in academic writing as they can often show how strong or tentative arguments/ideas/points of view are. For example: What is the difference between these two sentences?

1. Smoking causes lung cancer
2. Smoking may cause lung cancer

In the second sentence the use of 'may' indicates the possibility of lung cancer, whereas, in the first example there is more certainty that smoking causes lung cancer. When presenting evidence-based research and facts, it is important to be mindful of using modal verbs to indicate to the reader the strength of the evidence you are presenting.

Checklist for assessing your grammar in academic writing

- Have you used modals appropriately in your writing?
- Have you checked your sentences to ensure the subject and verb agree?
- Check your verbs in your sentences to ensure you have used the correct tense throughout your paper.
- Does your paper use some transition words to help your reader understand the ideas you are presenting?
- Does your paper have a good mix of simple, compound and complex sentences?
- Have you checked the correct use of punctuation within your sentences?

TECHNIQUES TO ENHANCE ACADEMIC WRITING

If you are still developing your academic English skills, there are some techniques that you can use to help enhance your writing and take it to the next level. This section covers nominalisation, active/passive voice, and using third person.

Nominalisation

This refers to the process of changing verbs (or other parts of speech) into nouns. This process can be effective in your academic writing, as it not only helps you reach the point you were making quicker, but also helps you with paraphrasing and creating headings as well if needed.

Process of nominalisation:

1. Identify the verb (or verb phrase) in the sentence
2. Change the verb into a noun (or noun phrase)
3. Reconstruct the sentence using the noun, instead of the verb. Sometimes additional information is needed to complete the sentence.

Example

Take a look at the following sentence:

- The assignment was completed by the student.

Was completed = verb phrase.

The noun phrase we can use here instead could be = The **completion of**

Now, let's reconstruct the sentence:

- The completion of the assignment by the student...

Here, the sentence is not complete as it still requires a verb. However, by doing this, you can bring in extra information which you could not have done in the first example.

You can usually spot nominalisation when we need to use 'of' after the noun, and many nouns will end with the suffixes -ion, -ness, -ment. However, be careful of using too much nominalisation in your writing. Although this technique can be handy in some situations, overusing it can result in your writing becoming unnecessarily complicated and less explicit.

Active vs passive voice

Active voice means that the subject comes first in the sentence and therefore is the most important thing in the sentence. For example: I ate the biscuit. 'I' is the most important part of the sentence here, because it is about 'who' ate the biscuit. Therefore, 'I' comes first.

Passive voice means that the action in the sentence is the most important and the subject is not important or doesn't belong in the sentence. For example: The biscuit was eaten (by me). The fact that the biscuit was eaten is the most important part of this sentence, and who ate it is not relevant or important, that's why 'by me' is in parentheses because it can be included if needed.

Passive voice

You use the passive voice:

- to avoid using informal personal pronouns (I, we, you)

It will be argued that... (instead of **I will argue** that...)

- when the 'doers' of the action are not important, or you don't want to mention them:

e.g. The buildings **were built** in 1950.

A mistake **was made**.

- to describe a process

e.g. The dry ingredients **are mixed** together.

A word of caution:

- Overuse of the passive voice can sometimes make your writing 'wordy', vague, and more difficult to read. Try to keep a balance of active and passive voice in your academic writing.
- When reporting on research especially; be sure to include some active voice.

Using third person

Using third person refers to using either proper noun or pronouns to refer to the subject in a sentence. It is usually recommended to stick to third person in academic writing as it helps you to support your argument using credible sources, rather than from your own position.

Consider the two sentences below:

1. Many researchers believe that looking after the community's mental health is important.
2. I think that looking after the community's mental health is important.

The first sentence is more appropriate for academic writing as it not only points to research that support the argument made, it doesn't come across as a personal opinion. Check out the examples in the table below for more ways to maintain third person in your academic writing.

TABLE 5.5 FIRST, SECOND AND THIRD PERSON EXAMPLES

First or second person	Third person
In this essay I will discuss...	This essay will discuss...
When you have finished the task...	When the task is finished...
I strongly agree that this is a valid point.	This is a valid point.
If you've never written an essay before these techniques may help.	These techniques may help those who have never written an essay before.

CONCLUSION

Overall, this chapter has explored the English language foundations required at university level study. More specifically, this chapter gives an overview of general advice for English language requirements, then explores some of the basics of academic English. Finally, it explores a number of areas that cover grammar for academic writing, as well as techniques for academic writing to help students with their study success.

Key points

- Each university and each degree has its own English language requirements.
- Academic English takes time to master and requires practice.
- Following some basic rules for writing in academic English can help enhance your writing.
- Reviewing key grammatical concepts such as parts of speech, tenses, subject-verb agreement and punctuation can help you to improve your academic writing.
- Some techniques to improve your writing and paraphrasing skills are nominalisation, understanding active/passive voice and using third person.

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STUDYING MATHS

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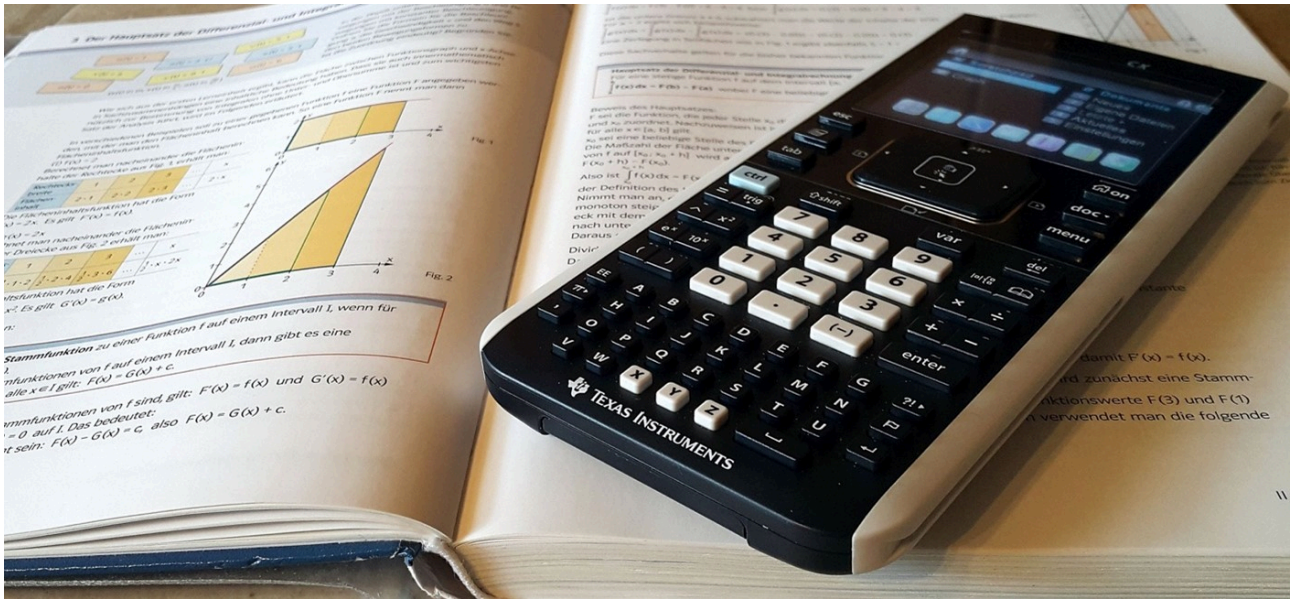


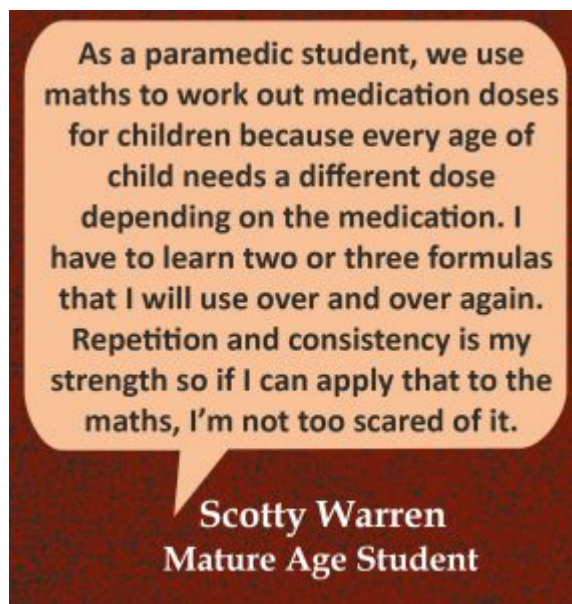
Figure 6.1 Studying maths is an important skill to develop in your university studies. Image by Jürgen Eick used under CC0 licence.

INTRODUCTION

This chapter provides strategies to empower you to study maths in whatever form you encounter it at university. It begins by describing how maths and mathematical thinking is vital to many of the professions. It then discusses *maths anxiety* and presents six strategies for overcoming this common problem. Next, the chapter addresses how to approach studying maths in general, and how to approach a single module of work in maths, followed by a discussion of problem-solving and hints for success. It concludes with some tips for how to approach maths assessments. Altogether, the chapter will put you on the path to a successful encounter with maths at university.

WHO NEEDS MATHS?

Many professions are highly dependent on maths. Student scientists, engineers, and accountants may work with maths in every subject. Students in other disciplines may encounter one or more maths courses or assessments. Nursing and paramedics students will encounter medication calculations for example. Similarly, many students who wish to work in people-helping professions will need to be able to interpret statistics to ensure their approaches to problems and interventions are sound. This will include students of psychology, human services, and education. No matter your discipline, this chapter will help you approach the maths content in your courses with successful strategies and a positive attitude.



MATHS ANXIETY AND ITS IMPACT ON STUDYING MATHS

When studying maths, students often become anxious and start to overanalyse the maths content. Overanalysing can further elevate their anxiety and create difficulty in understanding the underpinning maths concepts.

The Australian Council of Educational Research (ACER) defines maths anxiety as “feelings of unease and worry experienced when thinking about mathematics or completing mathematical tasks” (Buckley, Reid, Goos, Lipp, & Thomson, 2016, p. 158). Maths anxiety causes people to have significant self-doubt in their ability to do maths, causing them great distress.

When a person has maths anxiety, their brain continually thinks about the anxiety rather than the actual maths problem. The brain allocates the working memory and other resources that it would normally use with computations of the maths problem to the anxiety itself, making it very difficult to learn or retain the relevant skills or information (Marshall, Staddon, Wilson, & Mann, 2017). Maths anxiety is highly prevalent. Sadly, between 25% to 80% of the college population in the United States of America has some form of maths anxiety and the percentage is likely to be similar in Australia, given the similarities in culture (Koch, 2018).



Figure 6.2 Everyone will experience maths anxiety at one point or another. It is important to recognise it and find some strategies to help you. [Image](#) by [Yan Krukov](#) used under [CCO licence](#).

SYMPTOMS AND CAUSES OF MATHS ANXIETY

Maths anxiety can easily be identified. The symptoms of maths anxiety range from simple low confidence problems to more complex physical symptoms. If you experience the following, you may have maths anxiety:

- low confidence and negative thoughts such as “I am no good at maths”, “I won’t be able to

do this”, “I am never going to understand this maths concept” (Department of Education, 2020).

- physical symptoms ranging from increased heart rate, increased breathing to a panic attack when thinking about or doing maths (Department of Education, 2020).

The symptoms of maths anxiety are triggered when doing maths or from the thought (anticipation) of doing maths. The level of anxiety will vary from person to person (Department of Education, 2020). While maths anxiety is common, it can be managed or resolved allowing you to succeed in your maths learning journey.

STRATEGIES TO REDUCE MATHS ANXIETY

You will be able to recognise when you are starting to feel stressed or anxious and having difficulty trying to complete maths problems. This could include avoiding maths classes, revision and assessment. At this point, you could develop some methods to help you to relax and unwind. Some different strategies you may be able to use distraction techniques including reflecting on how you feel; leaving the room to do another activity for short periods of time; mindful breathing techniques (such as breathing in for a count of 5, and breathing out for a count of 7); or any other techniques you may already use for reducing anxiety.

It is also helpful to remind yourself of what you *can do* by returning to a problem that you can do before attempting the problem which caused the stress. More information about mental health resources (including sections on stress and anxiety) can be found in the chapter [Successful Connections](#).

Maths anxiety can be managed in a positive way using six strategies. The strategies will need to be employed over time to see the results. Addressing your maths anxiety using these six strategies also allows you to study maths effectively.

Six strategies you can use to help reduce maths anxiety

Strategy 1: Create a safe, calm and comfortable study environment. When you are in a comfortable environment, you have more scope to use your working memory to understand the maths concepts as it is not occupied with the distractions of a busy or stressful environment.

Strategy 2: Check your self-talk and beliefs about your ability to do maths. Self-efficacy is the belief that we are capable of successfully performing a task, for example studying maths. Self-efficacy influences your confidence and likelihood of success. Changing any negative thoughts about maths to positive thoughts will greatly increase the likelihood of succeeding in maths. For example, if you catch yourself thinking, “I can’t do this”, try to tell yourself “I can do this!” Similarly, if you tell yourself “I am no good at maths”, remind yourself that, “I can improve at maths”.

Strategy 3: Keep up with your coursework. Maths courses tend to build on concepts over the course, so skipping classes or homework makes it very difficult to learn work presented later in the term. Completing your work in order each week will also give your brain the time it needs to make mental maps of the concepts, and store these in your working memory. Memorising or “cramming” does not help you with learning maths effectively, and thus should be avoided.

Strategy 4: Show all the processes (the ‘full working’) as you practice maths problems. When practising the maths concepts with the full working, you are storing these processes in your working memory. This allows you to make a mental map of the concept and increases your understanding of that concept. It also allows your brain to form the connection of where and how to apply the maths

concept. This allows for easier recall and application of the process. Your setting out will become automatic, for example, aligning your equal signs throughout the problem using the correct symbols and notations, and adding text to explain what you are doing (See Figure 5.3). When these become automatic, you won't have to worry about them in your assessment. Practising with all the process will also help you to identify what you don't understand and know when to seek help.

Strategy 5: Seek help as soon as the need arises. Asking for help can be difficult. However, to succeed with maths (and overcome maths anxiety), it is important that you approach your teaching team (or other maths support services) to seek assistance. Your teaching or university maths support team has extensive experience and can help you by breaking down the concepts into smaller and simpler processes that are easier to understand. You may also have access to peer-facilitated study groups and these can be an excellent source of practical help and encouragement.

Strategy 6: Use timed practice. Timed practice models what you will need to do during a timed assessment item, such as an exam. You will collect or create some problems, then set a timer and work through as many of the problems as you can in this time. Practising in a similar, but less pressured environment than an exam can help you to overcome your anxiety of doing maths in timed situations. Using timed practice can build your confidence in completing different maths questions and build your speed in applying the concepts.

$$\begin{aligned}\text{Area} &= \text{length} \times \text{width} \\ &= 20 \times 30 \\ &= 600 \text{ cm}^2\end{aligned}$$

$$\begin{aligned}\text{Area} &= \text{length} \times \text{width} \\ &= 20 \times 30 \\ &= 600\end{aligned}$$

Therefore, the area of the rectangle will be 600 square centimetres.

(a) Example of poorly laid out maths

(b) Example of well laid out maths

Figure 6.3 This example shows poorly or well laid out maths. In (a), the equal signs do not align, the correct symbol is not used (for the multiplication sign) and units appear out of nowhere. In (b) the example is well laid out. The equal signs align, the maths is centred on the page and the answer is given in context with units.

The use of the six strategies will increase your confidence and help you to form good mental maps within your working memory. Over time, this will reduce your maths anxiety and break down the associated barriers that make studying maths more difficult than it needs to be.

FOCUS ON UNDERSTANDING THE PROCESS

The strategies presented to help reduce maths anxiety are good practice for any student learning maths. To be successful in maths, you will also need to understand the process used for solving maths problems. That means you need to understand why the process works. Understanding the process will help you to remember how to do the maths. To develop understanding, revise and rewrite calculations that you are shown in lectures or tutorials. Things always look easier when someone else is showing you how to do it, compared to when you try at home on your own! Rewriting the steps will make it easier to complete different questions and you will have good notes for revision.



Figure 6.4 It is always important to show all your working, as this shows the process you used to solve the problem. [Image by Mario Aranda](#) used under [CC0 licence](#).

Understanding the process also gives you some flexibility when approaching maths problems. Sometimes there may be more than one method for coming to the right answer. If you understand the processes, you will be able to identify the most effective method to complete the question and then apply it. If a question doesn't specify a particular method to use to solve the problem, you can also choose a method that suits you best.

APPROACHES FOR STUDYING EACH MODULE

Now that you have some strategies for combatting maths anxiety, and studying maths effectively, you can begin your maths journey at university with a positive mindset. We will now discuss how to study maths, module by module. But, what are *modules*? Some degrees will have entire courses that focus on maths, such as Fundamental Statistics, Foundation Mathematics, or Algebra and Calculus. Within these courses, the maths concepts are broken up into smaller segments for you to study, often known as modules. Modules allow you to look at one new concept at a time and gradually build your knowledge, experience and confidence. When beginning a new module, try these approaches to make your maths study more manageable:

- Work out what the module is about and what you are expected to learn. Before you start any exercises, scan the entire module and check the learning objectives for a summary of what to expect.
- Start at the beginning of the module, reading through the text and examples. When you come to an activity, attempt the questions yourself. This will help you to learn the formulae and when and how to apply them, thus developing your problem-solving techniques. It will also give you an idea of what you know and where you need to focus.
- Do not skip over any of the study materials. Maths is an iterative process, you will need to develop strong foundations and repeatedly revisit and build upon these foundations.
- Summarise the module as you work through it. List any new formulae and problem-solving techniques and take note of anything that you do not understand so you can seek assistance.
- Talk about your maths. It is amazing how problems can be clarified by talking with

somebody. You can do this with friends, work colleagues, at tutorials (in person or online) or through course discussion forums or groups.

- Ensure that you have a complete understanding of the topic that you are studying. If you cannot understand a topic, look for alternative resources that may explain it in a different way, contact the teaching team, or university maths support team.
- Contact your teaching team or university maths support team for help if you get stuck. Do this as soon as you have a problem so that you can move on with your studies, and not get behind. Check to see if your university has any maths support services, for example, learning advisors, tutors or peer mentoring programs. Knowing in advance what help is available and how to access it can save precious time and help prevent a small issue from becoming something worse over the course of your studies.

STRATEGIES FOR PROBLEM SOLVING

In many ways, maths is like solving a puzzle, where a question is posed, and you must find the answer. At the heart of this process is what we call problem-solving skills. Problem-solving questions are typically the worded questions you find in the application sections of your materials, or in your assignments. Problem-solving skills are something that can be practised and developed to make you more confident and capable with your maths. Most people find problem-solving difficult, and as such, it is an area they need to spend time developing. Here are some tips to help develop your skills:

- Read the question or problem carefully and identify what you are expected to find.
- Determine whether any of the information is not needed for solving the problem.
- Express the relevant information in mathematical terms, defining any variables that you are given and noting any special conditions.
- Break down the problem into smaller parts.
- Estimate the answer to the part of the problem that you cannot solve yet and proceed from there.
- Decide which of the skills or techniques you have learnt in the course could be applied to solve the problem.
- Apply the technique that you think will solve this problem. Try a different technique if the first did not work.
- Check that your answer makes sense to the problem.

Even if things haven't gone quite right, there are problem-solving strategies you can use to help put yourself back on the right path. You can:

- Check that you copied down everything correctly.
- Scan for errors in your calculations.
- Look back at your working and answers to similar questions.
- Start with a fresh page where you cannot see what you have done previously.
- Read the question aloud and slowly.
- Leave the problem for tomorrow (but don't leave it too long).

- Ask for help from your teaching team, university maths support team, study group, or whatever other maths support might be available to you.

MAKING THE MOST OF HELP

Sometimes students need assistance with maths. As discussed, getting help is both a successful strategy for managing maths anxiety and a problem-solving strategy. Here are some suggestions to maximise the benefits of the help you have available:

- Be specific as to what you don't understand — you do not want the tutor to cover areas where you do not need help. Being specific about what you need will likely save you some time.
- Attempt to solve the problem(s) yourself first and have your working available so that the tutor can discuss it with you. This will develop your problem-solving skills because you will have thought through the problem. It will also show where your understanding is lacking and where you became stuck.
- Attempt similar problems from the study materials or other textbooks/websites that have answers provided, so that you can discuss your problems with the tutor rather than requiring tuition in the basic concepts. This can help tailor the support to your specific needs.
- Be organised and specific. Make a written list of problems that need clarifying, including page numbers in the text, along with your working.



Figure 6.5 Asking for help can help you gain a better understanding of a concept, allowing you to move forward in your studies. *Image by [StartupStockPhotos](#) used under a [CCO licence](#).*

TIPS FOR MATHS ASSESSMENT

After you have studied the modules, you will need to complete some assessment. This section provides hints and tips for your assignments and exams.

Maths Assignments

When studying maths, it is essential to develop regular study patterns. Often your tutorial questions will help you to develop the skills needed in your assignments, so do not leave your maths study until just before an assignment is due.

When undertaking a maths assignment, you must express yourself clearly both in English and mathematics. Many students think that doing maths just involves ‘doing the sums.’ However, ‘doing the sums’ is only one part of doing and being involved in maths. In fact, it doesn’t matter how good you are at doing these sums if you cannot communicate your answers or solutions with others. Remember – in your career, you must be able to convince your colleagues or clients that your answer is the appropriate one. Therefore, communicating is just as important in maths as it is in all other subject areas.

Finally, you need to allow adequate time to present your assignment. Just like your other assignments, you need to complete a rough draft and then prepare a final ‘good’ copy. Your markers are looking for assignments that are neat, tidy, with the maths formatted correctly, and with logical, well documented communication (mathematical and English). This could be as simple as following the guides for best practice for maths notation, such as aligning equal signs, centring equations on the page, defining any variables you have used including their units. Your textbooks and study modules are a good guide to how your lecturers are expecting you to format your assignments.



Figure 6.6 When doing a maths assignment, you must express yourself clearly both in English and mathematics. *Image by Katerina Holmes used under CCO licence.*

Maths Exams

The best preparation for exams is to work consistently through the semester (or other study period) and keep up to date with the recommended study schedules provided to you in your courses. This includes working through suggested questions and tutorial questions. Practising maths regularly will develop your skills, confidence, and fluency. Practising your setting out will help you to automatically set your work out neatly in the exam.

In the weeks and days prior to the exam, you might like to use these preparation techniques for maths exams:

- Review the information about spaced practice in the chapter [Preparing for Exams](#) to maximise your exam preparation.
- As you have been practising your maths throughout the course, you won’t need to cram the night before the exam. See additional information on cramming in the chapter [Preparing for Exams](#).
- Review your notes (and worked examples) and make a concise list of key concepts and formulae. Make sure you know these formulae and more importantly, how to use them.
- Work through your tutorial problems again (without looking at the solutions). Don’t just read over them. Working through problems will help you to remember how to do them.
- Work through any practice or past exams which have been provided to you. You can also make your own practice exam by finding problems from your course materials. See the

Practice Testing section in the chapter [Preparing for Exams](#) for more information.

- When working through practice exams, give yourself a time limit. Don't use your notes or books. Treat it like the real exam.
- For those who suffer maths anxiety—practice any breathing or other techniques that help you to reduce or manage the anxiety.
- Finally, try to get a good night's sleep before the exam so you are well rested and can concentrate when you take the exam.

Further details about preparing for a maths exam can be found in the chapter [Types of Exams](#).

During your exams, remember to set out and communicate your maths in a way that the marker can follow. Normally the marker is not looking for perfection, but that you have used the correct methods (processes). Once again, communicating what you are doing is just as important as completing the actual calculations.

If you experience maths anxiety, be aware that it may be heightened during timed exams so you will need to remember your strategies for managing it.

CONCLUSION

Maths is an integral part of university study, regardless of which discipline you are studying. This chapter identified the value of studying maths and provided strategies to help students manage maths anxiety. It also presented methods for approaching studying maths in general, how to study single modules, hints for success in problem solving and concluded with tips for how to approach maths assessments. Equipped with these tips and strategies, you are ready to learn and work successfully with maths in your university studies.

Key points

- Maths is an important part of the learning journey.
- The study of maths trains your brain to think logically, accurately, and carefully.
- Maths anxiety is something everyone may experience at different stages in their university studies. The six strategies to help you manage it are: Creating a safe, calm and comfortable environment in which to study, developing positive self-efficacy for maths, practising maths (including all working), seeking help when required, timed practice and understanding the process.
- When seeking help, show your tutor your attempt to solve the problem(s) (with your working) so that they can discuss it with you. This will give you the most tailored support.
- Develop your problem-solving skills to help with applying the concepts in different situations, including assessments.
- Present your maths logically with full working and communication in your assignments.

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MATHS FOUNDATIONS

RAQUEL SALMERON AND ANITA FREDERIKS

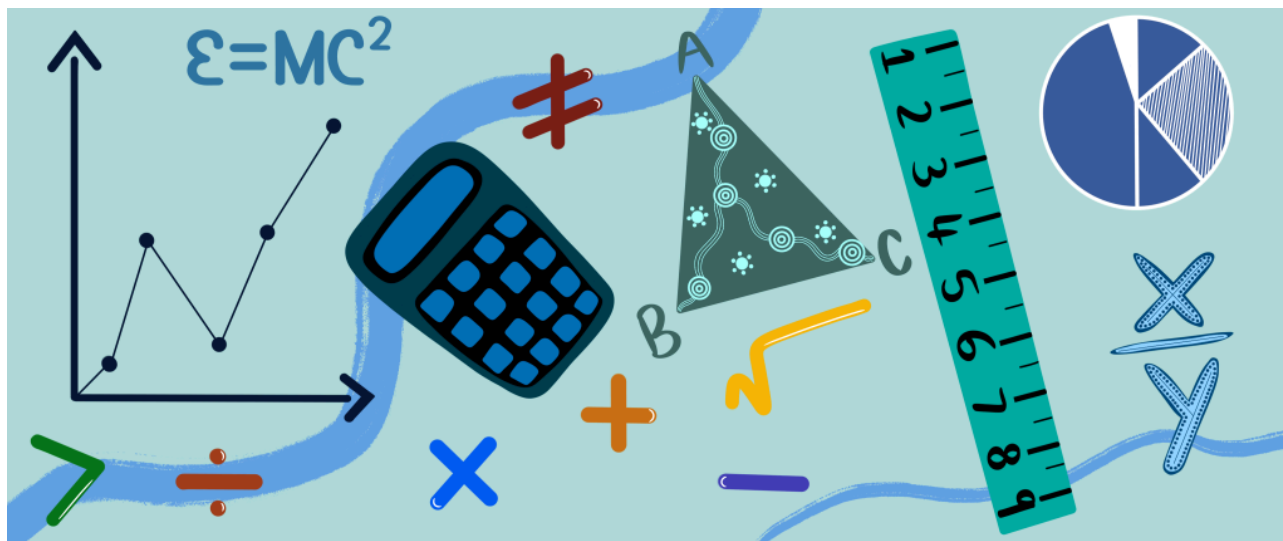


Figure 7.1 Maths Foundations. Image by Kc Rae, Aboriginal artist used under [CC BY-NC-ND licence](#).

INTRODUCTION

Welcome to the Maths Foundations Chapter. Here you will find an introduction to fundamental mathematics (maths) concepts and principles applicable across a wide range of university disciplines. The chapter first discusses key arithmetic topics, introducing fundamental operations, the number system, place value, fractions, decimals, percentages, rounding, and more. Following this, there is a section focussed on numerical reasoning and problem solving, emphasising critical skills to successfully tackle mathematical problems. Finally, the chapter discusses techniques to develop mental maths skills to allow you to solve some maths problems “in your head”, which is a valuable skill in many practical situations.

Proficiency in arithmetic is essential in fields such as Science, Technology, Engineering, Mathematics and Medicine (STEMM). It also supports career paths that involve data analysis, finance, economics and programming. In essence, mastering these maths fundamentals will equip you with essential mathematical skills, practical knowledge, and problem-solving abilities, empowering you to tackle mathematical challenges, make informed decisions, and succeed in your academic and professional pursuits.

ARITHMETIC

Arithmetic is a fundamental branch of mathematics. Being comfortable with arithmetic operations including addition, subtraction, multiplication, and division enables you to perform calculations quickly and accurately, reducing your reliance on calculators or other tools. Mastering arithmetic

concepts will allow you to confidently tackle more advanced branches of mathematics later in your studies, such as algebra, geometry, calculus and statistics.

Learning arithmetic promotes the development of logical thinking, pattern recognition, and mental agility. It enhances your memory, attention to detail, and the ability to think critically and analytically. These cognitive skills are transferable to various academic subjects and contribute to overall intellectual growth. Moreover, arithmetic is used in various aspects of your daily life, such as managing your finances, calculating bills, budgeting, shopping, cooking, and measuring.

Addition and subtraction

Addition is the process of combining two or more numbers to find their sum (or total).

Proficiency in addition supports mental math skills, enabling you to perform quick calculations mentally without relying on pen and paper or calculators. Table 7.1 shows the addition table. To use this table you find the first number of your sum on the left, and the second number of your sum on the top. Where the row and column intersect, is the result of the summation. For example, $9 + 8 = 17$.



Figure 7.2 Image by [jackmac32](#) used under [CCO licence](#).

TABLE 7.1 ADDITION TABLE SHOWING THE SUM OF THE NUMBER DOWN THE LEFTMOST COLUMN AND THE NUMBER ACROSS THE TOP ROW.

$+$		0	1	2	3	4	5	6
0		0	1	2	3	4	5	6
1		1	2	3	4	5	6	7
2		2	3	4	5	6	7	8
3		3	4	5	6	7	8	9
4		4	5	6	7	8	9	10
5		5	6	7	8	9	10	11
6		6	7	8	9	10	11	12
7		7	8	9	10	11	12	13
8		8	9	10	11	12	13	14
9		9	10	11	12	13	14	15

Note, changing the order of addition does not change the resulting sum. For example: $8 + 9 = 17$ is the same as $9 + 8 = 17$.

Subtraction is the opposite of addition, that is, addition undoes subtraction, and subtraction undoes addition. Knowing the addition facts will help you with subtraction. For example,

$$7 - 4 = 3 \qquad \text{as} \qquad 3 + 4 = 7.$$

Multiplication and Division

Multiplication is a shortcut for repeated addition. It allows you to find the total when adding the same number multiple times. For example, instead of adding $4 + 4 + 4$, you can simply multiply 4×3 to get the answer of 12. The number 3 tells you the number of times you need to add the

4 together (three times). This efficiency is crucial when dealing with large numbers or performing calculations quickly.

Division is the opposite of multiplication. This means that they undo each other's effect. When you multiply a number by 2 you get "twice" the value ($3 \times 2 = 6$). On the other hand, dividing by two results in "half" the value ($6 \div 2 = 3$). Note that after you multiply the 3 by 2, dividing the result (6) by 2 allows you to undo the effect and obtain the original number (3).

In order to solve multiplication problems, you would need to know all the one-digit multiplication facts. Table 7.2 shows the multiplication of the number down the leftmost column and the number across the top row. It is important that you know the times tables so that you are ready to multiply larger numbers. Note that the order you multiply numbers is not important, that is $3 \times 4 = 12$ as does $4 \times 3 = 12$.

TABLE 7.2 TIME TABLES, SHOWING THE PRODUCT OF THE NUMBER DOWN THE LEFTMOST COLUMN AND THE NUMBER ACROSS THE TOP ROW.

\times	0	1	2	3	4	5	6
0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6
2	0	2	4	6	8	10	12
3	0	3	6	9	12	15	18
4	0	4	8	12	16	20	24
5	0	5	10	15	20	25	30
6	0	6	12	18	24	30	36
7	0	7	14	21	28	35	42
8	0	8	16	24	32	40	48
9	0	9	18	27	36	45	54

FACTORS

Factors are all the numbers that multiply to get a particular number. For example, the factors of 12, are all the numbers which multiply together with a result of 12, that is: $12 = 1 \times 12$, $12 = 2 \times 6$, and $12 = 3 \times 4$. Therefore, the factors of 12 are 1, 2, 3, 4, 6 and 12.

The Highest Common Factor (HCF) is the largest positive number that divides two or more numbers without leaving a remainder. For example, the HCF of 12 and 18 is 6 because 6 is the largest positive number that can divide both 12 and 18. Similarly, the HCF of 15, 20, and 25 is 5 because 5 is the largest number that can divide all three numbers evenly. The HCF is used when simplifying fractions.

The Lowest Common Multiple (LCM) is the smallest number that is a product of two or more numbers. For example, the LCM of 4 and 6 is 12 because 12 is the smallest number that is a multiple of both 4 and 6. Similarly, the LCM of 3, 5, and 7 is 105 because 105 is the smallest number that is a multiple of all three numbers. The LCM is often used in mathematics to find a common denominator for fractions or to solve problems involving periodic events that repeat at different intervals. For example, if one event occurs every 3 days and another event occurs every 4 days, the LCM of 3 and 4, which is 12, represents the number of days after which both events will occur simultaneously.

FRACTIONS

Think about situations where you need to divide something into equal parts, for example when sharing a pizza with your friends (see Figure 7.3).

Fractions help us describe and understand these divisions. Fractions also come into play when measuring ingredients for cooking, determining sale prices, calculating medications, and dealing with quantities that are not integers. Let's consider a number of friends who are sharing a pizza, each having an equal portion of it. If there are two friends, each one will have half the pizza. That is, if we divide the pizza in two parts, each friend will get *one* of the *two* equal parts, or "one half" of the pizza (see Figure 7.4). The expression "one half" is written in maths as $\frac{1}{2}$, meaning that each friend has 1 part of the 2 parts the pizza has been divided into. Similarly, if there are four friends sharing the pizza, we would need to divide it in four parts, and each friend will get "one quarter" of it, which is written as $\frac{1}{4}$ (see Figure 7.5). We say that $\frac{1}{2}$ and $\frac{1}{4}$ are examples of *fractions*.



Figure 7.3 Think about situations where you need to divide something into equal parts. [Image](#) by [cottonbro studio](#) used under [CC0 licence](#).

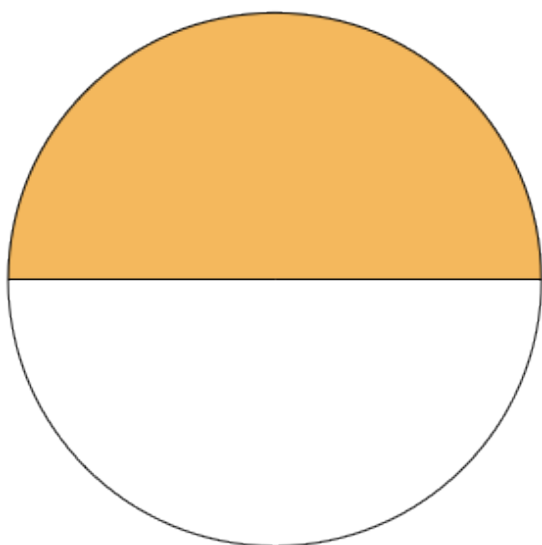


Figure 7.4 Image of a circle divided equally into two parts with shading representing one half.

In general, a fraction is written as $\frac{a}{b}$, where

a and b are

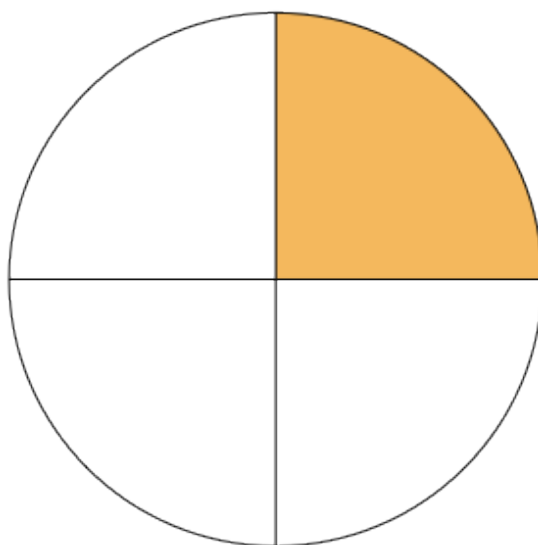


Figure 7.5 Image of a circle divided equally into four parts with shading representing one quarter.

integer numbers and b is different from zero (written as $b \neq 0$, because division by zero is undefined in mathematics). In a fraction, a (the top number) is called the *numerator* and b (the bottom number) is called the *denominator*. A fraction is a way to represent parts of a whole. The denominator b represents the number of equal parts the whole has been divided into (e.g. the two parts the pizza was divided into), and the numerator a represents how many parts are considered (e.g. the one part given to each friend). So the fraction $\frac{2}{5}$ represents 2 parts out of a total of 5 the whole has been divided into (see Figure 7.6).

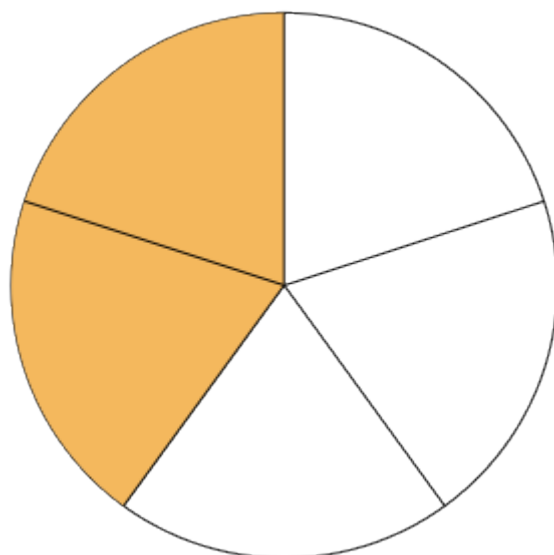


Figure 7.6 Visual representation of two fifths
 $\left[\frac{2}{5}\right]$

ADDING AND SUBTRACTING FRACTIONS

Now imagine that two friends have each $\frac{1}{5}$ of a pizza. How much of the pizza do they have in total? Putting the two $\frac{1}{5}$ slices together we realise that they have $\frac{2}{5}$ of the entire pizza (see Figure 7.7).

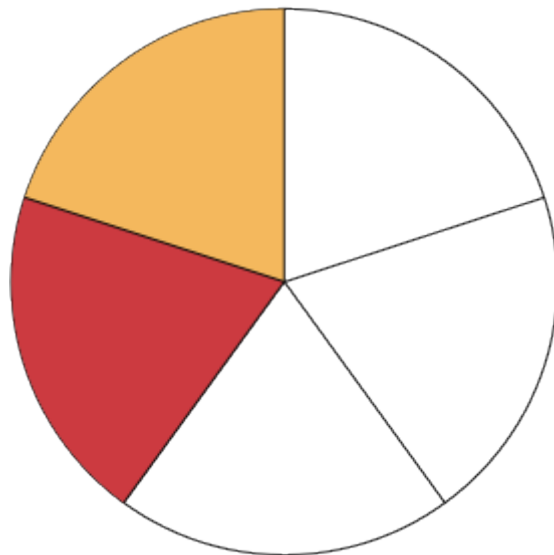


Figure 7.7 Visualisation of the sum of $\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$.

This leads us to an important concept: To add fractions, each fraction must have the *same* denominator, and to add them we add the numerators and keep the common denominator unchanged. That is: $\left[\frac{1}{5} + \frac{1}{5} = \frac{2}{5}\right]$

Similarly, to *subtract* fractions (that share the same denominator), we subtract the numerators and leave the common denominator unchanged. For example, to find out how much pizza is left after the friends ate the two fifths they had, we calculate: $\left[\frac{5}{5} - \frac{2}{5} = \frac{3}{5}\right]$ We still have $\frac{3}{5}$ of

the pizza, or 3 of the total 5 slices it was divided into. Note that the $\frac{5}{5}$ ($= 1$) above corresponds to the “whole” (entire pizza) and we are subtracting the $\frac{2}{5}$ that has been eaten to find out what portion of it is still left.

In order to learn how to add or subtract fractions when their denominators are different, we need to first understand the concept of *equivalent fractions*.

EQUIVALENT FRACTIONS

Two fractions are equivalent when they represent the same portion of the whole. For example, the fractions $\frac{2}{4}$ and $\frac{1}{2}$ are equivalent, because they both represent *one half* of the whole. In the first fraction we consider two out of four parts, and in the second we consider one out of two parts, which both represents one half of the total number of parts we have (see Figure 7.8). This means that we should be able to convert one fraction to the other.

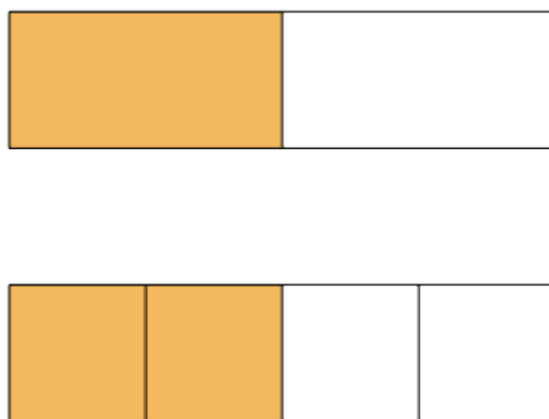


Figure 7.8 Diagram showing that one half is equivalent to two quarters.

How can we use mathematics to change $\frac{1}{2}$ into $\frac{2}{4}$? Or, how could you take a pizza that is cut into two pieces and cut it into four pieces? You could cut each of the two larger pieces into two smaller pieces. The whole pizza would then be cut into four pieces instead of just two. Mathematically, what we have described could be written as: $\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$. So we may conclude that *multiplying both the numerator and the denominator of a fraction by the same number does not alter the value of the fraction*. This is the *Equivalent Fractions Property*.

You can use equivalent fractions to add or subtract fractions that have different denominators. You first need to transform the fractions to equivalent fractions that have the same denominator. For example,

$$\frac{1}{2} + \frac{1}{4} = \frac{1 \times 2}{2 \times 2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}.$$

Often, when you complete a calculation and obtain a fraction as your result, you will need to express the fraction in *simplest form*. A fraction is expressed in simplest form if the numerator and denominator cannot be simplified by dividing both of them by the *same* number (other than

the number 1). In other words, the numerator and denominator do not have a common factor. If a fraction does have common factors in the numerator and denominator, you can reduce the fraction to its simplified form by removing (cancelling out) the common factors.

For example, consider the fraction $\frac{2}{3}$. The factors of 2 are 2 and 1 (that is, $2 \times 1 = 2$), and the factors of 3 are 3 and 1 (that is $3 \times 1 = 3$). Because there are no common factors (not counting the number 1), the fraction $\frac{2}{3}$ is already in simplest form.

Now consider the fraction $\frac{10}{15}$. The factors of the numerator and denominator are,

respectively: $\begin{array}{l} 10 = 2 \times 5 \\ 15 = 3 \times 5 \end{array}$

$\frac{10}{15} = \frac{2 \times 5}{3 \times 5}$

$\frac{10}{15} = \frac{2}{3}$

As you see, 5 is a common factor of both 10 and 15. So dividing both numbers by 5 you obtain the fraction in simplified form. $\frac{10}{15} = \frac{10 \div 5}{15 \div 5} = \frac{2}{3}$. Note that you can also obtain this result substituting the numerator and denominator of the fraction by the product of its factors and *cancelling* the common factor (the number 5 that appears both in the numerator and the denominator): $\frac{10}{15} = \frac{2 \times \cancel{5}}{3 \times \cancel{5}} = \frac{2}{3}$.

MULTIPLYING AND DIVIDING FRACTIONS

Multiplication of fractions is particularly useful when you need to calculate proportions, scale measurements, or solve real-world problems involving quantities that are not whole numbers.

For example, let's consider the multiplication of the fractions one half $\left(\frac{1}{2}\right)$ and three quarters

$\left(\frac{3}{4}\right)$ or $\frac{1}{2} \times \frac{3}{4}$. You may think about this as “a half of” $\frac{3}{4}$. To find one

half of three-quarters, you would divide the $\frac{3}{4}$ (that is, three $\frac{1}{4}$ pieces of the “whole”) into two equal halves, then take one of the halves as your solution. This operation can be visualised in Figure 7.9. Now, since you cannot divide three $\frac{1}{4}$ pieces evenly into two parts, you would need

to first convert $\frac{3}{4}$ into an equivalent fraction, for example by multiplying the numerator and denominator by 2, giving: $\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$. Now, taking half of the six $\frac{1}{8}$ pieces gives three $\frac{1}{8}$ pieces, written mathematically as $\frac{3}{8}$.

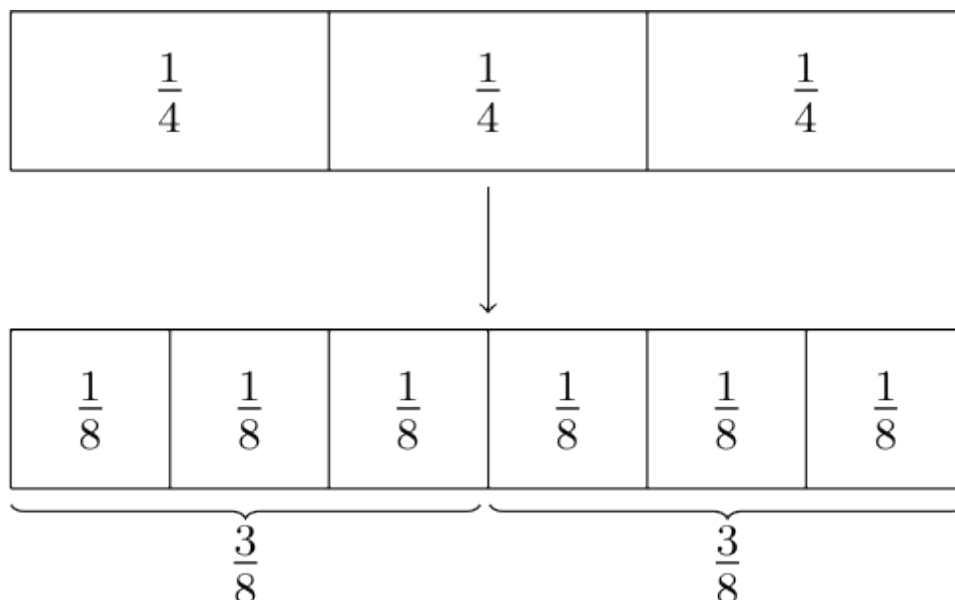


Figure 7.9 Visualisation of half of three quarters.

Therefore, $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$. Note that we could also find this solution by multiplying together the numerators and denominators of the fractions: $\frac{1}{2} \times \frac{3}{4} = \frac{1 \times 3}{2 \times 4} = \frac{3}{8}$. This observation is a general property: *To multiply fractions, we multiply the numerators and multiply the denominators.* Remember to check that your solution is in simplest form and if not, convert the fraction to simplest form.

Looking at another example, to find the product of $\frac{2}{3}$ and $\frac{3}{4}$, you would do: $\frac{2}{3} \times \frac{3}{4} = \frac{2 \times 3}{3 \times 4} = \frac{6}{12}$. Notice that both 6 and 12 have a common factor of 6, that is $12 = 6 \times 2$, and $6 = 6 \times 1$. Therefore, you can simplify the answer to be: $\frac{6}{12} = \frac{1 \times 6}{2 \times 6} = \frac{1}{2}$. This result is already in simplest form, so this is the final answer.

Finally, let's discuss division of fractions. This operation allows you to determine how many times one fraction is contained within another. When we divide one fraction by another, we essentially ask the question: "How many of the second fraction can fit into the first fraction?"

First, let's consider an example of dividing an integer by a fraction: $2 \div \frac{1}{4}$. This expression is asking "How many quarters are there in two." One whole is 4 quarters, so 2 is 8 quarters. Therefore, $2 \div \frac{1}{4} = 8$. In a similar way, $12 \div 3 = 4$ because there are three groups of 4 in 12 ($3 \times 4 = 12$).

Now, consider the division $\frac{1}{2} \div \frac{1}{6}$. We need to figure out how many $\frac{1}{6}$'s there are in $\frac{1}{2}$. This can be shown visually in Figure 7.10.

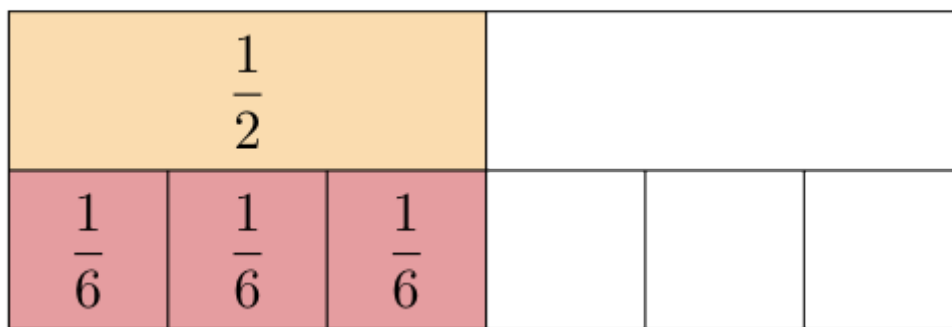


Figure 7.10 Visualisation showing there are 3 sixths in one half.

Note that $3 \times \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$. So $\frac{1}{2} \div \frac{1}{6} = 3$.

Notice that $\frac{1}{2} \times \frac{6}{1} = 3$ also, with $\frac{6}{1}$ known as the *reciprocal* of $\frac{1}{2}$. It can be shown that this is a general result, so to divide fractions, *multiply the first fraction by the reciprocal of the second*.

Another way to write fractions is to use decimals. This concept, along with place value will be discussed in the next section.

PLACE VALUE AND DECIMALS

Place value is used to represent the value of digits within a number based on their position or place in the number. In our decimal number system, which is based on powers of 10, each digit's position within a number determines its place value. For example, consider the number 358:

- The digit 3 is in the hundreds place, so its place value is $3 \times 100 = 300$.
- The digit 5 is in the tens place, so its place value is $5 \times 10 = 50$.
- The digit 8 is in the ones place, so its place value is $8 \times 1 = 8$.

When these place values are added together ($300 + 50 + 8$), you get the total value of the number, which is 358. This can be shown in a place value table (see Table 7.3).

Decimals are a way of representing numbers that have a fractional part. A decimal number consists of a whole number part and a decimal part, separated by a decimal point. The decimal point indicates the boundary between the whole number and fractional parts of the number. The digits to the left of the decimal point represent whole numbers and the digits to the right of the decimal point represent fractions of a whole number. This can be seen in Table 7.3. For example, in the number 3.142, 3 is the whole number part and 0.142 is the decimal part. The place value of the decimal numbers can be found in a similar way to the previous example:

- The digit 3 is in the ones place, so its place value is $3 \times 1 = 3$.
- The digit 1 is in the tenths place, so its place value is $1 \times 0.1 = 0.1$.
- The digit 4 is in the hundredths place, so its place value is $4 \times 0.01 = 0.04$.
- The digit 2 is in the thousandths place, so its place value is $2 \times 0.001 = 0.002$.

When these place values are added together, ($3 + 0.1 + 0.04 + 0.002$), you get the total value of the number, 3.142. This can be seen in Table 7.3.

TABLE 7.3 VISUALISATION OF THE NUMBERS 358 AND 3.142 AS PART OF THE BASE 10 NUMBER SYSTEM

Thousands [latex]1,000[/latex]	Hundreds [latex]100[/latex]	Tens [latex]10[/latex]	Ones [latex]1[/latex]	[latex]\bullet[/latex]	Tenths [latex]0.1[/latex]	Hundredths [latex]0.01[/latex]
	[latex]3[/latex]	[latex]5[/latex]	[latex]8[/latex]			
			[latex]3[/latex]	[latex]\bullet[/latex]	[latex]1[/latex]	[latex]4[/latex]

Decimals are commonly used in everyday life, such as in measurements, currency, and percentages. They are also important in many fields, including science, finance, and engineering. They can be added, subtracted, multiplied, and divided just like whole numbers. They can also be represented as fractions or percentages.

PERCENTAGES

In mathematics, a percentage is a way of expressing a number as a fraction of 100 (per cent meaning “per hundred”). For example, 5% means $\frac{5}{100}$. It is important to be able to convert numbers to percentage, or convert a percentage back to numbers.

When converting to a percentage, form a fraction and multiply by 100%. For example, a student receives 15 marks out of a total of 20 for an assignment. As a percentage, he receives: $\frac{15}{20} \times 100\% = 75\%$.

When converting from a percentage to a fraction or decimal you divide the percentage amount by 100. For example: Convert 65% to a fraction and a decimal. To convert a percentage to a fraction, divide by 100: $65\% = \frac{65}{100} = \frac{13}{20}$, where the rightmost fraction has been expressed in simplest form. To convert to a decimal: $65\% = \frac{65}{100} = 65 \div 100 = 0.65$. Note when dividing by 100, you shift the decimal place two places to the left.

ROUNDING NUMBERS

Rounding is used to get an approximate answer to more complex calculations or to ensure that your answer has the correct level of accuracy. To round a number to a specified place value, investigate the digit to the **immediate right** of that place. If this digit is:

- the number 0, 1, 2, 3, or 4, the specified place value remains unchanged.
- the number 5, 6, 7, 8 or 9, **round up** the specified place value by 1 .

For example, when rounding 734 to the nearest ten, you first need to check the digit in the ones place. This number is 4. As 4 is between 0 and 4, which means the number in the tens place remains the same, that is $734 = 730$, rounded to the nearest ten. You could also use the approximately equals to symbol (\approx) to write this mathematically, $734 \approx 730$.

Rounding with decimal numbers follows the same rule. If you want to round 123.456 to the nearest tenth (or to one decimal place), you look at the digit in the hundredths place (second



Figure 7.11 Image by 777546 used under CC0 licence.

decimal place), which is the place value directly to the right of the first decimal place. This digit is a 5. This means you need to round up the digit in the tenths place, that is: $123.456 = 123.5$, rounded to the first decimal place, or $123.456 \approx 123.5$.

When doing calculations, it is good practice to have in your head what the approximate answer should be. Rounding is an effective way to get that approximate answer. To apply this method, first round the numbers involved in the calculation, then calculate. For example, to multiply 234 by 726, round to $234 \approx 200$ and $726 \approx 700$, making the product: $200 \times 700 = 14,000$, suggests: $234 \times 726 \approx 14,000$. Therefore, once you have done the product (by hand, or on your calculator), if your answer is vastly different from 14,000, you should check your working. Rounding is also important for many mental maths techniques, as shown in the Mental Maths Skills section.

When doing calculations, you should use all the decimal places your calculator has to ensure accuracy of your final answer. One of the most asked questions is how many decimal places should be given in the final answer. As a rule of thumb, you should always give your answer to the same level of accuracy as the data provided. For example, you want to find the average height of six people (in centimetres), $172.5 \quad 177.8 \quad 169.2 \quad 180.0 \quad 162.5 \quad 173.7$ and your calculations result in an answer of 172.616 666 7. As all the heights were given to one decimal place, you would also give your answer to one decimal place. That is, the average height is 172.6 centimetres.

ORDER OF OPERATIONS

Mathematical expressions are written to convey specific information. Therefore, it is important that everyone reading them interprets them the same way and arrives at the same answer. For example, what is the answer to the expression $15 + 12 \div 3$, is it 9 or 19? For this reason, mathematicians have established a **convention** (an accepted method) that specifies the order in which operations are to be performed.

This **order of operations** states: When working from left to right follow these steps:

1. Evaluate any expressions in brackets. (If there are brackets inside another set of brackets, do the inside brackets first.)
2. Evaluate any powers and roots. Examples of powers are squares, e.g. $4^2 = 4 \times 4 = 16$, examples of roots include square and cube roots e.g. a square root is $\sqrt{16} = 4$ and a cube root is $\sqrt[3]{8} = 2$, as $2^3 = 8$.
3. Evaluate any multiplications or divisions.
4. Evaluate any additions or subtractions.

Back to the above example: $15 + 12 \div 3$. The first operation you will complete is the division: $15 + 12 \div 3 = 15 + 4$. You can complete the addition: $15 + 4 = 19$. Therefore, $15 + 12 \div 3 = 19$ not 9.

Let's look at another example: calculate $8 - 12 \div (7 - 4 \times 2)$. The first step would be to evaluate the brackets. Within the brackets, also follow the order of operations, so solve the multiplication first then the subtraction; that is: $8 - 12 \div (7 - 4 \times 2) = 8 - 12 \div (7 - 8) = 8 - 12 \div -1$, next complete the division: $8 - 12 \div -1 = 8 - (-12) = 8 + 12$, and finally, complete the addition: $8 + 12 = 20$.

You can also evaluate expressions using margin notes, for example, $\sqrt[3]{125} \times 3 - (6^2 - (4 + 3)^2 + 11) = \sqrt[3]{125} \times 3 - (6^2 - 7^2 + 11)$

\mbox{Evaluate the inside bracket,} \&= \sqrt[3]{125} \times 3 - (36 - 49 + 11) \& \& \mbox{Evaluate the powers in the brackets,} \&= \sqrt[3]{125} \times 3 - (-2) \& \& \mbox{Evaluate the brackets, left to right,} \&= 5 \times 3 + 2 \& \& \mbox{Evaluate root \& minus negative,} \&= 15 + 2 \& \& \mbox{Evaluate the multiplication,} \&= 17 \& \& \mbox{Evaluate the addition.}\end{align*}

Modern scientific calculators will follow the order of operations. It is still important to be able to work your way through the process to allow you to think mathematically and apply problem solving skills to further mathematics, for example algebra.

NUMERICAL REASONING AND PROBLEM SOLVING

Numerical reasoning and problem solving are important skills for your studies. Numerical reasoning is the ability to handle and interpret numerical data. This includes manipulating, analysing and drawing conclusions from data, which may be presented in words, tables or graphs. Problem solving usually involves understanding a worded question, translating it into mathematics, applying a mathematical procedure to obtain an answer, and finally interpreting and communicating your result.

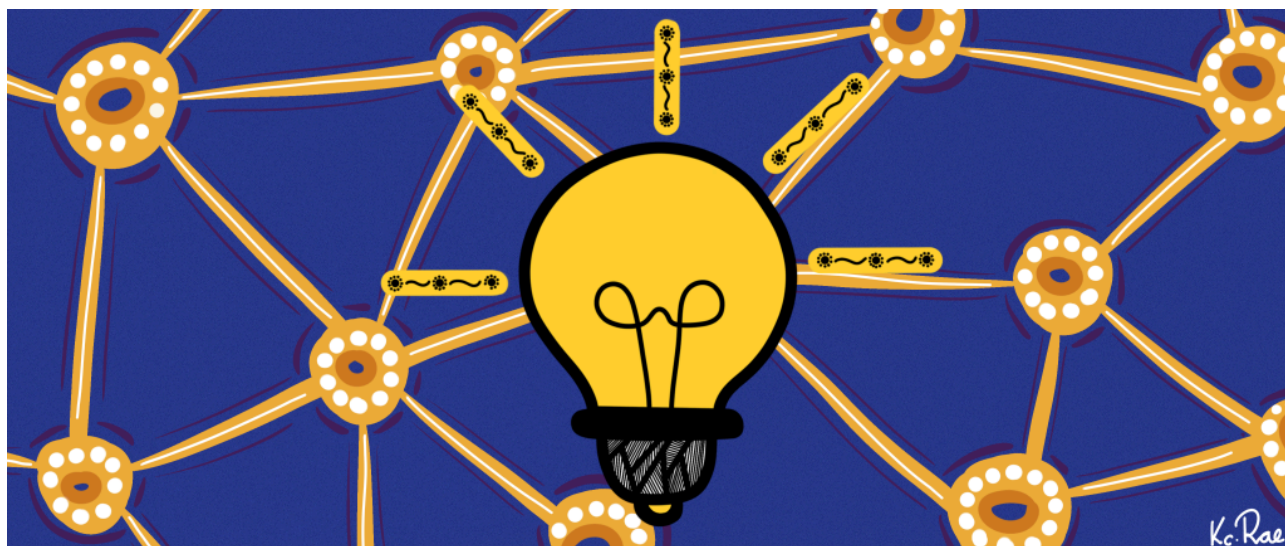


Figure 7.12 Image by Kc Rae, Aboriginal artist used under [CC BY-NC-ND licence](https://creativecommons.org/licenses/by-nc-nd/4.0/).

In order to improve your problem solving skills, master the required fundamental mathematical concepts, learn key problem solving strategies and practise key calculations, not only during your formal learning activities, but also in everyday life. This is a key step!

Let's do an example: Joseph bought 4 sheets of stamps. Each sheet had 20 stamps. How many stamps did Joseph buy? To solve the problem, you would

- write a phrase describing the result that we are looking for: *The total number of stamps, given by the product of the number of sheets and the number of stamps per sheet,*
- translate the statement into maths notation: 4×20 ,
- calculate the result: $4 \times 20 = 80$,
- check that the result is reasonable. If each sheet has 20 stamps, and Joseph bought 4 of them, it is reasonable that the result is 4 times 20, which is 80, and
- write a sentence to express the result: Joseph bought 80 stamps.

MENTAL MATHS SKILLS

Mental maths is the ability to conduct numerical reasoning quickly and accurately, in order to solve a problem “in your head”.

This ability is beneficial for a wide range of studies, including for example aviation and paramedicine, where you will need to perform calculations in your head and at times, under pressure. Therefore, mastering numerical reasoning and mental maths is an important part of your studies.

In order to solve a problem in your head, you may want to first solve the problem using pen and paper, then repeat it using mental maths techniques, explained below. It may be also very useful to practice your mental maths skills during your everyday activities, e.g. when paying at the supermarket (Can you estimate what your total expense will be?) or travelling in your car (If my speed is 60 kilometres per hour, how long would it take you to travel 100 kilometres?).

To develop or further improve your mental maths abilities, try the following techniques, which have been adapted and expanded from the discussion in McElroy (2004):

1. Master key mathematical concepts. These include fundamental operations (addition, subtraction, multiplication, division, operations with powers and roots).
2. Solve the problem first using pen and paper, following the steps described in the Problem Solving Section in previous chapter.
3. Put away the paper and visualise the step-by-step process to find the solution.
4. Practice, using different numbers or solving for a different aspect of the problem, until you feel comfortable that you can reproduce the process accurately and in a timely manner
5. Grade your problems, so that you start with simple ones, and progressively move to more complex ones.
6. Keep practising!

You may simplify calculations using rounding techniques. Consider adding the numbers $67 + 44$. To simplify this calculation, instead of adding $67 + 44$, you could round the numbers to the closest tens (e.g. 10, 20, 30, etc.) and then correct for the rounding you have done. This is a very efficient technique to do arithmetic in your head. How would this work with the example above?

- Add the numbers rounded to the closest tens (e.g. add $70 + 40 = 110$).
- Calculate the round off differences.
 - Difference from 70 to 67: *subtract 3 to the answer.*
 - Difference from 40 to 44: *add 4 to the answer.*
- Adjust the result to obtain the final answer $110 - 3 + 4 = 111$.

CONCLUSIONS

Through this chapter, you saw the importance of developing your fundamental mathematical skills. This chapter focused on the foundations of arithmetic, including working with fractions, and developing your mental maths. These fundamental skills are easily integrated not only into your studies, but also into your everyday life.

Key points

- It is important to develop your number facts (addition, subtraction, multiplication and division) as these skills are vital in problem solving and mental maths techniques.
- Addition and subtraction of fractions require a common denominator.
- Equivalent fractions are different ways to write the same fraction.
- Fractions as answers should always be given in simplest form.
- When multiplying fractions, multiply the numerators and denominators.
- Dividing fractions is the same as multiplying by the reciprocal of the second fraction.
- Round your answers to the specified number of decimal places, or to the required level of accuracy for the question.
- You must follow the order of operations when evaluating mathematical problems.
- When solving a worded problem, write a phrase describing the result you are looking for, translate the information you have into mathematics, then calculate, check and interpret your result.
- Practice “mental maths” skills by solving problems using pen and paper first, then visualising the process to find the solution. Round off techniques may be useful here.

GLOSSARY OF KEY MATHS TERMS

Addition: The process of finding the total amount or quantity when you join two or more numbers. Other words used to mean addition include: sum, total, add, plus, and. The symbol used for addition is the plus sign (+).

Decimal: A decimal number is the fractional part of a number, fractions of powers of ten, such as tenths, hundredths, thousandths, and so on. For example, one quarter $\left(\frac{1}{4}\right)$ can also be written as 0.25 in decimal form.

Denominator: The denominator is the bottom part of the fraction and represents the total number of equal parts that make up a whole.

Division: Division is the process of finding out how many times one number is contained within another number, and what is left over after the division (remainder). The result of a division operation is called the quotient. It is denoted by the division symbol (\div) or sometimes using a horizontal line (a fraction), e.g. $12 \div 3$ can be written as $\frac{12}{3}$.

Equation: In mathematics, an equation is a mathematical statement that states the equality of two expressions. For example, $2 \times 3^2 + 6 = 24$, is an equation.

Equivalent fraction: Equivalent fractions have different numerical representations but correspond to the same portion of a whole or a quantity.

Evaluate: In mathematics, evaluate means to find the numerical value or result of a mathematical expression or equation.

Expression: In mathematics an expression is a combination of numbers, variables, operators, and symbols that represents a mathematical phrase or statement. An expression does not contain an equals sign. For example: $15 + 12 \div 3$ is an expression.

Factor: Factors are all the numbers that multiply to get a particular number. In other words factors are numbers which can be divided into a number without leaving a remainder.

Fraction: A fraction is a mathematical expression that represents a part of a whole or a division of a quantity into equal parts.

Fraction in simplest form: A fraction is in its simplest form, also known as its simplest or lowest terms, when the numerator and the denominator have no common factors other than 1. In other words, the fraction cannot be further reduced without changing its value.

Highest Common Factor: The Highest Common Factor (HCF), also known as the Greatest Common Divisor (GCD), is the largest positive number that divides two or more numbers without leaving a remainder. In other words, it's the largest number that is a common factor of the given numbers.

Integer: An integer is a whole number that can be either positive, negative, or zero, without any fractional or decimal parts. Integers include all the positive whole numbers, their negative counterparts, and zero.

Lowest Common Multiple: The Lowest Common Multiple (LCM), also known as the Least Common Multiple, is the smallest positive multiple that is divisible by two or more numbers. In other words, it's the smallest number that is a multiple of the given numbers.

Mental maths: Mental maths refers to the practice of performing mathematical calculations mentally, without the use of external tools such as paper, pencil, or a calculator. It involves using mental strategies, techniques, and shortcuts to solve mathematical problems quickly and accurately in one's head.

Multiplication: Multiplication is a shortcut for repeated addition. It is denoted by the times symbol (\times) Other words for multiplication include times, product, multiply, or multiples.

Negative numbers: Negative numbers are numbers less than zero. Negative numbers have a negative sign, for example -2 is two below zero.

Numerical reasoning: Numerical reasoning is a cognitive skill that involves the ability to understand, analyse, and interpret numerical information in various contexts. It encompasses the capacity to perform mathematical calculations, make sense of quantitative data, and draw logical conclusions based on numerical information.

Numerator: The numerator is the top part of the fraction and represents the number of parts being considered.

Percentage: A way of expressing a number as a fraction of 100 (per cent meaning "per hundred").

Positive numbers: Positive numbers are numbers which are larger than zero.

Powers: In mathematics, a power refers to the expression of a number (known as the base) raised to a certain exponent (also called the power or index). The power indicates the number of times the base is multiplied by itself. For example,

- 2^3 represents 2 raised to the power of 3 which is: $2 \times 2 \times 2 = 8$.
- 5^2 represents 5 raised to the power of 2 which is: $5 \times 5 = 25$.

Real numbers: Real numbers encompass all the numbers that can be found on the number line, both to the right and left of zero.

Reciprocal: The reciprocal of a number is another number that, when multiplied by the original number, results in a product of 1. In other words, the reciprocal of a nonzero number a is $\frac{1}{a}$. For

example the reciprocal of 2 is $\frac{1}{2}$, because $2 \times \frac{1}{2} = 1$. Another example is the reciprocal of $\frac{3}{4}$ is $\frac{4}{3}$, because $\frac{3}{4} \times \frac{4}{3} = 1$.

Remainder: A remainder is anything left over after completing a division. This is normally rewritten as a remainder, or a fraction, or decimal. For example, $12 \div 5 = 2$ remainder of 2, or $12 \div 5 = 2\frac{2}{5} = 2.4$.

Root: The most common roots are the square root ($\sqrt{\quad}$) and the cube root ($\sqrt[3]{\quad}$), corresponding to powers of 2 and 3, respectively. Roots are essentially the inverse operation of powers. Roots can also be referred to as **surds**.

- the square root of 25 is: $\sqrt{25} = 5$, as $5^2 = 25$.
- the cube root of 8 is: $\sqrt[3]{8} = 2$, as $2^3 = 8$.

Rounding: Rounding is the process of approximating a number to a specified degree of accuracy.

Subtraction: Finding the difference between two numbers is called subtraction. It is denoted by the minus sign (−). Other words used to mean subtraction include minus, take, from, subtract, difference, take away.

GLOSSARY OF COMMON SYMBOLS USED IN MATHS

- + Plus sign (Addition)
- − Minus sign (Subtraction)
- × Times sign (Multiplication)
- ÷ Divided by sign (Division)
- = Equals or equal to
- ≈ Approximately equal to
- ≠ Not equal to (different from)
- ℤ Symbol used to represent all Integer numbers
- ℝ Symbol used to represent all Real numbers

SUMMARY OF KEY MATHEMATICAL OPERATIONS

Addition $1 + 3 = 4$, $a + b = c$

Subtraction $3 - 1 = 2$, $a - b = c$

Multiplication $2 \times 3 = 6$, $a \times b = c$

Division $4 \div 2 = 2$, $a \div b = c$ where $b \neq 0$

Adding Fractions $\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$

Subtracting Fractions $\frac{a}{b} - \frac{c}{b} = \frac{a-c}{b}$

Multiplying Fractions $\left[\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d}\right]$

Dividing Fractions $\left[\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \times \frac{d}{c} = \frac{a \times d}{b \times c}\right]$

Equivalent Fractions $\left[\frac{a}{b} = \frac{a \times c}{b \times c}\right]$

Cancelling terms (numerator and denominator) $\left[\frac{a \times \cancel{c}}{b \times \cancel{c}} = \frac{a}{b}\right]$

Converting to a percentage from a fraction or decimal, multiply by 100%.

Converting a fraction or decimal to a percentage, divide by 100.

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McElroy, R. D. (2004). *Mental math for pilots : a study guide*. Aviation Supplies & Academics.

ACKNOWLEDGEMENTS

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MARJORIE JEFFERS; YVONNE ROSE; KARANPAL SINGH SACHDEVA; AND ROBYN TWEEDALE



Figure 8.1 Much of university life is lived online. Image by [Vlada Karpovich](#) used under [CC0 licence](#).

INTRODUCTION

The 21st century university is highly technological and much of university life is lived online. To succeed at university, a student must be confident to operate online and be digitally literate. This means being able to understand, use, adapt to and innovate with technology. This chapter begins by exploring why digital literacy is important and how it is relevant to university life. Next, it examines what universities will expect of you in terms of digital life. The chapter then outlines the digital attitudes, attributes and skills you will need to develop, and how these relate to other skills and attributes, such as finding information online. By developing each of the elements that will be discussed in this chapter, you will be well equipped for online university life.

DIGITAL LITERACY AND UNIVERSITIES

People develop digital literacy throughout their lives. From using a mobile phone or typing a document, to manipulating data and engaging in social media, digital literacy is an important facet of every part of your life. It is helpful to build your capacity to be digitally literate as you progress. When you come to university, most likely you will not be familiar with the systems, technologies and environments that you will be expected to use throughout your study journey. It is important to become familiar, and develop these skills. You will also learn skills and attitudes with technology and digital environments that will help you in the rest of your life.

Online environments are now a key part of universities. You will not be able to succeed at university without access to relevant technology and systems. You will need to use email, learning management systems, online collaboration and videoconferencing tools and many other systems. Most information is online these days. Things like online course readings, online journals and e-books are commonplace in modern education. You may even need to build a social network online to communicate and collaborate on team projects and assessments.

It is also important to learn about the threats to you that online life can bring. Threats to your privacy, professional image, and academic success can be magnified if you don't live your life online securely, safely and ethically.

Everyone needs digital literacy to succeed in all aspects of their lives -learning, working and living. As a university student, you must be committed to developing your digital literacy within your academic, professional and personal life. Universities are committed to providing opportunities to develop digital literacy as part of your work and study.

WHAT IS A DIGITALLY LITERATE STUDENT?

Being digitally literate means having the skills, knowledge and attitudes that equip you for living, learning, working and flourishing in today's technological society. All elements of these skills, knowledge and attitudes are interrelated and interdependent.

Digital literacy attitudes include being curious, open to learning, resilient to change in technology and being collaborative. Digital literacy skills encompass elements such as:

- core computing and networking skills and knowledge to operate in a university environment (which underpin the other elements); (see below for more information)
- skills and understanding about information sources and the media, so you can access the information you need to study and work, and ensure that it is the right information;
- the ability to create online objects such as assignments, images, presentations, audio, video and other things such as spreadsheets or data;
- participating in online discussions, collaborations, groups and communicating effectively and appropriately online;
- being able to use the online learning systems at your university and beyond for ongoing professional development and learning; and
- being able to manage your "digital identity" at university and beyond into professional life and be ethical, responsible and legal in your online life.

You will develop digital literacy throughout your university journey and throughout the rest of your life. It is important to understand that digital literacy is:

- *Scaffolded*, so you don't need to know everything from the start, and you will build on your knowledge and skills as you learn.



Figure 8.2 You will need to use email, learning management systems, online collaboration and videoconferencing tools, and many other systems at university. [Image by fauxels used under CCO licence.](#)

- *Supported* as your university will provide you with opportunities to learn new skills and develop your understanding and attitudes to digital technologies and online learning. Look for opportunities through orientation, information technology (IT) training, library training, study support training and online resources.
- *General* as some skills and capabilities are important for all students, and *Specific* as other skills and capabilities are specific to a discipline or profession; and some disciplines and professions will require a much higher level of expertise and ability than others.

YOUR ONLINE LIFE AT UNIVERSITY

Starting university is a time when you will begin to collaborate online with others, either in your course or in the wider university social networks, whether it is in forums run by your lecturer, or via the university's social media platforms, such as Facebook and Twitter. Interacting with your lecturers and fellow students online will present additional chances to collaborate and co-operate to facilitate high levels of engagement. Your ability to navigate and interact in a positive way using these education and social environments will broaden your learning experiences and expedite understanding. All these lead to success both in your studies and your professional life.

Figure 8.3 represents some of the many technologies and environments that universities provide for students that make up their student digital life.

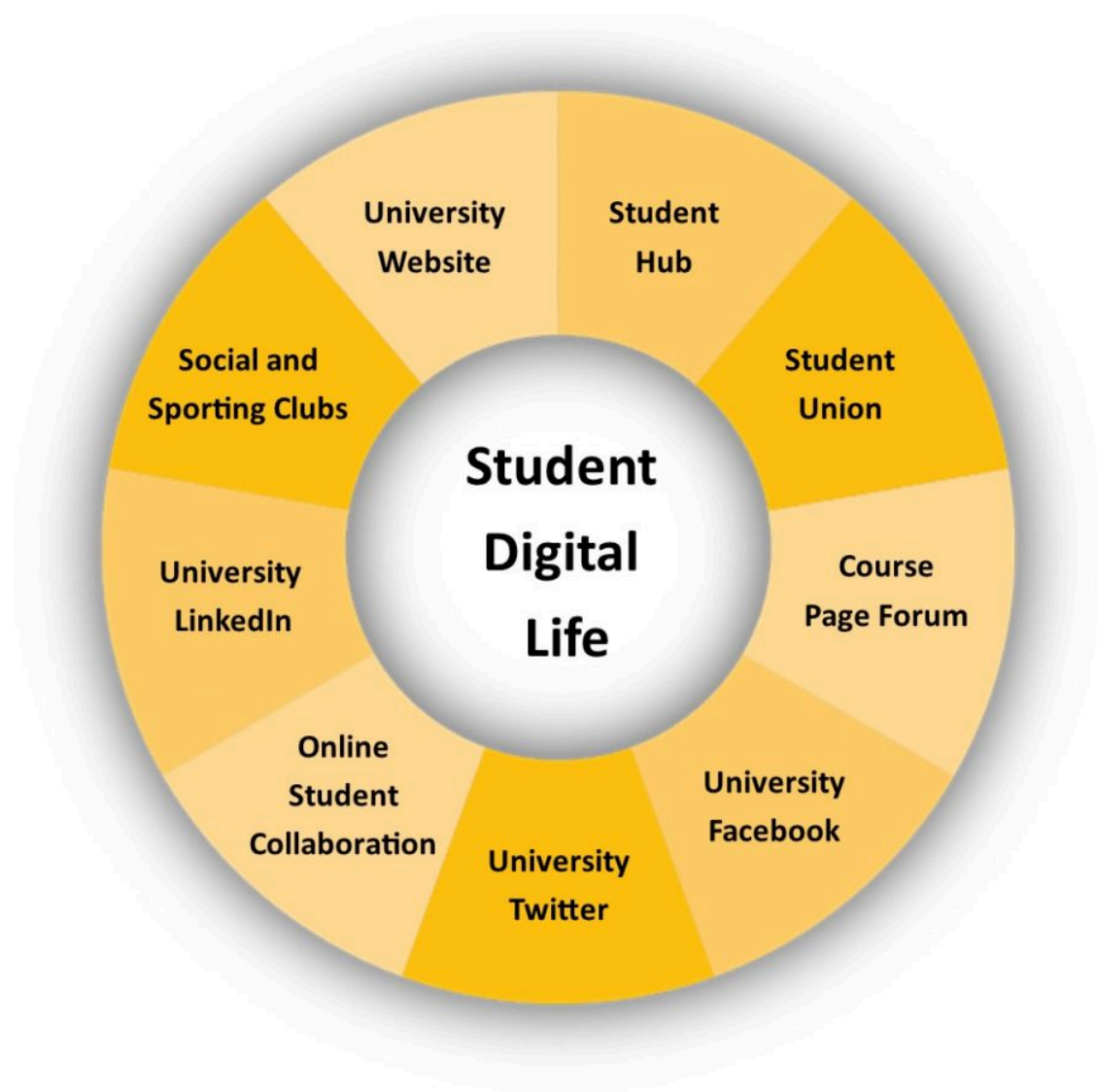


Figure 8.3 Student Digital Life Technologies and Environments. Image by USQ.

There are many positives to engaging with the platforms offered by your university. You will broaden your access to learning environments and be able to create networks with your colleagues and peers, as well as experts and mentors in your field. You will develop your online identity and improve your online interpersonal skills through communication in university systems and social media platforms. You will also develop digital problem-solving skills, and learn to innovate and create in online environments. The student digital life will involve accessing both official university sites and, on occasions, unofficial sites. Some of these include:

TABLE 8.1 DIGITAL TOOLS AND COLLABORATION OPPORTUNITIES

Official University Facebook Site	Awards, programs, partnerships, promotional materials, advertising “days” e.g. ANZAC Day, Harmony Day, graduation, career development, workshops.
Twitter	Follow academics, librarians, industries, university news and updates, events, research.
LinkedIn	Career information, professional development and training opportunities, networking, awards, and acknowledgments, research.
University Website	Student hubs, sporting groups, career opportunities, cultural activities, faith groups, international student support, library support.
Course Pages Learning Management Tools (Forums)	Student and course forums, assessment and referencing discussions, lecturers’ support for assignments.
Unofficial Facebook pages (Student run)	Collaboration opportunities and study groups.

The digitally literate student should understand the threats that exist in interacting with these online platforms, especially the unofficial, unmoderated sites that may have been set up by fellow students. You should always be aware of online threats and manage your online life carefully to avoid them.

TABLE 8.2 ONLINE THREATS AND AVOIDING THEM

Stealing your identity or hacking your accounts	Do not give out personal information unless you trust the person asking for it, and set your passwords so they are hard to guess Remember if it looks suspicious, it probably is!
Access to your financial data	Do not open email attachments from untrusted sources, and never give out your financial information to anyone you do not trust.
Bullying, cyberstalking and tracking	Be careful what you share online, both information and images, and always remember that others are watching you online Make sure you report bullying instances to your university or other relevant authorities.
Collusion and academic misconduct	Collusion on individual assessments may carry heavy penalties and universities watch carefully for instances where students are not completing their own work (See the chapter "Integrity at University" for more information).
Misinformation and conspiracy theories	Be careful about what information you trust and share online (See the chapter " Working with Information " for more information).

Remember, at university, knowing how to engage is important as you are expected to communicate professionally. Be aware of what you post, your tone and your words as they will be there for all to read. Understanding the principles of online communication will help you at university and in your communications outside of the university. It is not uncommon for recruiters to examine your online profiles to evaluate if you are a suitable candidate, so choose and use your social media channels wisely. Overall, the contemporary university student has opportunities like never before to broaden their learning experiences. By building your digital identity and creating positive relationships with others online, your chances of academic success will be enhanced in this cooperative environment.

EXPECTATIONS OF A 21ST CENTURY STUDENT

Studying at university in the 21st century means a lot of things. It means being able to study in an online environment. It means using technology, not just to participate, but to innovate. It means communicating and collaborating with your fellow students online. It means being able to learn new technologies and find information in the online world. And that is just to start!

It can be difficult for some students to have reliable access to everything they need to study effectively. It is, however, important for you to know what is expected of you as a student at

university, so that you can achieve your goals and be successful. Different universities will have slightly different expectations of you. Some may provide technology or lend technology. Others may send items to you that you need for study. It is best to check the specific requirements of your university before you set up your study space. However, let's cover some of the basics that all universities will require for you to have.

- You will need *equipment* or access to equipment regularly and consistently. Owning, or having regular access to, a computer, tablet, laptop or other device is essential.
- You will need *network access*, either at your home, or via a mobile device, or regular access from a reliable, safe network.
- You will need to be able to *access online study resources* and set up your online study environment (See the chapter [Study Space](#)).
- You will need to *participate in online learning*, such as attending online classes, participating in online discussions, giving feedback, and submitting assessment online. You will also need to participate in social environments and make connections with other students online.

Through all of this, you will need to make sure you are *safe, secure and ethical online*. You must observe online ethics around sharing of information and maintaining privacy, and understand academic integrity including online exams, cheating and copyright requirements. (See the chapter [Integrity at University](#)).

DIGITAL LITERACY SKILLS AND ATTRIBUTES

The types of skills and attributes you need to develop will depend on your field of study, your university requirements and what stage of study you are undertaking. Research students, for example, will need to develop quite different skills from those just starting out at university. Engineering or business students may need quite diverse kinds of skills in mathematics. Law students will need to skills to access distinct types of information from most other students.

It is particularly important to see your development of digital literacy skills and attributes as a journey; you will develop skills throughout your study and again throughout your life. You must maintain *digital literacy attitudes* and develop *skills and attributes* to succeed in your online university life, as shown in **Figure 8.5**.



Figure 8.4 Videoconferencing and making connections with other students online is an important part of university life. [Image by Anna Shvets](#) used under [CC0 licence](#).



Figure 8.5 Attitudes, Attributes and Skills for University Life Online. Image by USQ.

INFORMATION IN THE ONLINE WORLD

We live in a world where we experience rapid technological change. This has produced numerous and diverse information choices in our academic, work and personal lives. As a student it is essential to have the skills to use the range of resources available in libraries, universities and the internet. The ability to effectively locate, use and evaluate information is known as information literacy.

Information literacy is more than knowing how to search the internet. An information literate student can determine the information needs for study or assessment, find and access the needed information, evaluate the information and its sources critically, and use that information to accomplish their study goal. Information literacy is common to all disciplines and learning environments. Importantly, it comprises skills which not only foster successful learning but work readiness and effective citizenship. These skills include problem solving and critical thinking, finding information, forming opinions and evaluating sources.



Figure 8.6 Information literacy is a part of lifelong learning.
Image by [Kaboompics](#) used under [CC0 licence](#).

Information literacy is part of lifelong learning, creation of new knowledge, personal empowerment, engagement in wider culture, innovation and enterprise. Digital literacy and information literacy are related through the technology that is used to access information. Both literacies are essential because of how we consume information and the amount of incoming information available to us. For more understanding on how to work with information, see the chapter [Working with Information](#).

CONCLUSION

In the modern world, it is very important to be digitally literate. Digital literacy encompasses the attitudes, attributes and skills with technology and digital environments that will help you study at university and to survive and thrive working and living the rest of your life.

As a university student, you must be able to engage with the technologies, environments and social networks that your university will expect you to use. Your university will help you to develop digital literacy as part of your work and study, and to build on those skills and attributes to the level required by your discipline and future employment. You must have core computing skills underpinning other attributes to study online, communicate and collaborate, be secure, safe and ethical, and to find and use information.

Key points

- To succeed with university life online, you must be able to understand, use, adapt to and innovate with technology.
- Being digitally literate means having the skills, knowledge and attitudes that equip you for living, learning, working and flourishing in a today's technological society.
- You must be able to study in the online environment, use your university's digital systems, and communicate and collaborate online.
- You will develop your digital literacy attitudes and skills throughout your study and again throughout your life.

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WORKING WITH INFORMATION

ROWENA MCGREGOR; ROBYN TWEEDALE; LYNDELLE GUNTON; EMMA PETERS; YVONNE ROSE; SUSANNE SCHULTZ; AND KARANPAL SINGH SACHDEVA



Figure 9.1 Working effectively with information is key to successful study and research. *Image* by [Zen Chung](#) used under [CC0 licence](#).

INTRODUCTION

Working effectively with information is key to successful study and research. The effective and ethical use of information, especially scholarly information, will form the basis for writing essays, assignments, reports and examinations, and constructing visual and oral presentations. It is important to learn how to find information that matters and understand why it matters. Information and information literacy will provide links between your life experiences as a student, the wider academic world of scholarship, and the post-academic, real world, and professional applications of learning.

This chapter is designed to help build your skills to become proficient and literate in how you find and use information. As an information-literate person, you will be able to:

- Understand your information needs (*When do I need information? What type(s) of information do I need?*)
- Determine where information is stored (*Where is the best place to find this? Where should I search for the information?*)
- Develop the skills to find and access the information (*What tools are available to help me find the information? How do I use these tools?*)
- Evaluate information to identify the “right” kind of information, and discard the irrelevant information (*Why is this information useful? Why do I trust this source of*

information?)

- Use and communicate effectively the information as part of your writing and in the form your lecturer requires (*How will I use the information?*)
- Record and manage information effectively (*How will I keep track of my information sources?*)

The figure below outlines the importance of information and information skills for study and for life (see Figure 9.2).

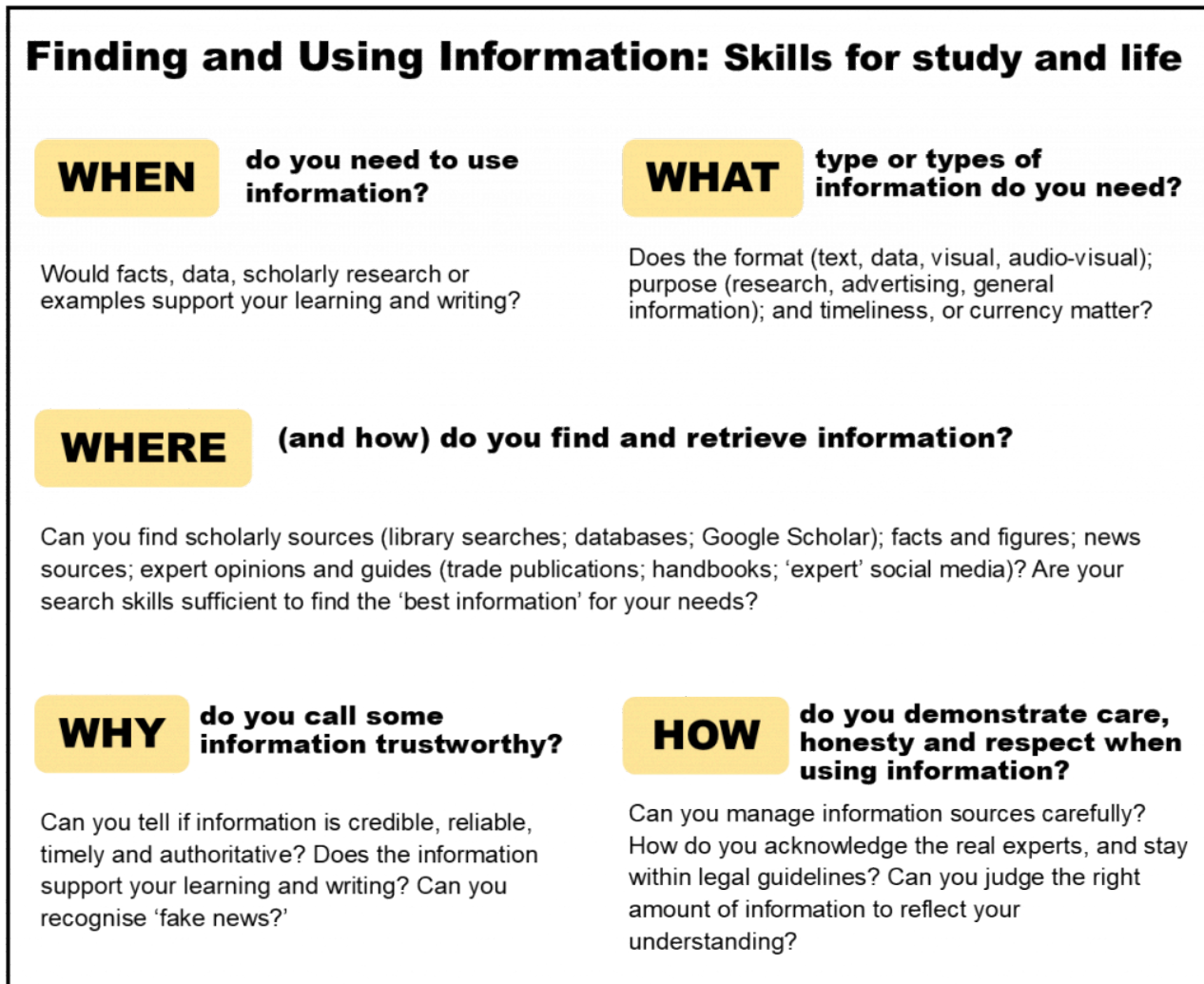


Figure 9.2 Finding and Using Information. Figure designed by Tahnya Bella.

While working with information, it will be helpful if you are willing to develop critical thinking or the awareness of the need and ability to question what you read. This critical approach is the core of developing critical information literacy skills, not just during academic study, but throughout your life. Thinking critically will allow you to use information to support and enhance (not replace) your own learning and ideas. Please see the chapter [Thinking](#) for more discussion on critical thinking.

WHAT IS INFORMATION?

Information takes many forms. We tend to think of information as being published in books, journals, magazines and newspapers. However, there are many other types of information – pictures, photographs, videos, cartoons, podcasts, tweets, social media posts, web pages, blog posts,

and... the list is endless. Not all information is written text, and not all information is published officially.

It is important to note, however, that *all* information is considered the property of the owner or publisher, whether it is your course textbook, a blog post you found on Google, or a cartoon you found in Pinterest. Therefore, academic integrity, or the honest, respectful, and ethical use of information sources applies equally to *all* information. See the chapter [Integrity at University](#) to learn more about using information with integrity.

While you are studying, you may need to draw on many different types of information, depending on what you are creating, and how you will use it. Your lecturers will expect you to find relevant information sources, but they will also expect you to be careful and discerning to avoid fake or invalid information in an academic context. It is important to be able to identify not only the different types of information sources, but also which ones are most appropriate for your needs. Read on to learn about some of the information types you will most commonly use in the university environment.

SCHOLARLY INFORMATION

Scholarly information is written by qualified experts (often academics) within a university setting for scholars in a particular field of study. The author is identified, and their credentials are available. Sources are documented, and technical language is often used. Understanding this language requires some prior experience with the topic. Attending, listening to and participating in your lectures and tutorials and completing any assigned readings will help you to develop this understanding. Scholarly information has many forms. It can be categorised as primary, secondary or tertiary sources.

PRIMARY SOURCES

A primary source provides information collected and reported verbatim. Primary sources provide a first-hand account of an event or time period and are considered to be authoritative. They represent original thinking, report on discoveries or events, or they can share new information. Primary sources are often discipline-specific. For example, in the legal field, primary sources include court reports and legislation. Historians may work with ancient texts. Sociologists may study policy documents. Social scientists in all disciplines often work with interview recordings and transcripts. Other scientists work with raw data and statistics collected in the field, such as weather recordings, or from national repositories, such as population statistics. A primary source is usually analysed, critiqued, or directly discussed in your work.

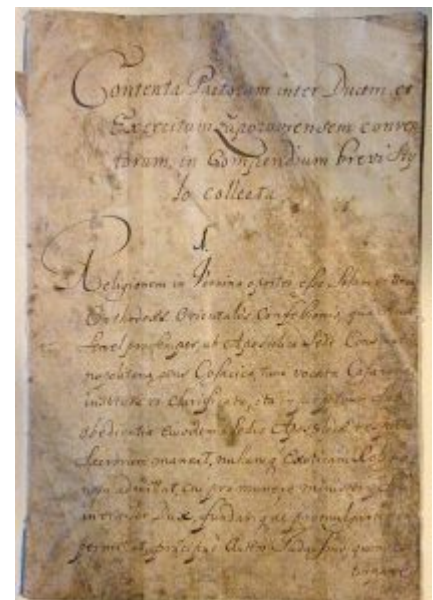


Figure 9.3 Historians may work with ancient texts. [Image](#) by Håkan Henriksson used under [CC-BY licence](#).

SECONDARY SOURCES

Secondary sources involve analysis, synthesis, interpretation, or evaluation of primary sources. Secondary sources come in a wide range of forms including scholarly books, journal articles, commentaries and documentaries. It may be an analysis of a literary or artistic work or a legal commentary.

Secondary information sources can form a significant percentage of information sources used for university assessment. Using and referring to a range of secondary sources that provide a range of interpretations and views can demonstrate quality information searching and a solid understanding of the topic.

TERTIARY SOURCES

You may come across mention of tertiary sources. These are primary or secondary information that has been condensed and rewritten in a simplified form. A textbook is a key example of a tertiary source. Fact sheets, indexes, dictionaries and encyclopedias are also included in this category.

TYPES OF SCHOLARLY INFORMATION

Primary, secondary and tertiary information sources can be provided in a range of formats as described below.

BOOKS

Also known as a monograph, scholarly monograph, research monograph, or scholarly book, a book is written by one or more authors and published by a scholarly publisher. The book will discuss a specific topic and, even if it was written by a small team of authors, it will read as one cohesive text.

Traditionally, books have been produced in print format. However, most universities collect books in electronic format, known as ebooks. You will need a computer, or tablet or phone to access these books online. Not all titles will be available in electronic format so please consult your library catalogue or contact your library to enquire about the different options for accessing specific resources.

What about textbooks?

Strictly speaking, a textbook is a scholarly publication. However, textbooks tend to give a broad, general and introductory overview of a topic rather than the specific information you will need to respond to your assessment tasks. It is best to use your textbooks to develop your understanding and familiarity with discipline-specific language and then use and cite other forms of scholarly literature in your work.

Book chapter

Also known as a scholarly chapter, or scholarly book chapter, a book chapter appears in a book edited and written by many academics. A book chapter is a standalone resource. This means that although the book will discuss a shared topic, the chapters may present conflicting arguments and perspectives on that topic within the same book.



Figure 9.4 It is best to use your textbooks to develop your understanding and familiarity with the discipline-specific language, and use and cite other forms of scholarly literature in your work. *Image by Gerd Altmann used under [CCO licence](#).*

JOURNAL ARTICLE

Searching within scholarly journals will provide you with the most current information. Also known as scholarly, research, or academic, these journal articles, are written by experts in their field, use formal language and will provide you with information relevant to your university studies.

Peer reviewed journal articles are a type of scholarly journal article. The peer review procedure is a separate process where the article has been reviewed by one or more academics before publication. The review process ensures published articles are factually accurate, report scientifically validated results, and that biases or limitations are noted in the text. For these reasons, peer reviewed articles are highly regarded by academics. You may sometimes be required to refer to *only* peer reviewed articles when writing an assignment. Information on whether a journal is peer reviewed can usually be found on the journal's website.

Original research article

Sometimes referred to as primary or empirical, an original research article reports on the new finding of a research project. Original research articles are considered primary literature.

Literature review article

The literature review journal article collates and analyses existing research in a field. Review articles are considered secondary literature. Some literature reviews attempt to include all the relevant research that addresses a specific question or area of interest. These literature reviews are called systematic reviews or systematic literature reviews.

PROFESSIONAL INFORMATION

Professional information sources are written for professionals in a field. The author is most often identified; however, sources are not always documented by citations and a reference list. The language may or may not be technical. A trade magazine is an example of a professional information source.

POPULAR INFORMATION SOURCES

Popular information sources communicate a broad range of information to the general public. The author is often not identified and may not be an expert. Sources are often undocumented. The language used is not technical. It is, therefore, difficult to assess whether a popular source is reliable. Popular information may also be commercial, aimed at selling something (advertising) or persuading to a viewpoint (political or propaganda). Examples of popular information sources include news reports, social media posts and websites.

GREY LITERATURE, ALSO GRAY LITERATURE

Grey literature is authoritative information, often published by government bodies and non-government organisations (NGOs). Grey literature is usually not published commercially and is often made available on an organisation's website. The authors may be individual experts, a panel or a committee. Examples of grey literature include reports (including research reports and government reports), literature reviews (not published elsewhere in a journal), policy documents, standards, conference papers and theses or dissertations.

CONFERENCE PAPERS

Conference papers may be presented at academic or professional conferences. Although some conference papers are reviewed, the process is rarely as rigorous as that required for peer reviewed journal articles.

Tip: If you find a relevant conference paper, check whether the authors also published the results in a peer reviewed journal, as an article will generally be viewed by your markers as being more credible than a conference paper.

Note: However, in fast changing disciplines such as information and communication technologies, conferences are highly regarded as the time taken to publish other forms of scholarly information may make them obsolete before they are available to read.

THESES OR DISSERTATIONS

Theses or dissertations form an important part of research. Theses and dissertations are usually deposited in a university's repository on completion. A university repository is an archive of the institution's research outputs. These repositories are a great place to start your search for theses and dissertations.

LECTURES AND LECTURE NOTES

Your lecturer may use an online learning management system (LMS) to deliver all your relevant course materials such as lecture recordings, lecture notes and reading lists. While these learning materials are not scholarly publications, there may be opportunities when it is appropriate to refer to such resources in your assessment.

FINDING PRINT AND ONLINE INFORMATION RESOURCES

You will need to find a variety of information to complete your study and assessment tasks. It is tempting to read a task and immediately dive into searching. However, a strategic approach will save time and enable you to access the highest quality resources in your discipline. By taking the time to clarify the content you are looking for, the appropriate genre/format/type of information for the task, and the best place to look for this information, you will ensure your searching is informed and efficient.

IDENTIFY WHAT YOU NEED

Before you search, read your assignment task or question carefully. Take note of or highlight all words that indicate the topic of your search. These words will form the beginning of your list of keywords. Also note any instructions around the type of information recommended – or required – to complete the search. This may be general (for example, scholarly sources) or specific (for example, peer reviewed journal articles published within the last five years). If you are unsure of any of the terms used to describe what you need to find, ask your lecturer or tutor before you begin your search.



Figure 9.5 Identifying keywords to use as search terms will ensure your information search results are more targeted and useful. *Image by Wokandapix used under CC-BY licence.*

IDENTIFY WHERE TO SEARCH

Knowing what you are looking for will help you to decide where to search. Scholarly information, grey literature and primary sources are located in a variety of online catalogues, collections and sites. Some of the places you can find these information sources are provided below.

SEARCHING FOR SCHOLARLY INFORMATION

Scholarly information is best found via a library search, a direct search of your university databases or via use of the search tool, *Google Scholar*. Library search (a search of your library's online catalogue) and database searches have several advantages. These advantages are:

- Subscriptions to journals and other electronic items allow you to access and download most of the information you discover
- Powerful filters and tools can focus your search and reduce the number of irrelevant materials in the search results

LIBRARY SEARCH

Your library probably has an online catalogue. Searching or browsing this should allow you to discover most resources available through your library, including print and online resources with links to the full text of online journal articles and electronic books and chapters.

DATABASES

Databases are online collections of resources that you can search to find information. They may cover a particular subject area or a range of subjects. For example, you can search Medline to find medical data and articles.

Most databases:

- have a peer reviewed or scholarly material filter to ensure you find reliable, authoritative information
- offer advanced search features that allow you to focus your search.

You can search databases to find journal articles, but they may also contain other publication types such as books, theses, newspapers, videos and images. Databases usually have a "Help" section with a detailed explanation of how to perform searches.

WEB SEARCH ENGINES

[*Google Scholar*](#), a Google tool that retrieves scholarly information, certainly has a place in your search strategy. *Google Scholar* will give an indication of what has been published on a topic. It can also be used to find additional keywords and phrases for your searches. *Google Scholar* can also be linked to your university library so you can directly access the resources available to you via your library subscription.

SEARCHING FOR GREY LITERATURE

Your library will likely have databases holding grey literature. These databases can usually be found by using the same techniques used to search for scholarly information. However, some specialist information is best accessed online via a [Google Advanced Search](#).

The *Google Advanced Search* tool allows you to focus your search and restrict it to specific domains or websites. It is a two-part online search form. The top part of the form allows you to construct a search. Look carefully at the descriptors adjacent to the various search boxes to create the most effective search. The bottom half of a *Google Advanced Search* allows you to restrict your search by using a range of filters. You can search by language, geographical region, date of last update, document format and via site or domain to search a specific website. Please speak to a librarian for guidance on searching for grey literature.



Figure 9.6 You will need to find a variety of information to complete your study and assessment tasks.

Image by RF..studio used under [CC0 licence](#).

SEARCHING FOR PRIMARY SOURCES

Primary sources are found in different places, according to genre/format/type of resource. Please speak to a librarian for guidance on searching for primary sources.

Newspapers

- Current and recent newspaper articles may be available via electronic databases from your university or national library
- Older newspaper articles may be available via national repositories provided by your national library. For instance, Australian newspapers can be accessed in the “TROVE” collection.

Legal sources: Legislation and case law

- Legal databases are provided by all university law libraries
- National and international legislation and case law can be found on the World Legal Information Institute (WorldLII) website
- Australian legislation and case law can be accessed on the Australasian Legal Information Institute (*AustLII*) website.
- The laws of your country, state, or territory are also available online on court and government websites.

Data and statistics

- Discipline-specific databases, provided by your library, are a useful source for statistics
- *World Statistics* offers free and easy access to data provided by international organisations, such as the World Bank, the United Nations and Eurostat
- Australian Bureau of Statistics (ABS) provides official statistics on economic, social, population and environmental matters of importance to Australia.



Figure 9.7 Legislation and law reports are primary sources. *Image* by [cottonbro](#) used under [CCO licence](#).

SEARCH STRATEGIES

The search techniques described here focus on finding and retrieving scholarly information. Once you have established what you are looking for and where to look, you are ready to create a search. Your goal now is to locate the information you need while keeping the number of irrelevant results to a minimum. To achieve this, you will need to create a list of keywords and combine these appropriately for your search. You will then apply *filters* to discard many irrelevant results. The final task is to export and save the resources you identify as being most suitable for your needs. Some of the steps may need to be repeated as you develop your search strategy. **Figure 9.8:** *Search Flow Chart* illustrates the steps. A more detailed description of the steps follows.

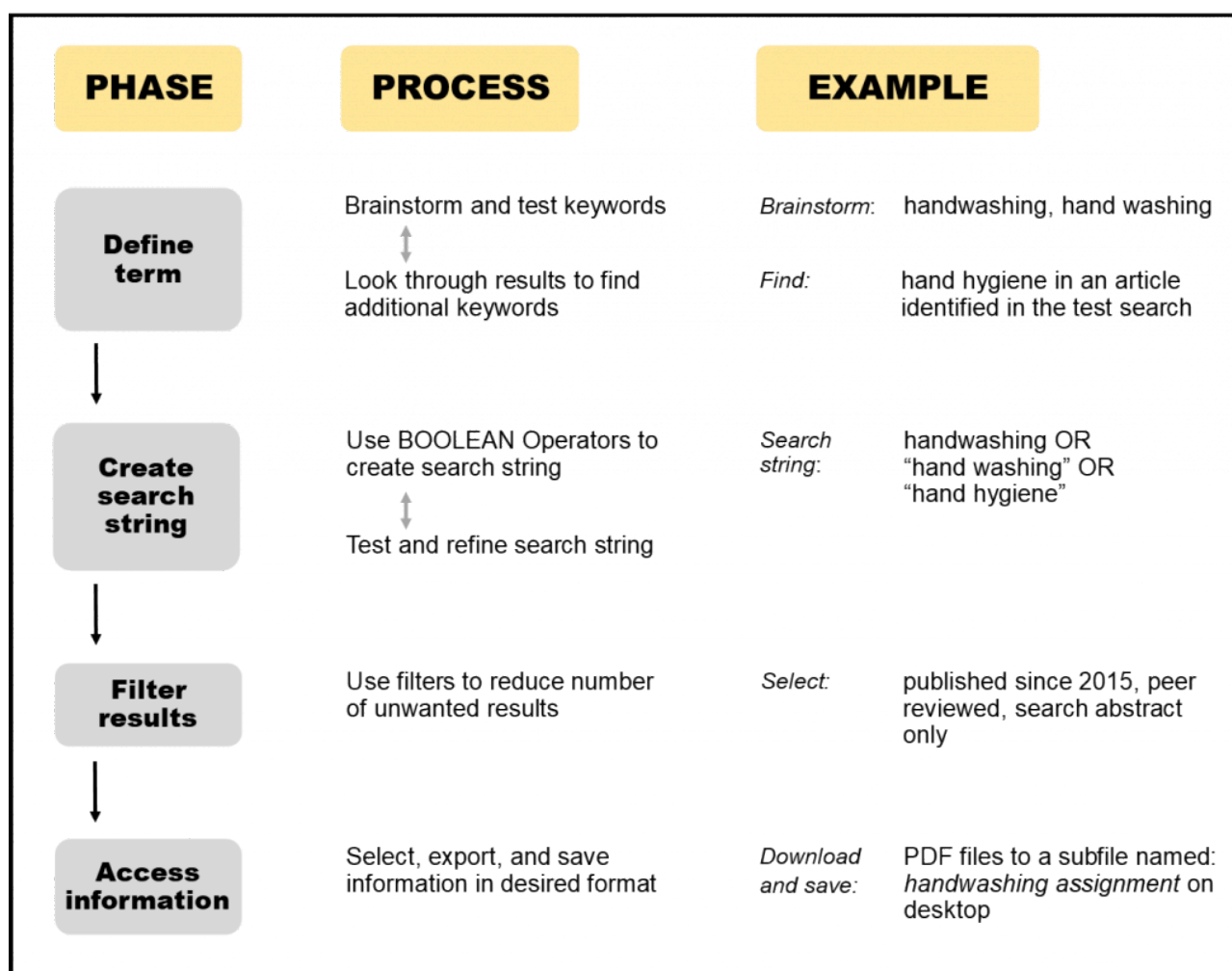


Figure 9.8 Search Flow Chart. Figure designed by Tahnya Bella.

The first step is to define your terms. Begin by looking carefully at your task and highlight the content words – the keywords that describe the topic. Then brainstorm to create a list of all the synonyms or similar words and phrases that you think may be used to describe the topic in the scholarly literature. Test your list by searching your library’s catalogue, a database, or *Google Scholar*. Add any additional words and phrases you discover to your list. In the example provided in Figure 9.8, the phrase “hand hygiene” was added as it was found in an article retrieved in a test search. You may need to remove words that retrieve unwanted results. Keep track of your work in a table or list to avoid wasting time by repeating failed searches or losing effective searches.

The second step is to create a search string. A search string lists the keywords in a way the databases or other resources you are searching will be able to understand. Library search and most scholarly databases require you use language in a precise way. **Figure 9.9** *Library and Database Search Strategies* explains this in detail.

Library and Database Search Strategies

AND

focus results

equity **AND** justice

Results will contain the terms equity AND justice

“ ”

exact phrase

“early childhood”

Results will contain the exact phrase “early childhood”

OR

broaden results

curriculum **OR** framework

Results will contain either or both the terms curriculum OR framework

terms that begin with

structur *

Results will contain terms that begin with ‘structur’ i.e. structure, structures, structural, structured...

NOT

exclude irrelevant results

therapy **NOT** medical

Results will not contain the term medical.
Beware of excluding relevant results

()

define a concept/topic

Biomedicine AND (disease OR infection)

Results will contain biomedicine AND either —or both—disease OR infection

Figure 9.9 Library and Database Search Strategies. Figure designed by Tahnya Bella.

Note: Library search and most databases do not understand natural language, so we need to use a logical framework to structure the search. This structure requires that we use specific words called Boolean operators to join keywords together in a search string – AND, OR, and NOT. All letters in the words AND, OR, and NOT must be capitalised or they will often be ignored or automatically replaced with “AND”. Exact phrases must be enclosed in double quotation marks. To find all associated words starting with the same “stem”, add an asterisk after the stem of the word. For example, using the search term econom* will reveal search results for any sources that use economy, economical, economic, economics, economies. Finally, to search for a list of likely words, place the list within parentheses and separate them with OR. Test your search string and make any additions – or remove items – until you are satisfied that your search has captured the relevant resources.

The third step is to use filters to refine your search and remove unwanted results. Filters are a list of options you can select to remove results that are not suitable for your purpose. Filters vary according to the database but often include publication date, type of resource, and whether the resource is peer reviewed. Filters are located to the left of the screen in most databases. Please speak to a librarian for guidance on using filters.

The fourth and final step is to access the information. Library search and databases will have a few options for exporting your search results. Select one or more items from the list and either save the list to your computer or email the list to yourself. A saved list is useful should you wish to retrieve the documents at a later time or collect the details you need for referencing from the list.

When you are ready to download and read the information you have retrieved, you will need to find the option for exporting or downloading the portable document format (PDF) version of

the information. Sometimes this may be in the form of a PDF icon. Where available, the PDF will be the official version of the article, book or book chapter. It will have the correct pagination and publication details (required for referencing) and will be the fully edited and finished version of the work.

EVALUATING INFORMATION

The American Library Association notes the need to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (Association of College and Research Libraries, 1989). We need information almost all the time, and with practice, you will become more and more efficient at knowing where to look for answers on certain topics. As information is increasingly available in multiple and new formats, users of this information must employ critical thinking skills to sift through it all and determine what is useful or relevant. You likely know how to find some sources when you conduct research. And remember, we think and research all the time, not just during study or on the job. If you’re out with friends and someone asks where to find the best Italian food, someone will probably consult a phone app to present choices.

This quick phone search may suffice to provide an address, hours, and even menu choices, but you’ll have to dig more deeply if you want to evaluate the restaurant by finding reviews, negative press, or personal testimonies.

Why is it important to verify sources? The words we write (or speak) and the sources we use to back up our ideas need to be true and honest. If they are not, we would not have any basis for distinguishing facts from opinions that may be, at best, only uninformed musings but, at worst, intentionally misleading and distorted versions of the truth. Maintaining a strict adherence to verifiable facts is a hallmark of a strong thinker. Many universities may use some kind of framework to help you evaluate the information you use. These frameworks focus on evaluation techniques and strategies, such as:

- the credibility or credentials of the author, and whether they are an expert on the topic
- looking for biases on why or how the information was published, for persuasive or propaganda purposes
- the validity and reliability of the publisher, and how information is presented and packaged
- the timeliness of the information, or whether it is regarded as current, and
- the reliance on verifiable facts and evidence to support any claims or statistics.

This type of framework is a good place to start, especially when thinking about traditional, published sources such as books, ebooks, journal articles and resources from library databases. Two examples of these frameworks are called C.R.A.A.P. (Currency, Relevance, Authority,

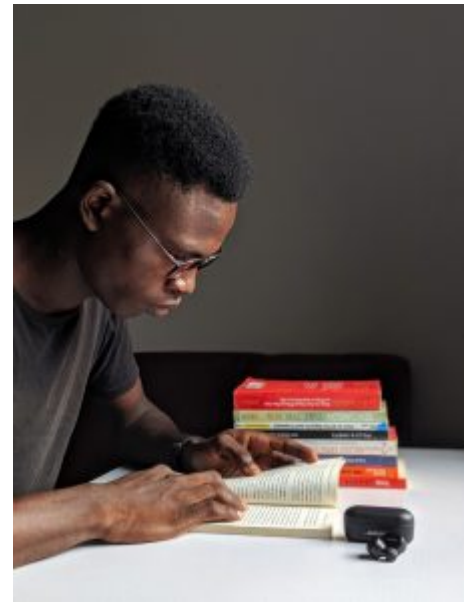


Figure 9.10 Maintaining a strict adherence to verifiable facts is a hallmark of a strong thinker. Image by [Oladimeji Ajegbile](#) used under [CC0 licence](#).

Accuracy and Purpose) and R.E.V.I.E.W. (Relevance, Expertise, Viewpoint, Intended audience, Evidence and When published).

Although these frameworks provide you with a way to think carefully and evaluate information, they are not perfect, especially for web-based information sources that operate on different rules from traditional published sources (Wineburg et al., 2020). As Johnson (2018, p. 35) states, “No universal formula or checklist can replace the critical thinking needed to determine if information is credible, but checklists and formulas can be a starting point for many students.” You probably see information presented as fact on social media daily, but as a critical thinker, you must practise the art of validating facts, especially if something you see or read in a post conveniently fits your perception. It is important to remember that the internet is also renowned for spreading rumours, fake news and scams. Digital misinformation has even been recognised as a threat to society (Del Vicario et al., 2016). Be diligent in your critical thinking to avoid misinformation! Please speak to a librarian for guidance on developing your critical thinking skills and techniques for evaluating information sources.

An example of a contentious information source is Wikipedia. Wikipedia is a source that many of us use every week for quick and simple information. However, most lecturers will not approve if you rely on Wikipedia for your research, and some may even explicitly forbid it. Why? Wikipedia is widely regarded as being of questionable reliability because it is a freely available source to which anyone can contribute and the authors cannot be identified (Angell & Tewell, 2017). So, any facts presented in Wikipedia need to be explicitly verified in other sources before you can rely on them for academic research. In general, it may be better to rely on other sources for your academic research. A professional, government, or academic organisation that does not sell items related to the topic and provides its ethics policy for review is worthy of more consideration and research. This level of critical thinking and examined consideration is the only way to ensure you have all the information you need to make decisions.

Other social media and news sources can be equally unreliable. We have all heard of “fake news”. When someone publishes an opinion or rumour, a lot of people will read it, and may even believe it without evidence. People tend to rely more on information that reinforces their own beliefs, values and opinions, and will tend to form communities with like-minded others (Del Vicario et al., 2016). This may cause a phenomenon known as ‘confirmation bias’, where people will look for this information to bolster their own perceptions and ignore any information that may discredit them. Part of critical thinking is striving to be objective and this is very important when it comes to recognising digital misinformation.

Some more strategies to help you evaluate web-based and digital information include:

- Who is responsible for the site (i.e., who is the author)? Check if the author has written anything else and if there are any obvious biases present in their writing. Is the topic within the expertise of the person offering the information?
- Where does the site's information come from (e.g., opinions, facts, documents, quotes, excerpts)? What are the key concepts, issues and "facts" on the site?
- Can the key elements of the site be verified by another site or source? In other words, if you want to find some information online, you shouldn't just Google the topic and then rely on the first website that appears at the top of the list of results.
- Can you find evidence that disputes what you are reading? If so, use this information. It is always useful to mention opposing ideas, and it may even strengthen your argument.
- Who funds the website? You can check the "About" section of a website but remember that this is written by the people who are responsible for the website, so it may be biased.
- You may choose to trust information more when it is published on a government (.gov) or academic (.edu/.ac) website but be careful about commercial (.com/.co) and non-profit (.org) websites because these are mostly unregulated.



Figure 9.11 Social media and news sources can be unreliable. People tend to rely more on information that reinforces their own beliefs, values and opinions, and will tend to form communities with others who are like-minded (Del Vicario et al., 2016). [Image](#) by Pxhere used under [CC0 licence](#).

For more information about digital literacy, see the chapter [University Life Online](#).

MANAGING INFORMATION AND RESOURCES

Once you have constructed a search and retrieved the appropriate and relevant information, you will want to manage the information so that it is easy to find, access and retrieve whenever you may need it. If you don't keep records of the information sources you find and use, it can be difficult to find them again. At a minimum, you will need to record the referencing details and links to digital information. It is also important to manage a backup system, either in online or separate physical storage, so you don't lose all your own hard work.

CONCLUSION

Working with information is a skill that can be developed. Information literacy is an important skill for study and for professional life. Remember that quality information sources will always help you to demonstrate your understanding. Learning to effectively incorporate appropriate information sources into your writing and assessment will support your learning and enhance your success at university.

Key points

- Working effectively with information is key to academic success.
- There are many types of scholarly literature, and grey literature.
- Scholarly information is written by academics and is valued at university.
- Identify what kind of information you need for a task.
- Identify where best to search for that kind of information for the task.
- Employ specific search strategies to find the most appropriate information and limit irrelevant sources.
- Evaluate information and think critically about whether it is the “right” kind of information, and discard the non-useful or irrelevant information.

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INTEGRITY AT UNIVERSITY

ROWENA MCGREGOR AND ANITA FREDERIKS



Figure 10.1: Accurately recording your information sources will help you to achieve academic integrity. *Image by Ivan Samkov used under [CC0 licence](#).*

INTRODUCTION

You will encounter the term “academic integrity” frequently while you are a student. This is because academic integrity underpins most university teaching, learning and research activities and every assessment. Understanding and applying academic integrity is essential for success at university. This chapter will begin by explaining academic integrity and academic misconduct. The chapter will then suggest several resources and skills you can develop to support your academic integrity. The chapter will also describe activities that constitute academic misconduct to further clarify the actions that are unacceptable in the university context.

WHAT IS ACADEMIC INTEGRITY?

Academic integrity is honest, respectful, and ethical behaviour within the university environment. Examples of academic integrity include being honest by indicating where and how often you use information created by others. You must be respectful of the work of others and communicate their ideas correctly. You must be ethical and not claim the work of others as your own, nor should you submit a list

“Academic integrity is...the expectation that teachers, students, researchers and all members of the academic community act with honesty, trust, fairness, respect and responsibility.” (Tertiary Education Quality and Standards Agency, n.d.)

of what others have said on the topic without providing additional critical or intellectual work. If your university allows you to use generative Artificial Intelligence (generative AI), you need to communicate the use of this tool as specified. Helpful behaviours that show integrity include using the referencing style supported by your university, ensuring all the work you submit is your own, and abiding by copyright laws when using and sharing information (TEQSA, n.d.).

WHAT IS ACADEMIC MISCONDUCT?

Academic misconduct is deliberate or inadvertent cheating. This includes plagiarism, cheating, collusion and fabricating information (TEQSA, 2019, p. 3). Use of generative AI to write an essay or complete an assignment without appropriate attribution is an emerging form of academic misconduct. The following section explains why some students are tempted to engage in academic misconduct.

THREATS TO ACADEMIC INTEGRITY

Although we may like to think that some of us are “cheaters” and some of us are simply not, the reality is somewhat different. There are many individual, social, and cultural factors that come together to make a student more likely to cheat. Miles et al.’s (2022) literature review on why students cheat identified the factors listed below (See **Table 10.1**). Please read them with a critical perspective and ask yourself: *How might I be vulnerable to committing academic misconduct?*

Table 10.1 Why students cheat

Factors that make students more likely to cheat (Miles et al., 2022)	<i>Students might say:</i>
Lack of understanding	<ul style="list-style-type: none"> • I didn't understand how to reference or paraphrase, and I copied some words from an article. • I talked about the assignment with my study group and used some of the ideas we came up with in my assignment.
Cultural differences	<ul style="list-style-type: none"> • When I went to school it was fine to copy from books and articles but now this is called plagiarism!
Technology	<ul style="list-style-type: none"> • Essay-writing services are all over my social media – it was so easy to buy an essay. • I use generative AI at work – to draft proposals and emails to clients. At uni they call it 'contract cheating.' • I Googled the question and found the answer on a website.
Personal circumstances	<ul style="list-style-type: none"> • Work didn't give me the time off I was promised. • My Mum/partner/child fell ill and I had to care for them. • Who knew online study would be so time-consuming? • I just always have trouble getting things done.
Peer influence	<ul style="list-style-type: none"> • I helped my friend by showing him my assignment. He copied parts of it and we both got caught for collusion. • I cheated – but I saw other people do it too!
Pressure to succeed	<ul style="list-style-type: none"> • My parents/community have sacrificed so much for my education, I don't want to disappoint them. • I have a scholarship from work. If I fail the course, I must pay the scholarship back.
Moral reasoning	<ul style="list-style-type: none"> • Sure, I cheated. So what? • Cheating was the wrong thing to do, but in the moment, it seemed more important to get something in than hold back the rest of my group.

BUILDING AND MAINTAINING ACADEMIC INTEGRITY

Given anyone might be influenced by one or more threats to their academic integrity, it is a great idea to think ahead about how to support your academic integrity. You might like to build your understanding and skills around referencing and paraphrasing, familiarise yourself with the technology that can help you and the policies and practices stipulated by your university regarding the ethical and effective use of that technology. You should also consider how you will manage competing priorities on your time, and the various internal and external pressures you experience. Finally, it is a good idea to think ahead about how you might react to a few common scenarios involving classmates so that should these situations arise, you will be better equipped to respond appropriately.



Figure 10.2 Threats to your academic integrity include plagiarism, contract and other forms of cheating. Image by [RODNAE Productions](#) used under [CC0 licence](#).

PARAPHRASING AND REFERENCING

Paraphrasing is the act of rewriting someone's words or ideas in your own words. When you use the exact words of another writer, you are 'quoting directly' or writing a 'direct quote.' An assignment that consists of many direct quotes separated by only a few sentences of your own does not show any evidence of original thinking and may be flagged as plagiarism. However, an accurate paraphrase applied to the topic of the assignment is your original work and demonstrates your learning and your critical thinking. Please see the chapter [Writing Assignments](#) for guidance on how to paraphrase. Whether you choose to paraphrase or quote directly, you will need to communicate where you found your ideas. To do this you will need to reference the ideas.

Referencing is the consistent and structured attribution of all ideas, words, images, statistics, and other information to the source. In other words, referencing allows you to clearly and accurately communicate where you found the information that you used in your assignments. There are thousands of referencing styles, most falling within the author-date or numbered referencing families. Check your university website for guidance on the style to use and how to reference in that style. Following is a description of the author-date and numbered referencing style families.

Author-date referencing styles

Author-date referencing styles require the name of the author (or authors) and the year of publication to be provided as an in-text citation whenever you use someone's words, ideas, images or other work. This means that several sentences within a paragraph may contain one or more in-text citations. The author's name and date may be written as part of the sentence, for example: Donohue (2017) argued that Parliament was hostile to Indigenous politicians. In-text citations can also be provided in brackets at the end of the sentence, for example: The Parliament was hostile to Indigenous politicians (Donohue, 2017).

Author-date styles also include a reference list, usually on a separate page at the end of the essay, presentation, report or literature review. The reference list contains everything mentioned as an in-text citation – and nothing else. This means you cannot include sources in your reference list other than those you have cited within the text. Each entry in the reference list provides the name of the author(s) or creator(s), the date of publication, the title of the work and where it was

produced or made available online. The American Psychological Association (APA) and Harvard styles are commonly used examples of author-date referencing styles.

Numbered referencing styles

Numbered referencing styles require a number in each sentence where someone's words, ideas, images or other works have been used. The details of the work – names, dates, title and location – are provided in footnotes, or a numbered list at the bottom of every page. Endnotes, or the entire list of references provided at the end of your work are preferred in some numbered referencing styles. The Australian Guide to Legal Citation (AGLC) and Vancouver are two examples of numbered referencing styles.

This was a brief introduction to referencing styles. Please speak to your lecturer or university librarian to determine the specific referencing style you should use, and for guidance on how to use that style in your assessment. You may also like to explore the use of bibliographic and text matching software to help you create your references and check your paraphrasing.

BIBLIOGRAPHIC SOFTWARE

Your university may make bibliographic software such as EndNote, Mendeley, RefWorks, Paperly, BibTeX or others available to students to download to their personal computers and devices. Such software can assist you with managing your information sources and referencing. If you would like to use a bibliographic software program, please note that it takes time to learn to use the software effectively. Be aware that until you are fluent in your referencing style, you will not be able to recognise and correct any referencing errors these programs can generate when used incorrectly. Developing your skills by manually creating your references will prepare you to use bibliographic software. Please speak to a librarian for guidance on when it is appropriate to use bibliographic software.

TEXT MATCHING SOFTWARE

Your university may subscribe to text matching (sometimes called 'plagiarism detection') software. Turnitin and iThenticate are examples of software that match text to detect – and help students avoid – plagiarism. These tools search the internet and university assessment repositories to find any text in your assignment that matches to other sources, including websites, scholarly literature, grey literature, and your own or other student assignments. If you have the opportunity to submit a draft assignment to such software before you submit your final assignment, please do so. Use of this software will generate a report and alert you to any text matches. This will allow you to use your referencing and paraphrasing skills to correctly attribute all the ideas in your work and avoid plagiarism. You may need to check with your teaching team for help interpreting the report.

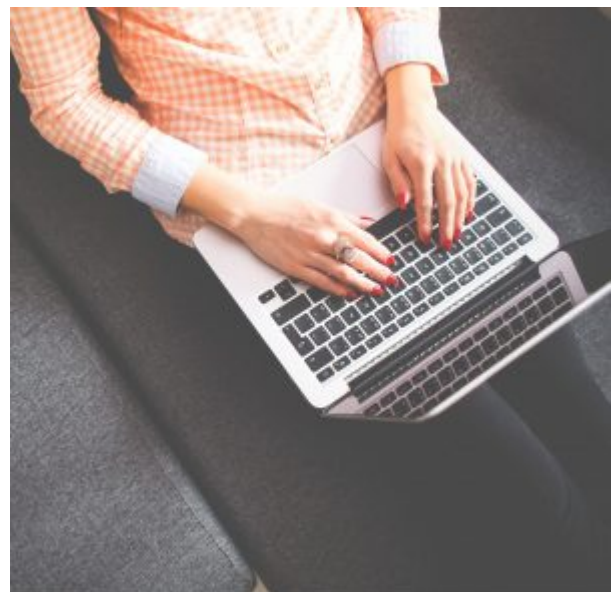


Figure 10.3 Text matching software can help you avoid plagiarism. *Image* by Pixabay used under [CC0 licence](#).

ETHICAL USE OF GENERATIVE ARTIFICIAL INTELLIGENCE

While you may not be familiar with the term “generative AI”, you may have heard of *ChatGPT* a program published free and online by OpenAI. You may also be aware of commercial products such as *GrammarlyGo*. These and many more online programs produce essays, reports, and other texts in response to questions or commands (known as prompts). Other generative AI services produce images, videos and multimedia. It is usually unethical to submit an assessment that has been produced by generative AI (see below). However, generative AI can be used ethically to build your academic and writing skills. Potential ethical uses of generative AI include brainstorming topic ideas, proofreading, and generating feedback on your draft assignments.

If you wish to explore generative AI, please consider the following actions. First, check with your teaching team, learning resources and university website for any guidelines and restrictions regarding the use of generative AI for assessment. These resources will help you to work within the policies of your university. Second, find and attend or complete any training provided by your university. This training will alert you to the functions and limitations of the various generative AI tools and equip you to use the tools effectively and within the policies set by your university. In particular you will need to understand how to write effective prompts and how to critically evaluate the responses provided. It is crucial to be aware of information or a citation that the generative AI chatbot may simply make up or “hallucinate” which can occur if the AI has been trained on insufficient information to provide an accurate response (Alkaissi & McFarlane, 2013). Third, be sure to attribute the use of the generative AI according to your university guidelines. These guideline are likely to change as understandings of copyright and generative AI change over time.

“Copyright of content generated by AI is complex. It is a rapidly evolving space with many legal uncertainties. Some people argue that there is no copyright since the output was not produced by a human, whereas others acknowledge that generative AI is illegally using copyright material for training itself, which might make anything it produces a breach of copyright. There will be no clear answer until this is resolved via the courts.”

Nikki Andersen, Open Education Content Librarian
University of Southern Queensland.

WORKING WITH YOUR PERSONAL CIRCUMSTANCES

Students who commit academic misconduct frequently cite legitimate personal circumstances such as work and family commitments that have led them to making poor decisions. While unexpected events will occur while you are at university, thinking ahead and being proactive will help you to manage these events if – or when – they occur. Time management skills include thinking ahead in this way and are described in the [Time Management](#) chapter.

You may also like to let the significant people in your life know the commitment of time and energy that study will require and ask for their support. Some specific examples may include asking in advance for reduced hours or time off work during assessment and practicum periods. You could also talk to your family regarding responsibility for specific household chores during heavy study periods. If you have trouble with negotiating and being appropriately assertive, you might be able to talk to a university counsellor for advice.

ETHICAL COLLABORATIONS

Students who commit academic misconduct are sometimes trying to collaborate with or help other students in their course. There are ways you can be supportive of others and work collaboratively while maintaining your academic integrity. Like planning to work with your personal circumstances, ethical collaborations require a little thinking ahead.

If you enjoy studying with other students and find talking about the course content a great way to learn, please do this. Just make sure you don't discuss your draft or completed assessment items in any detail. If you or other students have questions about assignments and exams, ask the teaching team for clarification. Similarly, if you or another student would like to see a completed assignment ask the teaching team. Unless directed by your teaching team, never approach other students and ask to see their work. Here are some examples of ways you can work with other students in an ethical manner. You may:

- discuss course content, ideas, and readings
- make and share study resources such as flash cards
- limit discussions on assessment tasks to what you are being asked to do and how you might approach completing the tasks
- ask shared questions to the teaching team

If you are concerned about another student's behaviour, please discuss this with your teaching team or university counsellors.

ACADEMIC MISCONDUCT

As noted earlier, academic misconduct is deliberate or inadvertent cheating. Avoiding academic misconduct is essential if you want to demonstrate honest, respectful and ethical conduct, and will allow you to avoid penalties. Varying between universities, penalties for academic misconduct may include having to rewrite a piece of assessment, failing a course or, in extreme cases, being excluded from your study program and the university. Some examples of academic misconduct – and ways to avoid it – are shared below.

Plagiarism

Plagiarism is the accidental or deliberate use of other people's work without sufficient attribution. In effect, you are claiming someone else's work as your own. Accidental plagiarism can be avoided by using effective notetaking practices (see the chapter [Notetaking](#)). Notetaking will ensure you have details needed to accurately report and attribute the resources you use. Paraphrasing – or rewriting the original ideas in your own words – is also required. Paraphrasing allows you to focus on aspects of an original work that support your arguments and to synthesise from multiple sources of information (APA, 2019). Because paraphrasing is a complex skill (and not simply replacing some of the original words with synonyms), please see the chapter [Writing Assignments](#) for more information on this key skill.

Self-Plagiarism

Self-plagiarism is re-use of your own work in a subsequent assignment. At first glance this may appear to be an efficient use of your time and effort. However, self-plagiarism does not demonstrate that you have learned anything new or that you have achieved the expected outcomes

of your course. You can use the same sources of information, but to avoid self-plagiarism you will need to write a new assignment to address the new topic, question or perspective.

Collusion

Collusion occurs when a student works with others – students, friends, paid tutors, family members – and then submits that shared work as if it is their own original work (Crook & Nixon, 2018). Collusion may be evident when:

- many students in a course submit assignments sharing similar content, references and structure
- the quality of work submitted by a student varies more than what may be expected due to conditions such as “exam nerves”
- work is submitted with very few citations.

As noted in the section above on ethical collaborations, working with others and discussing the content of a course or the requirements of an assignment can be productive and enjoyable. However, unless required for a group project, you should avoid sharing your draft or completed assignments. If you need feedback or advice on a draft consult with the academic and professional staff employed by your university to help people with their academic skills, for example, learning advisors, learning support and academic advisors.



Figure 10.4 Working with others can be a productive and enjoyable way to learn. Image by [StartupStockPhotos](#) used under [CC0 licence](#).

Contract Cheating

Contract cheating occurs when a student submits work completed by someone else, sometimes for money. Examples of contract cheating include asking a friend or family member to edit your work, and paying someone else to complete their assessment – to sit their exam, or to write their essay, or to complete the maths questions. Clearly this activity undermines the value of your qualification. If students cheat their way to graduation, and then cannot perform the skills or demonstrate the attributes required by their employers and colleagues, the qualification will soon be judged to be worthless. Another problem with contract cheating is that you become vulnerable to being blackmailed by the same criminals who provided the essay. These criminals have been known to contact the students they helped to cheat and threaten to expose them to the university or to their employer unless they make additional payments (Lancaster, 2016).

If you find yourself considering cheating due to time pressure, there are other options you can consider that demonstrate academic integrity. You may ask if an extension is available or consider if the penalty applied for late submission is acceptable. Communicate with your teaching team as early as possible to discuss your options. The [Time Management](#) chapter will be helpful for planning into the future.

Generative AI

Unethical use of generative AI is a form of contract cheating. Be aware that universities have different policies regarding the use of generative AI, and that these policies are subject to change.

Be sure to keep up to date with the policies and expectations of your university. Some examples of generative AI use that is contract cheating include:

- where generative AI use is not allowed, using generative AI to write or create all or part of an assignment
- where generative AI use is allowed, using generative AI without proper attribution
- using online algebra calculators to complete maths assignment or exam questions. Some of these online websites/tool provide answers, but you need to pay for working.

Universities often use software and metadata analysis to detect the use of generative AI. Text matching software programs such as Turnitin can be used for this purpose. Please note that suspected cheating via generative AI may not be flagged on the report but sent directly to university staff.

Many argue that the validity of the detection methods is uncertain (Alimardani & Jane, 2023) making it is important to keep records of your work. This includes keeping all draft versions of your assignments, whether or not you use generative AI. If you do use generative AI, record the prompts you used and a copy of the exact text or other content produced by the generative AI.

Fabricating Data

Whether you perform an experiment in a lab, collect data from another setting, or find data in a scholarly or other source, it is important to report this data clearly and accurately. Do not fabricate data to show a fake finding or outcome. Unexpected lab results may be disappointing, but they may provide an interesting opportunity to discuss the limitations of an experiment or how unanticipated conditions may have skewed the results. The discussion section of a report can benefit from the skilful handling of something that may have first appeared to be a disaster. In the case of not finding sufficient data from a scholarly source, the chapter [Working with Information](#) will help you to find relevant data.

CONCLUSION

Academic integrity governs all that you do at university. Academic integrity is made visible by the accurate attribution of ideas, images or other information you use in your work according to the rules of your university's preferred referencing style. Being diligent with paraphrasing and referencing, and submitting only work that is your own, are key ways to act with academic integrity. It is very important to only submit your own original work for assessment, or to clarify the contributions of others (including generative AI) where relevant. When reading your work, your lecturer should be able to identify the ideas you used to support your thinking and be confident that anything else is your personal contribution.

While there are many risks to academic integrity and many forms of misconduct, the risks can be mitigated by planning ahead and using the policies and support available from your university.

Key points

- Academic integrity underpins everything you do at university.
- Academic integrity requires the honest, respectful and ethical use of information.

- Effective paraphrasing will help you to maintain academic integrity.
- You can use Generative AI as a learning tool **if** your university's policies and resources support and allow this use.
- Accurate referencing and good record keeping can provide evidence of your academic integrity.
- Cheating in any form undermines the value of your degree and leaves you vulnerable to academic penalties and blackmail.

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PART III.

PART C: SUCCESSFUL STUDY SKILLS



Successful Study Skills

Image by [PatternPictures](#) used under [CC0 licence](#). Note: image has been modified.

GOALS AND PRIORITIES

KRISTEN LOVRIC AND DEBI HOWARTH



Figure 11.1 Selecting purposeful goals and priorities has the power to put you on track and on time in your journey to academic success. Image by [Sajith Ranatunga](#) used under [CC0 licence](#).

INTRODUCTION

Every day holds limitless choices for how you can spend your time. Whether consciously or not, those decisions are guided by goals and priorities. Selecting purposeful goals and priorities has the power to put you on track and on time in your journey to academic success. This chapter holds valuable tools for knowing how to get the best out of every day, every week and every year at university. It can move you from floating along with limitless choices, to flying with a focused, intentional direction towards where you want to go.

The chapter begins by explaining the link between goals and motivation. It then shows you how to construct SMART goals and how to use grit to “stick” with them. It also points out the difference between long-term and short-term goals. Next, the chapter explores how to determine priorities, and what to do when you have priority conflicts. This is followed by a helpful discussion of how to complete tasks by breaking them down into the components you need. The chapter finishes with a reminder of how having both deadlines and flexibility can assist you.

GOALS GIVE MOTIVATION

Motivation often means the difference between success and failure. That applies to school, to

specific tasks, and to life in general. One of the most effective ways to keep motivated is to set goals. Goals can be big or small. A goal can range from *I am going to write one extra page tonight*, to *I am going to work to get an A in this course*, and all the way to *I am going to graduate in the top of my class so I can start my career with a really good position*. The great thing about goals is that they can include and influence several other things that all work towards a much bigger picture. For example, if your goal is to get an A in a certain course, all the reading, studying, and every assignment you do for that course contributes to the larger goal. You are motivated to do each of those things and to do them well. Setting goals is something that is frequently talked about, but it is often treated as something abstract. Goal setting is best done with careful thought and planning. This next section will explain how you can apply tested techniques to goal setting and what the benefits of each can be.

SMART GOALS

Goals need to be *specific* and represent an *end result*. They should also be SMART. SMART is an acronym that stands for Specific, Measurable, Achievable, Relevant, and Time-bound. When constructed carefully, a SMART goal will help you achieve an end result and support your decision making. Each of the components of a SMART goal will now be described in more detail below.

- **Specific**—For a goal to be specific, it must be carefully defined. A goal of *get a good job when I graduate* is too general. It doesn't define what a good job is. A more specific goal would be something like *identify a hospital that recruits graduate nurses and has clear career paths*.
- **Measurable**—To show effect, and report progress, goals need to be measured. What this means is that the goal should have clearly defined outcomes with enough detail to measure them. For example, setting a goal of *doing well at university* is a bit undefined, but making a goal of *graduating with a grade point average (GPA) above 4.0 at university* is measurable and something you can work with.
- **Attainable**—*Attainable* or *achievable* goals means they are reasonable and within your ability to accomplish. While a goal to *complete six subjects in a semester and work part time* is something that would be nice to achieve, the odds that you could make that happen in a semester are not very realistic for most students. However, if you plan to *complete three subjects this semester and work part time* it may well be more achievable.
- **Relevant**—For goal setting, *relevant* means it applies to the situation. In relation to university, a goal of *buying a horse to ride to for pleasure on weekends* is unlikely to be relevant to your student goals, particularly if you live 100km from campus, but *getting dependable transportation to the campus* is something that would contribute to your success at university.
- **Time-bound**—Time-bound means you set a specific time frame to achieve the goal. *I will get my paper written by Wednesday* is time-bound. You know when you must meet the goal. *I will get my paper written sometime soon* does not help you plan how and when you will accomplish the goal.

In the following table you can see some examples of goals that do and do not follow the SMART system (see **Table 11.1**). As you read each one, think about what elements make them SMART or how you might change those that are not.

TABLE 11.1 EXAMPLES OF GOALS THAT DO AND DO NOT FOLLOW THE SMART SYSTEM

Goal	Is it SMART?	Comments
I am going to be rich someday	No	There is nothing specific, measurable, or time-bound in this goal.
I will graduate with a GPA of 4.0 by the end of next year.	Yes	The statement calls out specific, measurable, and time-bound details. The other attributes of attainable and relevant are implied. This goal can also be broken down to create smaller, semester or even weekly goals.
I will walk for 30 mins each day to help me relieve stress.	Yes	All SMART attributes are covered in this goal, explicitly or implied.
I would like to do well in all my courses next semester.	No	While this is clearly time-bound and meets most of the SMART goal attributes, it is not specific or measurable without defining what “do well” means.
I will earn at least a 4.0 GPA in all my courses next semester by seeking help from the Learning Advisor (Maths).	Yes	All the SMART attributes are present in this goal.
I am going to start being more organised.	No	While most of the SMART attributes are implied, there is nothing really measurable in this goal.

The most important thing to do when goal setting is to write down the goals, then keep them visible, and revisit each one every couple of weeks to make sure you are on track. Another useful approach to goal setting is to discuss your goals with a critical friend who will help you to be realistic and encourage you to achieve the goals.

STICK WITH IT!

As with anything else, the key to reaching goals is to stick with them, keep yourself motivated, and overcome any obstacles along the way. In the following graphic you will find seven methods that highly successful people use to accomplish their goals (see **Figure 11.2**).



Figure 11.2 Seven ways to stay motivated. Image adapted from OpenStax used under [CC-BY 4.0 licence](https://creativecommons.org/licenses/by/4.0/).

Keeping focused and motivated can be difficult at university. There are so many other things to do, lots of temptations, and procrastination can be a problem with complex study commitments. How well we persevere towards goal or task completion is sometimes called “grit”. Grit drives us

to succeed and to get back up when things seem too hard. Grit is not about how clever you are. It is about how much you keep going until something is finished or accomplished.

This personality trait was defined as grit by the psychologist Angela Duckworth and colleagues (Duckworth et al., 2007). In their study, they found that individuals with high grit were able to maintain motivation in learning tasks despite failures. What the results showed was that grit and perseverance were better predictors of academic success and achievement than talent or IQ. The *New York Times* best-selling author Paul G. Stoltz has since taken the grit concept and turned it into an acronym (GRIT) to help people remember and use the attributes of a *grit mindset* (Stoltz, 2015). His acronym is Growth, Resilience, Instinct, and Tenacity. Each element is explained in the table below (see **Table 11.2**).

TABLE 11.2 THE GRIT ACRONYM

Growth	Your inclination to seek and consider new ideas, alternatives, different approaches, and fresh perspectives
Resilience	Your capacity to respond constructively and to manage all kinds of adversity
Instinct	Your capacity to pursue the right goals in the best and smartest ways
Tenacity	The degree to which you persist, commit to, stick with, and achieve your goals

The first step in applying grit is to adopt an attitude that focuses on the end goal as the only acceptable outcome. With this attitude comes an acceptance that you may not succeed on the first attempt—or the nineteenth attempt. Failed attempts are viewed as merely part of the process and seen as a very useful way to gain knowledge that moves you towards success. Sometimes we need to look at *how* we are doing something to find out *why* we are unsuccessful. When we are honest about the reasons *why*, we can then start to manage the situation and set goals. We get back up and start again.

LONG-TERM GOALS AND SHORT-TERM GOALS

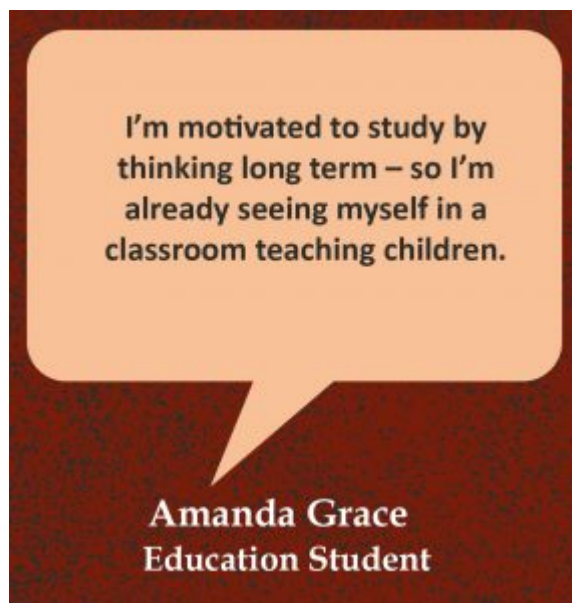
Long-term goals are future goals that often take years to complete. An example of a long-term goal might be to complete a Bachelor of Arts degree within four years. Another example might be purchasing a home or running a marathon. While this chapter focuses on your academic planning, long-term goals are not exclusive to these areas of your life. You might set long-term goals related to fitness, wellness, spirituality, and relationships, among many others. When you set a long-term goal in any aspect of your life, you are demonstrating a commitment to dedicate time and effort towards making progress in that area. Because of this commitment, it is important that your long-term goals are aligned with your values.

Setting short-term goals helps you consider the necessary steps you'll need to take, but it also helps to chunk a larger effort into smaller, more manageable tasks. Even when your long-term

goals are SMART, it's easier to stay focused and you'll become less overwhelmed in the process of completing short-term goals.

You might assume that short-term and long-term goals are different goals that vary in the length of time they take to complete. Given this assumption, you might give the example of a long-term goal of learning how to create an app and a short-term goal of remembering to pay your mobile phone bill this weekend. These are valid goals, but they don't exactly demonstrate the intention of short and long-term goals for the purposes of effective planning.

Instead of just being bound by the difference of time, short-term goals are the action steps that take less time to complete than a long-term goal, but that help you work towards your long-term goals. If you recall that short-term goal of paying your mobile phone bill this weekend, perhaps this short-term goal is related to a longer-term goal of learning how to better manage your budgeting and finances.



PRIORITISATION

A key component in goal setting and time management is that of prioritisation. Prioritisation can be thought of as ordering tasks and allotting time for them based on their identified needs or value. This next section provides some insight into not only helping prioritise tasks and actions based on need and value, but also how to better understand the factors that contribute to prioritisation.

The enemy of good prioritisation is panic, or at least making decisions based on strictly emotional reactions. It can be all too easy to immediately respond to a problem as soon as it pops up without thinking of the consequences of your reaction and how it might impact other priorities. It is natural for us to want to remove a stressful situation as soon as we can. We want the adverse emotions out of the way as quickly as possible. But when it comes to juggling multiple problems or tasks to complete, prioritising them first may mean the difference between completing everything satisfactorily and completing nothing at all.

One of the best ways to make good decisions about the prioritisation of tasks is to understand the requirements of each. If you have multiple assignments to complete and you assume one of those assignments will only take an hour, you may decide to put it off until the others are finished. Your assumption could be disastrous if you find, once you begin the assignment, that there are several extra components that you did not account for and the time to complete will be four times

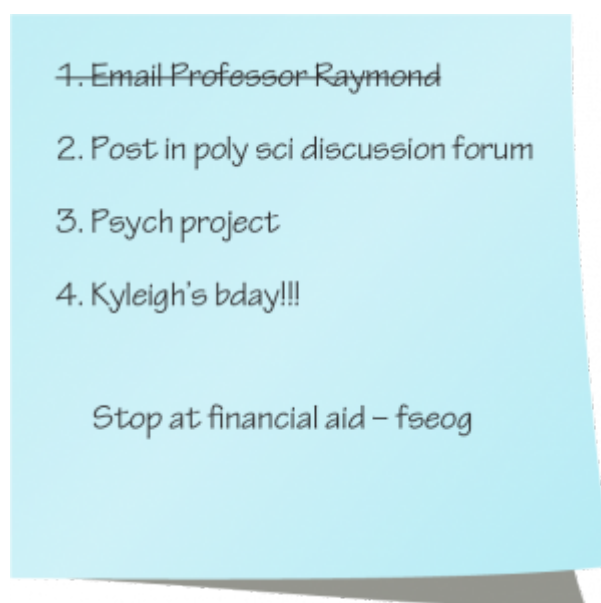


Figure 11.3 Numbered lists are useful and easy tools to create. Image by OpenStax used under [CC-BY 4.0 licence](https://creativecommons.org/licenses/by/4.0/).

as long as you estimated. Because of situations like this, it is critically important to understand exactly what needs to be done to complete a task before you determine its priority.

To better see how things may need to be prioritised, some people make a list of the tasks they need to complete and then arrange them in a quadrant map based on importance and urgency. Traditionally this is called the Eisenhower Decision Matrix. Before becoming the 34th president of the United States, Dwight Eisenhower served as the Allied forces supreme commander during World War II and said he used this technique to better prioritise the things he needed to get done.

In this activity, begin by making a list of things you need or want to do today and then draw your own version of the grid below. Write each item in one of the four squares. Choose the square that best describes it based on its urgency and its importance. When you have completed writing each of the tasks in its appropriate square, you will see a prioritisation order of your tasks. Obviously, those listed in the Important and Urgent square will be the things you need to finish first. After that will come things that are “important but not urgent,” followed by “not important, but urgent,” and finally “not urgent and not important” (see **Figure 11.4**).

	Urgent	Not Urgent
Important	Urgent and Important <ul style="list-style-type: none">• Paper due tomorrow• Apply for internship by deadline	Not Urgent but Important <ul style="list-style-type: none">• Exam next week• Flu shot
Not Important	Urgent but Not Important <ul style="list-style-type: none">• Amazon sale• Laundry	Not Urgent and Not Important <ul style="list-style-type: none">• Check social• TV show

Figure 11.4 The Eisenhower Matrix can help organise priorities and ensure that you focus on the correct tasks. Image by OpenStax used under [CC-BY 4.0 licence](#).

Another thing to keep in mind when approaching time management is that while you may have greater autonomy in managing your own time, many of your tasks are being driven by a few different individuals. In some cases, keeping others informed about your priorities may help avert possible conflicts (e.g., letting your boss know you will need time on a certain evening to study; letting your friends know you plan to do a journal project on Saturday but can do something on Sunday, etc.). It will be important to be aware of how others can drive your priorities and

for you to listen to your own good judgment. Time management in university is as much about managing all the elements of your life as it is about managing time for class and to complete assignments.

Occasionally, regardless of how much you have planned or how well you have managed your time, events arise where it becomes almost impossible to accomplish everything you need to by the time required. While this is very unfortunate, it simply cannot be helped. As the saying goes, “things happen.” Finding yourself in this kind of situation is when prioritisation becomes most important. When this occurs with university assignments, the dilemma can be extremely stressful, but it is important to not feel overwhelmed by the anxiety of the situation so that you can make a carefully calculated decision based on the value and impact of your choice.

PRIORITY CONFLICTS

As an illustration, imagine a situation where you think you can only complete one of two assignments that are both important and urgent, and you must make a choice of which one you will finish and which one you will not. This is when it becomes critical to understand all the factors involved. While it may seem that whichever assignment is worth the most points to your grade is how you make the choice, there are actually a number of other attributes that can influence your decision in order to make the most of a bad situation. For example, one of the assignments may only be worth a minimal number of points towards your total grade, but it may be foundational to the rest of the course. Not finishing it, or finishing it late, may put other future assignments in jeopardy as well. Or the instructor for one of the courses might have a “late assignment” policy that is more forgiving—something that would allow you to turn in the work a little late without too much of a penalty.

If you find yourself in a similar predicament, the first step is to try to find a way to get everything finished, regardless of the challenges. If that simply cannot happen, the next immediate step would be to communicate with your instructors to let them know about the situation. They may be able to help you decide on a course of action, or they may have options you had not considered. Only then can you make effective choices about prioritising in a tough situation. The key here is to make certain you are aware of and understand all the ramifications to help make the best decision when the situation dictates you make a hard choice among priorities.

COMPLETING TASKS

Another important part of time management is to develop approaches that will help you complete tasks in a manner that is efficient and works for you. Most of this comes down to a little planning and being as informed about the specifics of each task as you can be.

Knowing what you need to do

As discussed in previous parts of this chapter, many learning activities have multiple components, and sometimes they must occur in a specific order. Additionally, some elements may not only be dependent on the order they are completed, but can also be dependent on how they are completed. To illustrate this we will analyse a task that is usually considered to be a simple one: *attending a class session*. In this analysis we will look at not only what must be accomplished to get the most out of the experience, but also at how each element is dependent upon others and must be done in a specific order. The graphic below shows the interrelationship between the different activities, many of which might not initially seem significant enough to warrant mention, but it becomes obvious that other elements depend upon them when they are listed this way (see **Figure 11.5**).

Element or Task Needed for Success	Task it Depends on
Pre-class Prep	
<ul style="list-style-type: none"> • Completing previous homework • Reading appropriate material for lecture • Taking notes on areas that need clarification 	<ul style="list-style-type: none"> • Understanding homework assigned from previous class • Making certain appropriate reading material is identified • Reading appropriate material for lecture
↓	
During Class	
<ul style="list-style-type: none"> • Understanding lecture • Taking notes on lecture • Asking questions for clarification • Taking part in class discussion • Receive assignments for next class 	<ul style="list-style-type: none"> • Reading appropriate material • Understanding lecture • Reading appropriate material, Understanding lecture • Reading appropriate material, Understanding lecture
↓	
Post-Class	
<ul style="list-style-type: none"> • Understanding homework assigned • Making certain appropriate reading material is identified • Ask questions for clarification • Reviewing and rewriting notes 	<ul style="list-style-type: none"> • Receive assignments for next class • Receive assignments for next class • Receive assignments for next class

Figure 11.5 Many of your learning activities are dependent on others, and some are the gateways to other steps. Image by OpenStax used under [CC-BY 4.0 licence](#).

As you can see from the graphic above, even a task as simple as “going to class” can be broken down into a number of different elements that have a good deal of dependency on other tasks. One example of this is preparing for the class lecture by reading materials ahead of time in order to make the lecture and any complex concepts easier to follow. If you did it the other way around, you might miss opportunities to ask questions or receive clarification on the information presented during the lecture.

Understanding what you need to do and when you need to do it can be applied to any task, no matter how simple or how complex. Knowing what you need to do and planning for it can go a long way towards success and preventing unpleasant surprises.

Knowing how you will get it done

After you have a clear understanding of what needs to be done to complete a task (or the component parts of a task), the next step is to create a plan for completing everything. This may not be as easy or as simple as declaring that you will finish part one, then move on to part two, and

so on. Each component may need different resources or skills to complete, and it is in your best interest to identify those ahead of time and include them as part of your plan.

A good analogy for this sort of planning is to think about it in much the same way you would as preparing for a lengthy trip. With a long journey you probably would not walk out the front door and then decide how you were going to get where you were going. There are too many other decisions to be made and tasks to be completed around each choice. If you decided you were going by plane, you would need to purchase tickets, and you would have to schedule your trip around flight times. If you decided to travel by car, you would need petrol money and possibly a map or GPS device. What about clothes? The clothes you will need are dependent on how long will you be gone and what the climate will be like. If it is far enough away that you will need to speak another language, you may need to either acquire that skill or at least come with something or someone to help you translate. What follows is a planning list that can help you think about and prepare for the tasks you are about to begin.

Knowing what resources will you need

Make a list of the resources you will need to complete a task. The first part of this list may appear to be so obvious that it should go without mention, but it is by far one of the most critical and one of the most overlooked. Have you ever planned a trip but forgotten your most comfortable pair of shoes or neglected to book a hotel room? If a missing resource is important, the entire project can come to a complete halt. Even if the missing resource is a minor component, it may still dramatically alter the end result. Learning activities are much the same in this way. List everything you need.



Figure 11.6 Allowing time to think is an important part of learning. [Image](#) by [Ivan Samkov](#) used under [CCO licence](#).

It is also important to keep in mind that resources may not be limited to physical objects such as paper or ink. Information can be a critical resource as well. In fact, one of the most often overlooked aspects in planning by new university students is just how much research, reading, and information they will need to complete assignments.

Knowing what skills will you need

Poor planning or a bad assumption in this area can be disastrous, especially if some part of the task has a steep learning curve. No matter how well you planned the other parts of the project, if there is some skill needed that you do not have and you have no idea how long it will take to learn, it can be a bad situation.

Imagine a scenario where one of your class projects is to create a poster. It is your intent to use some kind of imaging software to produce professional-looking graphics and charts for the poster, but you have never used the software in that way before. It seems easy enough, but once you begin, you find the charts keep printing out in the wrong resolution. You search online for a solution, but the only thing you can find requires you to recreate them all over again in a different setting. Unfortunately, that part of the project will now take twice as long.

It can be extremely difficult to recover from a situation like that, and it could have been prevented by taking the time to learn how to do it correctly before you began or by at least including in your schedule some time to learn and practise.

SET DEADLINES

Of course, the best way to approach time management is to set realistic deadlines that take into account which elements are dependent on which others and the order in which they should be completed. Giving yourself two days to write a 20-page work of fiction is not very realistic when even many professional authors average only six pages per day. Your intentions may be well founded, but your use of unrealistic deadlines will not be very successful. Setting appropriate deadlines and sticking to them is very important.

BE FLEXIBLE

It is ironic that the item on this list that comes just after a strong encouragement to make deadlines and stick to them is the suggestion to be flexible. The reason that “be flexible” has made this list is because even the best-laid plans and most accurate time management efforts can take an unexpected turn. The idea behind being flexible is to readjust your plans and deadlines when something does happen to throw things off. The worst thing you could do in such a situation is panic or just stop working because the next step in your careful planning has suddenly become a roadblock. The moment when you see that something in your plan may become an issue is when to begin readjusting your plan.

Adjusting a plan along the way is incredibly common. In fact, many professional project managers have learned that it seems something *always* happens or there is always some delay, and they have developed an approach to deal with the inevitable need for some flexibility. In essence, you could say that they are even planning for problems, mistakes, or delays from the very beginning, and they will often add a little extra time for each task to help ensure an issue does not derail the entire project or that the completion of the project does not miss the final due date. As you work through tasks, make certain you are always monitoring and adapting to ensure you complete them.

Being flexible is helpful but sometimes it can feel overwhelming when there are too many changes needed within a short amount of time. It can help to stand back occasionally and look at the big picture to remind yourself of your major priorities for your life while at university. You may find it helpful to draw a learning map and place it on your wall to remind yourself of what really matters to you – where you will be flexible and where you won’t.

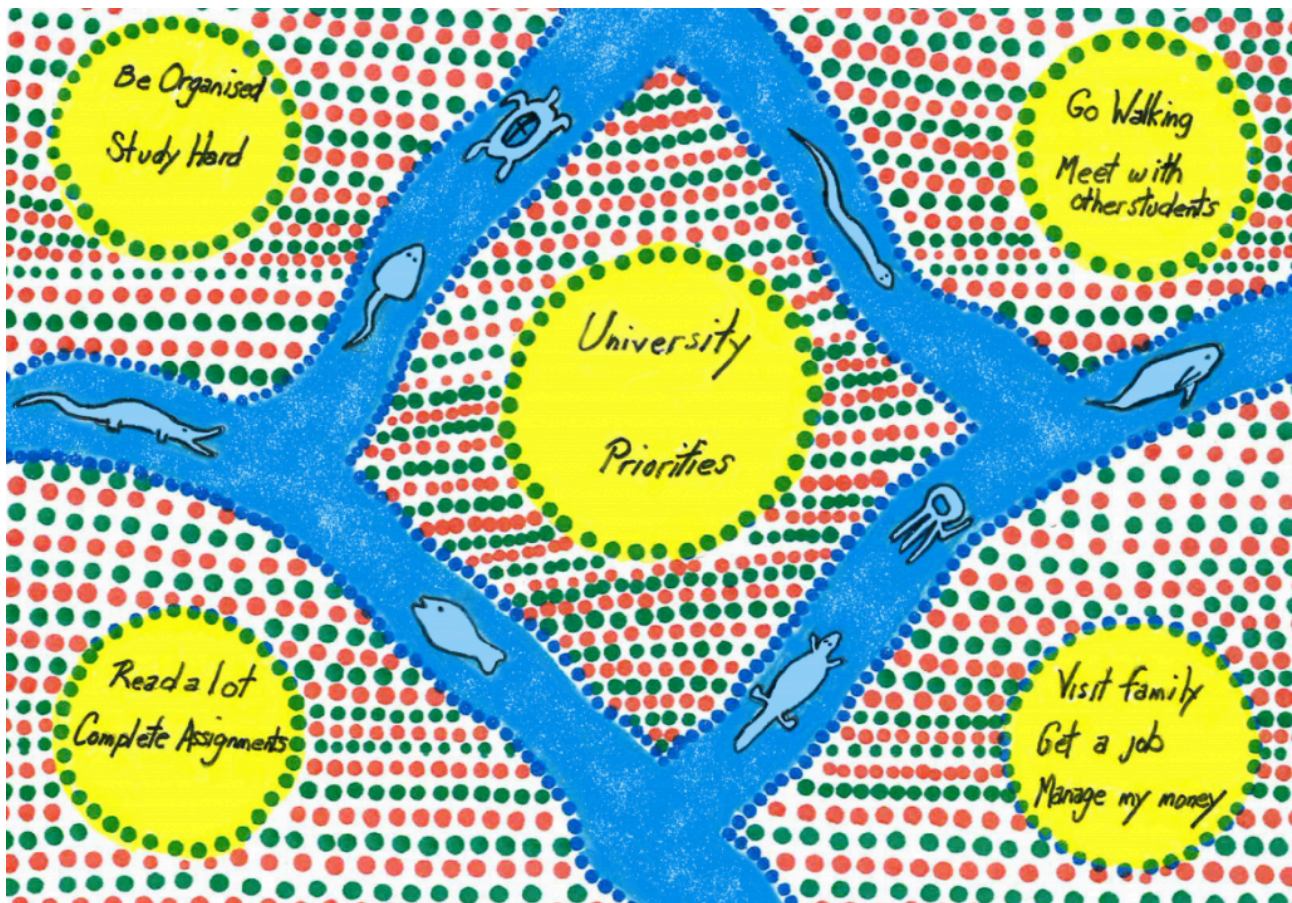


Figure 11.7 You may find it helpful to draw a learning map and place it on your wall to remind yourself of what really matters to you. Image by Sam Conway.

CONCLUSION

Goal setting and prioritisation are essential in the first year of university and beyond. Learning effective approaches to goal setting and managing priority conflicts takes time, but the steps covered in this chapter provide a strong foundation to get students started. Using a structured approach to identifying achievable goals that are personally meaningful allows you to plan for both short and long-term success. Overtime, prioritisation may also become easier as you gain experience. Keep the key points in mind to help maintain your motivation as you transition into university life.

Key points

- One of the most effective ways to keep motivated is to set goals.
- SMART Goals are a useful structured approach to plan, write down, commit to, and achieve meaningful goals.
- The key to reaching goals is to keep at it, keep yourself motivated, and overcome any obstacles along the way.
- Apply grit and adopt an attitude that looks directly to the end goal as the only acceptable outcome.
- Setting short-term goals helps you consider the necessary steps you'll need to take to achieve

your long-term goals, but it also helps to chunk a larger effort into smaller, more manageable tasks.

- Prioritisation is a key component of goal setting and time-management which involves ordering tasks, and allotting time for them based on their identified needs or value.
- If you find that you have a priority conflict, make certain you are aware of and understand all the ramifications to help make the best decision.
- Knowing what you need to do and planning for it can go a long way towards successfully completing tasks. You might need specific resources or skills.

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COMBATTING PROCRASTINATION

ARUNA DEVI



Figure 12.1 It's easy to lose time when you procrastinate. [Image](#) by [CottonBro](#) used under [CC0 licence](#).

INTRODUCTION

Let's begin with a few questions. *Would you like to be successful at university? Do you ever avoid work or delay doing difficult jobs? Would you like to stop procrastinating and prevent its negative consequences?* If you answered yes to any of these questions, then this chapter can help you. Procrastination is common at university. Students tend to procrastinate if a set task seems too challenging or stressful to tackle. Surprisingly, procrastinating students are *more* susceptible than their peers to stress, anxiety or guilt. Therefore, it can be helpful to consider both why you procrastinate and what can you do about it. In this chapter you will learn about what procrastination is, why it exists, its effects, and helpful strategies to combat it. Understanding these elements can help keep you on the path to academic success.

WHAT IS PROCRASTINATION?

Procrastination is the act of delaying tasks that need to be completed at a certain time. We all do to it to some extent. For most people, minor procrastination is not a great concern. There are however, situations where procrastination can become a serious problem and hinder academic success. For example, consistently deferring your revision to the night before the exam or leaving your assignments until the due day can threaten your success. The risks of causing anxiety, poor performance and loss of self-esteem amplify when it becomes a chronic habit affecting multiple subjects. If procrastinating is so destructive, then why do we do it?

REASONS FOR PROCRASTINATING

There are several reasons why we procrastinate, and some are surprising. Superficially, we may delay a task because we think we don't need to do it yet, because other tasks seem more important, or because we simply want to avoid the strain of a challenge. If you look a little deeper, however, you may find you have hidden physical or psychological motives driving your choices.

Lack of energy and focus

Sometimes we just do not feel up to the challenge of a certain task. It might be due to discomfort, illness, or just a lack of energy. If this is the case, it is important to identify the cause. It could be something as simple as a lack of sleep, having an unhealthy diet or tiredness after working constantly all day. If a lack of energy is continually causing you to procrastinate to the point where you are beginning to feel stressed over not getting things done, it's time to assess the situation and find the remedy. It may be as simple as improving your diet, reducing your work shifts or heading off to bed earlier instead of playing games into the early hours of the morning.



Figure 12.2 Lack of mental focus is another reason we avoid tasks. *Image by Ketut Subiyanto used under CC0 licence.*

A lack of mental focus can be another reason we avoid tasks (see **Figure 12.2**). This can be due to mental fatigue, being disorganised, or being distracted by other things. If we allow our attention to be constantly diverted by phone calls, friends, family members and social media notifications, it can hinder our progress in meeting goals on time. Lack of mental focus is something that may have far-reaching effects in your life going beyond simply avoiding tasks. If it is something that reoccurs and seems difficult to rectify, you may find it helpful to seek professional support.

Fear of failure

A fear of failure is another hidden cause of procrastination. Sometimes even without awareness, we can be afraid that we will not be able to do a task well. Failing may make us feel incompetent or embarrassed, so we secretly find ways to sabotage doing a task. We trick ourselves into thinking that if we don't do the work, then we won't get those feelings of failure of not being clever enough. Then we can rationalise that we failed because we ran out of time to complete the task, not because we were incapable.

A fear of failure may not have anything to do with the actual ability of the person suffering from it. You can in fact be quite capable of doing a task and performing well, but fear holds you back from trying. Viewing ourselves in a negative manner can directly impact our self-confidence, building more fear and more avoidance (Nicholson & Scharff, 2007). One way to break this destructive cycle is to realise that not everyone does everything perfectly the first time. Failure can be a valuable learning experience that helps us improve and develop. It provides useful information about what we need to change in order to succeed. By changing our mindset about failure, you can disarm its power as an excuse to avoid tasks.

THE EFFECTS OF PROCRASTINATING

The effects of procrastinating can be detrimental to your academic success (see **Figure 12.3**). Many are obvious and understood easily, but some are more subtle. If you can identify the effects, it can help you to recognise when procrastinating is interfering with your study. You can increase your self-awareness about your behaviour by discussing what you are noticing with friends (Nicholson & Scharff, 2007), family, or with the support services available at your university.



Figure 12.3 We can think of many creative ways to procrastinate, but the outcome is often detrimental. Image by University of the Fraser Valley used under [CC-BY 2.0 licence](https://creativecommons.org/licenses/by/2.0/).

Loss of time

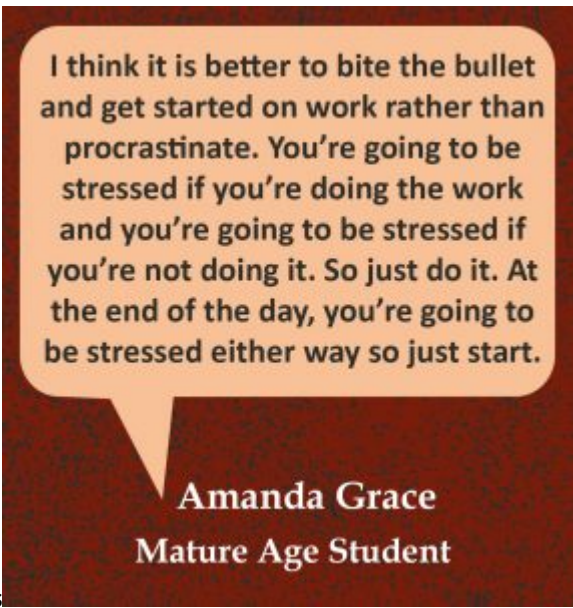
Procrastination diverts time away from important or necessary tasks, and spends it on less important activities. The end result is you have less time to do what is really important. With less time to complete assessment tasks, the accuracy of your work and quality of the content are likely to suffer. The result can be poor academic performance (Van Eerde, 2003). Time is a precious gift that cannot be refunded. Once it is spent, it is gone forever. Procrastinating risks trading this valuable commodity for things that do not ultimately support your goal of graduating from university. Students who don't address their habit of procrastinating, may regret their actions.

Loss of achieving goals

Another adverse effect of procrastination is its impact on achieving academic goals. Some long-term goals can only be reached if short-term goals are achieved first. For example, you may have to pass a theoretical subject on child safety and wellbeing before you are permitted to do any practical teacher-training in a classroom. If you fail to submit that crucial child safety assignment, then your goal of visiting a school for teacher-training, and also the bigger goal of becoming a teacher are both jeopardised. Failing to complete a task can be a sign of procrastination. The *effect* of not completing it is missing out on reaching a goal and every other goal that depends on it. Without the focus of goals and the satisfaction of achieving them, it can be easy to lose direction and motivation.

Loss of self-esteem

Often, when you procrastinate, you can become frustrated and disappointed in yourself for not getting important tasks completed. If this continues to happen, you can begin to develop an inferior opinion of yourself and might question your abilities. It can lead to low self-esteem and might even begin to feel like there is something wrong with you. This can trigger other increasingly negative emotional experiences such as anger and depression. Low self-esteem can be both the cause and the effect of procrastinating. It can produce a damaging cycle. Increasing our self-esteem can help us to interrupt the pattern and reduce our fears of failure (Langher et al., 2017), leading to more positive outcomes.

A quote by Amanda Grace, a Mature Age Student, about procrastination and stress. The quote is presented in a light orange speech bubble against a dark red background. The text inside the bubble reads: "I think it is better to bite the bullet and get started on work rather than procrastinate. You're going to be stressed if you're doing the work and you're going to be stressed if you're not doing it. So just do it. At the end of the day, you're going to be stressed either way so just start." Below the bubble, the name "Amanda Grace" and her title "Mature Age Student" are written in white text.

I think it is better to bite the bullet and get started on work rather than procrastinate. You're going to be stressed if you're doing the work and you're going to be stressed if you're not doing it. So just do it. At the end of the day, you're going to be stressed either way so just start.

Amanda Grace
Mature Age Student

Stress

Procrastination causes stress and anxiety, which may seem odd since the act of procrastination is often about avoiding a task we think is stressful! Anyone who has noticed that nagging feeling when they know there is something else they should be doing is familiar with this. On the other hand, some students see this kind of stress as a boost of mental urgency. They put off a task until they feel that surge of motivation. While this may have worked in the past, students quickly learn that procrastinating when it comes to university work almost always includes an underestimation of the tasks to be completed— sometimes with disastrous results. Stress not only affects an individual's health and wellbeing, but it can also have a negative effect on academic accomplishment. Procrastination might sometimes help us to release stress for a short period of time, but intentional avoidance can trigger even more stress, anxiety and guilt later.

STRATEGIES FOR COMBATTING PROCRASTINATION

Now that you understand a few of the major problems procrastination can produce, let's look at methods to manage it and get you on to completing the tasks, no matter how unpleasant you think they might be.

Get organised

The most effective way to combat procrastination is to use time and project management strategies such as schedules, goal setting, and other techniques to get tasks accomplished in a timely manner. In order to be more organised, you need to clarify what needs to be done, how it can be done, and when you can complete it. Contemplating these questions will assist you to manage your time appropriately by helping you to be more focused and organised. Essentially, we need to monitor our progress frequently, ensuring that we improve our approaches by figuring out which strategies work best for us.

Put aside distractions

Distractions are time-killers and are the primary way people procrastinate. It is too easy to just play a video game a little while longer, check out social media, or finish watching a movie when we are avoiding a task. Putting aside distractions is one of the primary functions of setting

priorities. It is important to exercise self-discipline, so that we can focus our attention on one thing. Additionally, we can develop good study habits by delaying short term pleasure and by paying more attention to completing those tasks that are more significant.

Reward yourself

Rewarding yourself for the completion of tasks or meeting goals is a good way to fight procrastination. An example of this would be rewarding yourself with watching a movie you would enjoy *after* you have finished the things you need to do, rather than using the movie to keep yourself from getting things done. Furthermore, completing a task successfully and getting the feeling of satisfaction and accomplishment can be considered a reward in itself. Since you have invested a lot of effort for a good purpose and you have sacrificed your comfort, you can reward yourself. This can not only motivate you, but also enhance your self-efficacy beliefs in undertaking other tasks confidently in the future.



Figure 12.4 A strong motivational tool is to hold ourselves accountable by telling someone else we are going to do something and when we are going to do it. [Image by Armin Rimoldi](#) used under [CC0 licence](#).

Be accountable—tell someone else

A strong motivational tool is to hold ourselves accountable by telling someone else we are going to do something and when we are going to do it. This may not seem like it would be very effective, but on a psychological level we feel more compelled to do something if we tell someone else. It may be related to our need for approval from others, or it might just serve to set a level of commitment. Either way, it can help us stay on task and avoid procrastination—especially if we take our accountability to another person seriously enough to warrant contacting that person and apologising for not doing what we said we were going to do.

CONCLUSION

Procrastination is a common experience among university students. The results are often detrimental to academic achievement, produce stress and raise anxiety. This chapter examined the nature of procrastination, why we do it, how it affects us, and how to fight it. Be on the lookout for signs of procrastination and combat it actively when you see it. If you do, you can reap the benefits of having less stress, higher self-esteem and greater achievement during your academic journey.

Key points

- Procrastination is the act of delaying tasks that need to be completed by a certain time.
- Reasons for procrastinating include a lack of energy and focus, and a fear of failure.
- The effects of procrastination include a loss of time, goals, self-esteem and/or increase stress.

- Develop good study habits by being organised, putting aside distractions, rewarding yourself and remaining accountable.

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TIME MANAGEMENT

LINDA CLARK



Figure 13.1 Students manage their own study time. [Image](#) by [Andrey Grushnikov](#) used under [CC0 licence](#).

INTRODUCTION

Commonly, students in higher education face challenges from poor time management. While it may not be possible to prevent life's problems while you are at university, you can do a great deal to prevent the challenges that they can cause. This can be accomplished through thoughtful prioritisation and time management efforts. This chapter provides a close look at the nature of time management and how to identify your time management style. You will learn how to conduct a time audit of your life and create a semester, weekly and daily plan. Following this, an examination of how to break up tasks into manageable time frames and tips from three proven time management strategies will help keep you on track to graduate from university on time.

TIME MANAGEMENT AT UNIVERSITY

You may find that time management at university is different from anything you have experienced previously. Even in the workplace, activities and time spent on tasks are monitored by the company and its management. At university, time management is left up to you. While it is true that there are assignment due dates and organised classroom activities, learning at the university level requires more than just the simple completion of work. It involves decision-making and the ability to evaluate information. This is best accomplished when you are an active partner in your own learning activities.

You can expect to spend much more time on learning activities outside the classroom than you will in the classroom. Most courses have a workload of 165 hours each semester. This is a workload of 10-12 hours each week needed to attend or listen to lectures and tutorials, prepare for

assessments, and to read study material. Some weeks may be more intense, depending on the time of the semester and the courses you are taking. Not only will what you do be larger in scale, but the depth of understanding and knowledge you will put into it will be significantly more than you may have encountered previously. This is because there are greater expectations required of university graduates in the workplace. Nearly any profession that requires a university degree has with it a level of responsibility that demands higher-level thinking and therefore higher learning.

IDENTIFYING YOUR TIME MANAGEMENT STYLE

Managing time and prioritising tasks are not only valuable skills for pursuing an education, but they can become abilities that follow you through the rest of your life, especially if your career takes you into a leadership role (see **Figure 13.2**).



Figure 13.2 An online calendar is a very useful tool for keeping track of classes, meetings, and other events. Most learning management systems contain these features, or you can use a calendar application. Image by OpenStax used under [CC-BY 4.0 licence](https://creativecommons.org/licenses/by/4.0/).

Table 13.1 is an exercise that is intended to help you recognise some things about your own time management style, and identify any areas where you might be able to improve. Tick the box that best represents your position on each statement.

TABLE 13.1 TIME MANAGEMENT

Statement	Always	Usually	Sometimes	Rarely	Never
I like to be given strict deadlines for each task. It helps me stay organised and on track.					
I would rather be 15 minutes early than one minute late.					
I like to improvise instead of planning everything out ahead of time.					
I prefer to be able to manage when and how I do each task.					
I have a difficult time estimating how long a task will take.					
I have more motivation when there is an upcoming deadline. It helps me focus.					
I have difficulty keeping priorities in the most beneficial order.					

When you have finished, consider what your answers mean in regard to potential strengths and/or challenges for you when it comes to time management in university. If you are a person who likes strict deadlines, what would you do if you took a course that only had one large paper due at the end? Would you set yourself a series of mini deadlines that made you more comfortable and that kept things moving along for you? Or, if you have difficulty prioritising tasks, would it help you to make a list of the tasks to do and order them, so you know which ones must be finished first?

TIME AUDIT

The simplest way to manage your time is to plan accurately for how much time it will take to do each task, and then set aside that amount of time. How you divide the time is up to you. If it is going to take you five hours to study for a final exam, you can plan to spread it over five days, with an hour each night, or you can plan on two hours one night and three hours the next.

This approach however relies on being able to estimate time accurately. Many people are not truly aware of how they actually spend their time. To get organised and plan for the semester ahead, you will need to consider study and non-study commitments. Conduct an audit on how much time you spend on aspects of your daily life. Include studying, working, sleeping, eating, caring for others, socialising, household chores and exercising. This will allow you to see where your time is going and where you could achieve some better balance for your life, work and study.

In this activity, write down all the things you think you will do tomorrow, and estimate the time you will spend doing each (see **Table 13.2**). Then track each thing you have written down to see how accurate your estimates were. After you have completed this activity for a single day, you may consider completing another time audit for an entire week so that you are certain to include all of your activities.

TABLE 13.2 SAMPLE TIME ESTIMATE TABLE

Daily activity	Estimate time	Actual time
Practice quiz	5 minutes	15 minutes
Lab conclusions	20 minutes	35 minutes
Food shopping	45 minutes	30 minutes
Drive to work	20 minutes	20 minutes
Work	4 hours	4 hours
Physical therapy	1 hour	50 minutes

PLANNING YOUR SEMESTER

Now that you have audited your time and you know how much time is required in all areas of your life you can now make a plan. It is important to view your time in three different ways – semester, weekly and daily.

Semester view

- Make a plan of the whole semester. A yearly wall calendar is useful for this.
- Add assignment due dates and exam blocks
- Add class or lab attendance requirements
- Include other significant commitments, for example, work or family commitments identified in your time audit.

Weekly view

- Consider the tasks you need to complete each week to meet the expectations of your course such as weekly readings or tutorial preparation.
- Allocate time for exam preparation, tutorial preparation and time to work on upcoming assignments.

Daily view

- Write daily 'to do' lists
- Use time management apps on your phone to set reminders
- Allow for some flexibility

BREAKING TASKS DOWN

Of all the parts of time management, accurately predicting how long a task will take is usually the most difficult. What makes it challenging to estimate accurately time spent on-task is that you must also account for things like interruptions or unforeseen problems that cause delays. When it comes to academic activities, many tasks can be dependent upon the completion of other things first, or the time a task takes can vary from one instance to another. For example, if a lecturer assigned you three chapters of reading, you would not know how long each chapter might take to read until you looked at them. The first chapter might be 30 pages long while the second is 45. The third chapter could be only 20 pages but made up mostly of charts and graphs for you to compare. By page count, it might seem that the third chapter would take the least amount of time, but actually studying charts and graphs to gather information can take longer than regular reading.

The concept behind the next strategy discussed is to break tasks into smaller, more manageable units that do not require as much time to complete. As an illustration of how this might work, imagine that you are assigned a two-page essay that is to include references. You estimate that to complete the essay would take you between four and five hours. You look at your calendar over the next week and see that there simply are no open five-hour blocks. While looking at your calendar, you do see that you can squeeze in an hour every night. Instead of trying to write the entire paper in one sitting, you break it up into much smaller components as shown in the table below (see **Table 13.3**).

TABLE 13.3 BREAKING DOWN PROJECTS INTO EVEN SMALL CHUNKS.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8:00 a.m. - 10:00 a.m.		Work		Work			Work
10:00 a.m. - 12:00 p.m.	Algebra	Work	Algebra	Work	Algebra	10 a.m. - 11 a.m. only if needed	Work
12:00 p.m. - 2:00 p.m.	Lunch/study	1pm English comp	Lunch/study	1pm English comp	Lunch/study	Family picnic	
2:00 p.m. - 4:00 p.m.	History	English comp	History	English comp	History	Family picnic	
4:00 p.m. - 6:00 p.m.	Study for algebra quiz	Grocery	Study for history exam	Study for history exam	Research 5 p.m. - 6 p.m. Rewrite and polish final draft	Family picnic	Laundry
6:00 p.m. - 7:00 p.m.	Write outline: look for references	Research references to support outline; look for good quotes	Research presentation project	Write second page and closing draft	Create presentation	Meet with Darcy	Prepare university stuff for next week
7:00 p.m. - 8:00 p.m.	Free time	Free time	Write paper introduction and first page draft	Research presentation project	Create presentation		Free time

You could use a variation of the Pomodoro Technique discussed in the next section and write for three 20-minute segments each day at different times. The key is to look for ways to break down the entire task into smaller steps and spread them out to fit your schedule.

THREE STRATEGIES FOR TIME MANAGEMENT

There are three helpful time management strategies that have been used by students successfully for many year – Daily Top Three, Pomodoro Technique and Eat the Frog. Try them out and see how they work for you.

Daily Top Three

The idea behind the *daily top three* approach is that you determine which three things are the most important to finish that day, and these become the tasks that you complete. It is a very simple technique that is effective because each day you are finishing tasks and removing them from your list. Even if you took one day off a week and completed no tasks on that particular day, a *daily top three* strategy would have you finishing 18 tasks in the course of a single week. That is a good number of things crossed off your list.

Pomodoro Technique

The Pomodoro Technique allows you to tackle one task at a time with high intensity before



Figure 13.3 The Pomodoro Technique is named after a type of kitchen timer, but you can use any clock or countdown timer. Image by Marco Verch used under [CC BY 2.0 licence](#).

taking a short-timed break, and then repeating this process (see **Figure 13.4**). The Pomodoro Technique recommends 25 minutes of work and then a five-minute break, and after two hours of this, a longer break of 15-30 minutes (Cirillo, n.d). Be flexible in your approach, for example you don't have to stop after 25 minutes if you are working well, or you may restart your 25 minutes if you get distracted. To make the most of this technique, plan your tasks ahead of time and be specific about what you want to achieve during each time block.

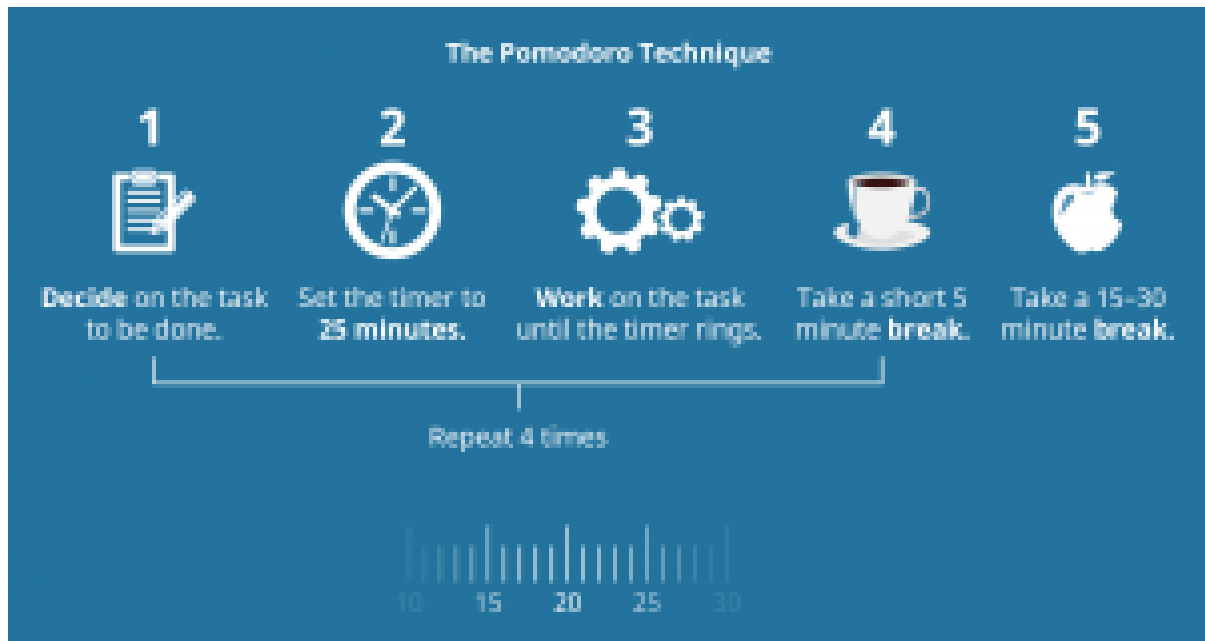


Figure 13.4 The Pomodoro Technique contains five defined steps. Image by OpenStax used under [CC-BY 4.0 licence](#).

Eat the Frog

Of our three quick strategies, *eat the frog* probably has the strangest name and may not sound the most inviting. The name comes from a famous quote, attributed to Mark Twain: “Eat a live frog first thing in the morning and nothing worse will happen to you the rest of the day.” How this applies to time and task management is based on the concept that if a person takes care of the biggest or most unpleasant task first, everything else will be easier after that.

We greatly underestimate how much worry can impact our performance. If you are continually distracted by anxiety over a task you are dreading, it can affect the task you are working on at the time. Not only will you have a sense of accomplishment and relief when the task you are concerned with is finished and out of the way, but other tasks will seem lighter and not as difficult.

CONCLUSION

We all lead busy lives and managing your time effectively while you are studying at university can mean the difference between success and failure. By managing your time and using some positive strategies, you can give yourself the best possible chance of successful study outcomes.

Key points

- Time management at university level is up to you.

- Expect to spend more time on learning outside of the classroom than you will inside the classroom.
- Identify your time management style to help you create deadlines.
- Consider study and non-study commitments when auditing your time to help you to see where your time goes.
- Plan your semester first, add weekly tasks, and then make a 'to do' list for daily tasks.
- Break large tasks into small blocks of time which will fit into your schedule.
- Use the Daily Top Three to write down three tasks that are important to finish that day.
- Use the Pomodoro Technique to work on one task for a 25-minute period. then take a five-minute break then repeat until you have been working for two hours.
- Use Eat the Frog to take care of the biggest task first so that everything else seems easier after that.

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STUDY SPACE

WENDY HARGREAVES



Figure 14.1 Where you do your study can affect your ability to work well. Image by [Free Photos](#) used under [CC0 licence](#).

INTRODUCTION

The environment where you do your study can influence your ability to work well. This chapter will prompt you to think about how you can create a space to best encourage productive results when you work. It begins with explaining why your study space is important. It then assists you to choose a suitable space, discusses how to set it up and suggests some bonus items that could add extra flair or functionality. Electronic devices are also considered in your reorganisation. The chapter then explores how to minimise distractions, which is followed by a discussion of how to identify some alternative locations for study that you could use. The section finishes by considering the optimal time of day for you to work in your study space. Altogether, this chapter can equip you with ideas and plans to get the best out of your study space, and ultimately help you on your journey to academic success.

WHY YOUR STUDY SPACE MATTERS

The space where you study plays a large part in ensuring you work effectively. Your environment can not only aid your efficiency but also impact whether you complete work at all. One example of this might be typing on a laptop. While it might seem more comfortable to lie back on a couch to type a long paper, sitting up at a table actually increases your typing speed and reduces the

number of mistakes. Even deciding whether to use a mouse and mouse pad or not can impact how quickly you work.

There are many other factors about your study space that can affect your productivity. For example, is there enough room? Is there a place to keep reference materials within arm's reach while working? Is there anything you can do to make working easier or more efficient? For example, could you buy an inexpensive second monitor so you can have more than one document displayed at a time? Your workspace is another important resource you can use for academic success. The key is to discover what works for you, and that begins with finding yourself a suitable space for study.

CHOOSING A SPACE

A good study space has a few basic requirements. It needs a desk or table, a chair, access to power, an internet signal if required, and a good light source such as a desk lamp or well positioned ceiling lights. Your space should be cool or warm enough for your comfort as you study. Try to make it a welcoming place you want to be in—not an uncomfortable environment that makes you want to just do the minimum you must complete and leave.

If possible, find an area you can use exclusively for your study sessions and can leave set up all the time. Spaces with multiple purposes can have challenges. For example, Martina thought setting up her study station on the dining room table was a good idea at first. The view was calming, and the table was big enough to spread out and could even hold all her materials to study architectural drawing. Unfortunately, soon after setting up, the table was needed for a family dinner party. She had to find a cubbyhole to hide away her supplies with some needing to go into a cupboard in the next room. Now she was spread out over multiple study spaces. She also found that while she couldn't see the television from the dining room, she could hear it. It was very distracting. Martina ultimately decided to forgo her view and create a smaller station in an unused bedroom so she could leave her supplies set up and have a quieter area. Like Martina, you may have to try out numerous spaces to find what works best for you.

Whatever your space limitations, carve out a place that you can dedicate to your reading, writing, notetaking, and reviewing. If you really don't have any options at home for an exclusive study space, the next best thing could be to create a study box. A study box is a dedicated storage box that holds all the study supplies you need to access while working at a desk, such as a pen, note paper, a flash drive and a folder of notes. This box isn't meant to hold every single item related to university. If it did, you may waste a lot of time sorting through the box trying to find what you need. Instead the box holds only what you need to do your work right now. It means you can open the box quickly and be set up and ready to work within a few minutes. While a permanent study

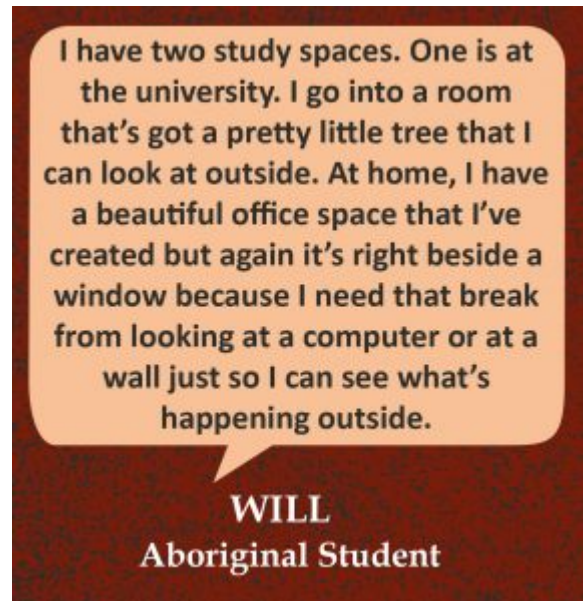


Figure 14.2 Try to make your study space a welcoming place you want to be in.

Image by [Prateek Katyal](#) used under [CCO licence](#).

space is always a better option, a study box can be the next best thing to get you working fast in a shared space, instead of wasting time looking for a pen.

SETTING UP YOUR STUDY SPACE

Now that you've chosen your space, it's time to get it ready for use. Your set up doesn't need to be elaborate or expensive. Aside from your desk, the chair, power and good lighting, you can begin to add stationery items to help you work, such as writing paper, notebooks, pens, pencils, markers, an eraser and highlighters. You will also need to add materials that are specific to the course you are studying, such as textbooks, calculators, drawing tools, or music manuscript.

When positioning items on your desk, place the items that you use most frequently closest to you, and the items you use less frequently further away. Remove excess clutter and rubbish to make the most of the space you have. Having a neat and tidy desk can help you to feel calm and in control when the work starts piling up.



Figure 14.3 Which desk is a more inviting place to start your study? Image by Ali West used under [CC-BY 2.0 licence](#).

You may not always be in the mood to sit down to study. Interestingly, setting up a dedicated spot to work with all you need ready to use may help trigger motivation to study. Setting the right atmosphere in your study space can generate a study-mood in your mind. But don't wait for the study fairy to appear before you start working. Sit down at your desk, follow your study plan, start work, and she'll show up.

BONUS ITEMS

If you want to make your study space even more productive and enjoyable, there are some bonus items you may consider adding. You could, for example, add a wall calendar, a card with an inspiring quote, or even a diffuser to add a pleasant aroma to the room. Here are some more ideas of what students like to add to their study space. Don't add all of the items or your space may end up cluttered. Just pick some that you value most:

- a notice board
- a whiteboard
- sticky notes
- a favourite pen and a pen holder
- a decorative mouse pad
- a file holder for frequently used documents
- a spare pair of reading glasses
- a printer and paper
- a dictionary and thesaurus
- headphones
- a stress ball
- a desk lamp
- a book stand
- decorations (e.g., a photograph, a painting, a plant)
- a sit-stand adjustable desktop
- a clock
- kitchen timer
- rubbish bin
- filing cabinet or filing box
- bookshelf



Figure 14.4 Considering adding bonus items to make your study space even more productive and enjoyable. [Image by Jess Bailey Designs](#) used under [CCO licence](#).

There are many different ways you can make your study space work for you. You may enjoy searching the internet for ideas of how others have set up simple areas or more elaborate arrangements. Look at the images below of one table presented six different ways to prompt your thinking.



Figure 14.5 There are many different ways you can make your study space work for you. Image by Wendy Hargreaves and Tristan Hargreaves used under [CC-BY-NC licence](#).

ORGANISING YOUR ELECTRONIC DESKTOP

Don't forget to invest some time to organise your electronic space if you are using a computer for your studying. A cluttered electronic desktop can be just as distracting and time consuming as a cluttered wooden desktop. Chances are you have already been using your computer prior to starting university. It is probably already loaded with applications and games and miscellaneous files stored saved on the desktop. Now is the time to sort those random files, clear some digital space and set up new storage folders for your new subjects with a simple and easily accessible filing system.

While you are there, take some time to save your regularly accessed university sites as links in your browser. Place on your dock or task bar the applications you want to access quickly. Most importantly, give some thought to how you intend to back-up your electronic work periodically so there are no last-minute disasters of lost assignments if your computer unexpectedly crashes.

AVOIDING DISTRACTIONS

So far we have spent time considering what to add into your study space. It is also worth considering what to take out. Remove anything that is in danger of distracting you from your work. Don't make it easy for yourself to get off-task. When you are faced with a challenging equation, a difficult article to understand or an intimidating blank piece of paper at the start of writing an essay, your brain is hunting to do something that requires less effort. We are programmed to look for the easier option, and "just" checking your emails or what's on television is compelling. By making it harder to access distractions, you decrease their power to tempt you. For example, what happens when it is easier to keep working through a tricky equation than it is to go down stairs to the kitchen, pull up a chair, stand on it, and reach up onto top of a cupboard to where you put your mobile, wait for it to turn on, and then text your friend? Suddenly "just" finishing off those sums seems less effort than "just" sending a text.

There will always be distractions. Video games, television, movies, surfing the internet, music, friends and even housecleaning can distract us from doing something else we need to do, like study for an exam. That may seem extreme, but sometimes vacuuming is the preferred activity to buckling down and working through calculus problems! Mobile phones, tablets, and portable computers that bring a world of possibilities to us anywhere have brought *distraction* to an entirely new level.

When you study, your biggest challenge may be to block out all the competing noise. Letting go of that connection to our friends and the larger world, even for a short amount of time, can be difficult. Perhaps the least stressful way to allow yourself a distraction-free environment is to make the study session a definite amount of time. Make it long enough to accomplish a significant amount of studying but short enough to hold your attention.

You can increase that attention time with practice and focus. Pretend it is a professional appointment or meeting during which you cannot check e-mail or texts or otherwise engage with your portable devices. We have all become attached to the ability to check in on social media or with family and friends via text, chat, and calls. If you're working on your computer, switch off those pop-up notifications that draw you away from your study task.

If you set a specific amount of time to study without interruptions, you can convince your wandering mind that you will soon be able to return to your link to the outside world. Start small and set an alarm on a kitchen timer—a 30-minute period to review notes, then a brief break, then another 45-minute study session to quiz yourself on the material, and so on. By using a kitchen timer instead of your phone, you remove the temptation to access your phone.

When you prepare for your optimal study session, remember to do these things:

- Put your phone in another room or at least some place where you will not see or hear it vibrate or ring. Just flipping it over is not enough.
- Turn off the television or music
- Turn off notifications on your computer



Figure 14.6 Video games are a common distraction, but we need to be aware that even tedious activities like cleaning can be a distraction from studying. [Image by Jeshoots](#) used under [CCO licence](#).

- Unless you are deliberately working with a study group, study somewhere alone if possible or at least away from others enough to not hear them talking.

If you live with lots of other people or don't have access to much privacy, see if you can negotiate some space alone to study. Ask others to leave one part of the house or an area in one room as a quiet zone during certain hours. Ask politely for a specific block of time. Most people will respect your educational goals and be willing to accommodate you. You can even make a humorous "Do not disturb" sign to remind people you are not available. If you're trying to work out quiet zones with small children in the house, the bathtub with a pillow can make a fine study oasis.

Many people say they work better with the television or the radio on, but the truth is that an environment with too many interruptions is rarely helpful when focus is required. Before deciding that the television or talkative roommates do not bother you when you work, take an honest accounting of the work you produce with interruptions compared to work you do without. If you find that your work is better without distractions, it is a good idea to create an environment that reduces interruptions. This may mean you have to go to a private room or use headphones, when you work. Regardless, the importance of a distraction-free environment cannot be emphasised enough.

ALTERNATIVE STUDY SPACES



Figure 14.7 The park or the library could be an alternative study space for you. *Image by Armin Rimoldi used under [CC0 licence](#).*

Having a dedicated, regular space to study at home is the ideal resource for students. You can however supplement it with a short list of alternative spaces that also work well for you and create a refreshing variation in your routine. These might include your university library, community libraries, a coffee shop or local parks. When you are experimenting with locations outside of your home for study, be attuned to what genuinely works. When you sit in the coffee shop with your books, consider if you are really staying focused and motivated or are you finding your concentration drifting away more frequently than normal. Do you like studying

there because it helps you move forward with your assignment or because you run into friends and enjoy avoiding your work? Is there a quieter coffee shop where you can work where the tables are more spread out and your friends don't bump into you? Be conscious of the tradeoffs when picking a secondary study space. If it takes you time to pack a bag of resources, travel to a place and order a coffee, then consider what is the ratio of productive output against time lost? Be honest in your assessment in order to make secondary study spaces work for you, not against you.

Life circumstances can also create blocks of potential study time in places you don't normally associate with study, such as waiting beside a soccer field for your child to finish training, sitting in a dental surgery waiting room, or riding the train. Consider, what sort of tasks can you complete effectively in these alternative study spaces? If it is a regular event, can you have a prepacked bag or box ready with what you need? You could create a folder (physical or electronic) that stores your reading matter, ready to be accessed when you find yourself with unplanned time. Look to harness opportunities. For example, if you have a daily a 30-minute train trip, can this become your regular reading time or an opportunity to re-watch your lectures online?

STUDYING AT THE RIGHT TIME

Most people are subject to their own rhythms, cycles, and preferences throughout their day. Some are alert and energetic in the mornings, while others are considered “night owls” and prefer to work after everyone else has gone to sleep. It can be important to be aware of your own cycles and to use them to your advantage. Rarely does anyone do their best work when they are exhausted, either physically or mentally. Just as it can be difficult to work when you are physically ill, it can also be a hindrance to try to learn or do mental work when you are tired or emotionally upset.

Your work environment includes your own state of mind and physical wellbeing. Both have a significant influence on your learning and productivity. Because of this, it is not only important to be aware of your own condition and work preferences, but to actually try to create conditions that help you in these areas. One approach is to set aside a specific time to do certain kinds of work. You might find that you concentrate better after you have eaten a meal. If that is the case, make it a habit of doing homework every night after dinner. Some people find that they are more creative during a certain time of the day or that they are more comfortable writing with subtle lighting. It is worth taking the time to find the conditions that work best for you so that you can take advantage of them.

CONCLUSION

A well-considered study space has a surprising amount of power to impact your academic success. As you settle into your new role as a student and set up your study space, stay mindful of what honestly works for you and what doesn't. The decisions you make about where you work and when you work can really make a difference to your productivity. Spending a little time creating the best environment is time well spent.

Key points

- Where you study affects how well you study.
- Choose a space with a desk, chair, power, internet signal, light and a comfortable temperature.
- If possible, keep your space permanently set up just for your study.
- Consider using a study box if you can't maintain a permanent space of your own.
- Add essential stationery items and study materials to your space.
- A well organised desk can motivate you to study.
- Adding bonus items can make your space more productive and enjoyable.
- Organise your electronic desktop as well as your physical desk.
- Remove distractions from your study space.
- Tell people that you are unavailable during a set study time.
- Find some alternative study spaces to supplement your home study space.
- Find the time of day when you concentrate best to work in your study space.

READING

LINDA CLARK



Figure 15.1 Each of us reads and records information in our own way. Image by [Zen Chung](#) used under [CC0 licence](#).

INTRODUCTION

Reading and consuming information are increasingly important today because of the amount of information we encounter. Not only do we need to read critically, but we also need to read with an eye to distinguish fact from opinion and identify credible sources. In academic settings, we deliberately work to become stronger readers. Take advantage of all the study aids you have at hand, including human, electronic, and physical resources, to increase your performance. This chapter will provide you with an understanding about the different ways of reading for university study, some reading strategies for you to try and information about different types of sources.

WAYS OF READING

There are generally five ways of reading which include: 1) pre-reading, 2) skimming, 3) scanning, 4) detailed reading, and 5) critical reading.

Pre-reading

During the pre-reading stage, you can easily pick up on information from the cover and the front matter that may help you understand the material you're reading more fully or place it in context with other important works in the discipline. Look for an author's biography or note from the author. To identify the topics covered and how the information fits into the subject, look for headings in larger and bold font, summary lists, and important quotations throughout the textbook chapter. Use these features as you read to help you determine what are the most important ideas.

Sometimes you can find a list of other books the author has written near the front of a book. Do you recognise any of the other titles? Can you do an internet search for the name of the book or author? Beyond a standard internet search, try the library's database. These are more relevant to academic disciplines and contain resources you typically will not find in a standard search engine. If you are unfamiliar with how to use the library database, ask a librarian.

Skimming

Skimming is not just glancing over the words on a page or screen. Effective skimming allows you to take in the major points of a passage to determine the usefulness of the source. If the source is useful, you will then need to engage in a deeper level of active reading, but skimming is the first step—not an alternative to deep reading. Skimming is useful as it gives you a brief overview before reading in more detail and assists with comprehension. Instead of reading every word, skimming involves spending a brief amount of time per page, quickly looking at:

- the contents
- the headings and sub-headings
- the abstract or introductory paragraph
- the conclusion
- any diagrams or graphics you think are important

End your skimming session with writing a few notes or terms to look up, questions you still have, and an overall summary. Recognise that you likely will return to that book or article for a more thorough reading if the material is useful.

Scanning

Scanning involves reading a text with a specific purpose in mind. Rather than reading every

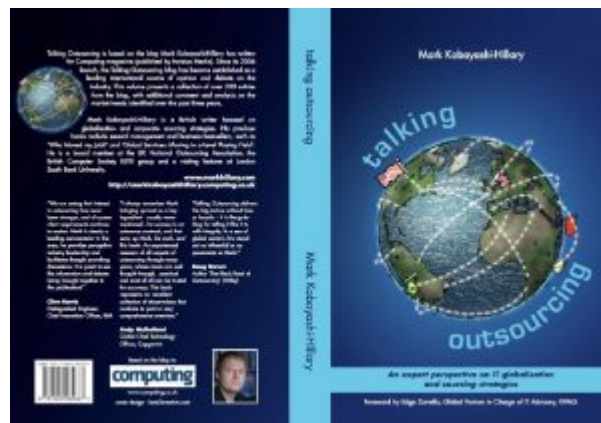
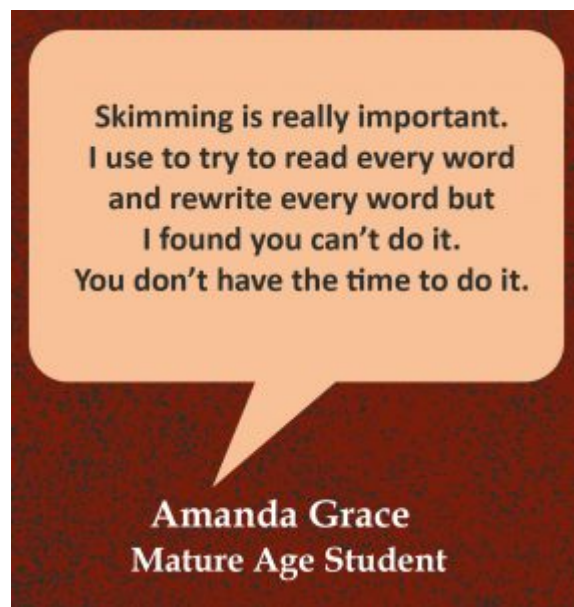


Figure 15.2 Learning about the book you're reading can provide good context and information. Look for an author's biography and forward on the back cover or in the first few pages. Image by Mark Hillary used under a [CC-BY 2.0 licence](https://creativecommons.org/licenses/by/2.0/).



section, scanning involves quickly looking for relevant information only. Use this technique when you are reading to find specific material or data related to an assignment topic, or to find answers for questions (e.g. for tutorial activities).

Detailed reading

Detailed reading is when you focus on the written material, really looking to gather specific information or evidence on a topic. This type of reading will provide you with a more in-depth understanding of the specific information, facts, positions and views on a topic. In detailed reading you may be looking for new information or a different perspective. Is this writer claiming a radical new definition for the topic or an entirely opposite way to consider the subject matter, connecting it to other topics or disciplines in ways you have never considered? Also, try to consider all the possible perspectives of a subject as well as the potential for misunderstanding due to personal biases and the availability of false information about the topic.

Critical reading

Critical reading requires you to actively engage with the written material by questioning and evaluating the quality and relevance of the information for your task. This may include analysing the author's strategies, methods and reasoning. Critical reading is a vital skill to develop to help you become a better analytical thinker and writer.

The following are some questions to consider when reading critically.

- Are there any contradictions?
- Is an argument developed?
- Is it logical?
- Is the text biased?
- Is there supporting evidence and how valid is it?
- Are there any 'hidden' assumptions?
- Is there an alternative conclusion given?
- What alternative perspectives are available in the wider literature?

READING PRIMARY AND SECONDARY SOURCES

Primary sources are original documents we study, which include letters, first editions of books, legal documents, and a variety of other texts. When scholars look at these documents to understand a period in history or a scientific challenge and then write about their findings, the scholar's article is considered a secondary source. Primary sources may contain dated material we now know is inaccurate. They may contain personal beliefs and biases that the original writer didn't intend to be published openly, and it may even present fanciful or creative ideas that do not support current knowledge. Readers can still gain great insight from primary sources, but readers need to understand the context from which the writer of the primary source wrote the text.

Likewise, secondary sources are inevitably another person's perspective on the primary source, so a reader of secondary sources must also be aware of potential biases that may persuade an incautious reader to interpret the primary source in a particular manner. A literature review is an example of a secondary source. When possible, you should attempt to read a primary source in conjunction with the secondary source.

RECURSIVE READING STRATEGIES

One fact about reading for university courses is that you may end up doing more re-reading. It may be the same content, but you may need to read the passage more than once to detect the emphasis the writer places on one aspect of the topic or how frequently the writer dismisses a significant counterargument. This re-reading is called recursive reading.

When reading at the university level, you are trying to make sense of the text for a specific purpose. You should consider what the writer of the piece may *not* be including and why. This is why reading for comprehension is recursive. Specifically, try to see reading as a process that is far more circular than linear. For example, you'll need to go back and re-read passages to determine meaning and make connections between the reading and your discipline or context. This recursive reading strategy builds on the 'Ways of Reading' that we explored previously. Let's break the recursive reading strategy into manageable chunks, because you are actually doing quite a lot when you read.

Accessing prior knowledge

When you read, you naturally think of anything else you may know about the topic, but when you read deliberately and actively, you make yourself more aware of accessing this prior knowledge. Have you ever watched a documentary about this topic? Did you study some aspect of it in another class? All of this thinking will help you make sense of what you are reading.

Asking questions

Humans are naturally curious beings. As you read actively, you should be asking questions about the topic you are reading. Don't just say the questions in your mind; write them down. You may ask: Why is this topic important? What is the relevance of this topic currently? Was this topic important a long time ago but irrelevant now? Why did my lecturer assign this reading?

Inferring and implying

When you read, you can take the information on the page and *infer*, or conclude responses to related challenges from evidence or from your own reasoning. A student will likely be able to infer what material the lecturer will include on an exam by taking good notes throughout the classes leading up to the test. Writers may *imply* information without directly stating a fact. You have to read carefully to find implications because they are indirect, but watching for them will help you comprehend the whole meaning of a passage.

Learning vocabulary

Vocabulary specific to certain disciplines helps practitioners in that field engage and communicate with each other. As a potential professional in the field you're studying, you need to know the lingo. You may already have a system in place to learn discipline-specific vocabulary, so use what



Figure 15.3 The six elements of recursive reading should be considered as a circular, not linear, process. Image by OpenStax used under [CC-BY 4.0 licence](#).

you know works for you. Two strong strategies are to look up words in a dictionary (online or hard copy) to ensure you have the exact meaning for your discipline and to keep a dedicated list (glossary) of words you see often in your reading. You can list the words with a short definition so you have a quick reference guide to help you learn the vocabulary.

Evaluating

When you evaluate a text, you are seeking to understand the presented topic in detail in order to engage with it. Depending on how long the text is, you will perform a number of steps and repeat many of these steps to evaluate all the elements the author presents. When you critically evaluate a text, you need to do the following:

- Scan the title and all headings
- Read through the entire passage fully
- Question what main point the author is making
- Decide who the audience is
- Identify what evidence/support the author uses, and is the evidence valid?
- Consider if the author presents a balanced perspective on the main point
- Recognise if the author introduced any biases, contradictions or assumptions in the text

ALLOW TIME FOR READING

You should determine the reading requirements and expectations for every class early in the semester. You also need to understand why you are reading the particular text you are assigned. Do you need to read closely for minute details that determine cause and effect? Or is your lecturer asking you to skim several sources so you become more familiar with the topic? Knowing this reasoning will help you decide your timing, what notes to take, and how best to undertake the reading assignment. Depending on your schedule, you may need to read both primary sources and secondary sources. You may also need to read current journalistic texts to stay current in local or global affairs. To avoid feeling overwhelmed, schedule reading time when creating your weekly study timetable to allow you to time read and review. You can make time for reading in a number of ways that include scheduling active reading sessions and practising recursive reading strategies.



Figure 15.4 If you plan to make time for reading while you commute, remember that unexpected events like delays and cancellations could impact your concentration. Image by Nick Walker used under a CC0 licence.

CONCLUSION

Reading is one of the most important skills you need for studying at university. The strategies that have been explored in this chapter will help you to get the most out of your reading time.

Key points

- Pre-reading helps you understand the context of what you are reading.
- Skimming helps you to determine the usefulness of the source.
- Scan to find specific information related to your assignment topic.
- Detailed reading helps you to gather evidence on your topic.
- Use critical reading to question and evaluate the relevance of the information in the source
- Identify if you are reading a primary or secondary source, and watch for biases.
- Recursive reading strategies involve *accessing prior knowledge* of the topic; *asking yourself questions* about importance; *inferring* meaning; *learning new vocabulary*, and; *evaluating* the validity, evidence and bias of the author.
- Schedule weekly reading time.

NOTETAKING

LINDA CLARK AND CHARLENE JACKSON



Figure 16.1 Strong notes build on your prior knowledge of a subject, help you discuss trends or patterns present in the information, and direct you toward areas needing further research or reading. Image by [RF_studio](#) used under [CCO licence](#).

INTRODUCTION

Notetaking and reading are two compatible skill sets. Beyond providing a record of the information you are reading or hearing, notes help you make meaning out of unfamiliar content. Well-written notes help you organise your thoughts, enhance your memory, and participate in class discussion, and they prepare you to respond successfully in exams. This chapter will provide you with guidelines for understanding your purpose for taking notes, and steps for taking notes before, during and after class. Then, a summary of different notetaking strategies will be provided so that you can choose the best method for your learning style. Finally, you will discover ways to annotate your notes to enable quick reference, along with information about taking notes specifically for assignments.

UNDERSTANDING YOUR PURPOSE FOR LEARNING

Knowing your course requirements and the intended purpose for your notes should impact the type of notes you take. For example, are you:

- taking lecture notes that will become the basis of exam study?
- taking notes while watching your classes online?
- taking notes from books or articles for an assignment?

There are no right or wrong ways to take notes, but it is important to find strategies that work for you and are efficient for your purpose.

TAKING NOTES FROM CLASSES

Whether you are attending classes on campus or are studying online, it is still important to take notes from your lectures. Notes help you keep up with the content each week which in turn helps you prepare for your exams. There are things you should consider before, during and after your lectures to assist with your notetaking.

Before the class

In some courses the weekly class content is available before the lecture as PowerPoint slides. This may make it tempting not to take notes, however these slides usually only have key points. Further details and explanations are given verbally in the class. A good tip is to print the PowerPoint slides before the lecture and use them as the basis for your note taking. If you select the three slides per page from the print options, it will give you room to take some notes. Come to lectures prepared by completing any set reading or tasks for that week. This will help you understand the content and more easily make decisions about what relevant notes to take.

During the class

Take notes to actively engage in the process of learning. This will help with concentration. Handwriting your notes has been proven to increase memory and retention. Do not try to write down every word or you will miss important information. Keep your notes brief, use keywords, short sentences and meaningful abbreviations.

Most lectures are recorded so you can go back and check for anything you missed. It is a good idea also to leave plenty of space for these thoughts, or for adding in pictures or diagrams. Pay attention to the structure or organisational pattern of the lecture. Key points are usually outlined at the beginning of the lecture, and repeated or summarised at the end. Listen for language cues emphasising important information including:

- numerical lists, e.g. “firstly..., secondly”, “there are three steps/stages...”
- phrases such as “on the other hand”, “in particular”, “remember/note/look out for”, “consequently”
- inclusion of examples or hypothetical situations



Figure 16.2 Handwriting your notes has been proven to increase memory and retention. *Image by [Fotografierende](#) used under [CC0 licence](#).*

- emphasis of a particular point through tone of voice

If you do not understand the content, make a note or write a question and follow this up in your tutorial or discussion forum.

After the class

It is important that you re-read your notes as soon as possible after the class, when the content is still fresh in your mind, and make any additions. If you have exams in your course, then it is important to spend time organising your notes throughout the semester. This will ensure that by the end of the semester you will have well-ordered notes that are meaningful and useful to learn from, saving you valuable exam preparation time. Your learning preference will inform the review strategies you choose.

NOTETAKING STRATEGIES

There are several different notetaking strategies. Regardless of your method, be sure to keep your notes organised, store notes from the same subject together in one place, and clearly label each batch of notes with subject, source and date taken. Here are three notetaking strategies you can try; Cornell Method, linear notes and concept mapping.

Cornell Method

One of the most recognisable notetaking systems is called the Cornell Method. In this system, divide a piece of paper into three sections: the summary area, the questions column and the notes column (see **Figure 16.3**). The Cornell Method provides you with a well-organised set of notes that will help you study and review your notes as you move through the course. If you are taking notes on your computer, you can still use the Cornell Method in Word or Excel.

over the key ideas you recorded in the questions column. This review process will help your memory make the connections between your notes, your textbook reading, your in-class work, and assignments.

Academic Essay Elements	
Topic	Topic <ul style="list-style-type: none"> – Establishes context – Limits scope of essay – Introduces Issue/Problem
Thesis	Thesis <ul style="list-style-type: none"> – Central argument or point of paper – Arrives early in paper—usually toward end of first paragraph (maybe a bit later in longer papers) – Focused, clear, and specific – Reflects writer's position on the topic/issue
Supporting Details	Supporting Detail Paragraphs <ul style="list-style-type: none"> – Each paragraph has a specific topic – Clarify, explain, illustrate, expand on topic – Provide EVIDENCE—quotes, data, references <p><u>Cite everything properly!</u></p>
Conclusion	Conclusion <ul style="list-style-type: none"> – Tie back to intro/thesis – Show how details supported the argument – Why is it important? – Point to implications/outcomes, but don't introduce entirely new ideas
<p>Use the structure, but don't follow it too rigidly. The most important pieces are a strong thesis and good evidence to back it up. The conclusion should not just summarize—take it a little further.</p>	

Figure 16.4 This sample set of notes in the Cornell Method is designed to make sense of a large amount of information. The process of organising the notes can help you retain the information more effectively than less consistent methods. Image by OpenStax used under [CC-BY 4.0 licence](#).

The main advantage of the Cornell Method is that you are setting yourself up to have organised, workable notes. This method is a useful strategy to organise your notes for exam preparation.

Linear notes

A common format for note taking is a linear style – using numbers or letters to indicate connections between concepts. Indicate the hierarchy of ideas by using headings, written in

capitals, underlined or highlighted in some way. Within concepts, ideas can be differentiated by dot points, or some other indicator, to create an outline that makes the notes easier to read. The main benefit of an outline is its organisation.

The following formal outline example shows the basic pattern:

- I. Dogs (*main topic - usually general*)
 - A. German Shepherd (*concept related to main topic*)
 - 1. Protection (*supporting information about the concept*)
 - 2. Assertive
 - 3. Loyal
 - B. Weimaraner (*concept related to main topic*)
 - 1. Family-friendly (*supporting information about the concept*)
 - 2. Active
 - 3. Healthy
- II. Cats (*main topic*)

One final notetaking method that appeals to learners who prefer a visual representation of notes is called *mapping* or sometimes *mind mapping* or *concept mapping*. The basic principles are that you are making connections between main ideas through a graphic depiction. Main ideas can be circled, with supporting concepts radiating from these ideas, shown with a connecting line and possibly details of the support further radiating from the concepts. You may add pictures to your notes for clarity.

Sketchnoting

Sketchnoting differs from concept mapping. Concept maps use a hierarchical structure and consist primarily of text with a focus on one main theme, and show the connections between ideas related to that theme. Sketch notes have a picture focus using a flexible layout and can cover one or a range of themes. (See **Figure 16.6**)

Notetaking can continue with this sort of numbering and indenting format to show the connections between main ideas, concepts and supporting details.

Concept mapping

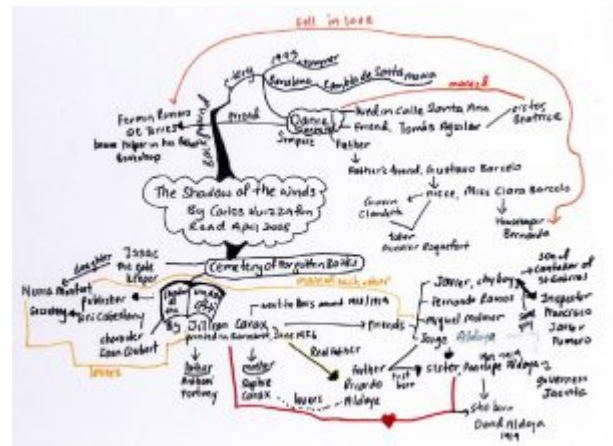


Figure 16.5 Concept mapping can be an effective and personalised approach to capturing information. Image by ArtistIvanChew used under [CC-BY 2.0 licence](https://creativecommons.org/licenses/by/2.0/).

icons, shapes and lines. This style of notetaking is used by students to maintain engagement, enhance understanding, and to retain information from verbal or written content. The sketchnoting technique is used to organise ideas and summarise content in a meaningful way to help the notetaker recall the information at a later date. Sketchnoting can be created digitally or using pen and paper. You can choose your style and preference.

ANNOTATING NOTES

Annotations can refer to anything you do with a text to enhance it for your particular use (either a printed text, handwritten notes, or other sort of document you are using to learn concepts). The annotations may include highlighting passages or vocabulary, defining those unfamiliar terms once you look them up, writing questions in the margin of a book and underlining or circling key terms for future reference. You can also annotate some electronic texts.

Your mantra for highlighting text should be less is more. Always read your text selection first before you start highlighting anything. You need to know what the overall message is before you start placing emphasis in the text with highlighting. Another way to annotate notes after initial notetaking is underlining significant words or passages.

When did Lincoln die? April 15, 1865

The Gettysburg Address

Where is Gettysburg? Pennsylvania
What happened there? Civil War battle of Gettysburg, July 1-3, 1863 - union victory, but largest # of dead in entire war

President Abraham Lincoln

November 19, 1863

$80(4 \times 20) + 7 = 87$

“Fourscore and seven years ago ¹⁷⁷⁶ our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal. ^{from US Constitution? No - Dec of Independence}

“Now we are engaged in a great civil war, ⁽¹⁸⁶¹⁻⁶⁵⁾ testing whether that nation, or any nation so ^{formed} conceived and so dedicated, can long ^{last} endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final ^{cemetery} resting-place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate — we ^{repetition} cannot ^{make holy} consecrate — we cannot ^{make holy} hallow — this ground. The brave men, living and dead, who struggled here have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so ^{like royalty} nobly advanced. It is rather for us to be here dedicated to the great task remaining before us — that from these honored dead we take increased devotion to that cause for which they gave the ^{death} last full measure of devotion — that we here highly resolve that these dead shall not have died in ^{for no reason!} vain — that this nation, under God, shall have a new birth of freedom and that government of the people, by the people, for the people, shall not ^{repetition} perish from the earth.”

^{phrases from Constitution?}

^{Lodie}

Figure 16.7 Annotations may include highlighting important topics, defining unfamiliar terms, writing questions, underlining or circling key terms, or otherwise marking a text for future reference. Whichever approach you choose, try not to overdo it; neat, organised, and efficient notes are more effective than crowded or overdone notes. Image by OpenStax used under [CC-BY 4.0 licence](#).

TAKING NOTES FOR ASSIGNMENTS

When taking notes for an assignment, be clear whether they are your own words, or a direct quote so that you do not accidentally plagiarise. When you have finished taking notes, look for key themes or ideas and highlight them in different colours. This organises your information and helps you to see what evidence you have to support various ideas you wish to make in your assignment.

Make sure to record the author, title, date, publishing details and relevant page numbers of books and articles you use. This will save you time and avoid errors when referencing.

ELECTRONIC NOTETAKING

If you use an e-reader or e-books to read texts for class or read articles from the internet on your laptop or tablet, you can still take effective notes. Almost all electronic reading platforms allow readers to highlight and underline text. Some devices allow you to add a written text in addition to marking a word or passage that you can collect at the end of your notetaking session. Look into the specific tools for your device and learn how to use the features that allow you to take notes electronically. You can also find apps on devices to help with taking notes. Microsoft's OneNote, Google Keep, and the Notes feature on phones are relatively easy to use, and you may already have free access to those.

CONCLUSION

Notetaking is a major element of university studying and learning. As you progress through your study, your notes need to be complete so you can recall the information you learn in lectures. The strategies that have been explored in this chapter will help you to be deliberate in your notetaking.

Key points

- Know the purpose for your notes.
- Before the class, print any lecture slides with the notes option.
- During the class, keep your notes brief, use keywords, short sentences and meaningful abbreviations.
- After the class, re-read your notes and organise them.
- The Cornell Method uses a table with a summary area, a questions column and a notes column.
- Linear notetaking uses headings, numbers or letters to show hierarchy and connections between concepts.
- Concept mapping uses graphic depiction to connect ideas.
- Sketchnoting is a creative way to make personalised meaningful notes from written or spoken content.
- Annotating your notes with highlights, underlining, circling or writing in the margin can enhance your understanding.
- Notetaking for assignments must show clearly when the words are your own or are a direct quote. Record the source details for use in referencing.
- Notetaking can be performed by hand or on electronic devices.

THINKING

DOUGLAS EACERSALL; TYLER CAWTHRAY; AND AKSHAY SAHAY



Figure 17.1 Thinking and problem-solving are core skills at university. Image by [Pexels](#) used under [CC0 licence](#).

INTRODUCTION

Thinking is a core skill that university educators aim to teach students. Learning different ways of thinking and how to resolve or respond to problems creates well-rounded learners who are capable of breaking down issues or problems into manageable parts, adapting to changing situations or contexts and devising creative or novel solutions. These are key characteristics required in the 21st century digitally focused work environment.

This chapter will provide you with an overview of different types of thinking, namely, creative, critical and analytical and give guidance on how you can practise these approaches. It will then cover the practical use of these skills for your study, including applying creative, critical and analytical thinking skills to problem solving and your university assignments. In this way, the chapter provides you with the information and thinking skills to begin positively affecting your study outcomes right now.

CREATIVE THINKING

Has anyone ever told you that you have a creative flair? If so, celebrate! That's a good personality trait to nurture. Creativity is needed in all occupations and during all stages of life. Learning to be more in tune with your own version of creativity can help you think more clearly, resolve problems, and appreciate setbacks. You're creative if you repurpose old furniture into a new function. You're also creative if you invent a new biscuit recipe for a friend who has a nut allergy. Further, you're using creativity if you can explain complex biological concepts to your classmates in your tutorial or workshop. Creativity pops up everywhere. When creative thinking comes into

play, you'll be looking for both original and unconventional ideas, and learning to recognise those ideas that improve your thinking skills all around.

Creativity doesn't always present itself in the guise of a chart-topping musical hit or other artistic expression. We need creative solutions throughout the workplace, institutions for learning and in everyday life—whether in the home, board room, emergency room, or classroom. It was no fluke that the 2001 revised Bloom's cognitive taxonomy, originally developed in 1948, placed a new word at the apex—*create* (See Figure 17.2). We all need to use and develop the lower thinking skills including remembering, applying, and analysing, but at the top of the apex, these skills can be incorporated to create new ideas leading to innovation and invention.

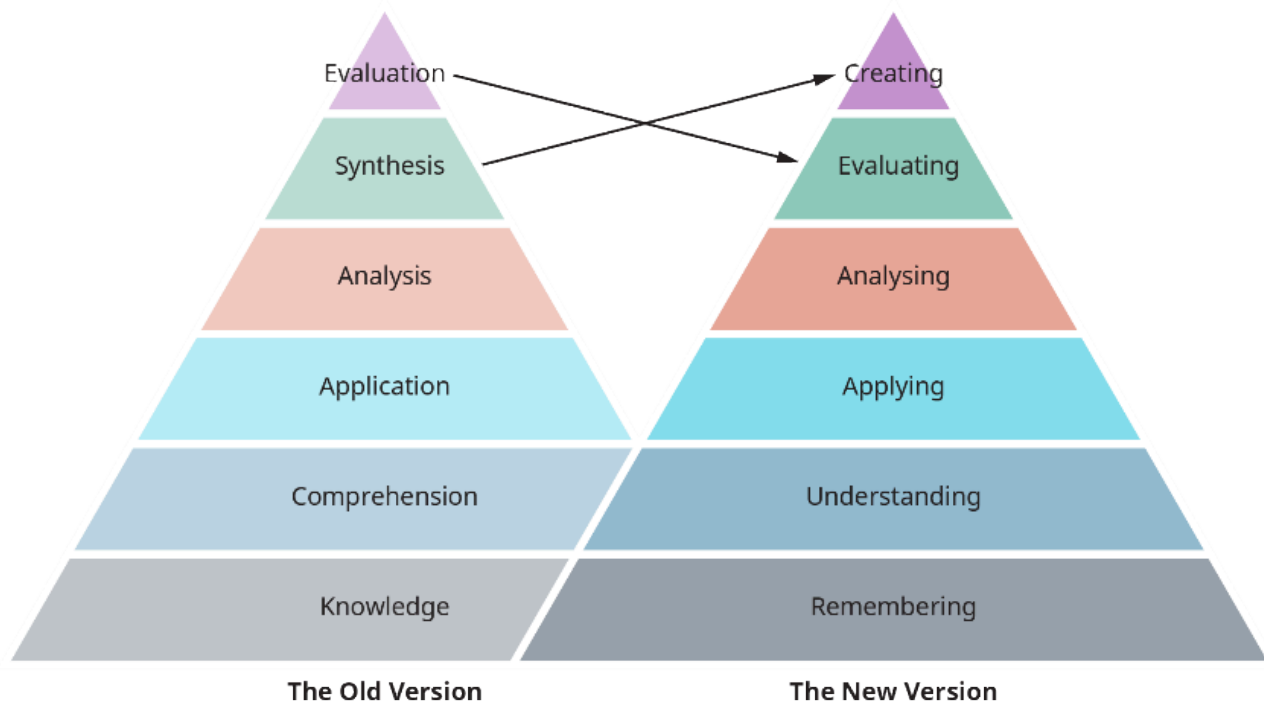


Figure 17.2 Bloom's Taxonomy is an important learning theory used by psychologists, cognitive scientists, and educators to demonstrate levels of thinking. Image by OpenStax used under [CC-BY licence](#).

Many assessments and lessons you've seen during your schooling have likely been arranged with Bloom's taxonomy in mind. Regurgitating the minute details of *Goldilocks* or *Romeo and Juliet* demonstrates far less comprehension than fashioning an original ending that turns the tables, or developing a board game from the story. Author Gregory Maguire used the base plot of L. Frank Baum's 1900 book *The Wonderful Wizard of Oz* and the 1939 movie *The Wizard of Oz* to create the 2003 smash-hit Broadway musical *Wicked* that tells the story from the perspective of the Wicked Witch of the West, making her a sympathetic character. This creative approach calls for far more critical and creative thinking than memorising facts. Creating new out of old or new out of nothing is how we ended up with manned space flight, mobile phones, and rap music. Continuing to support creativity in whatever form it takes will be how we cure cancer, establish peace, and manipulate the time-space continuum. Don't shortchange your own creativity.

You may feel like you cannot come up with new ideas, but even the process of combining and recombining familiar concepts and approaches is a creative act. A kaleidoscope creates a nearly infinite number of new images by repositioning the same pieces of glass. It is certainly a pretty metaphor of idea generation, but even if old ideas are reworked to create new solutions to existing problems or we embellish a current thought to include new ways of living or working, that renewal is the epitome of the creative process.

It's common to think of creativity as something used mostly by traditional artists—people who paint, draw, or sculpt. Indeed, artists are creative, but think of other fields in which people think creatively to approach situations in their discipline. The famous heart surgeon Dr. Denton Cooley didn't have an exact model when he first implanted an artificial heart. Chemist Stephanie Kwolek discovered life-saving Kevlar when she continued work on a substance that would usually be thrown away. Early US astronauts owed their ability to orbit and return to Earth based on creative uses of mathematics by people like Katherine Johnson. Inventor and actress Hedy Lamarr used diagrams of fish and birds to help aviation pioneer Howard Hughes produce faster airplanes. Indeed, biomimicry, an approach to innovation that seeks sustainable solutions to human challenges by emulating nature's time-tested patterns and strategies, is now a huge field of study. This list could go on and on.



Figure 17.3 A kaleidoscope can make infinite new patterns. Image by OpenStax used under [CC-BY licence](#).



Figure 17.4 Denton Cooley (Credit: Texas Children's Hospital / Public Domain), Stephanie Kwolek (Credit: Chemical Heritage Foundation, [CC-BY](#)), Katherine Johnson (Credit: NASA / Public Domain), and Hedy Lamarr (Credit: MGM / Public Domain). These individuals employed extensive creativity in the fields of science and math, leading to significant discoveries and accomplishments.

DEVELOPING CREATIVE THINKING FOR UNIVERSITY

There are many activities you can undertake, as part of your university studies, to develop your creative thinking and supercharge your problem solving and academic success.

Creative Spaces

Setting up your study space in a certain way can foster more creative thinking. Personalising the space with personal and inspiring objects can help remind you of your own unique perspectives while at the same time inspiring new and innovative thoughts. Try to design your study space with

comfort and relaxation in mind. You should aim for a space that you want to spend time in and that creates a stress-free environment. If you are relaxed and uninhibited, you will be more open to innovative ideas and the creative process. For more suggestions on setting up your study space, see the chapter [Study Space](#).

Notebook

Keep a notebook to write down and explore ideas. This can be about anything that comes to mind (e.g. brainstorming ideas for a project), or could use creative questions to generate ideas for a particular academic task. For example, how would I develop this product if I was the richest person on earth, or how would I solve this problem as a superhero, or how would I present this idea as a TikTok video? Approaching a problem like this can be a good way to think creatively, outside of the box, and get ideas flowing. Ideas can also be creatively explored through graphical representations. In your notebook you might try sketching ideas as illustrations, making a collage of ideas from cut out pictures, or drawing a concept map.

Creativity Driven Learning

You can develop your creative thinking skills by using creative means to focus your learning. This might be used to aid deep learning or to assist with surface level memorisation of course content. For example, you could write a short story to help you remember and understand certain core concepts of a particular theory or you could write a song, where the lyrics help to memorise key information.

ANALYTICAL THINKING

Different forms of thinking can be useful in many situations. When we work out a problem or situation systematically, breaking the whole into its component parts for separate analysis, to come to a solution or a variety of possible solutions, we call that analytical thinking. Characteristics of analytical thinking include setting up the parts, using information literacy, and verifying the validity of any sources you reference. Although the phrase analytical thinking may sound daunting, we do this sort of thinking in our everyday lives when we brainstorm, budget, detect patterns, plan, compare, solve puzzles, and make decisions based on multiple sources of information. Consider the thinking that goes into the logistics of a “dinner and a movie” date—where to eat, what to watch, who to invite, what to wear, popcorn or ice-cream. These decisions all involve analytical thinking skills.

Many employers specifically look for candidates with analytical skills. If everything always went smoothly on the shop floor or in the office, we wouldn’t need front-line managers, but everything doesn’t always go according to plan or corporate policy. Your ability to think analytically could be the difference between getting a good job and being passed over by others who prove they are stronger thinkers. A mechanic who takes each car apart piece by piece to see what might be wrong instead of investigating the entire car, gathering customer information, assessing the symptoms, and focusing on a narrow set of possible problems, is not an effective member of the team. Some career fields even have set, formulaic analyses that professionals in those fields need to know how to conduct and understand, such as a cost analysis, a statistical analysis, or a return-on-investment analysis.

DEVELOPING ANALYTICAL THINKING FOR UNIVERSITY

There are many ways you can develop your analytical thinking for university. Some of these

include identifying and examining relationships between theories and ideas, and making use of real-world examples.

Identify and examine relationships

In developing analytical thinking, it is important to identify the parts of an issue, theory or idea you are studying, and examine how they relate to each other and other ideas. This can be undertaken when you are listening to a lecture, taking notes from the textbook or working on organising information for an assignment. For example, once you have taken notes and/or studied a particular part of the course, you could try and relate it to other sections of the course by writing notes that seek to explain and synthesise how the different sections relate (or don't relate) to each other. This type of activity will begin to develop your analytical thinking skills in the context of your university course.

Apply knowledge to real-world examples

When trying to learn new information, it can be helpful to relate it to real life examples rather than trying to learn it through memory alone. This is more likely to result in learning by understanding and will exercise your analytical thinking skills. This is because this type of learning requires you to identify the relevant course concepts and analyse them in terms of their application in the real world rather than learning them in isolation. For instance, if you were studying law, there are many abstract law concepts to remember — the rule against perpetuities; the differences between defamation, slander and libel; the application of jurisprudence. If we use defamation, slander and libel as an example, trying to differentiate the slight differences between the definitions of these three terms can be confusing. If however you apply these definitions to a high profile celebrity defamation case, you will engage your analytical thinking skills in understanding the contrasting aspects of these concepts and connecting them to relevant elements of the real world example. This helps you to remember them and also understand their application.

CRITICAL THINKING

Critical thinking has become a buzz phrase in education and corporate environments in recent years. The definitions vary slightly, but most agree that thinking critically includes some form of judgement that thinkers generate after careful analysis of the perspectives, opinions, or experimental results present in a particular problem or situation. Before you wonder if you're even capable of critical thinking, consider that you think critically every day. When you grab an unwashed T-shirt off the top of the pile on the floor of your bedroom to wear to university but then suddenly remember that you may see the person of your dreams on that route, you may change into something a bit less dishevelled. That's thinking critically—you used data (the memory that your potential soul mate travels the same route you use on that day on campus) to change a sartorial decision (dirty shirt for clean shirt), and you will validate your thinking if you do have a successful encounter with said soul mate.

Likewise, when you decide to make your lunch rather than just grabbing a bag of chips, you're thinking critically. You must plan, buy the food, possibly prepare it, arrange to carry the lunch with you, and you may have various reasons for doing that—making healthier eating choices, saving money for an upcoming trip, or wanting more quiet time to unwind instead of waiting to purchase food. You are constantly weighing options, consulting data, gathering opinions, making choices, and then evaluating those decisions, which is a general definition of critical thinking.

Consider the following situations and how each one demands your thinking attention. Which do you find most demanding of critical thinking and why?

1. Participating in competitive athletic events
2. Watching competitive athletic events
3. Reading a novel for pleasure
4. Reading a textbook passage for study

DEVELOPING CRITICAL THINKING FOR UNIVERSITY

Critical thinking forces you to determine the actual situation under question and to determine your thoughts and actions around that situation. Critical thinking differs according to the subject you're thinking about, and as such it can be difficult to pin down a formula to make sure you are doing a good job of thinking critically in all situations. There are however some general approaches you can take during your university studies to improve your critical thinking skills. These include questioning everything and participating in academic discussion.

Question Everything

In order to exercise your critical thinking, it is important that you question everything. You should never assume information is accurate or correct. Even information from seemingly credible sources such as the news, your textbook or your lecturers should be scrutinised. To exercise your critical thinking skills, you should identify and evaluate the evidence to make an informed decision about the information. You should question the credibility of the source and the evidence that has been provided to support the information. Is it accurate? Is it reliable? Is it sufficient? For more information on methods for measuring a source's credibility, see the chapter [Working with Information](#).

Participate in Discussions

Whether it is through an online forum or in person, participating in academic discussion can improve your critically thinking abilities. Discussions with peers and your lecturers will help you to engage with and evaluate different perspectives. This aids you in critically formulating and expressing your own opinions and further refining your critical analysis skills through dialogue and constructive debate.

PRACTICAL APPLICATION

Now that you understand a bit more about the different types of thinking skills and how to develop them in the university context, let's examine how to apply them to problem solving and assessment. These are some of the most useful applications of thinking skills you will experience at university.

PROBLEM SOLVING

Problem solving is part of our everyday and study life and often incorporates the different types of thinking discussed above. Many of the tasks you are required to complete as part of your university studies will involve multiple thinking skills and elements of problem solving. When solving a problem, we generally have a sequence of processes that we follow, with related types of thinking, to effectively resolve or to dissolve a problem. In order to do this, we may use some variation of the following strategies:

1. Identify and determine what the problem is (analytical)

2. Explore (brainstorm) as many possible solutions to the problem (creative)
3. Recognise and understand that there will be varying perspectives from different people (analytical)
4. Explore the results further by researching and documenting pros and cons for all the possible solutions (analytical/critical)
5. Select the best solution (critical)
6. Communicate your findings to all involved (analytical/critical/creative)
7. Establish logical action items based on your analysis (analytical/critical)

The image below represents the problem solving cycle:



Figure 17.5 Problem-solving cycle. Image created by the University of Southern Queensland.

To determine the best solution to a problem, it is important to generate a wide array of solutions. When coming up with potential solutions during a brainstorming session, it is important to remember that there is no right or wrong answer. The purpose of this is to establish different solutions that can potentially solve the problem. Once you have a variety of different solutions, you can start evaluating them to see how they fit within the context of the problem and weighing up pros and cons. This will help you to narrow down your solutions until you find the best one. Once you have established this, you can communicate and implement the solution. Afterwards evaluate whether the problem has been resolved or not. Evaluation is an important part for closing the loop when problem solving. If the problem is not resolved, then go through the process again.

Determining the best approach to any given problem and generating more than one possible solution constitutes the complicated process of problem-solving. People who are good at these skills are highly marketable because many jobs consist of a series of problems that need to be solved for production, services, and sales to continue smoothly.

Think about what happens when a worker at your favourite coffee shop slips on a wet spot behind the counter, dropping several drinks she just prepared. One problem is the employee may be hurt, in need of attention, and probably embarrassed; another problem is that several customers do not have the drinks they were waiting for; and another problem is that stopping production of

drinks (to care for the hurt worker, to clean up her spilt drinks, to make new drinks) causes the line at the cash register to back up. A good manager has to juggle all these elements to resolve the situation as quickly and efficiently as possible. The resolution and return to standard operations doesn't happen without a great deal of creative, analytical and critical thinking: prioritising needs, shifting other workers off one station onto another temporarily, and dealing with all the people involved, from the injured worker to the impatient patrons.

Applied to the university setting, we can consider the different disciplines of study and the common problems and thinking skills most used within them. Creative arts students are more likely to engage in creative projects that require creative problem-solving skills. For example, a photography student may experiment with filters to communicate a mood in a picture. In a similar way, an architecture student may need to tap into creative thinking skills when considering the atmosphere of a home during the design process. When designing a bridge, engineering students may be more likely to use analytical thinking to consider the amount of load different building materials can carry. In reality though, just like the example of the coffee shop manager above, most of the problem solving we do, including at university involves a mix of different thinking skills, no matter the discipline. For example, if you are an early childhood education student outlining the logistics involved in establishing a summer day camp for children, you may need a combination of critical, analytical, and creative thinking to solve this challenge. Faced with a problem-solving opportunity, you must assess the skills you will need to create solutions. Problem-solving can involve many different types of thinking. You may have to call on your creative, analytical, or critical thinking skills—or more frequently, a combination of several different types of thinking—to solve a problem satisfactorily.

THINKING AND ASSESSMENT SUCCESS

At university, the need to apply multiple thinking skills is evident in many of the academic tasks required, irrespective of discipline. For instance, goal setting, time management, planning, learning content, assignment writing, note taking, reading, examination and quiz preparation, oral presenting, and group work all require different combinations of creative, analytical and critical thinking skills. This section will use the example of an essay assessment to demonstrate how these different skills can be applied to contribute directly to your academic success.

Essay Writing

Successful essay writing involves several steps. These include task analysis, brainstorming, finding and evaluating sources, constructing and writing arguments with supporting evidence, and referencing (see the chapter [Writing Assignments](#) for a more detailed overview of essay tasks). Each of these steps involves different combinations of thinking skills. For example, when brainstorming topics, creative and analytical thinking are important but if you are evaluating sources then critical thinking will be used. For referencing, you will need to be very accurate and follow a predetermined method, so analytical and critical skills will be useful but creative thinking skills will not be as relevant.

Task Analysis (analytical and critical thinking)

Task analysis involves breaking the assignment task down into its relevant parts and therefore involves mostly analytical thinking skills. By breaking the task into parts, you can more effectively analyse what is required and how these parts relate to the overall task. There is also some critical thinking required in understanding the requirements of each part of the task and the language used to communicate this. You must critically assess the meaning of these words and what each

requirement is actually asking you to do. For example, it may require that you compare and contrast, describe, evaluate and/or justify. The analytical and critical assessment of the essay task can help you understand the essay question and ensure that you fulfil the overall essay requirements adequately.

Brainstorming (analytical and creative thinking)

In the context of essay assessments, brainstorming is used to come up with a topic and possible options to fulfil the essay requirements (e.g. answer the essay question). In this case you will mostly use analytical and creative thinking skills. You will use analytical skills to identify the individual concepts relevant to the topic and organise them according to their relationship to each other. These concepts often come from your course textbook and relevant literature and may be organised into an overall framework. This represents the concepts you believe will be useful in answering the essay question. As part of this process, creative thinking will be used to come up with novel concepts and may also be required to represent the framework visually in a concept map.

Finding and evaluating sources (critical thinking)

In order to effectively answer an essay assessment question, you will often need to engage with a great deal of information (see the chapter [Working with Information](#)). Some of that information will be factual, and some won't. You need to be able to use your critical thinking skills to distinguish between facts and opinions so that the information you use in your essay effectively supports your arguments.

Fact: a statement that is true and backed up with evidence; facts can be verified through observation or research

Opinion: a statement someone holds to be true without supporting evidence; opinions express beliefs, assumptions, perceptions, or judgements

Of course, the tricky part is that most people do not label statements as fact and opinion, so you need to be aware and recognise the difference by using your critical thinking skills. You probably have heard the old saying “Everyone is entitled to their own opinions,” which may be true, but conversely, not everyone is entitled to their own facts. Facts are true for everyone, not just those who want to believe in them. For example, *mice are animals* is a fact; *mice make the best pets* is an opinion. Many people become very attached to their opinions, even stating them as facts despite the lack of verifiable evidence. Think about political campaigns, sporting rivalries, musical preferences, and religious or philosophical beliefs. When you are reading, writing, and thinking critically, you must be on the lookout for sophisticated opinions others may present as factual information. While it's possible to be polite when questioning another person's opinions when engaging in intellectual debate, thinking critically requires that you do conduct this questioning.

Basically, you need to use your critical thinking skills to evaluate the information you plan to use for your arguments and supporting evidence. This means questioning the information based on accuracy and reliability. To ensure that information is fact and not opinion it is useful to find corroborating evidence from other reliable sources. The more corroborating evidence from reliable sources, the more factual and accurate the information is likely to be. The reliability of

sources should be critically evaluated by checking where the information has come from. Is the source reputable and impartial? For example, information taken from Facebook or Wikipedia is less reliable than evidence provided through an academic peer-reviewed journal. Questioning the sources in this way and making informed decisions whether to include information in your essay is exercising your critical thinking skills.

Constructing Arguments with Supporting Evidence (analytical, critical and creative thinking)

Once you have all your information gathered and you have checked your sources for accuracy and reliability you need to decide how you are going to present your well-informed analysis. This involves constructing arguments with supporting evidence and writing this in essay form (see the chapter [Writing Assignments](#) for more information on essay writing). This process involves using both critical and analytical thinking skills. Critical thinking will be used to select the best arguments and relevant supporting evidence and your analytical skills will be important in structuring the elements into a logical argument. The actual writing of the article will also involve some creative thinking as you express your arguments and ideas through the art of writing.

You will need to be careful when constructing your arguments to recognise your own possible biases. Facts are verifiable; opinions are beliefs without supporting evidence. Stating an opinion is just that. You could say “Blue is the best colour,” and that’s your opinion. If you were to find evidence to support this claim, you could say, “Researchers at Oxford University recognise that the use of blue paint in mental hospitals reduces heart rates by 25% and contributes to fewer angry outbursts from patients.” This would be an informed analysis with credible evidence to support the claim, in the context of mental hospitals.

Not everyone will accept your analysis, which can be frustrating. Most people resist change and have firm beliefs on both important issues and less significant preferences. With all the competing information surfacing online, on the news, and in general conversation, you can understand how confusing it can be to make any decisions. Look at all the reliable, valid sources that claim different approaches to be the *best* diet for healthy living: ketogenic, low-carb, vegan, vegetarian, high fat, raw foods, paleo, and Mediterranean. All you can do in this sort of situation is use your creative, critical and analytical thinking skills to conduct your own serious research, check your sources, and write clearly and concisely to provide your analysis of the information for consideration. You cannot force others to accept your stance, but you can use evidence in support of your thinking, being as persuasive as possible without lapsing into your own personal biases. Then the rest is up to the person reading or viewing your analysis.

CONCLUSION

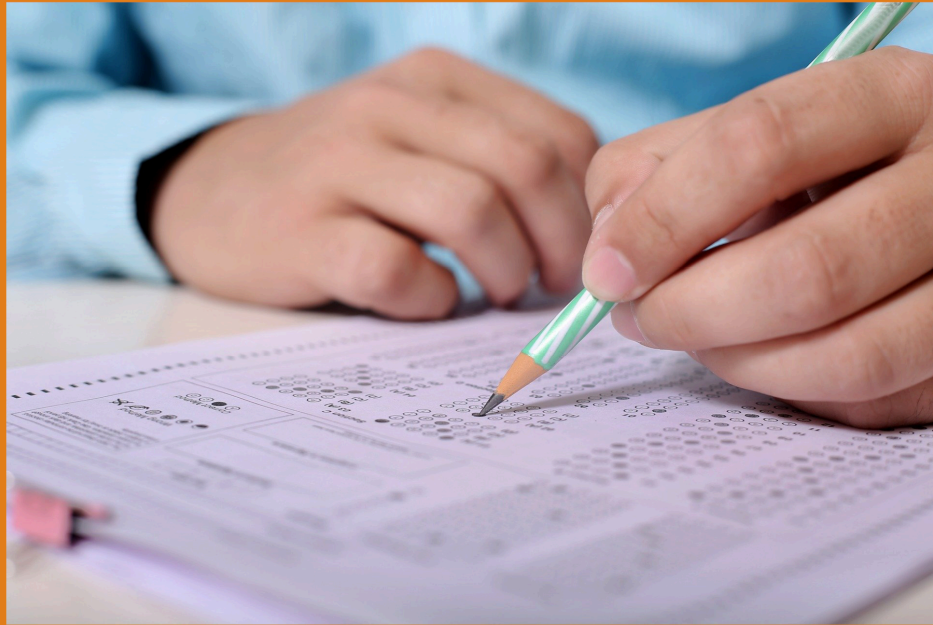
Thinking is a core skill that is central to your ongoing learning at university and later in your career. University represents a unique opportunity to learn and test different approaches in a safe environment. The creative, analytical and critical thinking discussed in this chapter, as well as the activities provided to increase your thinking skills at university, and the practical application of thinking skills to problem solving and essay writing are a valuable guide to understanding, developing and applying thinking skills to your university study.

Key points

- Thinking and problem solving skills are critical to learning both at university and during your career.
- Creative thinking is the highest form of thinking as outlined in *Bloom's Revised Taxonomy*. The creative process appears challenging, but simply put it requires the combination of existing ideas in new ways to create novel outcomes.
- Creative thinking can be developed at university through creative spaces, keeping a notebook and creativity driven learning.
- Analytical thinking requires you to break down a problem, task or issue into its smallest parts and respond to each accordingly.
- You can improve your analytical thinking by identifying and examining relationships and applying your knowledge to real-world examples.
- Critical thinking involves careful assessment or judgment of the available information, assumptions and bias to develop an informed perspective.
- Some strategies to exercise your critical thinking skills include, questioning everything and participating in discussions.
- Problem solving is a critical skill developed at university and may require all of the forms of thinking discussed above. It focuses on devising solutions.
- Creative, analytical and critical thinking are all used in different combinations to successfully complete the steps of the essay writing process.

PART IV.

PART D: SUCCESSFUL ASSESSMENT



Successful Assessment

Image by [F1 Digital](#) used under [CC0 licence](#). Note: image has been modified.

MANAGING ASSESSMENT

CRISTY BARTLETT; KATE DERRINGTON; AND ANBARASU THANGAVELU

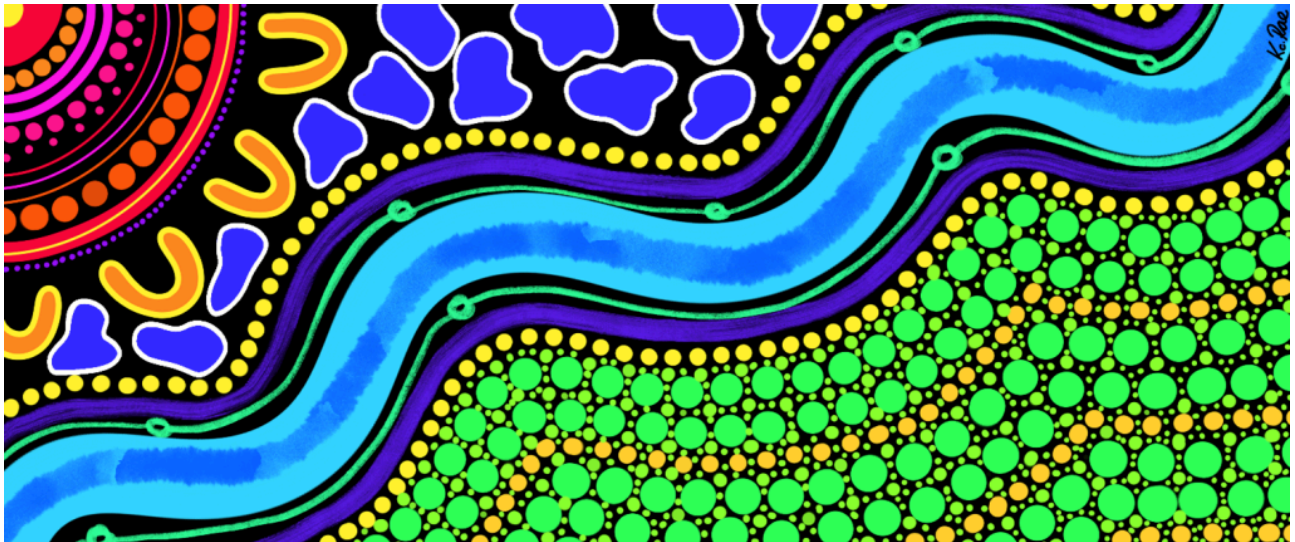


Figure 18.1 Baanda-li. Image by Kc Rae, Aboriginal artist used under [CC BY-NC-ND licence](#).

Baanda-li means to “put in order” or “organise” in the Yuwaalaraay/ Euahlayi dialectic of the Gamilaraay language. This piece tells the story of how, with the right planning and organisation (represented by the pink and orange community gathering in the top left-hand corner), students can utilise the learning tools they have developed during their studies (represented by the royal blue rocks) to overcome assessment challenges (represented by the diagonal watercourse). “Greener pastures” (represented by the green dotwork) can be achieved with the right assessment planning. Kc Rae, Aboriginal artist.

INTRODUCTION

It is not uncommon to feel confused or a bit overwhelmed when approaching assessment at university. This chapter is designed to guide you through the process of assessment management and provide strategies to help make your assessment preparation less stressful. When relevant, we will refer you to other sections in this book where specific skills are discussed in detail.

We start by discussing what to do with the information you receive about your assessment items. It is important to know exactly what your requirements are before beginning to research or write. Spending a little extra time at the start, analysing your question thoroughly and reading your criteria sheet, will make the assignment research and writing processes easier, and will save you time. The next section covers assessment planning and outlines how planning can save you time

and effort. We discuss key components of assessment preparation, including finding information, writing, revising, and submitting your assessments. Your assessment process doesn't finish when you submit. We describe how to use your feedback to help you improve your understanding of the material and to improve future submissions.

We then briefly discuss academic integrity and what it means for university students before concluding the chapter and providing key points on managing your assessments. At the end of this chapter you should have a good understanding of some strategies and techniques for managing your assessments at university.

UNDERSTANDING YOUR ASSESSMENT TASK

In this section we discuss the different types of information that you may receive about your assessment items and how to interpret them. Other chapters in this book provide more detailed information about specific types of assessment items, such as the [Presentations](#) chapter about presentation assessments. It can be tempting to skip over reading the assessment information and planning stages, however these steps will save you time. Knowing exactly what the task is, and is not, will ensure that your activities are focused. Similarly, spending some time planning how you will approach the task and the structure will help you to avoid spending time on activities that don't contribute to your final submitted work. We will first discuss the information that you will find in your assessment task sheets.

TASK SHEETS

For most assessment tasks you will be provided with a task sheet. The task sheet (also known as an assignment information sheet, assessment outline or task brief), provides information about your assessment task. It is important to read this carefully, as it includes the key information required to undertake your assessment. In this section we outline the main components of a task sheet and how to interpret them, starting with the topic words, task words, and limiting words. These terms are defined in the table below (see **Table 18.1**).

Table 18.1 Parts of an Assignment Question

Topic words	These are words and concepts you have to research and write about.
Task words	These will tell you how to approach the assignment and structure the information you find in your research (e.g., discuss, analyse).
Limiting words	These words define the scope of the assignment, e.g., Australian perspectives, relevant codes or standards or a specific timeframe.

Below is an example of what an assessment task looks like. Notice the use of topic words (coloured orange), limiting words (coloured blue) and task or directive words (coloured green). Consider what a topic and task analysis look like in this example question.

Discuss the suggestion that a **wide range of skills** are required to **succeed** in the **professional workplace**. Consider this in an **Australian context**.

Conducting a topic analysis is important to develop effective, targeted key words to search for

assignment resources. You can also use this approach for essay questions in an exam to make sure you are on track with your response. You can then use these words and their synonyms to start looking for good quality information which is relevant to your topic (see the [Working with Information](#) chapter for more about finding information).

This is a simple example of an assessment task. It is important to look for additional information that sets the scope, parameters or guidelines. For instance, in the previous example question, noting the Australian context is important for your research process so that you only search for and include relevant information. This will keep you on track and avoid investing your time on information you don't need.

Assessment style

Other things to consider from your task sheet include the style of assessment (e.g., essay, report, or presentation), word length, file type and size, number, type, and recency of the references required. The style of assessment tells you what sort of document you need to complete and the sections that you may need to include (e.g., an essay would normally include an introduction, body paragraphs, and a conclusion, whereas a presentation may require a recorded slide presentation).

Written assessment word count

The word count, or word length, is important as it indicates the number of words required to adequately address the assessment task. If you have written significantly less than the word count, then you have probably not covered the topic fully. If you are significantly over the word limit, then you have included too much information or may need to review your work to ensure your writing is clear and concise. (See the [English Language Foundations](#) chapter for more information about writing concisely). The section below shows what to consider when calculating your word count.

Word count considerations

Things to check regarding the word count include:

- Is there a 'firm' maximum or minimum word limit (e.g., no more than 1500 words) or a word count range (e.g., 1350 – 1650 words or 1500 words +/- 10%)?
- What is the penalty for going over the word limit (sometimes markers will only review your writing up to the word limit, or you may lose marks for going over the limit)?
- Does the word count include in-text citations and the reference list?
- Does the word count include figures, tables, and appendices?

How many and what kind of references do you need to include in your assignments?

The number, type, and recency of references refers to the sources of information that you cite in your work. For example, you may need to include citations from at least five (number) peer-reviewed sources (type) published in the last eight years (recency). The chapter [Working with Information](#) provides guidance about finding, evaluating, and managing sources of information.

MARKING RUBRIC

The marking rubric provides an overview of each marked component of the assessment task and can be helpful in the planning, writing, and reviewing phase of your assessment process. It may also be called a marking sheet, criteria sheet or scoring sheet. The marking rubric will help you to understand more precisely what your marker will be looking for when marking your assignment. **Table 18.2** shows an extract from a marking criteria sheet, where the assessment task was to write an essay outlining typical and atypical development for a chosen developmental period.

Table 18.2 Extract of a marking rubric. Used with permission from Course Examiner, Mark Oliver, University of Southern Queensland.

Criteria	HD - Outstanding	A - Advanced	B - Well developed	C - Satisfactory	F - Poor to Very Poor	
1. DESCRIPTION OF TYPICAL PHYSICAL, COGNITIVE, AND PSYCHO-SOCIAL DEVELOPMENT MILESTONES FOR IDENTIFIED DEVELOPMENTAL PERIOD.	Demonstrates a sophisticated understanding of the physical, cognitive, and psycho-social of the identified developmental period. There are no gaps or misunderstandings.	Demonstrates a very good understanding of the physical, cognitive, and psycho-social of the identified developmental period. There are a few minor gaps only.	Demonstrates a well-developed understanding of the physical, cognitive, and psycho-social of the identified developmental period. There are some gaps and/or minor misunderstandings.	Demonstrates developing understanding of the physical, cognitive, and psycho-social of the identified developmental period. There are many gaps and/or minor misunderstandings.	Demonstrates limited to no understanding of the physical, cognitive, and psycho-social of the identified developmental period. There are many gaps and/or minor misunderstandings. Lacks satisfactory breadth and/or many fundamental misunderstandings. The work does not meet the standard for a pass.	No work submitted, no response, irrelevant response.
	10-9 marks	8 marks	7 marks	6-5 marks	4-1 marks	0 marks
2. ANALYSIS OF THE ENVIRONMENTAL INTERACTIONS THAT SHAPE PHYSICAL, COGNITIVE, AND PSYCHO-SOCIAL DEVELOPMENT MILESTONES FOR IDENTIFIED DEVELOPMENTAL PERIOD.	Presents a balanced and exhaustive analysis of the environmental systems that shape the physical, cognitive, and psycho-social development of the identified developmental period.	Presents a mostly balanced and thorough analysis of most of the environmental systems that shape the physical, cognitive, and psycho-social development of the identified developmental period. There are a few minor gaps in the analysis.	Discusses many of the environmental systems that shape the physical, cognitive, and psycho-social development for the identified developmental period. There is some balance to the analysis, but further analysis of some environmental systems was required.	Discusses some of the environmental systems that shape physical, cognitive, and psycho-social development of the identified developmental period. There are many gaps in the analysis.	The analysis lacks satisfactory breadth in terms of the environmental systems that shape the physical, cognitive, and psycho-social development of the identified developmental period. The work does not meet the standard for a pass.	No work submitted, no response, irrelevant response.
	10-9 marks	8 marks	7 marks	6-5 marks	4-1 marks	0 marks

The marking rubric provides a summary of the requirements that you would need to meet to obtain a particular mark or grade for each component of the assessment. In the example in **Table 18.2**, the requirement for a mark of between 9 and 10 (out of 10) for the first criteria is: *“Demonstrates a sophisticated understanding of the physical, cognitive, and psycho-social of the identified developmental period. There are no gaps or misunderstandings.”* This indicates that you would need to demonstrate a comprehensive understanding with your discussion of the physical, cognitive, and

psycho-social aspects of development for the nominated developmental period to receive a mark of 9 or higher.

The marking rubric is also useful when you are reviewing your work prior to submission. You can use the rubric as a checklist to ensure that you have included all the key pieces of information. The total marks allocated for each criterion is useful as a guide to their relative importance in the assessment task. The section on Feedback in this chapter also discusses how you can use the feedback from your marked rubric.

ASSESSMENT WEIGHTING

The weighting of an assessment item refers to the amount, or proportion, that each assessment mark contributes to your final grade. You are likely to have multiple assessment items each contributing to the final grade for your subject. In the example shown in **Table 18.3**, the essay contributes to 25% of the final grade for the subject. The essay may be given a total possible mark of 100, which is then converted to a mark out of 25 for the subject. For example, if you receive 80 marks out of 100 for the essay, this will contribute 20 marks towards your final grade for the semester ($80 / 100 \times 25\%$).

Table 18.3 Relative weightings of assessment items for an example subject

Assessment item	Weighting
Annotated Bibliography	5%
Essay	25%
Short answer quiz	10%
Presentation	20%
End of semester exam	40%
	100%

Why is the weighting important? Apart from indicating how your final grade is determined, the weighting also indicates the relative contribution that each assessment piece makes to your final grade. This allows you to allocate more time to the assessment items that will impact your grade the most. For example, you don't want to spend 80 hours preparing the annotated bibliography, which contributes 5% towards the final grade, if that will only leave you with five hours to prepare your presentation, which makes up 20% of your final grade for the course. The final grade or score for your course is determined using the marks you receive on each of your contributing assessment items.

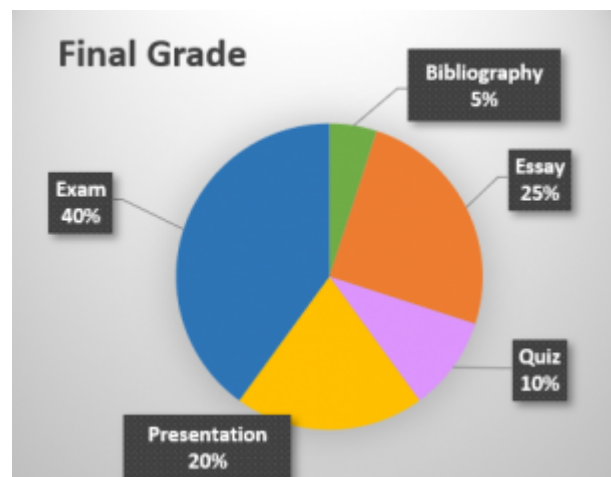


Figure 18.3 Assessment weights. Image by USQ.

PLANNING

Once you have understood the requirements of your assessment task, writing a plan will assist you to:

- Break the task into manageable sections

- Keep your assessment study time focused on what you need to be achieving
- Keep to your word limit

The chapter [Time Management](#) provides useful information about breaking larger tasks into smaller ones and managing your study time. Your time management strategy and study schedule should include time for finding relevant information, writing, reviewing, proofreading, editing your work and submitting your assessment. To begin planning your response, brainstorm key ideas. Next, try to organise these ideas using a concept map, table, or other visual organiser. This gives you an overview of the direction of your ideas. **Figure 18.4** is an example of a concept map for the assignment example



Figure 18.4 Concept map example. Image by UniSQ.

question provided earlier in the task analysis section in this chapter. From your concept map you can then determine the structure of your assessment, including definitions and terms you will need to include in your introduction. You can use your concept map to decide on the key points which will become the basis of your **topic sentences** (the main point) for each paragraph. Using a concept map to plan your structure will make your writing more coherent.

FINDING INFORMATION

You are usually going to need to find credible information once you understand the requirements of the assessment task. The chapter [Working with Information](#) provides guidance on finding and managing information. Remember to keep the reference information with any notes that you are taking, so you can appropriately cite this information.

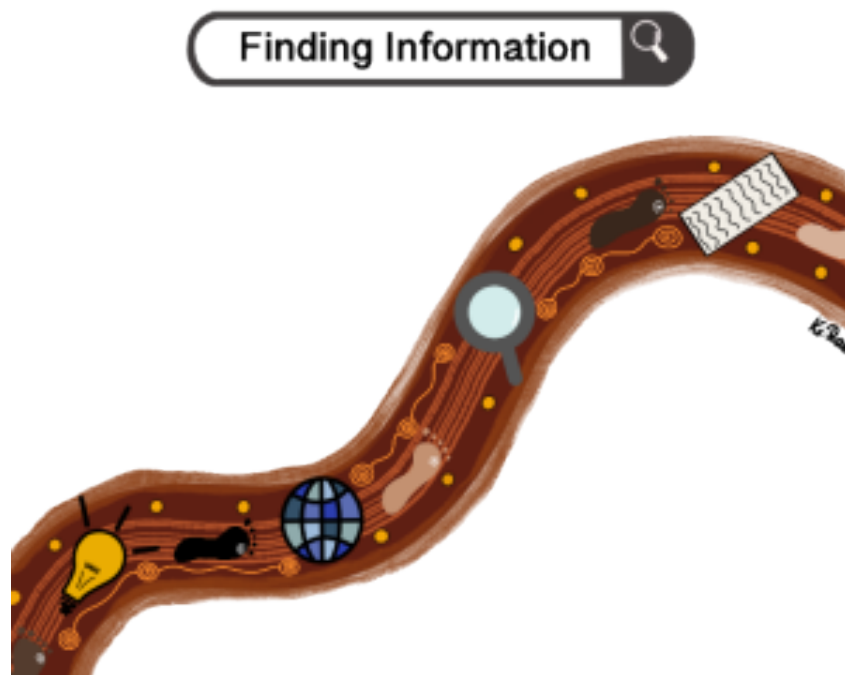


Figure 18.5 Spend time finding quality information for your assessment tasks. Image by Kc Rae, Aboriginal artist used under [CC BY-NC-ND licence](#).

WRITING YOUR ASSIGNMENT

You are now ready to write your assignment. Remember to refer to your original assignment plan, including which key points you will be making. You may need to revise your plan after you have found and read information related to the topic, for example if you found information about a new key point that you would like to make. This is where your plan becomes extremely useful. When you are writing, focus on writing each planned paragraph or topic. This will help you to concentrate on what is required for the task and prevent you from going off track.

The [English Language Foundations](#) chapter provides information about enhancing your writing and the [Types of Assignments](#) chapter provides additional information about writing specific sections and types of assignments. If you are preparing a presentation, then the [Presentations](#) chapter will be a useful guide.

REVISING AND REVIEWING

Allocate time for revising and reviewing your work before submitting. This allows you to find and fix small errors that could lose you marks. It is also an opportunity to review your entire document to ensure that your ideas are fully explained and linked to the assessment task. If possible, leave your writing for a couple of days before you start reviewing, editing and proofreading. This will allow you to see your work with ‘fresh eyes’ and you will be more likely to detect errors and inconsistencies. Review each of your sentences (e.g., correct punctuation, length, and spelling), paragraphs (e.g., clear topic sentences and credible appropriately cited evidence), and the document structure. You can also use the information from the [English Language Foundations](#) chapter and the editing and proofreading checklist tables in the [Writing Assignments](#) chapter as guides when reviewing your writing.

The marking rubric and task sheet can also be used as checklists to ensure that you have covered all the key aspects required for the assessment task. For example, check that you have:

- used the correct referencing style
- cited the required number of credible sources (if specified)
- provided information on all aspects of the assignment task
- used the required headings and formatting
- written within the required word count

Consider any previous feedback received on similar tasks to see if there are areas for improvement. For example, you may have received feedback that your writing lacks flow, therefore check how you have transitioned from one paragraph to another. (For more information refer to **Table 5.3** transition words and phrases in the [English Language Foundations](#) chapter). The [English Language Foundations](#) chapter also provides useful information about enhancing your writing and the chapters [Writing Assignments](#) and [Types of Assignments](#) provides additional information about writing specific sections and types of assignments.



Figure 18.6 Ensure that you allow time to review your work before you submit it. *Image by Wokingham Libraries used under CC0 licence.*

SUBMITTING

Don't forget to submit your assignment. Check that your submission has been accepted if you are submitting online and keep a copy of any assessments once submitted. Plan to reward yourself and acknowledge your achievement once you have submitted. Choose a reward that's meaningful to you.

FEEDBACK

What is feedback?

Feedback is information about how well you have performed a task. In tertiary education, it is a key tool that is used to promote student development. Understanding how to engage with your feedback and why it is important, is critical to your learning both at university and later in the workplace.

Forms of feedback

There are different forms of assessment related feedback that you may receive. Feedback can be given informally and verbally in class, within study groups, practical settings, or in conversations with lecturers or peers. Make sure you listen for feedback on your performance in these communications. Feedback is also regularly given informally and formally in written form. This may be comments on an online discussion forum, class activity, an assessment piece from your lecturer and in some cases from other students.



Figure 18.7 Reward yourself, in a way that's meaningful for you, when you submit your assessment. [Image by ShadOwfall](#) used under [CC0 licence](#).

Preparing for feedback

At university, staff and your peers provide you with verbal and written feedback to help you learn and develop. However, this feedback can only be effective if you are prepared to receive it. In practice this means you need to do the following:

- **Keep an open mind:** The person who provides you with feedback may be critical of your work. This feedback is an important feature of learning at university and it is meant to be constructive, not personal. Be prepared to consider it.
- **Be reflective:** To ensure that you are ready to use feedback, adopt a reflective mindset. This means reading or listening to comments and thinking about how you may use this information to improve your work.
- **Get ready to change:** Feedback is only effective if it is used. This means that you need to be prepared to act or change how you perform a task or engage in an activity in response to feedback. If you are unwilling to make changes, you limit the positive impact feedback can have.



Figure 18.8 Spend time reviewing your feedback. This will help you improve your future assessments as well as explain your assessment mark. Image by Kc Rae used under [CC BY-NC-ND licence](#).

Engaging with feedback

Once you have received feedback in class, online, in practicums or on a piece of assessment, you need to **engage** and **act on** it. This means you need to allow yourself time to review, think about, clarify, and apply feedback to your current and future work. As engaging with your feedback is part of the learning process, use your feedback to:

- Improve your work and/or practice
- Develop your skills
- Improve your marks

If you don't consider your feedback, then you may continue to lose marks or make the same mistakes in future assessments or tasks. Feedback is an ongoing process and includes:

- Constructive feedback on areas for improvement during your studies
- Feedback about your work. It is not about you as a person (try not to take it personally).

You need to make a conscious effort to change your work where necessary to facilitate your growth, development and learning.

Hints and tips for using feedback

There are several strategies you can utilise to take advantage of your feedback. Remember,

sometimes it helps to read through your feedback, then leave it for a while before engaging with it. Consider:

- What you did well?
- What can you improve for your next assessment?
- What information or support will you need to develop those skills?
- What did I get partial or no marks for? These are areas for improvement.

	5	4	3	2-5	2-1	0
5. Literacy and written communication skills (all sections)	Superb writing. Purposeful, well integrated and succinct academic writing which clearly conveys key points. No errors in vocabulary, grammar, punctuation, word choice, spelling, or organization.	Very good writing. Purposeful, well integrated and succinct academic writing which clearly conveys key points. Very minor errors in vocabulary, grammar, punctuation, word choice, spelling, and/or organization which do not affect comprehension and readability.	Good writing. Writing is generally academic in tone but may occasionally lack some focus, integration and/or succinctness and may be minor errors or instances of ineffective use of vocabulary, grammar, punctuation, word choice, spelling, and/or organization. Overall comprehension and readability is good.	Adequate writing. May be several errors and instances of ineffective use of vocabulary, grammar, punctuation, word choice, spelling, academic tone, and/or organization which obscure meaning some of the time.	Poor to very poor writing. The degree of errors in vocabulary, grammar, punctuation, word choice, academic tone, spelling, and/or organization is such that it is difficult to know what the writer is trying to express. The work does not meet the standard for a pass.	No work submitted/ no response/ irrelevant response.
8	10-9	8	7	6-5	4-1	0

Figure 18.9 Assignment feedback on marking rubric. Image by UniSQ.

In the example above, a mark of 8 / 10 has been allocated for the assignment criteria of *Literacy and written communication skills (all sections)*. This mark indicates that there are some minor errors in vocabulary, grammar, punctuation, word choice, spelling, and/or organisation. However, the writing was generally purposeful and clearly conveyed the main points. Consider the difference between the criteria for the mark received and the criteria for full marks. In this example, additional time editing and proofreading may be required to improve (see the chapters [English Language Foundations](#) and [Writing Assignments](#) for more information about editing and proofreading).

Dealing with negative feedback

We all make mistakes and have areas for improvement. Therefore, try not to be too hard on yourself. Put your feedback in perspective and remember, it's not personal. Importantly, use your feedback to your advantage and learn from it. Last but not least, ask for assistance, there are resources and people available to help you engage with your feedback and improve your skills. Seek clarification from your lecturer or tutor if you don't understand your assessment feedback.

Did you know?

- Markers are people too, and sometimes they make mistakes.
- Most errors are discovered in the moderation process, but occasionally a marking error slips through.
- If that has happened to you, then respectfully contact the course examiner to raise the error. Be clear and factual.
- Don't rush to ring the marker while you are angry or upset. Make sure your contact is respectful.
- Allow appropriate time for your marks to be reviewed.
- Being close to the next grade, or usually getting better marks, are not examples of errors in marking.

ACADEMIC INTEGRITY

Academic integrity includes, but is more than, correctly acknowledging the sources of any information that you use in your assignments (as discussed in the chapter [Integrity at University](#)). Academic integrity also involves engaging in behaviours and actions that are honest, respectful, and ethical.

According to the Tertiary Education Quality and Standards Agency (TEQSA; 2022), academic integrity is:

the expectation that teachers, students, researchers and all members of the academic community act with: honesty, trust, fairness, respect and responsibility.

Why is academic integrity important? Demonstrating academic integrity shows that you are honest, trustworthy, and responsible, each of which are critical behaviours for your future professional roles. Demonstrating academic integrity also means that you are not engaging in academic misconduct. Academic misconduct occurs when an action or behaviour is not consistent with academic integrity. Examples of actions or behaviours that represent academic misconduct include not attributing the work of other (plagiarising), working with other students to write and use an assignment (collusion), asking or paying others to complete your assignment for you or inappropriate use of artificial intelligence (contract cheating). It is recommended that you check with your university guidelines regarding their policy on academic integrity and the use of artificial intelligence. Most universities have formal processes to investigate academic misconduct and there are a range of penalties that may be applied when academic misconduct has occurred. Criteria related to academic integrity may also contribute to your overall mark for an assessment piece. For example, the marking rubric extract shown in **Figure 18.10** shows that a total of five marks is allocated to the application of referencing. The [Working with Information](#) chapter has additional information about appropriately acknowledging the source of information, including in-text citations and referencing.

6. Application of referencing & presentation style protocols (all sections)	Referencing (in text and reference list) and presentation conforms to APA style and is error free.	Referencing (in text and reference list) and presentation conforms to APA style but may be occasional minor formatting errors.	Referencing (in text and reference list) and presentation mostly conforms to APA style but may be some errors or inconsistencies.	Referencing (in text and reference list) and presentation is recognizable as APA style but contains many errors and inconsistencies.	Referencing (in text and reference list) consistently missing essential information and/or non-APA style applied or format is not recognisable as APA style. The work does not meet the standard for a pass.	No work submitted/ no response/ irrelevant response.
	5	4	3	2.5	2-1	0

Figure 18.10 Extract of a marking rubric. Used with permission from Course Examiner, Mark Oliver, University of Southern Queensland.

The purpose of this section is to highlight the importance of academic integrity and to provide you with information about appropriate practices and approaches. Each of the chapters in this book provides useful information to assist you in adopting practices that are consistent with academic integrity. (See the chapter [Integrity at University](#) for more information on academic integrity).

CONCLUSION

In this chapter we described some of the assessment information that you will receive in your courses. We discussed the importance of planning your assessment preparation and the steps involved. We examined the importance of understanding and applying feedback to improve your assessment and finished with an overview of academic integrity. It can be tempting to skip over reading the assessment information and planning stages, however these steps will save you time overall and contribute to your academic success.

Key points

- Your task sheet and marking rubric provide key information about your assessment task.
- Developing a plan for the assessment task will help you to keep on track.
- Allow time for reviewing and editing your work before submitting.
- Reward yourself for submitting your assessment.
- Understanding and engaging with your feedback is critical for success, and feedback is not intended to be personal.
- Academic integrity involves engaging in behaviours and actions that are honest, respectful, and ethical.
- Check your university's academic integrity policies regarding the use of artificial intelligence to ensure that you don't engage in academic misconduct.

REFERENCES

Tertiary Education Quality and Standards Agency. (2022). *Defining academic integrity*.
<https://www.teqsa.gov.au/students/understanding-academic-integrity/what-academic-integrity>

WRITING ASSIGNMENTS

KATE DERRINGTON; CRISTY BARTLETT; AND SARAH IRVINE



Figure 19.1 Assignments are a common method of assessment at university and require careful planning and good quality research.

Image by [Kampus Production](#) used under [CC0 licence](#).

INTRODUCTION

Assignments are a common method of assessment at university and require careful planning and good quality research. Developing critical thinking and writing skills are also necessary to demonstrate your ability to understand and apply information about your topic. It is not uncommon to be unsure about the processes of writing assignments at university.

- You may be returning to study after a break
- You may have come from an exam based assessment system and never written an assignment before
- Maybe you have written assignments but would like to improve your processes and strategies

This chapter has a collection of resources that will provide you with the skills and strategies to understand assignment requirements and effectively plan, research, write and edit your assignments. It begins with an explanation of how to analyse an assignment task and start putting your ideas together. It continues by breaking down the components of academic writing and exploring the elements you will need to master in your written assignments. This is followed by a discussion of paraphrasing and synthesis, and how you can use these strategies to create a strong,

written argument. The chapter concludes with useful checklists for editing and proofreading to help you get the best possible mark for your work.

TASK ANALYSIS AND DECONSTRUCTING AN ASSIGNMENT

It is important that before you begin researching and writing your assignments you spend sufficient time understanding all the requirements. This will help make your research process more efficient and effective. Check your subject information such as task sheets, criteria sheets and any additional information that may be in your subject portal online. Seek clarification from your lecturer or tutor if you are still unsure about how to begin your assignments.

The **task sheet** typically provides key information about an assessment including the assignment question. It can be helpful to scan this document for topic, task and limiting words to ensure that you fully understand the concepts you are required to research, how to approach the assignment, and the scope of the task you have been set. These words can typically be found in your assignment question and are outlined in more detail in the two tables below (see **Table 19.1** and **Table 19.2**).

TABLE 19.1 PARTS OF AN ASSIGNMENT QUESTION

Topic words	These are words and concepts you have to research and write about.
Task words	These will tell you how to approach the assignment and structure the information you find in your research (e.g., discuss, analyse).
Limiting words	These words define the scope of the assignment, e.g., Australian perspectives, relevant codes or standards or a specific timeframe.

Make sure you have a clear understanding of what the task word requires you to address.

TABLE 19.2 TASK WORDS

Task word	Definition	Example
Account for	Give reasons for or explain why something has occurred. This task directs you to consider contributing factors to a certain situation or event. You are expected to make a decision about why these occurred, not just describe the events.	Account for the factors that led to the global financial crisis.
Analyse	Consider the different elements of a concept, statement or situation. Show the different components and show how they connect or relate. Your structure and argument should be logical and methodical.	Analyse the political, social and economic impacts of climate change.
Assess	Make a judgement on a topic or idea. Consider its reliability, truth and usefulness. In your judgement, consider both the strengths and weaknesses of the opposing arguments to determine your topic's worth (similar to evaluate).	Assess the efficacy of cognitive behavioural therapy (CBT) for the treatment of depression.
Classify	Divide your topic into categories or sub-topics logically (could possibly be part of a more complex task).	Classify the artists studied this semester according to the artistic periods they best represent. Then choose one artist and evaluate their impact on future artists.
Comment on	State your opinion on an issue or idea. You may explain the issue or idea in more detail. Be objective and support your opinion with reliable evidence.	Comment on the government's proposal to legalise safe injecting rooms.
Compare OR Compare and contrast	Show the similarities and differences between two or more ideas, theories, systems, arguments or events. You are expected to provide a balanced response, highlighting similarities and differences.	Compare the efficiency of wind and solar power generation for a construction site.
Contrast	Point out only the differences between two or more ideas, theories, systems, arguments or events.	Contrast virtue ethics and utilitarianism as models for ethical decision making.
Critically (this is often used with another task word, e.g. critically evaluate, critically analyse, critically discuss)	It does not mean to criticise, instead you are required to give a balanced account, highlighting strengths and weaknesses about the topic. Your overall judgment must be supported by reliable evidence and your interpretation of that evidence.	Critically analyse the impacts of mental health on recidivism within youth justice.
Define	Provide a precise meaning of a concept. You may need to include the limits or scope of the concept within a given context.	Define digital disruption as it relates to productivity.
Describe	Provide a thorough description, emphasising the most important points. Use words to show appearance, function, process, events or systems. You are not required to make judgements.	Describe the pathophysiology of Asthma.
Distinguish	Highlight the differences between two (possibly confusing) items.	Distinguish between exothermic and endothermic reactions.
Discuss	Provide an analysis of a topic. Use evidence to support your argument. Be logical and include different perspectives on the topic (This requires more than a description).	Discuss how Bronfenbrenner's ecological system's theory applies to adolescence.
Evaluate	Review both positive and negative aspects of a topic. You may need to provide an overall judgement regarding the value or usefulness of the topic. Evidence (referencing) must be included to support your writing.	Evaluate the impact of inclusive early childhood education programs on subsequent high school completion rates for First Nations students.
Explain	Describe and clarify the situation or topic. Depending on your discipline area and topic, this may include processes, pathways, cause and effect, impact, or outcomes.	Explain the impact of the COVID-19 pandemic on the film industry in Australia.
Illustrate	Clarify a point or argument with examples and evidence.	Illustrate how society's attitudes to disability have changed from a medical model to a wholistic model of disability.

Task word	Definition	Example
Justify	Give evidence which supports an argument or idea; show why a decision or conclusions were made. Justify may be used with other topic words, such as outline, argue.	Write a report outlining the key issues and implications of a welfare cashless debit card trial and make three recommendations for future improvements. Justify your decision-making process for the recommendations.
Review	A comprehensive description of the situation or topic which provides a critical analysis of the key issues.	Provide a review of Australia's asylum policies since the Pacific Solution in 2001.
Summarise	An overview or brief description of a topic. (This is likely to be part of a larger assessment task.)	Summarise the process for calculating the correct load for a plane.

The **criteria sheet**, also known as the marking sheet or rubric, is another important document to look at before you begin your assignment. The criteria sheet outlines how your assignment will be marked and should be used as a checklist to make sure you have included all the information required.

The task or criteria sheet will also include the:

- Due date
- Word limit (or word count)
- Referencing style and research expectations
- Formatting requirements

Task analysis and criteria sheets are also discussed in the chapter [Managing Assessments](#) for a more detailed discussion on task analysis, criteria sheets, and marking rubrics.

Preparing your ideas

Brainstorm or concept map: List possible ideas to address each part of the assignment task based on what you already know about the topic from lectures and weekly readings.

Finding appropriate information: Learn how to find scholarly information for your assignments which is

- accurate
- recent
- reliable

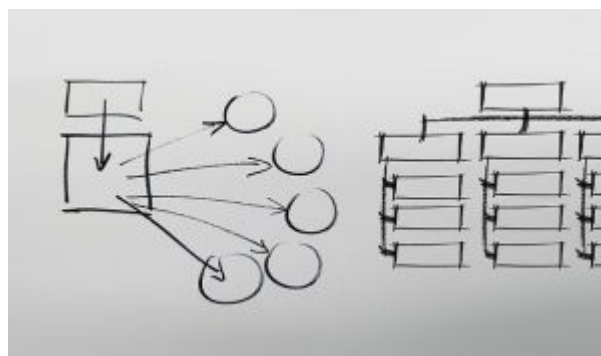


Figure 19.2 A concept map is a good way to prepare your ideas. *Image by Gerd Altmann used under CC0 licence.*

See the chapter [Working With Information](#) for a more detailed explanation.

WHAT IS ACADEMIC WRITING?

Academic writing tone and style

Many of the assessment pieces you prepare will require an academic writing style. This is sometimes called 'academic tone' or 'academic voice'. This section will help you to identify what is required when you are writing academically (see **Table 19.3**). The best way to understand what academic writing looks like, is to read broadly in your discipline area. Look at how your

course readings, or scholarly sources, are written. This will help you identify the language of your discipline field, as well as how other writers structure their work.

TABLE 19.3 COMPARISON OF ACADEMIC AND NON-ACADEMIC WRITING

Academic writing	Non-academic writing
Is clear, concise and well-structured	Is verbose and may use more words than are needed
Is formal. It writes numbers under twenty in full.	Writes numbers under twenty as numerals and uses symbols such as “&” instead of writing it in full
Is reasoned and supported (logically developed)	Uses humour (puns, sarcasm)
Is authoritative (writes in third person- This essay argues...)	Writes in first person (I think, I found)
Utilises the language of the field/industry/ subject	Uses colloquial language e.g., mate

Thesis statements

Essays are a common form of assessment that you will likely encounter during your university studies. You should apply an academic tone and style when writing an essay, just as you would in in your other assessment pieces. One of the most important steps in writing an essay is constructing your thesis statement. A thesis statement tells the reader the purpose, argument or direction you will take to answer your assignment question. A thesis statement may not be relevant for some questions, if you are unsure check with your lecturer. The thesis statement:

- Directly *relates to the task*. Your thesis statement may even contain some of the key words or synonyms from the task description.
- Does *more than restate* the question.
- *Is specific* and uses precise language.
- Let’s your reader know *your position* or the main argument that you will support with evidence throughout your assignment.
- Usually has two parts: *subject and contention*.
 - *The subject* is the key content area you will be covering.
 - *The contention* is the position you are taking in relation to the chosen content.

Your thesis statement helps you to structure your essay. It plays a part in each key section: introduction, body and conclusion.

Planning your assignment structure

When planning and drafting assignments, it is important to consider the structure of your writing. Academic writing should have clear and logical structure and incorporate academic research to support your ideas. It can be hard to get started and at first you may feel nervous about the size of the task, this is normal. If you break your assignment into smaller pieces, it will seem more manageable as you can approach the task in sections. Refer to your brainstorm or plan. These ideas should guide your research and will also inform what you write in your draft. It is sometimes easier to draft your assignment using the 2-3-1 approach, that is, write the body paragraphs first followed by the conclusion and finally the introduction.

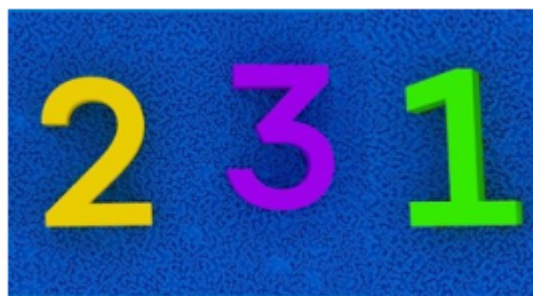


Figure 19.3 It is sometimes easier to draft your assignment using the 2-3-1 approach. Image by [Sam Karanja](#) used under [CCO licence](#).

Writing introductions and conclusions

Clear and purposeful introductions and conclusions in assignments are fundamental to effective academic writing. Your introduction should tell the reader what is going to be covered and how you intend to approach this. Your conclusion should summarise your argument or discussion and signal to the reader that you have come to a conclusion with a final statement. These tips below are based on the requirements usually needed for an essay assignment, however, they can be applied to other assignment types.

Writing introductions

Most writing at university will require a strong and logically structured introduction. An effective introduction should provide some background or context for your assignment, clearly state your thesis and include the key points you will cover in the body of the essay in order to prove your thesis.

Usually, your introduction is approximately 10% of your total assignment word count. It is much easier to write your introduction once you have drafted your body paragraphs and conclusion, as you know what your assignment is going to be about. An effective introduction needs to inform your reader by establishing what the paper is about and provide four basic things:

- A brief background or overview of your assignment topic
- A thesis statement (see section above)
- An outline of your essay structure
- An indication of any parameters or scope that will/ will not be covered, e.g. From an



Figure 19.4 Start your academic writing with a strong and logically structured introduction. Image by [Gerd Altmann](#) used under [CCO licence](#).

Australian perspective.

The below example demonstrates the four different elements of an introductory paragraph.

1) Information technology is having significant effects on the communication of individuals and organisations in different professions. 2) This essay will discuss the impact of information technology on the communication of health professionals. 3) First, the provision of information technology for the educational needs of nurses will be discussed. 4) This will be followed by an explanation of the significant effects that information technology can have on the role of general practitioner in the area of public health. 5) Considerations will then be made regarding the lack of knowledge about the potential of computers among hospital administrators and nursing executives. 6) The final section will explore how information technology assists health professionals in the delivery of services in rural areas. 7) It will be argued that information technology has significant potential to improve health care and medical education, but health professionals are reluctant to use it.

1 Brief background/ overview | 2 Indicates the scope of what will be covered | 3-6 Outline of the main ideas (structure) | 7 The thesis statement

Note: The examples in this document are taken from the University of Canberra and used under a [CC-BY-SA-3.0 licence](#).

Writing conclusions

You should aim to end your assignments with a strong conclusion. Your conclusion should restate your thesis and summarise the key points you have used to prove this thesis. Finish with a key point as a final impactful statement. Similar to your introduction, your conclusion should be approximately 10% of the total assignment word length. If your assessment task asks you to make recommendations, you may need to allocate more words to the conclusion or add a separate recommendations section before the conclusion. Use the checklist below to check your conclusion is doing the right job.

Conclusion checklist

- Have you referred to the assignment question and restated your argument (or thesis statement), as outlined in the introduction?
- Have you pulled together all the threads of your essay into a logical ending and given it a sense of unity?
- Have you presented implications or recommendations in your conclusion? (if required by your task).
- Have you added to the overall quality and impact of your essay? This is your final statement about this topic; thus, a key take-away point can make a great impact on the reader.
- Remember, do not add any new material or direct quotes in your conclusion.

This below example demonstrates the different elements of a concluding paragraph.

1) It is evident, therefore, that not only do employees need to be trained for working in the Australian multicultural workplace, but managers also need to be trained. 2) Managers must ensure that effective in-house training programs are provided for migrant workers, so that they become more familiar with the English language, Australian communication norms and the Australian work culture. 3) In addition, Australian native English speakers need to be made aware of the differing cultural values of their workmates; particularly the different forms of non-verbal communication used by other cultures. 4) Furthermore, all employees must be provided with clear and detailed guidelines about company expectations. 5) Above all, in order to minimise communication problems and to maintain an atmosphere of tolerance, understanding and cooperation in the multicultural workplace, managers need to have an effective knowledge about their employees. This will help employers understand how their employee's social conditioning affects their beliefs about work. It will develop their communication skills to develop confidence and self-esteem among diverse work groups. 6) The culturally diverse Australian workplace may never be completely free of communication problems, however, further studies to identify potential problems and solutions, as well as better training in cross cultural communication for managers and employees, should result in a much more understanding and cooperative environment.

1 Reference to thesis statement – In this essay the writer has taken the position that training is required for both employees and employers. | 2-5 Structure overview – Here the writer pulls together the main ideas in the essay. | 6 Final summary statement that is based on the evidence.

Note: The examples in this document are taken from the University of Canberra and used under a [CC-BY-SA-3.0 licence](#).

Writing paragraphs

Paragraph writing is a key skill that enables you to incorporate your academic research into your written work. Each paragraph should have its own clearly identified topic sentence or main idea which relates to the argument or point (thesis) you are developing. This idea should then be explained by additional sentences which you have paraphrased from good quality sources and referenced according to the recommended guidelines of your subject (see the chapter [Working with Information](#)). Paragraphs are characterised by increasing specificity; that is, they move from the general to the specific, increasingly refining the reader's understanding. A common structure for paragraphs in academic writing is as follows.

Topic Sentence

This is the main idea of the paragraph and should relate to the overall issue or purpose of your assignment is addressing. Often it will be expressed as an assertion or claim which supports the overall argument or purpose of your writing.

Explanation/ Elaboration

The main idea must have its meaning explained and elaborated upon. Think critically, do not just describe the idea.

Evidence

These explanations must include evidence to support your main idea. This information should be paraphrased and referenced according to the appropriate referencing style of your course.

Concluding sentence (critical thinking)

This should explain why the topic of the paragraph is relevant to the assignment question and link to the following paragraph.

Use the checklist below to check your paragraphs are clear and well formed.

Paragraph checklist

- Does your paragraph have a clear main idea?
- Is everything in the paragraph related to this main idea?
- Is the main idea adequately developed and explained?
- Do your sentences run together smoothly?
- Have you included evidence to support your ideas?
- Have you concluded the paragraph by connecting it to your overall topic?

Writing sentences

Make sure all the sentences in your paragraphs make sense. Each sentence must contain a verb to be a complete sentence. Avoid *sentence fragments*. These are incomplete sentences or ideas that are unfinished and create confusion for your reader. Avoid also *run on sentences*. This happens when you join two ideas or clauses without using the appropriate punctuation. This also confuses your meaning (See the chapter [English Language Foundations](#) for examples and further explanation).

Use transitions (linking words and phrases) to connect your ideas between paragraphs and make your writing flow. The order that you structure the ideas in your assignment should reflect the structure you have outlined in your introduction. Refer to transition words table in the chapter [English Language Foundations](#).

PARAPHRASING AND SYNTHESISING

Paraphrasing and synthesising are powerful tools that you can use to support the main idea of a paragraph. It is likely that you will regularly use these skills at university to incorporate evidence into explanatory sentences and strengthen your essay. It is important to paraphrase and synthesise because:

- Paraphrasing is regarded more highly at university than direct quoting.
- Paraphrasing can also help you better understand the material.
- Paraphrasing and synthesising demonstrate you have understood what you have read through your ability to summarise and combine arguments from the literature using your own words.

What is paraphrasing?

Paraphrasing is changing the writing of another author into your words while retaining the original meaning. You must acknowledge the original author as the source of the information in your citation. Follow the steps in this table to help you build your skills in paraphrasing (see **Table 19.4**).

TABLE 19.4 PARAPHRASING TECHNIQUES

- 1 Make sure you understand what you are reading. Look up keywords to understand their meanings.
- 2 Record the details of the source so you will be able to cite it correctly in text and in your reference list.
- 3 Identify words that you can change to synonyms (but do not change the key/topic words).
- 4 Change the type of word in a sentence (for example change a noun to a verb or vice versa).
- 5 Eliminate unnecessary words or phrases from the original that you don't need in your paraphrase.
- 6 Change the sentence structure (for example change a long sentence to several shorter ones or combine shorter sentences to form a longer sentence).

Example of paraphrasing

Please note that these examples and in text citations are for instructional purposes only.

Original text

Health care professionals assist people often when they are at their most **vulnerable**. To provide the **best care** and understand their needs, workers must demonstrate **good communication skills**. They must develop patient **trust and provide empathy** to effectively work with patients who are experiencing a **variety of situations** including those who may be suffering from trauma or violence, physical or mental illness or substance abuse (French & Saunders, 2018).

Poor quality paraphrase example

This is a poor example of paraphrasing. Some synonyms have been used and the order of a few words changed within the sentences however the colours of the sentences indicate that the paragraph follows the same structure as the original text.

Health care sector workers are often responsible for **vulnerable** patients. To understand patients and deliver **good service**, they need to be **excellent communicators**. They must establish patient **rapport and show empathy** if they are to successfully care for patients from a **variety of backgrounds** and with different medical, psychological and social needs (French & Saunders, 2018).

A good quality paraphrase example

This example demonstrates a better quality paraphrase. The author has demonstrated more understanding of the overall concept in the text by using the keywords as the basis to reconstruct the paragraph. Note how the blocks of colour have been broken up to see how much the structure has changed from the original text.

Empathetic communication is a vital skill for health care workers. Professionals in these fields are often responsible for patients with complex medical, psychological and social needs. Empathetic communication assists in building rapport and gaining the necessary trust to assist these vulnerable patients by providing appropriate supportive care (French & Saunders, 2018).

The good quality paraphrase example demonstrates understanding of the overall concept in the text by using key words as the basis to reconstruct the paragraph. Note how the blocks of colour have been broken up, which indicates how much the structure has changed from the original text.

What is synthesising?

Synthesising means to bring together more than one source of information to strengthen your argument. Once you have learnt how to paraphrase the ideas of one source at a time, you can consider adding additional sources to support your argument. Synthesis demonstrates your understanding and ability to show connections between multiple pieces of evidence to support your ideas and is a more advanced academic thinking and writing skill.

Follow the steps in this table to improve your synthesis techniques (see **Table 19.5**).

TABLE 19.5 SYNTHESISING TECHNIQUES

1	Check your referencing guide to learn how to correctly reference more than one author at a time in your paper.
2	While taking notes for your research, try organising your notes into themes. This way you can keep similar ideas from different authors together.
3	Identify similar language and tone used by authors so that you can group similar ideas together.
4	Synthesis can not only be about grouping ideas together that are similar, but also those that are different. See how you can contrast authors in your writing to also strengthen your argument.

Example of synthesis

There is a relationship between academic procrastination and mental health outcomes.

Procrastination has been found to have a negative effect on students' well-being (Balkis, & Duru, 2016). Yerdelen, McCaffrey, and Klassens' (2016) research results suggested that there was a positive association between procrastination and anxiety. This was corroborated by Custer's (2018) findings which indicated that students with higher levels of procrastination also reported greater levels of the anxiety. Therefore, it could be argued that procrastination is an ineffective learning strategy that leads to increased levels of distress.

Topic sentence | Statements using paraphrased evidence | Critical thinking (student voice) |
Concluding statement – linking to topic sentence

This example demonstrates a simple synthesis. The author has developed a paragraph with one central theme and included explanatory sentences complete with in-text citations from multiple sources. Note how the blocks of colour have been used to illustrate the paragraph structure and synthesis (i.e., statements using paraphrased evidence from several sources). A more complex synthesis may include more than one citation per sentence.

CREATING AN ARGUMENT

What does this mean?

Throughout your university studies, you may be asked to 'argue' a particular point or position in your writing. You may already be familiar with the idea of an argument, which in general terms means to have a disagreement with someone. Similarly, in academic writing, if you are asked to create an argument, this means you are asked to have a position on a particular topic, and then justify your position using evidence.

What skills do you need to create an argument?

In order to create a good and effective argument, you need to be able to:

- Read critically to find evidence
- Plan your argument
- Think and write critically throughout your paper to enhance your argument

For tips on how to read and write critically, refer to the chapter [Thinking](#) for more information. A formula for developing a strong argument is presented below.

A formula for a good argument

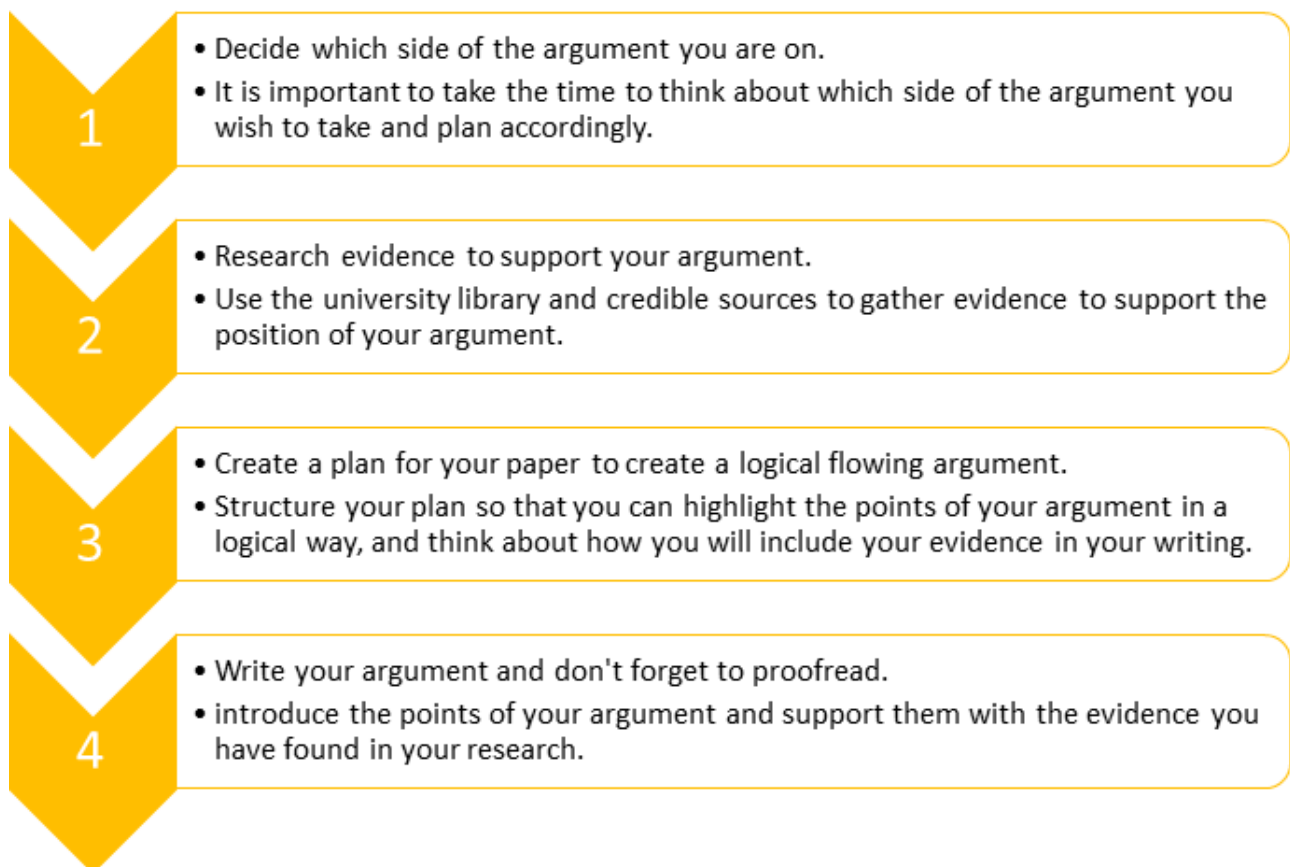


Figure 19.5 A formula for a good argument. Image by USQ.

What does an argument look like?

As can be seen from the figure above, including evidence is a key element of a good argument. While this may seem like a straightforward task, it can be difficult to think of wording to express your argument. The table below provides examples of how you can illustrate your argument in academic writing (see **Table 19.6**).

TABLE 19.6 ARGUMENT

Introducing your argument	<ul style="list-style-type: none"> • This paper will argue/claim that... • ...is an important factor/concept/idea/ to consider because... • ... will be argued/outlined in this paper.
Introducing evidence for your argument	<ul style="list-style-type: none"> • Smith (2014) outlines that.... • This evidence demonstrates that... • According to Smith (2014)... • For example, evidence/research provided by Smith (2014) indicates that...
Giving the reason why your point/evidence is important	<ul style="list-style-type: none"> • Therefore this indicates... • This evidence clearly demonstrates.... • This is important/significant because... • This data highlights...
Concluding a point	<ul style="list-style-type: none"> • Overall, it is clear that... • Therefore, ... are reasons which should be considered because... • Consequently, this leads to.... • The research presented therefore indicates...

Editing and proofreading (reviewing)

Once you have finished writing your first draft it is recommended that you spend time revising your work. Proofreading and editing are two different stages of the revision process.

- Editing considers the overall focus or bigger picture of the assignment
- Proofreading considers the finer details

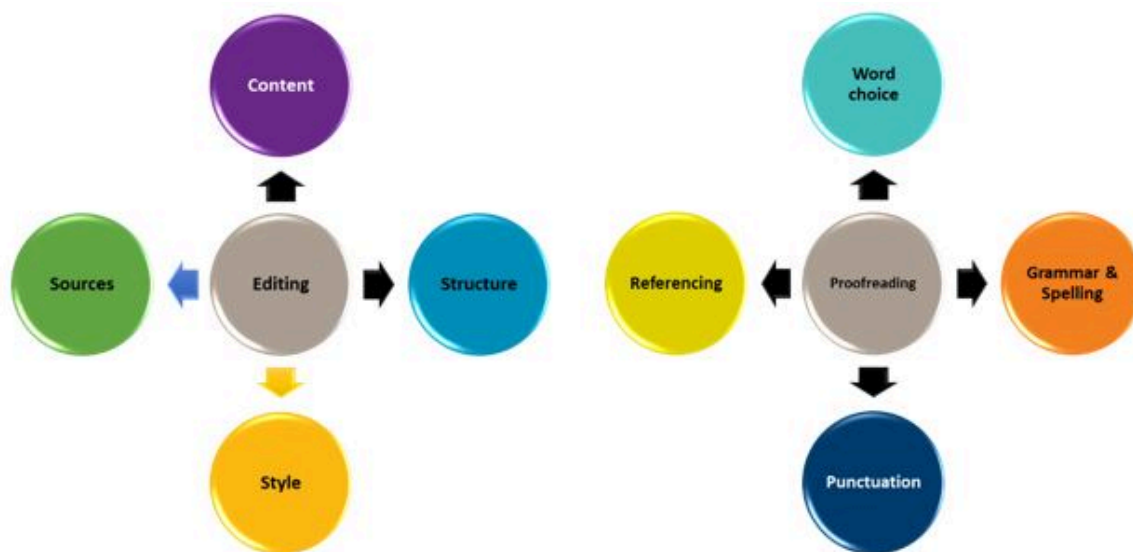


Figure 19.6 Editing and proofreading processes to complete at completion of writing 1st draft of assignment. Image by USQ.

As can be seen in the figure above there are four main areas that you should review during the editing phase of the revision process. The main things to consider when editing include content, structure, style, and sources. It is important to check that all the content relates to the assignment task, the structure is appropriate for the purposes of the assignment, the writing is academic in style, and that sources have been adequately acknowledged. Use the checklist below when editing your work.

Editing checklist

- Have I answered the question accurately?
- Do I have enough credible, scholarly supporting evidence?
- Is my writing tone objective and formal enough or have I used emotive and informal language?
- Have I written in the third person not the first person?
- Do I have appropriate in-text citations for all my information?
- Have I included the full details for all my in-text citations in my reference list?

There are also several key things to look out for during the proofreading phase of the revision process. In this stage it is important to check your work for word choice, grammar and spelling, punctuation and referencing errors. It can be easy to mis-type words like 'from' and 'form' or mix up words like 'trail' and 'trial' when writing about research, apply American rather than Australian spelling, include unnecessary commas or incorrectly format your references list. The checklist below is a useful guide that you can use when proofreading your work.

Proofreading checklist

- Is my spelling and grammar accurate?
- Are my sentences sensible?
 - Are they complete?
 - Do they all make sense?
 - Do they only contain only one idea?
 - Do the different elements (subject, verb, nouns, pronouns) within my sentences agree?
 - Are my sentences too long and complicated?
 - Do they contain only one idea per sentence?
- Is my writing concise? Take out words that do not add meaning to your sentences.
- Have I used appropriate discipline specific language but avoided words I don't know or understand that could possibly be out of context?
- Have I avoided discriminatory language and colloquial expressions (slang)?
- Is my referencing formatted correctly according to my assignment guidelines? (for more information on referencing refer to the *Managing Assessment* feedback section).

CONCLUSION

This chapter has examined the experience of writing assignments. It began by focusing on how to read and break down an assignment question, then highlighted the key components of essays. Next, it examined some techniques for paraphrasing and summarising, and how to build an argument. It concluded with a discussion on planning and structuring your assignment and giving

it that essential polish with editing and proof-reading. Combining these skills and practising them, can greatly improve your success with this very common form of assessment.

Key points

- Academic writing requires clear and logical structure, critical thinking and the use of credible scholarly sources.
- A thesis statement is important as it tells the reader the position or argument you have adopted in your assignment. Not all assignments will require a thesis statement.
- Spending time analysing your task and planning your structure before you start to write your assignment is time well spent.
- Information you use in your assignment should come from credible scholarly sources such as textbooks and peer reviewed journals. This information needs to be paraphrased and referenced appropriately.
- Paraphrasing means putting something into your own words and synthesising means to bring together several ideas from sources.
- Creating an argument is a four step process and can be applied to all types of academic writing.
- Editing and proofreading are two separate processes.

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TYPES OF ASSIGNMENTS

CRISTY BARTLETT AND KATE DERRINGTON



Figure 20.1 By recognising different types of assignments and understanding the purpose of the task, you can direct your writing skills effectively to meet task requirements. [Image](#) by [Armin Rimoldi](#) used under [CCO licence](#).

INTRODUCTION

As discussed in the previous chapter, assignments are a common method of assessment at university. You may encounter many assignments over your years of study, yet some will look quite different from others. By recognising different types of assignments and understanding the purpose of the task, you can direct your writing skills effectively to meet task requirements. This chapter draws on the skills from the previous chapter, and extends the discussion, showing you where to aim with different types of assignments.

The chapter begins by exploring the popular **essay** assignment, with its two common categories, analytical and argumentative essays. It then examines assignments requiring **case study responses**, as often encountered in fields such as health or business. This is followed by a discussion of assignments seeking a **report** (such as a scientific report) and **reflective writing** assignments, common in nursing, education and human services. The chapter concludes with an examination of annotated bibliographies and literature reviews. The chapter also has a selection of templates and examples throughout to enhance your understanding and improve the efficacy of your assignment writing skills.

DIFFERENT TYPES OF WRITTEN ASSIGNMENTS

ESSAY

At university, an essay is a common form of assessment. In the previous chapter [Writing Assignments](#) we discussed what was meant by showing academic writing in your assignments. It is important that you consider these aspects of structure, tone and language when writing an essay.

Components of an essay

Essays should use formal but reader friendly language and have a clear and logical structure. They must include research from credible academic sources such as peer reviewed journal articles and textbooks. This research should be referenced throughout your essay to support your ideas (See the chapter [Working with Information](#)).

If you have never written an essay before, you may feel unsure about how to start. Breaking your essay into sections and allocating words accordingly will make this process more manageable and will make planning the overall essay structure much easier.

- An essay requires an introduction, body paragraphs and a conclusion.
- Generally, an introduction and conclusion are approximately 10% each of the total word count.
- The remaining words can then be divided into sections and a paragraph allowed for each area of content you need to cover.
- Use your task and criteria sheet to decide what content needs to be in your plan

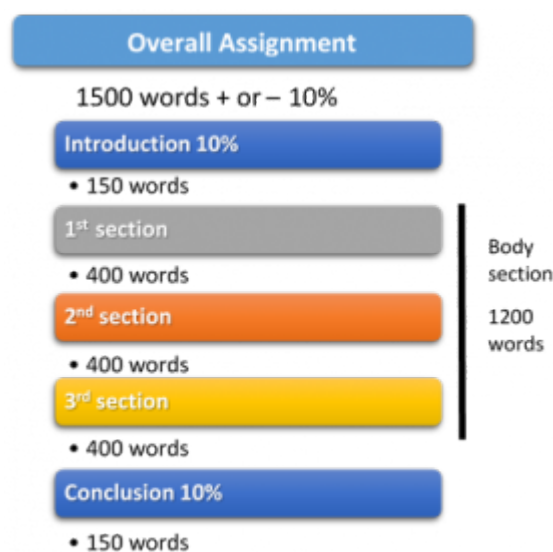


Figure 20.2 Demonstrating how to plan and allocate words for an assignment task. Image by USQ.

An effective essay introduction needs to inform your reader by doing four basic things:

TABLE 20.1 AN EFFECTIVE ESSAY

1	Engage their interest and provide a brief background of the topic.
2	Provide a thesis statement. This is the position or argument you will adopt. (Note a thesis statement is not always required. Check with your tutor).
3	Outline the structure of the essay.
4	Indicate any parameters or scope that will/will not be covered.

An effective essay body paragraph needs to:

- 1 State the topic sentence or main point of the paragraph. If you have a thesis statement, the topic sentence should relate to this.
- 2 Expand this main idea, define any terminology and explain concepts in more depth.
- 3 This information should be paraphrased and referenced from credible sources according to the appropriate referencing style of your course.
- 4 Demonstrate critical thinking by showing the relationship of the point you are making and the evidence you have included. This is where you introduce your “student voice”. Ask yourself the “So what?” question (as outlined in the critical thinking section) to add a discussion or interpretation of the how evidence you have included in your paragraph is relevant to your topic.
- 5 Conclude your idea and link to your next point.

An effective essay conclusion needs to:

- 1 Summarise or state the main points covered, using past tense.
- 2 Provide an overall conclusion that relates to the thesis statement or position you raised in your introduction.
- 3 Not add any new information.

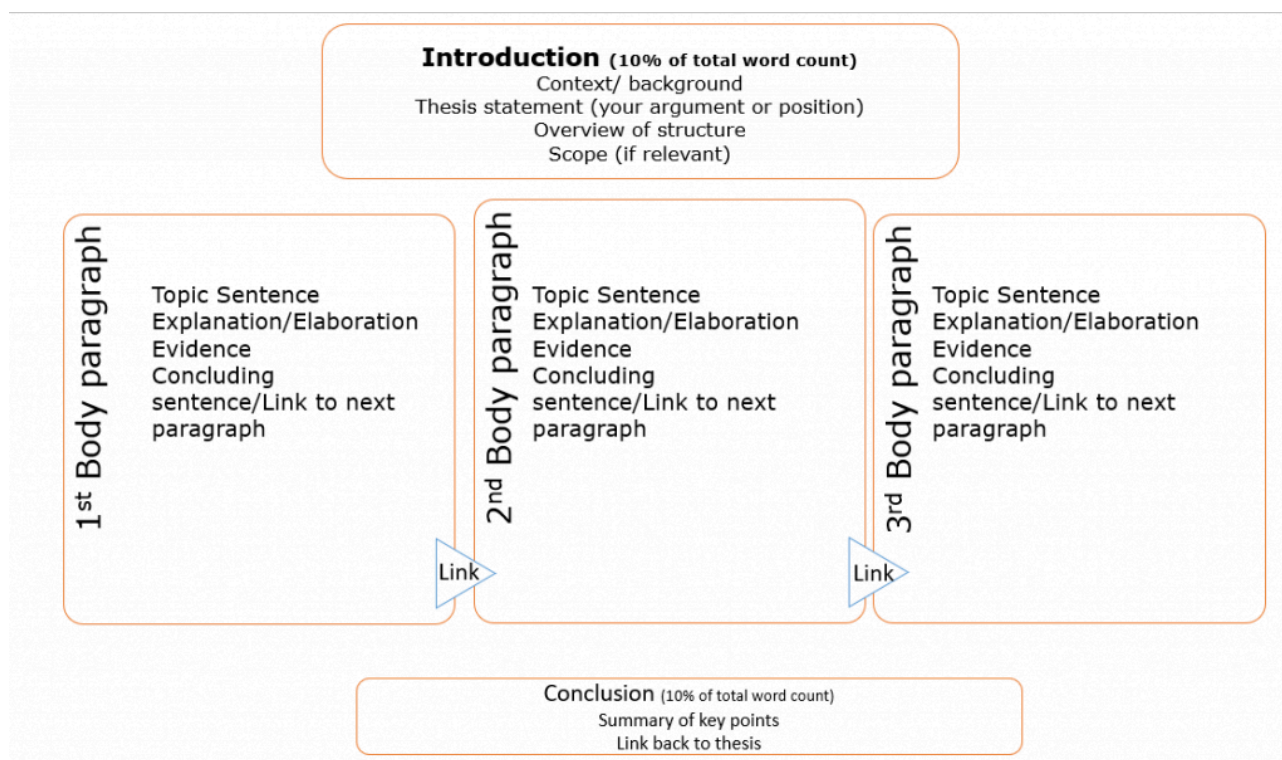


Figure 20.3 Essay structure overview template figure. Image by USQ.

Common types of essays

You may be required to write different types of essays, depending on your study area and topic. Two of the most commonly used essays are **analytical** and **argumentative**. The task analysis process discussed in the previous chapter [Writing Assignments](#) will help you determine the type of essay required. For example, if your assignment question uses task words such as analyse, examine, discuss, determine or explore, you would be writing an **analytical essay**. If your assignment question has task words such as argue, evaluate, justify or assess, you would be writing an **argumentative essay**. Despite the type of essay, your ability to analyse and think critically is important and common across genres.

Analytical essays

These essays usually provide some background description of the relevant theory, situation, problem, case, image, etcetera that is your topic. Being analytical requires you to look carefully at various components or sections of your topic in a methodical and logical way to create understanding.

The purpose of the analytical essay is to demonstrate your ability to examine the topic thoroughly. This requires you to go deeper than description by considering different sides of the situation, comparing and contrasting a variety of theories and the positives and negatives of the topic. Although in an analytical essay your position on the topic may be clear, it is not necessarily a requirement that you explicitly identify this with a thesis statement, as is the case with an argumentative essay. If you are unsure whether you are required to take a position, and provide a thesis statement, it is best to check with your tutor.



Figure 20.4 The purpose of the analytical essay is to demonstrate your ability to examine the topic thoroughly. [Image](#) by [Anete Lusina](#) used under [CC0 licence](#).

Argumentative essays

These essays require you to take a position on the assignment topic. This is expressed through your thesis statement in your introduction. You must then present and develop your arguments throughout the body of your assignment using logically structured paragraphs. Each of these paragraphs needs a topic sentence that relates to the thesis statement. In an argumentative essay, you must reach a conclusion based on the evidence you have presented.

CASE STUDY RESPONSES

Case studies are a common form of assignment in many study areas and students can underperform in this genre for a number of key reasons.

Students typically lose marks for not:

- Relating their answer sufficiently to the case details
- Applying critical thinking
- Writing with clear structure
- Using appropriate or sufficient sources
- Using accurate referencing

When structuring your response to a case study, remember to refer to the case. Structure your paragraphs similarly to an essay paragraph structure but include examples and data from the case as additional evidence to support your points (see **Figure 20.5**). The colours in the sample paragraph below show the function of each component.

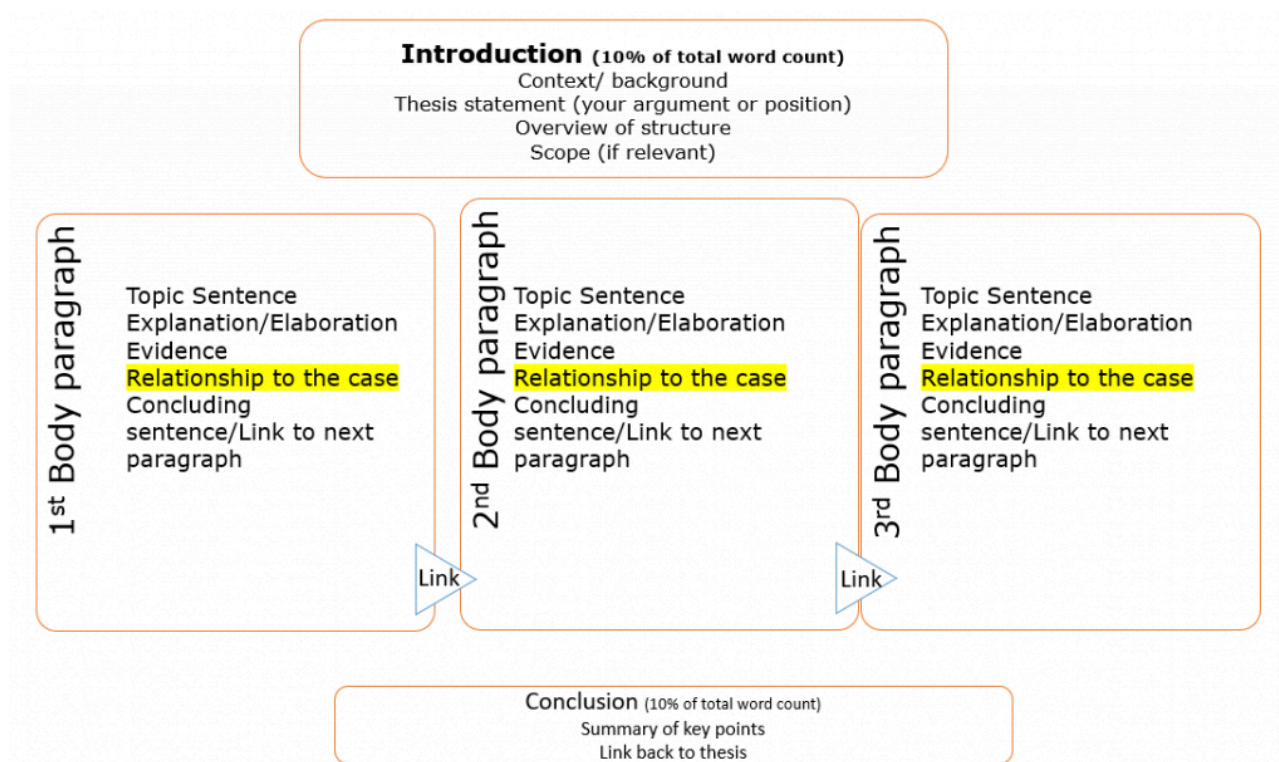


Figure 20.5 Case study response structure template. Image by USQ.

The Nursing and Midwifery Board of Australia (NMBA) Code of Conduct and Nursing Standards (2018) play a crucial role in determining the scope of practice for nurses and midwives. A key component discussed in the code is the provision of person-centred care and the formation of therapeutic relationships between nurses and patients (NMBA, 2018). This ensures patient safety and promotes health and wellbeing (NMBA, 2018). The standards also discuss the importance of partnership and shared decision-making in the delivery of care (NMBA, 2018, 4). Boyd and Dare (2014) argue that good communication skills are vital for building therapeutic relationships and trust between patients and care givers. This will help ensure the patient is treated with dignity and respect and improve their overall hospital experience. In the case, the therapeutic relationship with the client has been compromised in several ways. Firstly, the nurse did not conform adequately to the guidelines for seeking informed consent before performing the examination as outlined in principle 2.3 (NMBA, 2018). Although she explained the procedure, she failed to give the patient appropriate choices regarding her health care.

Topic sentence | Explanations using paraphrased evidence including in-text references | Critical thinking (asks the so what? question to demonstrate your student voice). | Relating the theory back to the specifics of the case. The case becomes a source of examples as extra evidence to support the points you are making.

REPORT

Reports are a common form of assessment at university and are also used widely in many professions. It is a common form of writing in business, government, scientific, and technical occupations.

Reports can take many different structures. A report is normally written to present information

in a structured manner, which may include explaining laboratory experiments, technical information, or a business case. Reports may be written for different audiences including clients, your manager, technical staff, or senior leadership within an organisation. The structure of reports can vary, and it is important to consider what format is required. The choice of structure will depend upon professional requirements and the ultimate aims of the report. Consider some of the options in the table below (see **Table 20.2**).

TABLE 20.2 EXPLANATIONS OF DIFFERENT TYPES OF REPORTS

Executive or Business Reports	Overall purpose is to convey structured information for business decision making.
Short form or Summary Reports	Are abbreviated report structures designed to convey information in a focused short form manner.
Scientific Reports	Are used for scientific documentation purposes and may detail the results of research or describe an experiment or a research problem.
Technical Reports	Are used to communicate technical information for decision making, this may include discussing technical problems and solutions.
Evaluation Reports	Present the results of or a proposal for an evaluation or assessment of a policy, program, process or service.

REFLECTIVE WRITING

Reflective writing is a popular method of assessment at university. It is used to help you explore feelings, experiences, opinions, events or new information to gain a clearer and deeper understanding of your learning. A reflective writing task requires more than a description or summary. It requires you to analyse a situation, problem or experience, consider what you may have learnt and evaluate how this may impact your thinking and actions in the future. This requires critical thinking, analysis, and usually the application of good quality research, to demonstrate your understanding or learning from a situation. Essentially, reflective practice is the process of looking back on past experiences and engaging with them in a thoughtful way and drawing conclusions to inform future experiences. The reflection skills you develop at university will be vital in the workplace to assist you to use feedback for growth and continuous improvement. There are numerous models of reflective writing and you should refer to your subject guidelines for your expected format. If there is no specific framework, a simple model to help frame your thinking is **What? So what? Now what?** (Rolfe et al., 2001).



Figure 20.6 Reflective writing is used to help you explore feelings, experiences, opinions, events or new information to gain a clearer and deeper understanding of your learning. [Image](#) by [Manfred Richter](#) used under [CC0 licence](#).

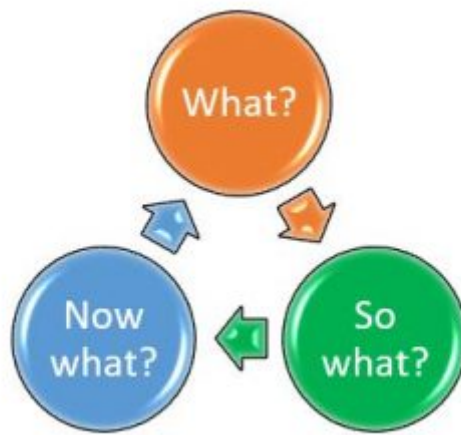


Figure 20.7 What? So What? Now What? Image by USQ.

TABLE 20.3 WHAT? SO WHAT? NOW WHAT? EXPLAINED.

What?	Describe the experience – who, what, why, when, where?
So what?	What have you learnt from this? Why does it matter? What has been the impact on you? In what way? Why? You can include connections to coursework, current events, past experiences.
Now what?	What are you going to do as a result of your experience? How will you apply what you have learnt in the future? Are there critical questions to further pursue? Make an action plan of what you will do next.

The Gibbs' Reflective Cycle

The Gibbs' Cycle of reflection encourages you to consider your feelings as part of the reflective process. There are six specific steps to work through. Following this model carefully and being clear of the requirements of each stage, will help you focus your thinking and reflect more deeply. This model is popular in Health.

The 4 R's of reflective thinking

This [model](#) (Ryan and Ryan, 2013) was designed specifically for university students engaged in experiential learning. Experiential learning includes any 'real-world' activities including practice led activities, placements and internships. Experiential learning, and the use of reflective practice to heighten this learning, is common in Creative Arts, Health and Education.



Figure 20.8 Gibbs' Reflective Cycle. [Image by Jason S. Todd](#) used under [CC-BY-NC-SA licence](#).

ANNOTATED BIBLIOGRAPHY

What is it?

An annotated bibliography is an alphabetical list of appropriate sources (books, journals or websites) on a topic, accompanied by a brief summary, evaluation and sometimes an explanation or reflection on their usefulness or relevance to your topic. Its purpose is to teach you to research carefully, evaluate sources and systematically organise your notes. An annotated bibliography

may be one part of a larger assessment item or a stand-alone assessment piece. Check your task guidelines for the number of sources you are required to annotate and the word limit for each entry.

How do I know what to include?

When choosing sources for your annotated bibliography it is important to determine:

- The topic you are investigating and if there is a specific question to answer
- The type of sources on which you need to focus
- Whether they are reputable and of high quality

What do I say?

Important considerations include:

- Is the work current?
- Is the work relevant to your topic?
- Is the author credible/reliable?
- Is there any author bias?
- The strength and limitations (this may include an evaluation of research methodology).

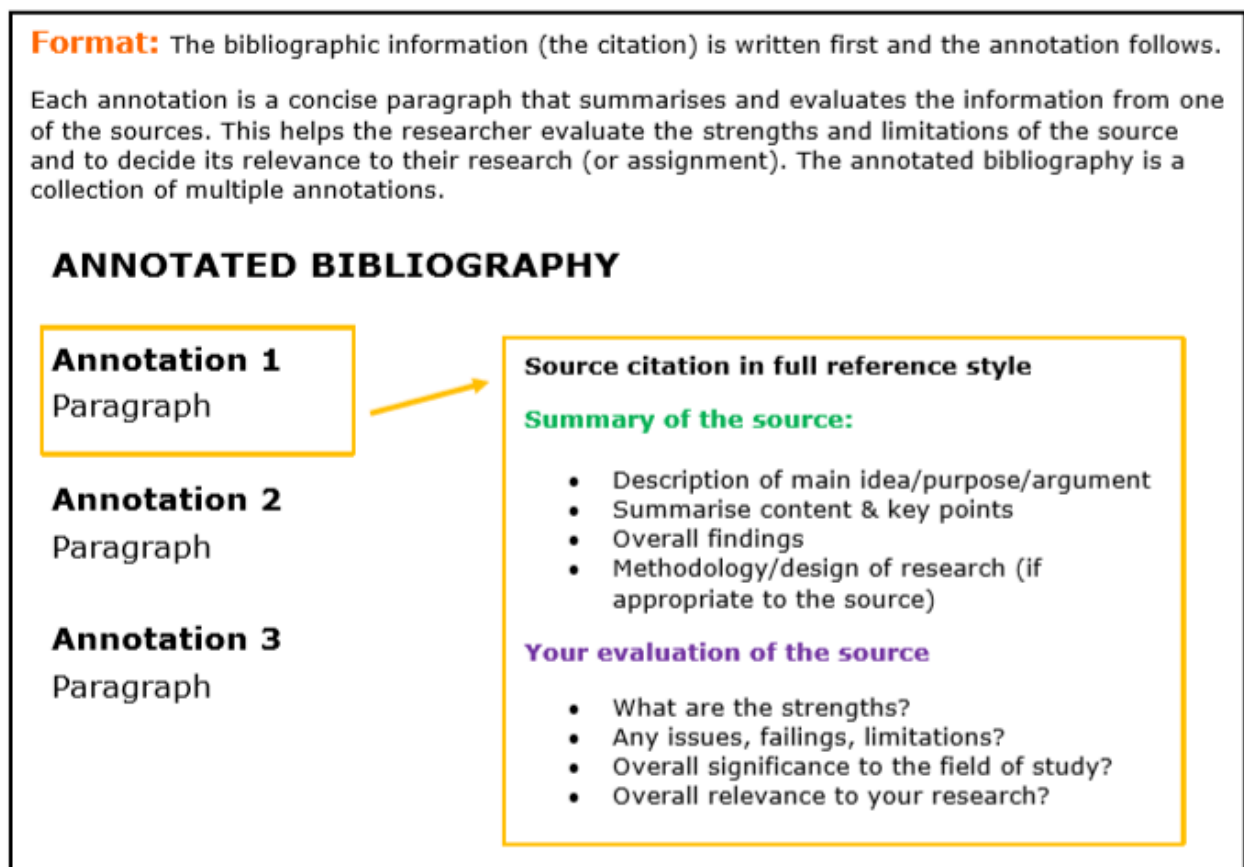


Figure 20.9 Annotated Bibliography. Image by USQ.

LITERATURE REVIEWS

It is easy to get confused by the terminology used for literature reviews. Some tasks may be described as a systematic literature review when actually the requirement is simpler; to review the literature on the topic but do it in a systematic way. There is a distinct difference (see **Table 20.4**). As a commencing undergraduate student, it is unlikely you would be expected to complete a systematic literature review as this is a complex and more advanced research task. It is important to check with your lecturer or tutor if you are unsure of the requirements.

TABLE 20.4 COMPARISON OF LITERATURE REVIEWS

A literature review	A systematic literature review
<p>A review which analyses and synthesises the literature on your research topic in a systemic (clear and logical) way. It may be organised:</p> <ul style="list-style-type: none">• Conceptually• Chronologically• Methodologically	<p>A much larger and more complicated research project which follows a clearly defined research protocol or process to remove any reviewer bias. Each step in the search process is documented to ensure it is able to be replicated, repeated or updated.</p>

Generally, you are required to establish the main ideas that have been written on your chosen topic. You may also be expected to identify gaps in the research. A literature review does not summarise and evaluate each resource you find (this is what you would do in an annotated bibliography). You are expected to analyse and synthesise or organise common ideas from multiple texts into key themes which are relevant to your topic (see **Figure 20.10**). Use a table or a spreadsheet, if you know how, to organise the information you find. Record the full reference details of the sources as this will save you time later when compiling your reference list (see **Table 20.5**).

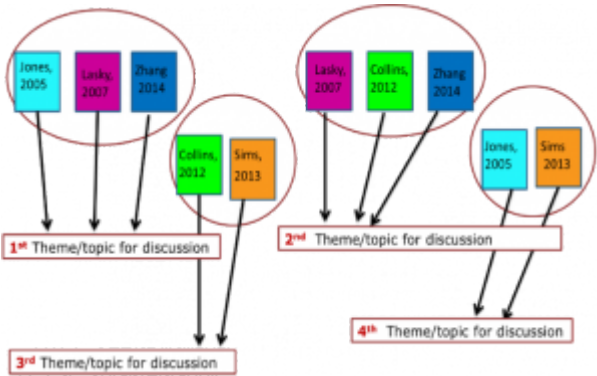


Figure 20.10 Thematic organisation. Image by USQ.

Full reference details	Theme 1	Theme 2	Theme 3	Theme 4
Source 1				
Source 2				
Source 3				
Source 4				
Source 5				
Source 6				

Table 20.5 Themes in a table.

CONCLUSION

Overall, this chapter has provided an introduction to the types of assignments you can expect to complete at university, as well as outlined some tips and strategies with examples and templates for completing them. First, the chapter investigated *essay* assignments, including analytical and

argumentative essays. It then examined *case study* assignments, followed by a discussion of the *report* format. *Reflective writing*, popular in nursing, education and human services, was also considered. Finally, the chapter briefly addressed annotated bibliographies and literature reviews. The chapter also has a selection of templates and examples throughout to enhance your understanding and improve the efficacy of your assignment writing skills.

Key points

- Not all assignments at university are the same. Understanding the requirements of different types of assignments will assist in meeting the criteria more effectively.
- There are many different types of assignments. Most will require an introduction, body paragraphs and a conclusion.
- An essay should have a clear and logical structure and use formal but reader friendly language.
- Breaking your assignment into manageable chunks makes it easier to approach.
- Effective body paragraphs contain a topic sentence.
- A case study structure is similar to an essay, but you must remember to provide examples from the case or scenario to demonstrate your points.
- The type of report you may be required to write will depend on its purpose and audience. A report requires structured writing and uses headings.
- Reflective writing is popular in many disciplines and is used to explore feelings, experiences, opinions or events to discover what learning or understanding has occurred. Reflective writing requires more than description. You need to be analytical, consider what has been learnt and evaluate the impact of this on future actions.
- Annotated bibliographies teach you to research and evaluate sources and systematically organise your notes. They may be part of a larger assignment.
- Literature reviews require you to look across the literature and analyse and synthesise the information you find into themes.

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PRESENTATIONS

AKSHAY SAHAY AND ANBARASU THANGAVELU



Figure 21.1 You will likely at some point during your program be required to deliver information via a presentation. [Image by fauxels](#) used under [CC0 licence](#).

INTRODUCTION

Presentations are a common form of assessment at university. You will likely at some point during your program be required to deliver information via a presentation. This chapter provides you with the foundational knowledge, skills and tips to prepare and present your work effectively.

TYPES OF PRESENTATIONS

There are various types of presentations you may come across at university. Being aware of each type of presentation can be beneficial for you as a student. At university, most presentations will either be formal, informal or group presentations.

- **Formal presentations** are instances where you are required to prepare in advance to deliver a talk. This can be for an assessment piece, interview, conference or project. In a formal presentation, you are likely to use some form of visual tool to deliver the information.
- **Informal presentations** are occasions where you may be required to deliver an impromptu talk. This may occur in tutorials, meetings or gatherings.
- **Group presentations** are normally formal and require you to work collaboratively with your peers in delivering information. Similar to formal presentations, group presentations require prior planning and practise. Group presentations are normally done for an

assessment piece, projects or conferences. Some visual tools may be used.

Regardless of the type of presentation you are asked to do, understanding the standard forms of presentations will assist with your preparation.

PREPARATION

Like other assessments or tasks, preparation is key to successfully delivering a presentation as it will help to ensure that you are heading in the right direction from the start. It will also likely increase your confidence in completing the presentation. Irrespective of the type of the presentation, you can use the steps shown in **Figure 21.2** for your preparation.



Figure 21.2 Steps for preparing your presentation. Image by USQ.

The steps shown in **Figure 21.2** will essentially allow you to create tailored presentations which have directed content addressing a specific topic or task. This will allow you to engage your audience and deliver effectively the message that you are trying to communicate. Specific tips and tricks on how to present effectively are discussed later in this chapter.

PRESENTATION STRUCTURE

Similar to written assignments, creating a structure is crucial to delivering your presentation. The benefits of having a structure are that your presentation will flow in logical manner and your audience will be able to follow and understand the information you are delivering. While presentation structures may vary, depending on whether you are presenting in a group, presenting informally, or presenting a poster, using some form of structure will likely be beneficial to both you and your audience. When structuring a presentation, also consider the platform, technology

and setting. For example, if you are presenting informally, you may not require the use of any form of technology or visual equipment. You may just rely on hand written notes. In contrast, if you are presenting in a more formal setting, you may prefer to use technology to assist you, such as PowerPoint. **Figure 21.3** offers a sample you can use to create your structure. Be sure to check any task sheet given to you by your lecturer. They may have a particular structure they wish you to use for a specific task.



Figure 21.3 A sample structure of a presentation. Image by USQ.

TIPS AND TRICKS

There are certain strategies you can use to help deliver a good presentation. Not every strategy is going to be applicable to all presentations and every individual. You will need to choose the strategies that work for you and meet the objectives of your presentation, relate to your audience and importantly address the overall task. Delivering your work is one of the hardest aspects of a presentation but it is achievable. Therefore, it is essential that you have the appropriate approach in your delivery. This includes prior planning, practise, and being confident.

The tips and tricks in this section will guide you in preparing and delivering effective

presentations. Please note that some of these tips and tricks may be more relevant to oral than visual presentations.

Tip 1: Improve your delivery

Figure 21.4 presents five simple ways to lift the standard of your delivery.

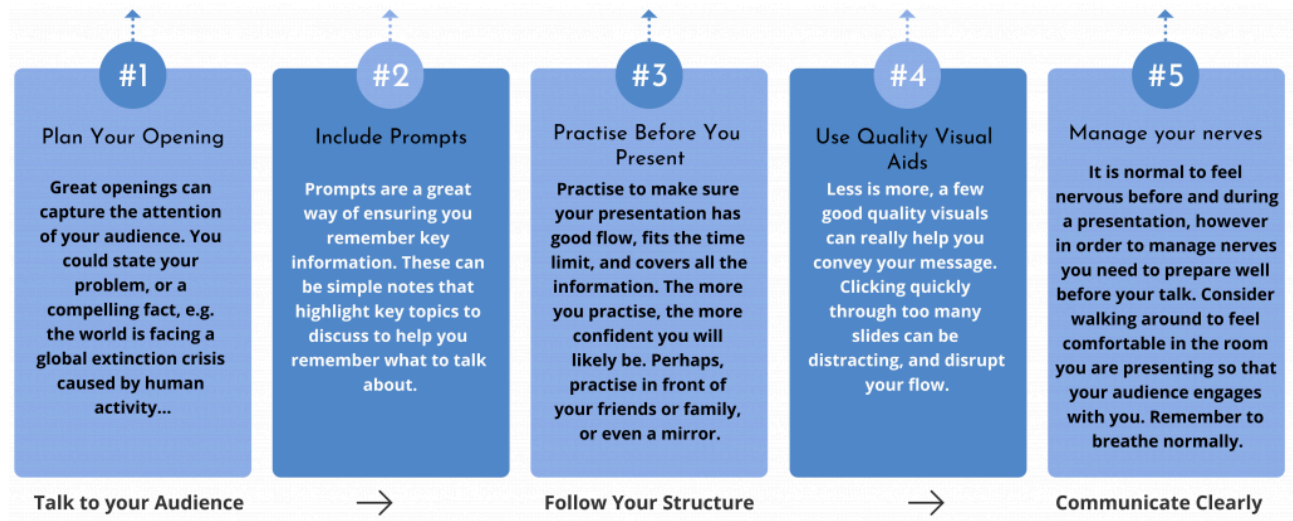


Figure 21.4 Improving your delivery. Image by USQ.

Tip 2: Stay on track with your presentation

Figure 21.5 presents reminders about your audience, structure and focus of your presentation to keep you on track.

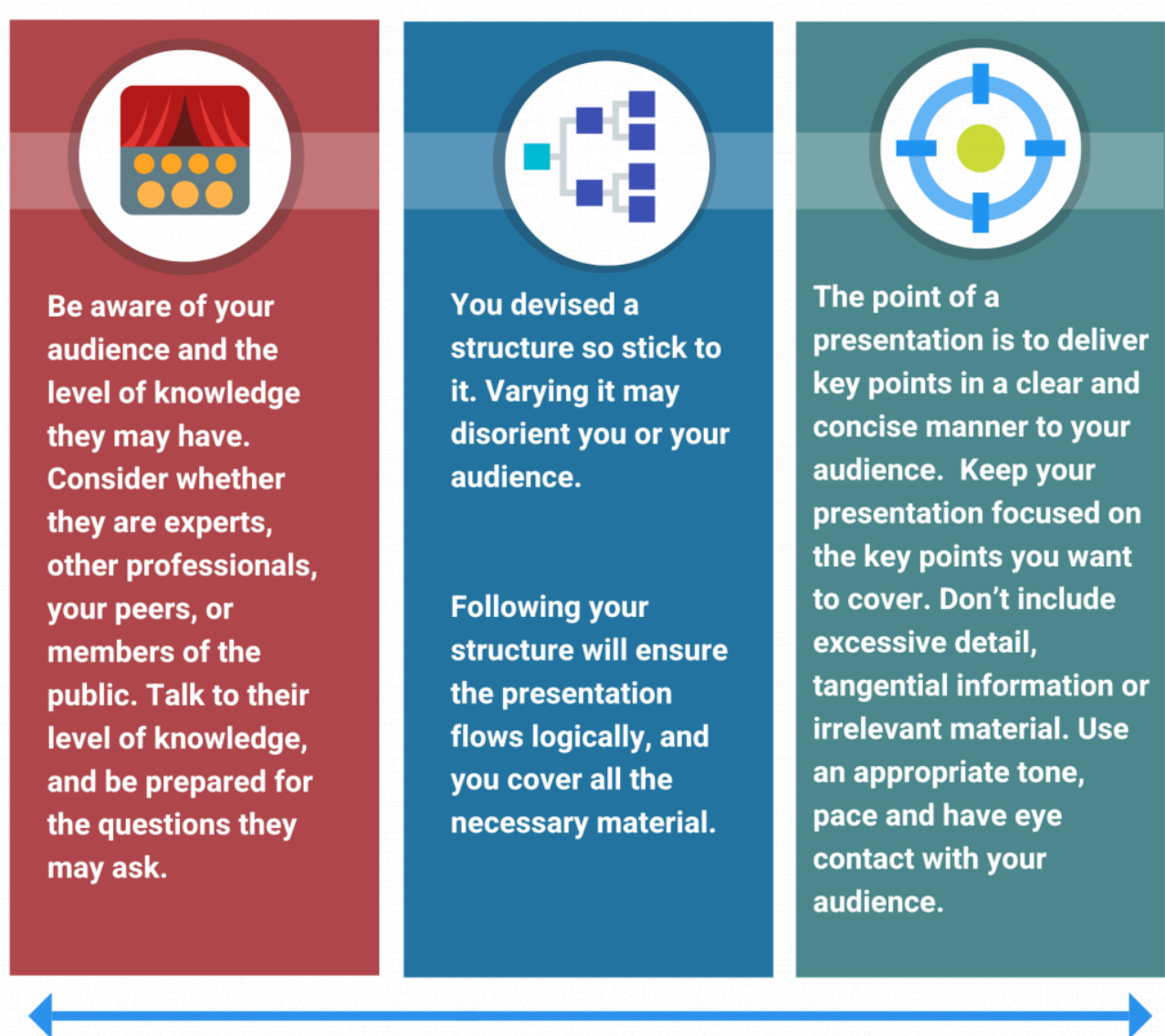


Figure 21.5 Stay on track with your presentation. Image by USQ.

Tip 3: Consider your voice and body

When giving an oral presentation, you should pay special attention to your voice and body. Voice is more than the sum of the noises you make as you speak. Pay attention to inflection, which is the change in pitch or loudness of your voice. You can deliberately use inflection to make a point, to get people's attention, or to make it very obvious that what you are saying right now is important. You can also change the volume of your voice. Speak too softly, and people will think you are shy or unwilling to share your ideas; speak too loudly, and people will think you are shouting at them. Control your volume to fit the audience and the size of the venue. If you use these tips, you should do a good job of conveying your ideas to an audience.

Some people have a tendency to rush through their presentations because they are feeling nervous. This means they speed up their speech, and the audience has a difficult time following along. Take care to control the speed at which you give a presentation so that everyone can listen comfortably. You can achieve this by timing yourself when preparing and practising your talk. If you are exceeding the time limit, you may either be speaking too quickly, or have too much content to cover.

Also, to add to the comfort of the listeners, it is always nice to use a conversational tone in a presentation. This includes such components as stance, gesture, and eye contact—in other words, overall body language. How do you stand when you are giving a presentation? Do you move around and fidget? Do you look down at the ground or stare at your note cards? Are you chewing gum or sticking your hands in and out of your pockets nervously? Obviously, you don't want to do any of these things. Make eye contact with your audience as often as possible. Stand in a comfortable manner, but don't fidget. Use gestures sparingly to make certain points. Most importantly, try to be as comfortable as you can knowing that you have practised the presentation beforehand and you know your topic well which will help to calm nerves.

Tip 4: Consider your attitude

Attitude is everything. Your enthusiasm for your presentation will prime the audience. If you are bored by your own words, the audience will be yawning. If you are enthused by what you have to offer, they will sit up in their seats and listen intently. Also, be interested in your audience. Let them know that you are excited to share your ideas with them because they are worth your effort.

Tip 5: Consider the visuals

You might also think about using technology to deliver your presentation. Perhaps you will deliver a slide presentation in addition to orally communicating your ideas to your audience. Keep in mind that the best presentations are those with minimal words or pictures on the screen, just enough to illustrate the information conveyed in your oral presentation. Do a search on lecture slides or presentation slides to find a myriad suggestions on how to create them effectively. You may also create videos to communicate what you found in your research. Today, there are many different ways to take the information you found and create something memorable through which to share your knowledge. When you are making a presentation that includes a visual component, pay attention to three elements: design, method, and function. The design includes such elements as size, shape, colour, scale, and contrast. You have a vast array of options for designing a background or structuring the visual part of your presentation, whether online or offline.



Figure 21.6 Take care to control the speed at which you give a presentation so that everyone can listen comfortably. [Image](#) by [祝鹤槐](#) used under [CC0 licence](#).

Consider which method to use when visually presenting your ideas. Will it be better to show your ideas by drawing a picture, including a photograph, using clip art, or showing a video? Or will it be more powerful to depict your ideas through a range of colours or shapes? These decisions you make will alter the impact of your presentation. Will you present your ideas literally, as with a photograph, or in the abstract, as in some artistic rendition of an idea? For instance, if you decide to introduce your ideas symbolically, a picture of a pond surrounded by tall trees may be the best way to present the concept of a calm person. Consider also the purpose of the visuals used in your presentation. Are you telling a story? Communicating a message? Creating movement for the audience to follow? Summarising an idea? Motivating people to agree with an idea? Supporting and confirming what you are telling your audience? Knowing the purpose of including the visual element of your presentation will make your decisions about design and method more meaningful and successful.

As mentioned, not every strategy is applicable to all presentations or to every individual. Choose the strategies that are relevant to you and focus on them. Perhaps you could design a learning map of the tips you need to remember, as shown in **Figure 21.8**.



Figure 21.7 Consider which method to use when visually presenting your ideas. Image by [ThisIsEngineering](#) used under [CCO licence](#).

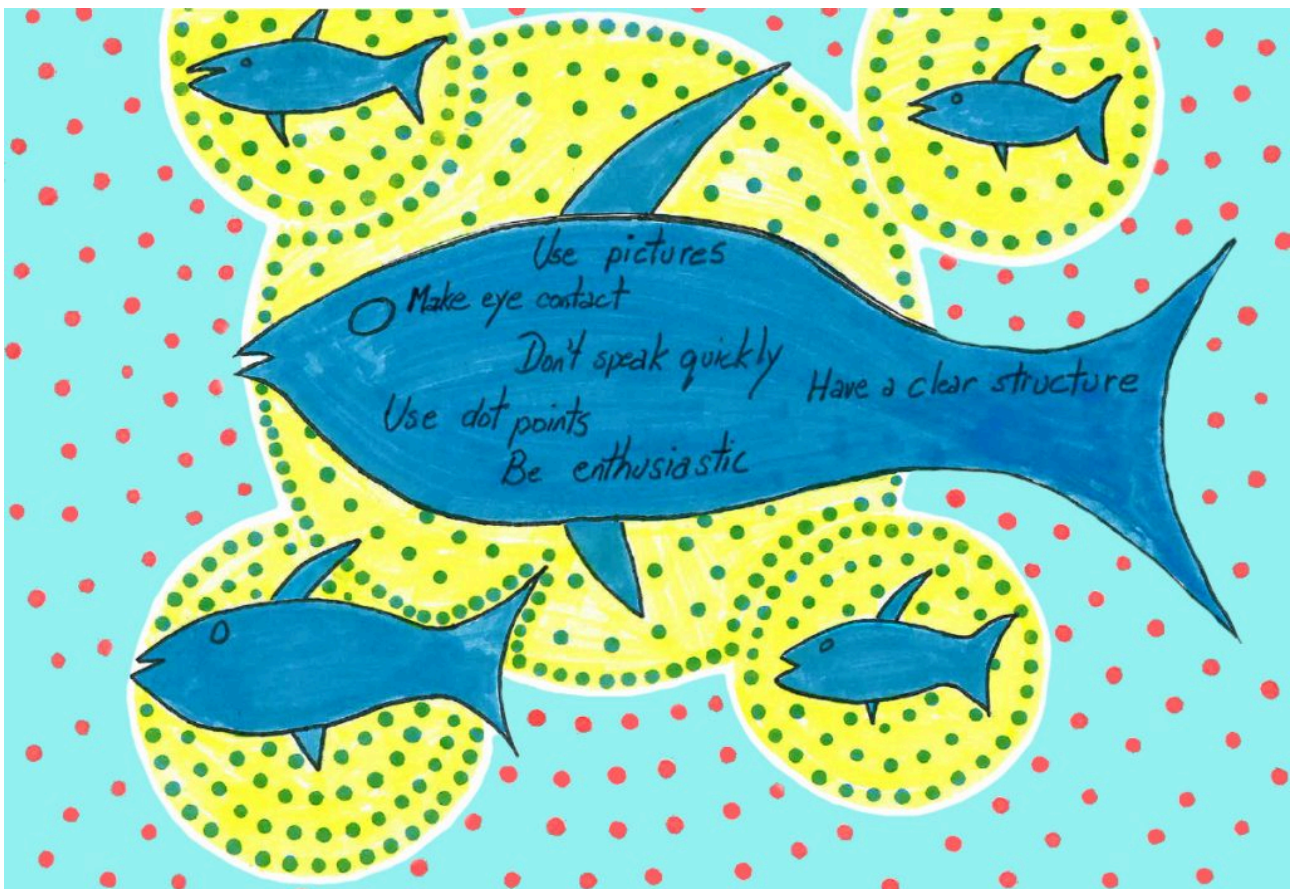


Figure 21.8 You can design a learning map of tips to remember. Image by Sam Conway.

CONCLUSION

Delivering a presentation may be daunting, especially if you are new to university but as we have discussed in this chapter, there are several approaches you can use to help you prepare and deliver your presentation effectively. While each individual may have their own approach, preparing, planning, structuring and practising your presentation will go a long way to help you achieve success. Following the steps and considering the ideas in this chapter places you in a good position to deliver presentations effectively. The approaches are beneficial but ensure you are adhering to any specific requirements included in the assignment task sheet. Following the task sheet closely and applying these presentation skills will increase your likelihood of academic success.

Key points

- Understand the type of presentation you are asked to deliver.
- Start preparing in advance and adopt a structure.
- Know your topic well and your audience.
- Try and practise different strategies, tools, speaking approaches well before your presentation and ensure it is within the allocated time limit. Remember, practise, practise and practise!
- Be confident in yourself, your presentation skills and follow the plan you have developed.

PREPARING FOR EXAMS

KATE DERRINGTON; CRISTY BARTLETT; AND ANITA FREDERIKS



Figure 22.1 You will need to undertake different types of exams as a student. [Image by Karolina Grabowska used under CC0 licence.](#)

INTRODUCTION

Exams are a common method of assessment at university and it is likely that you will need to undertake different types of exams as a student. This chapter is the first of two covering exams.

It aims to equip you with the skills needed to plan consistently for your exams. It has a range of techniques to assist you to cope with large volumes of revision information and strategies for improving your memory and retention. It also covers on-the-day exam strategies and tips for dealing with exam stress. If you would like information on preparing for specific types of exams, we recommend that you continue to read the next chapter [Types of Exams](#) where essay, multiple choice, short answer, open book, closed and restricted exams, take home, online and numeracy (maths) exams are covered in more detail.

REVISION STRATEGIES

When preparing for your exams you are often revising content from your entire semester. We recommend that you consider what you wish to achieve from your study sessions and then choose strategies and approaches that will help you achieve those aims. We have provided a number of strategies (and how they work) to help you choose effective study strategies. Most of these strategies are designed to improve your understanding of the material and increase your ability to recall and use the information in exams.

Memory

Most of the strategies we discuss in this chapter are aimed at making the most of your memory and increasing your ability to recall the information when you need it in your exam. You don't need to have a complex understanding of memory and how it works to use these strategies, however we have provided a brief overview about why these strategies work in each section. In addition to the revision strategies that we discuss in this chapter, the following will also help you to improve your memory:

- Having adequate sleep (being tired negatively effects our memory)
- Taking regular exercise
- Consuming a healthy diet
- Practising using your memory
- Managing anxiety or stress (see the section on exam anxiety in this chapter)
- Taking regular study breaks and resting
- Having a study, work, life balance and spending time doing things that we enjoy

Spacing

The first exam preparation strategy that you might find useful is spacing. Spacing refers to *when* you study. This technique requires a consistent approach over an extended period. It uses repetition with breaks or spaces in between study sessions to help you retrieve information. *Why* is this an effective method? Research suggests that giving yourself time between study sessions helps you forget the information. Strange as this may sound, forgetting is beneficial to remembering information long-term. *How* does this work? Every time you forget something, your brain must work harder to remember or relearn it. This repetition improves your understanding, retention, problem solving and application of knowledge.

Table 22.1 below demonstrates how spacing works. Assume you are going to spend about seven hours studying for a Biology exam. Cramming would have you spending most of those hours the night before the exam. With spacing however, you would study a little bit each day. See the section on cramming for further explanation why cramming is an inefficient study strategy.

Table 22.1 Spacing vs Cramming

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Cramming				Study for 2 hours	Study for 5 hours	Biology exam
Spacing	1 hour of study	1 hour of study	1 hour of study	2 hours of study	2 hours of study	Biology exam

Interleaving

Interleaving is another strategy that you might find useful when preparing for an exam. Interleaving refers to *what* you study. This technique involves switching between your study topics or subjects to help your memory. *Why* is this an effective method? Your brain must work harder to process this “mixed up” information. As with the spacing technique, this may cause some short-term forgetting, but can lead to better long-term outcomes for memory and learning. *How* does

this work? This means not just spending each study session on one sort of problem or topic. Within each time block in your study plan, consider mixing up the content that you revise. Use interleaving with spacing to revisit material from a previous chapter or unit or revise different types of problems or question sets.

Table 22.2 Example of interleaving

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morning					
Reread Biology, Chapter 1	Biology Chap 1 practice quiz	Review Biology flashcards	Read Biology Chapter 3	Review Anatomy flashcards	Review Biology flashcards
	Create Biology flashcards for review and read chap 2	Review Anatomy flashcards	Review Anatomy flashcards	Review Biology flashcards	
Afternoon					
Read Anatomy notes weeks 1-2	Create Anatomy flashcards	Biology Chap 2 practice quiz	Review Biology flashcards	Review items missed on online quizzes.	Biology exam Chapters 1-3
			Biology Chap 3 practice quiz		

Using mnemonics

Mnemonics (pronounced new-monics) are an exam revision strategy that can help you to remember things by using letters or phrases as a form of association. For example, if you have studied music you may have been taught the mnemonic device “every good boy deserves fruit” as a way of remembering EGBDF is the order of the notes on the music staff. Another example is NEWS (north, east, west, and south) to remember the points on the compass. *Why and How* do mnemonics work? When you are unfamiliar with the foundational concepts of a new learning task or process, these help you recall information quickly, especially for lists or processes with multiple steps. Once you are more familiar with your discipline area you probably won’t need mnemonics, but you will probably always remember them. Here are some familiar mnemonics you may find useful:

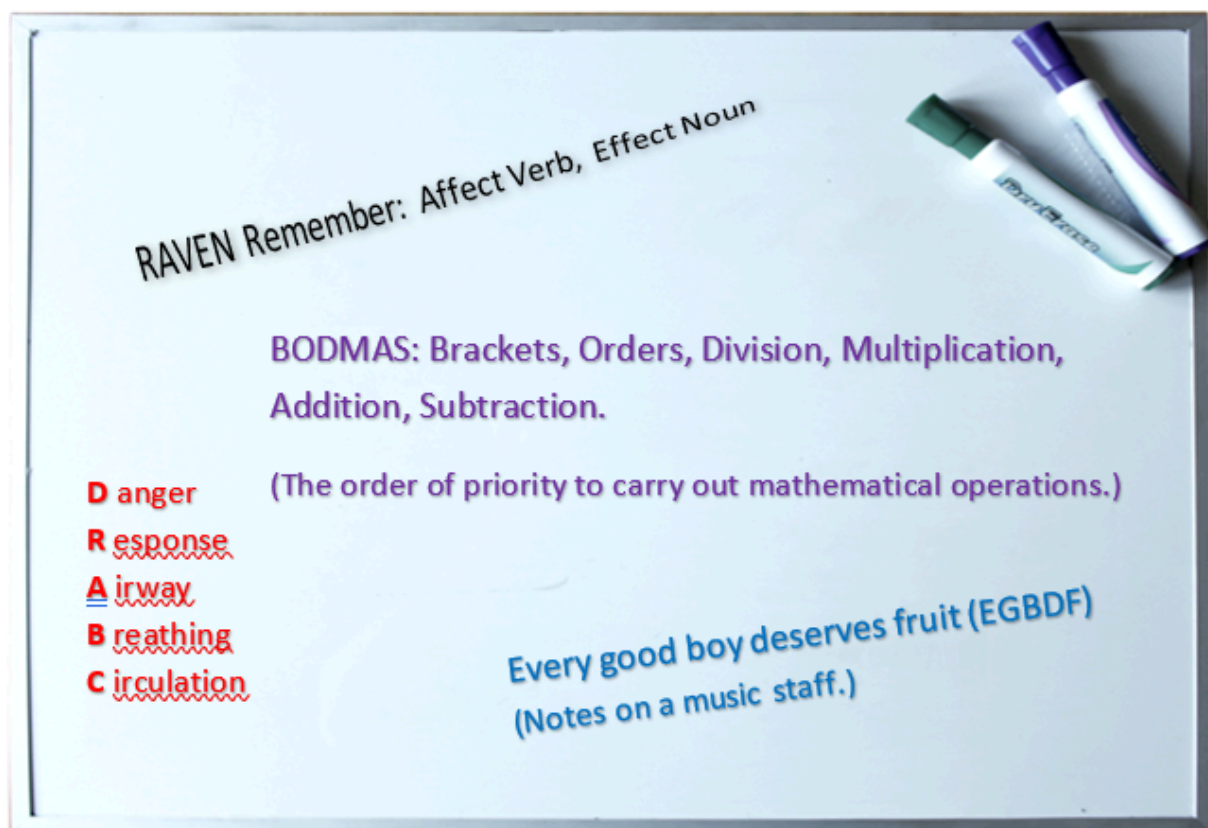


Figure 22.2 Mnemonics examples. Adapted [image](#) by [Angela](#) used under [CC0 licence](#).

You can certainly make up your own mnemonics but be careful that your reminder isn't so complex that it is more difficult to remember than the information you were relating it to.

Practising concept association

Concept association is an exam revision strategy that involves linking the information you are learning with information that you already know. This can help you to make sense of the new information and can improve your ability to recall the information when you need it (e.g. in an exam). For example, you may be reading about different approaches that nurses can take when communicating with a person in their care. If you have experienced being cared for by a nurse, then you can consider which communication approaches the nurse may have used, if they implemented the approach well, and if their communication was effective. This links the information you are learning with existing memories and can also provide you with a deeper understanding of the material and how it relates to the 'real world'. You do not need to have direct experience with the topic to use the concept association approach. In the above example you may consider how the recommended communication approaches are similar or dis-similar to the approaches you take (or have observed others take) in different contexts. Alternatively, you may consider how the



Figure 22.3 Linking new material to existing knowledge and memories increases your ability to recall or remember the information later. [Image](#) by [Elisa Riva](#) used under [CC0 licence](#).

recommendations match with your understandings of good communication skills. The aim is to link the new information with information that you are already familiar with. The links to existing information provide pathways for recalling the new information, and the more pathways you have available the more likely you will be able to recall the information. By considering how the information relates to your experiences or knowledge also prompts you to think about the new information in different ways, which has the added bonus of increasing your understanding of the topic.

Generating idea clusters

The revision techniques involved in creating idea clusters are similar to those used when creating concept associations and mnemonics. They are deliberate techniques aimed at increasing your ability to remember information by connecting the new information with existing information. Unlike concept associations, idea clusters involve linking new material with unrelated, but well remembered information. For example, Andrea is an avid knitter and remembers how to create complicated stitches by associating them with nursery rhymes she read as a child. A complex delicate stitch, that Andrea thinks looks like part of it is hiding, brings to mind Red Riding Hood, and connecting it to that character helps Andrea recall the exact order of steps necessary to execute the design. You can do the same thing with song lyrics, lines from movies, or favourite stories where you draw a connection to the well-known phrase or song and the task you need to complete. This is a similar approach to using mnemonics, however with concept clusters you are linking new information to more complex known material (compared to simpler phrases or words using mnemonics). To be successful, you need to be able to link the new information to a well-remembered story, situation, or knowledge. This is a useful technique when you need to remember a series of steps, or more complex information and you have time to practice the association with an existing memory.

CRAMMING AND WHY IT DOESN'T WORK WELL

Cramming involves attempting to cram all of the information required for your exam into your memory in a very short period of time, and it doesn't work very well. It doesn't work well because our memory works best when we focus on one concept at a time and spend time linking the concept to what we already know. Your brain also needs time to rest. Your brain and memory can only accept so much at any one time, in the same way that you cannot keep lifting a heavy weight indefinitely, you need to rest your muscles. Your brain needs time to rest before it's ready to accept more information. Cramming does not allow time for this rest to occur.

In addition to not being able to easily recall the information you need in the exam, cramming can also cause stress, memory fatigue, and affect your ability to concentrate. This makes it even more difficult to recall the information in your exam. And if that wasn't bad enough, you are also more likely to forget (or be unable to retrieve) later, any information that you did manage to recall in the exam. This may be a problem for you in future subjects that build on the information you are learning now. You may be required to



Figure 22.4 Aim to avoid last minute cramming because most of the information you are trying to cram in will 'fall out'. Image by [Luisao Pepe](#) used under [CC0 licence](#).

spend time re-learning the information later when you are trying to complete future subjects. You are also likely to need to draw on this knowledge in your future career.

While our advice is to avoid cramming, we know that there are times when you may find you only have a short period of time to prepare for your exams. You can adapt the strategies listed above to maximise the effectiveness of the study time you have available. Allocate time to all of your subjects and use a mini interleaving approach where you alternate your study time across multiple subjects. Use mnemonics to assist you and monitor your concentration levels. Taking breaks while you are studying will help you to maintain your concentration during your study block.

PRACTICE TESTING

It can also be useful to test yourself both as you revise your work and again before taking the final exam. Practice testing has to do with *how* you study. It is not enough to just reread content. You must practice or test your ability to retrieve the information from your brain. You can do a practice “test” in a number of ways. For example, you might test yourself as you are reading information. Explicitly ask yourself what a paragraph or section means as you read. You could also read a section in the text, cover the material, and ask yourself, “What was the main idea of this section?” Recite aloud or write down your answer, and then check it against the original information. With practice testing you are not only practicing recalling or remembering the information, you are also thinking about the material in more depth, which creates more connections to existing memories and enables you to more easily recall the information.

This process works also to test your maths understanding. Follow the same principles by writing down the example question, covering up the working and trying it yourself. Then check your answer and working with the example provided. Do as many questions as you can, to assist with recalling the methods more readily when you are under pressure in an exam. Another way to practice test is to create flashcards or design your own test. This takes more time, but there are online programs (apps) that make it easier. Practice testing is an effective study strategy because it helps you practice or rehearse *retrieving* information and skills, which is important when taking the real exam. Another way to learn something is to teach it to someone else. Ask a friend or family member if you can explain something to them or practice a skill with them. You may find you know more about the subject than you thought, or it might highlight any gaps in your understanding. You can replicate the experience an actual exam produces by including timed writing into your study sessions. You don’t need all of your study time to exactly replicate the exam but find out the exam format in advance and practice the skills needed. For example:

- For a history or law course where you may have to write essay style responses, set a timer and practice how much you can write in this time.
- For a mathematics exam, where you need to complete problems and show working, incorporate timed problem-solving into your study.
- Practice answering questions within a set time limit and with only the resources you will have in the exam.

Practicing under similar conditions to your exam will help you feel better prepared and confident in the exam. Create an environment where mistakes are safe and are expected as just another part of learning. This relates to the principles you learned in the section on grit and persistence (see [Goals and Priorities](#) chapter). An example of this might be taking practice quizzes on your own, outside of the more formal course activities. These quizzes could be found in your textbook,

in tutorial activities, online, or you may develop quizzes with another student. Studying with a partner can increase your learning, since to create a good quiz you would need to learn the main concepts of the subject and answering the questions on your partner's quiz might help you identify areas where you need more knowledge. The main idea with this practice is that you are creating an environment where it is safe to make mistakes, and importantly, learn from them. This should allow you to avoid those same mistakes in your formal assessments.

TAKING THE EXAM

In the lead up to your exam

Preparation and planning are the keys to exam success. Check that you know:

- The date, location and time of your exam (e.g., which campus, online, or at a study centre).
- The transport and parking arrangements for exam day. Find out where you can park and what are the costs and payment options.
- The identification you require for admission into the exam (e.g., student ID, or drivers licence).
- The type of exam and how long you have for completion.
- Will there be additional perusal time before the exam commences (particularly for in person exams) where you can read and think about your response.
- What you are allowed to take into the exam.
- How much time to allocate to each question or section of the exam.

Knowing this information will help things run smoothly on exam day and reduce your stress. It will also impact the type of revision you do and the materials you may or may not be allowed to take into the examination room. There is more information about different types of exams and what they involve in the [Types of Exams](#) chapter.

If your exam is online, there are other considerations you need to organise prior to taking your exam. These may include the following:

- Ensure you have a reliable device (laptop or computer) and internet connection.
- Ensure you have all the required hardware to complete your exam (e.g., printer or scanner).
- Test all devices and equipment prior to undertaking your exam.
- Have all the items you require to complete your exam ready (e.g., calculator, translation dictionary, etc.)
- Test comfort levels before you start (e.g., lighting, temperature, and seating).
- Remove distractions (e.g., turn off your mobile phone and television).
- Prepare for the online assessment just like you would for other exams.

Consider making an exam day plan as outlined in **Table 22.3**. This will help you to use your exam time effectively.

Table 22.3 Exam day plan

Exam type: Closed exam including short answer and multiple-choice responses 50% of overall grade 2 hours to complete.	
Planning Spend 5 -10 minutes planning your responses to the multiple-choice questions and make notes if allowed.	Writing Allow 1 hour for short response (15 minutes per question). Allocate the remaining hour for multiple-choice questions.

On the day of your exam

On the day of the exam it is important to maintain your focus and remember your exam plan. For example, it can be helpful to wait quietly when you first arrive at the exam location rather than talking to your peers who may disrupt your thought processes. If you begin to feel rushed, return to the plan that you compiled in the lead up to the exam. This may assist you in gathering your thoughts, and organising what you are allowed to take into the exam. Consider the following exam day tips outlined below. This may assist you on arrival to a face-to-face exam or as you prepare to begin an online exam.

Arriving at the exam/ preparing to start an online exam

- Get to the exam location or be prepared to start your online exam in plenty of time so you do not feel rushed
- Don't let other students interrupt your thinking and try not to compare what you have learned with others
- Get to your designated place, organise whatever materials you can have, and calm your mind

At the beginning of your exam you will be provided with exam instructions. This might include information about how to respond to the exam question, if multiple choice, or explain how short response items will be marked. It is important to carefully listen to or read directions to ensure that you complete the exam as required. The following section outlines some considerations to optimise your exam performance.

Taking the exam

- Listen carefully for any verbal directions or read the exam instructions carefully (if an online exam).
- As soon as you receive the exam, scan quickly and familiarise yourself with the requirements and any choices if applicable (use perusal time if available).
- Read the instructions carefully. Consider any options to choose questions, e.g., two from a selection of four short-answer questions. Misreading instructions and answering more questions than is necessary will not give you any additional marks and waste time that could be spent on another section of the exam.
- Decide how you will allocate your time for each section (you should know this if you have

made an exam plan).

- Answer every required question on the exam. Even if you don't complete each question, you may receive some marks for partial answers. Find out before the exam if marks will be allocated for partial answers.
- Answer the questions about which you are the most confident first.

It is an achievement, and often a relief to finally reach the end of the exam. It can be tempting to leave the exam location or log off early if you haven't used all of the allocated time. It is, however, advised that you use all the time available to maximise your chance of success. You can use this valuable time to review your responses and check your answers. Imagine that you accidentally missed an entire question, using the time at the end of the exam wisely would help you avoid this issue. The section below summarises some of the ways you can use extra time at the end of an exam.

At the end of the exam

- Allow time to review your answers. Use this time to check your maths calculations, review an essay for grammatical and content errors, or answer the difficult multiple choice questions you skipped earlier.
- Finally, make sure you have completed the entire exam: check the backs of pages, and verify that you have a corresponding answer section for every question section on the exam. It can be easy to skip a section with the idea you will come back to it but forget to do so.

EXAM ANXIETY

It is natural to experience some exam stress or anxiety. The good news is that there are a number of strategies you can use to manage any exam anxiety so that it does not become overwhelming. However, we recommend that you seek additional support if you find that your coping strategies are not working, or if exam stress is affecting your ability to undertake your studies. Below are some strategies that can be useful in managing exam anxiety or nerves.



Figure 22.5 Schedule regular activities that help you relax or de-stress. [Image](#) by [Ralf Kunze](#) used under [CC0 licence](#).

- Be prepared for your exams. Knowing that you are prepared for your exams will help reduce exam stress.
- Physical activity will help you manage stress. Try to incorporate regular exercise in your schedule.
- Do not underestimate the effectiveness of controlled deep breathing. Taking deep, slow breaths can help you focus. This can be particularly useful in exams.

- Have a healthy diet and drink plenty of water. What we eat does influence how we feel. However, we don't recommend that you suddenly increase the amount of water you drink the night before the exam.
- Get some sleep. Getting enough sleep is important, particularly in the lead up to your exams.
- Find what helps you relax, such as music, going for a walk, going to the beach, and schedule those things in your planner. For example, playing music that you enjoy can help you relax and feel less stressed.
- Learn effective relaxation techniques including controlled breathing, visualisation, and meditation. These can help while you are in the exam itself too.



Figure 22.6 Almost everyone experiences some form of exam anxiety, practice using techniques that help you maintain your calm. *Image by Robert Owen-Wahl used under [CCO licence](#).*

SPECIAL ACCOMMODATIONS FOR EXAMS

Most universities will have processes in place to provide students with reasonable adjustments to their exam conditions for students who meet disability support or equity criteria. This can include additional time to undertake the exam, assistive technologies, furniture adjustments, or alternative locations. The aim is to provide an equitable exam experience and opportunities for academic success. We encourage you to contact your university for information about their specific services and support.

WHEN THINGS GO WRONG

Sometimes things just don't go to plan on exam day. For example, you may be unwell on the day of your exam, or experience computer issues when undertaking an online exam. Your university will have processes in place for managing these circumstances. There are often time limits for rectifying issues on exam day, so contact your university as soon as practical when you realise you won't be able to undertake your exam. We recommend that you know in advance how to contact your university for support during online exams, so if the unexpected does happen (e.g. someone cuts your internet connection) you are prepared and know what to do.

CHECKLIST FOR EXAM SUCCESS

The checklist below provides key strategies that will help you in your studies.



Figure 22.7 Checklist for exam success. Image adapted from OpenStax used under [CC BY licence](#).

CONCLUSION

Exams are a common method of assessment at university and there are many different types. In this chapter we have introduced you to the idea of consistent planning for exam success. A variety of strategies were discussed to assist in coping with revising large volumes of material. Specific strategies to target memory and retention such as spacing, interleaving and practice testing were explained. The chapter also discussed what to do on the day of your exam to maximise your

success and minimise your stress. The next chapter [Types of Exams](#) is recommended for more information on preparing for specific types of exams, such as essays, multiple choice, short answer, open book, closed and restricted exams, take home, online and numeracy (maths) exams.

Key points

- Start preparing early with regular and consistent study
- Make a study plan and stick to it
- Use memory strategies; try spacing and interleaving. Find what works for you.
- Know your exam type and practice accordingly
- In the exam, answer all questions, and show all your working
- Know the requirements for undertaking your exam (what you can take in with you) and have them ready
- Plan how you will get to your exam, including where you will park and how long it will take to get there, to avoid exam day stress
- It is common to experience exam anxiety, but strategies such as deep breathing can help you remain calm in your exam

TYPES OF EXAMS

ANITA FREDERIKS; KATE DERRINGTON; AND CRISTY BARTLETT

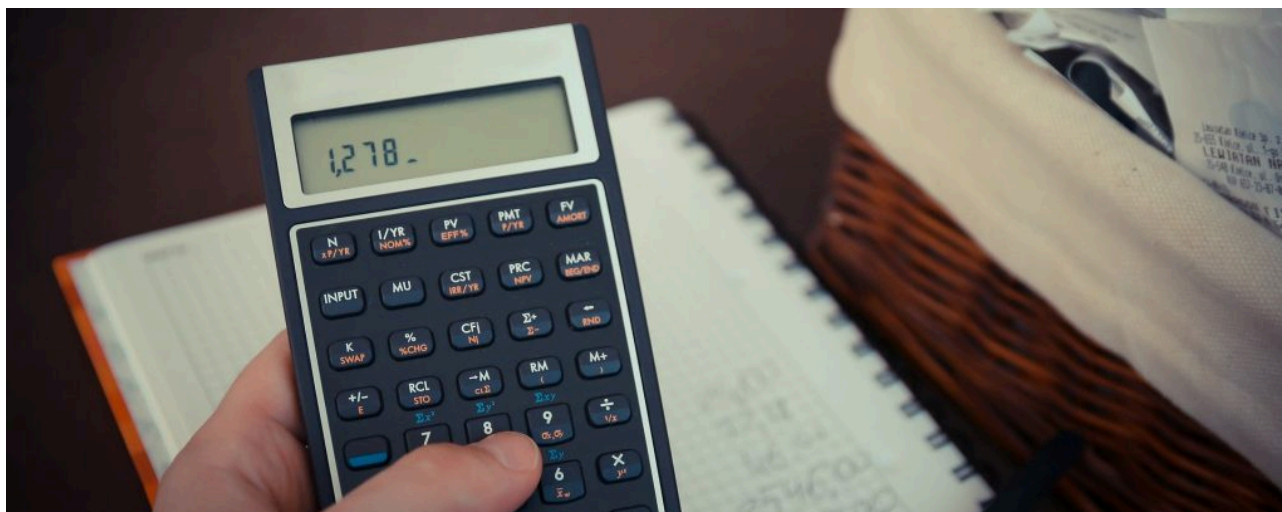


Figure 23.1 Each type of exam has different considerations and preparation. Image by [Michal Jarmoluk](#) used under [CC0 licence](#).

INTRODUCTION

There are many different types of exams and exam questions that you may need to prepare for at university. Each type of exam has different considerations and preparation, in addition to knowing the course material. This chapter extends the discussion from the previous chapter and examines different types of exams, including multiple choice, essay, and maths exams, and some strategies specific for those exam types. The aim of this chapter is to provide you with an overview of the different types of exams and the specific strategies for preparing and undertaking them.

The COVID19 pandemic has led to a number of activities previously undertaken on campus becoming online activities. This includes exams, so we have provided advice for both on campus (or in person) exams as well as alternative and online exams. We recommend that you read the chapter [Preparing for Exams](#) before reading this chapter about the specific types of exams that you will be undertaking.

TYPES OF EXAMS

During your university studies you may have exams that require you to attend in person, either on campus or at a study centre, or you may have online exams. Regardless of whether you take the exam in person or online, your exams may have different requirements and it is important that you know what those requirements are. We have provided an overview of closed, restricted, and open exams below, but always check the specific requirements for your exams.

Closed exams

These exams allow you to bring only your writing and drawing instruments. Formula sheets (in the case of maths and statistics exams) may or may not be provided.

Restricted exams

These exams allow you to bring in only specific things such as a single page of notes, or in the case of maths exams, a calculator or a formula sheet. You may be required to hand in your notes or formula sheet with your exam paper.

Open book exams

These exams allow you to have access to any printed or written material and a calculator (if required) during the exam. If you are completing your exam online, you may also be able to access online resources. The emphasis in open book exams is on conceptual understanding and application of knowledge rather than just the ability to recall facts.

Myth: You may think open book exams will be easier than closed exams because you can have all your study materials with you.

Reality: Open book exams require preparation, a good understanding of your content and an effective system of organising your notes so you can find the relevant information quickly during your exam. Open book exams generally require more detailed responses. You are required to demonstrate your knowledge and understanding of a subject as well as your ability to *find* and apply information applicable to the topic. Questions in open book exams often require complex answers and you are expected to use reason and evidence to support your responses. The more organised you are, the more time you have to focus on answering your questions and less time on searching for information in your notes and books. Consider these tips in the table below when preparing for an open book exam.

Tips for preparing your materials for open or unrestricted exams

- Organise your notes logically with headings and page numbers
- Use different colours to highlight and separate different topics
- Be familiar with the layout of any books you will be using during the exam. Use sticky notes to mark important information for quick reference during the exam.
- Use your learning objectives from each week or for each new module of content, to help determine what is important (and likely to be on the exam).
- Create an alphabetical index for all the important topics likely to be on the exam. Include the page numbers, in your notes or textbooks, of where to find the relevant information on these topics.
- If you have a large quantity of other documents, for example if you are a law student, consider binding legislation and cases or place them in a folder. Use sticky notes to indicate the most relevant sections.
- Write a summary page which includes, where relevant, important definitions, formulas, rules, graphs and diagrams with examples if required.
- Know how to use your calculator efficiently and effectively (if required).

Take home exams

These are a special type of open book exam where you are provided with the exam paper and are able to complete it away from an exam centre over a set period of time. You are able to use whatever books, journals, websites you have available and as a result, take-home exams usually require more exploration and in-depth responses than other types of exams.

It is just as important to be organised with take home exams. Although there is usually a longer period available for completing these types of exams, the risk is that you can spend too long researching and not enough time planning and writing your exam. It is also important to allow enough time for submitting your completed exam.

Tips for completing take home exams

- Arrange for a quiet and organised space to do the exam
- Tell your family or house mates that you will be doing a take-home exam and that you would appreciate their cooperation
- Make sure you know the correct date of submission for the exam paper
- Know the exam format, question types and content that will be covered
- As with open book exams, read your textbook and work through any chapter questions
- Do preliminary research and bookmark useful websites or download relevant journal articles
- Take notes and/or mark sections of your textbook with sticky notes
- Organise and classify your notes in a logical order so once you know the exam topic you will be able to find what you need to answer it easily

When answering open book and take-home exams remember these three steps below.

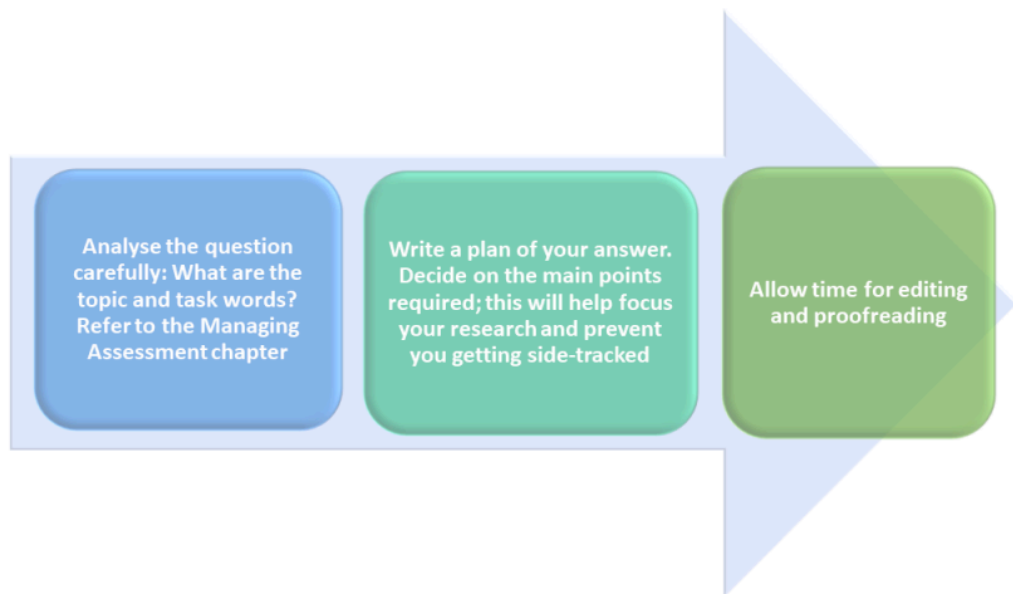


Figure 23.2 Three steps for open book and take home exams. Image by USQ.

Multiple choice

Multiple choice questions are often used in online assignments, quizzes, and exams. It is tempting to think that these types of questions are easier than short answer or essay questions because the answer is right in front of you. However, like other types of assessment, multiple choice questions require you to understand and apply the content from your study materials or lectures. This requires preparation and thorough content knowledge to be able to retrieve the correct answer quickly. The following sections discuss strategies on effectively preparing for, and answering, multiple choice questions, the typical format of multiple choice questions, and some common myths about these types of questions.

Preparing for multiple choice questions

- Prepare as you do for other types of exams (see the [Preparing for Exams](#) chapter for study strategies).
- Find past or practice exam papers (where available), and practise doing multiple choice questions.
- Create your own multiple choice questions to assess the content, this prompts you to think about the material more deeply and is a good way to practise answering multiple choice questions.
- If there are quizzes in your course, complete these (you may be able to have multiple attempts to help build your skills).
- Calculate the time allowed for answering the multiple-choice section of the exam. Ideally do this before you get to the exam if you know the details.

Strategies for use during the exam

- Consider the time allocated per question to guide how you use your time in the exam. Don't spend all of your time on one question, leaving the rest unanswered. **Figure 23.3**

provides some strategies for managing questions during the exam.

- Carefully mark your response to the questions and ensure that your answer matches the question number on the answer sheet.
- Review your answers if you have time once you have answered all questions on the exam.

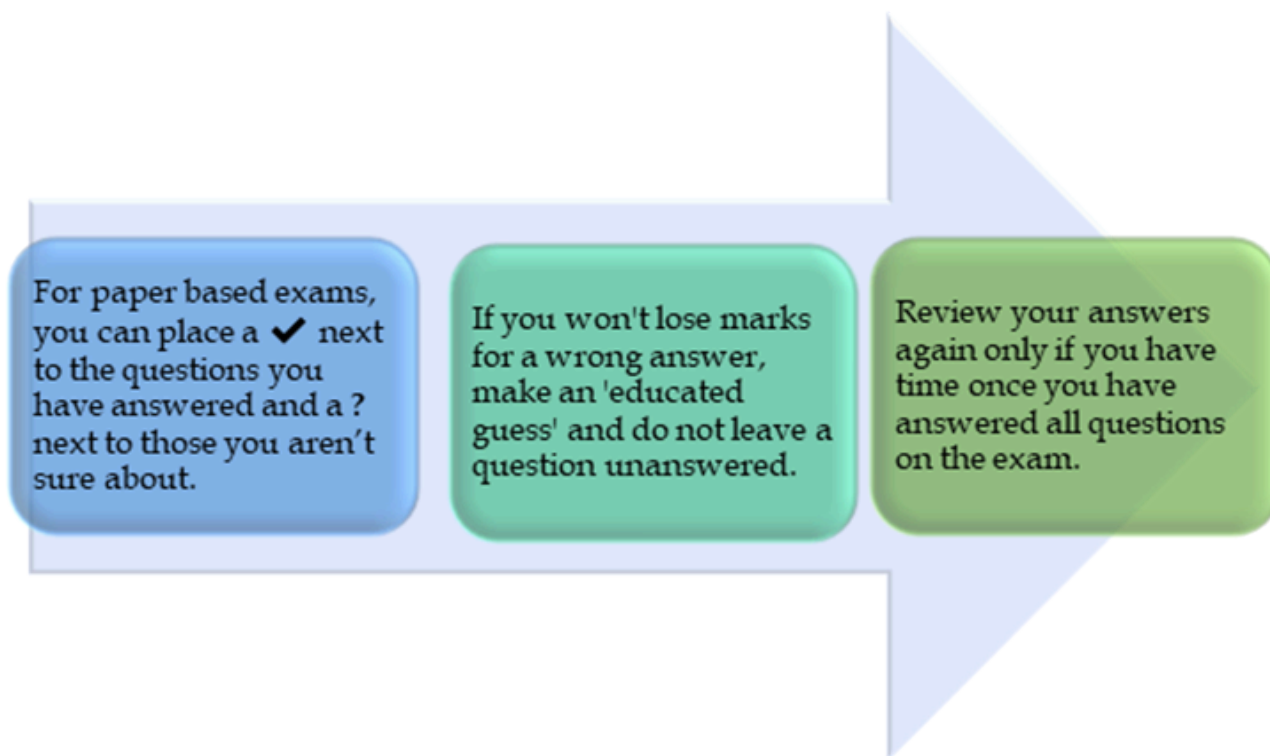


Figure 23.3 Three tips for multiple choice exams. Image by USQ.

Format of multiple choice questions

The most frequently used format of a multiple choice question has two components, the question (may include additional detail or statement) and possible answers.

TABLE 23.1 MULTIPLE CHOICE QUESTIONS

The question and/or statement or question:	Analyse this very carefully as the key words give you the information to determine the correct answer. Take care with small words which are qualifiers (e.g., 'not', 'only', 'today') as they place limitations on the situation or problem (e.g., which answer is not a type of cat).
The possible answers:	There may be as few as three, but generally there are four or five possible answers which are made up of the following types: <ul style="list-style-type: none">• one or more incorrect answers;• one or more correct answers, one of which is a more accurate or a fuller answer than the other/s.

The example below is of a simple form of multiple choice question.

Multiple choice questions usually...

- (a) only ever test for recognition of facts
- (b) are easy and require very little preparation
- (c) have (c) as the most commonly correct response
- (d) require you to pick the best answer out of up to five possible answers
- (e) do not cover any complex material or concepts

(The correct answer is (d))

Figure 23.4 An example of a simple form of a multiple choice question

Multiple choice myths

These are some of the common myths about multiple choice questions that are NOT accurate:

- You don't need to study for multiple choice tests
- Multiple choice questions are easy to get right
- Getting these questions correct is just good luck
- Multiple choice questions take very little time to read and answer
- Multiple choice questions cannot cover complex concepts or ideas
- C is most likely correct
- Answers will always follow a pattern, e.g., badcbadcbadc
- You get more questions correct if you alternate your answers

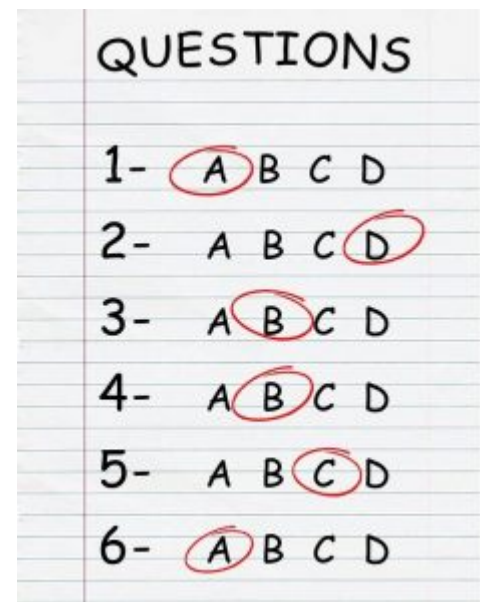


Figure 23.5 Like other types of exam questions, multiple choice questions require preparation and planning. Image by [eslfuntaiwan](#) used under [CC0 licence](#).

None of the answers above are correct! Multiple choice questions may appear short with the answer provided, but this does not mean that you will be able to complete them quickly. Some questions require thought and further calculations before you can determine the answer.

Short answer exams

Short answer, or extended response exams focus on knowledge and understanding of terms and concepts along with the relationships between them. Depending on your study area, short answer responses could require you to write a sentence or a short paragraph or to solve a mathematical problem. Check the expectations with your lecturer or tutor prior to your exam. Try the preparation strategies suggested in the section below.

Preparation strategies for short answer responses

- Concentrate on key terms and concepts
- It is not advised to prepare and learn specific answers as you may not get that exact question on exam day; instead know how to apply your content.
- Learn similarities and differences between similar terms and concepts, e.g. stalagmite and stalactite.
- Learn some relevant examples or supporting evidence you can apply to demonstrate your application and understanding.

There are also some common mistakes to avoid when completing your short answer exam as seen below.

Common mistakes in short answer responses

- Misinterpreting the question
- Not answering the question sufficiently
- Not providing an example
- Response not structured or focused
- Wasting time on questions worth fewer marks
- Leaving questions unanswered
- Not showing working (if calculations were required)

Use these three tips in **Figure 23.6** when completing your short answer responses.

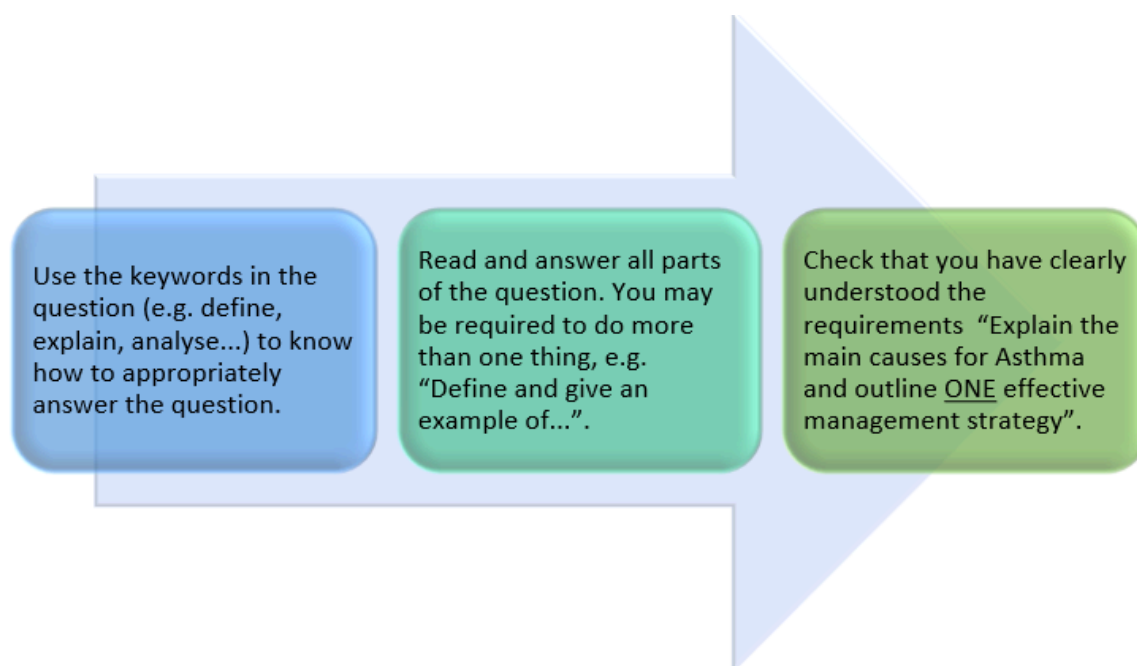


Figure 23.6 Three tips for short answer exams. Image by USQ.

Essay exams

As with other types of exams, you should adjust your preparation to suit the style of questions you will be asked. Essay exam questions require a response with multiple paragraphs and should be logical and well-structured.

It is preferable not to prepare and learn an essay in anticipation of the question you may get on the exam. Instead, it is better to learn the information that you would need to include in an essay and be able to apply this to the specific question on exam day. Although you may have an idea of the content that will be examined, usually you will not know the exact question. If your exam is handwritten, ensure that your writing is legible. You won't get any marks if your writing cannot be read by your marker. You may wish to practise your handwriting, so you are less fatigued in the exam.

Follow these three tips in **Figure 23.7** below for completing an essay exam.

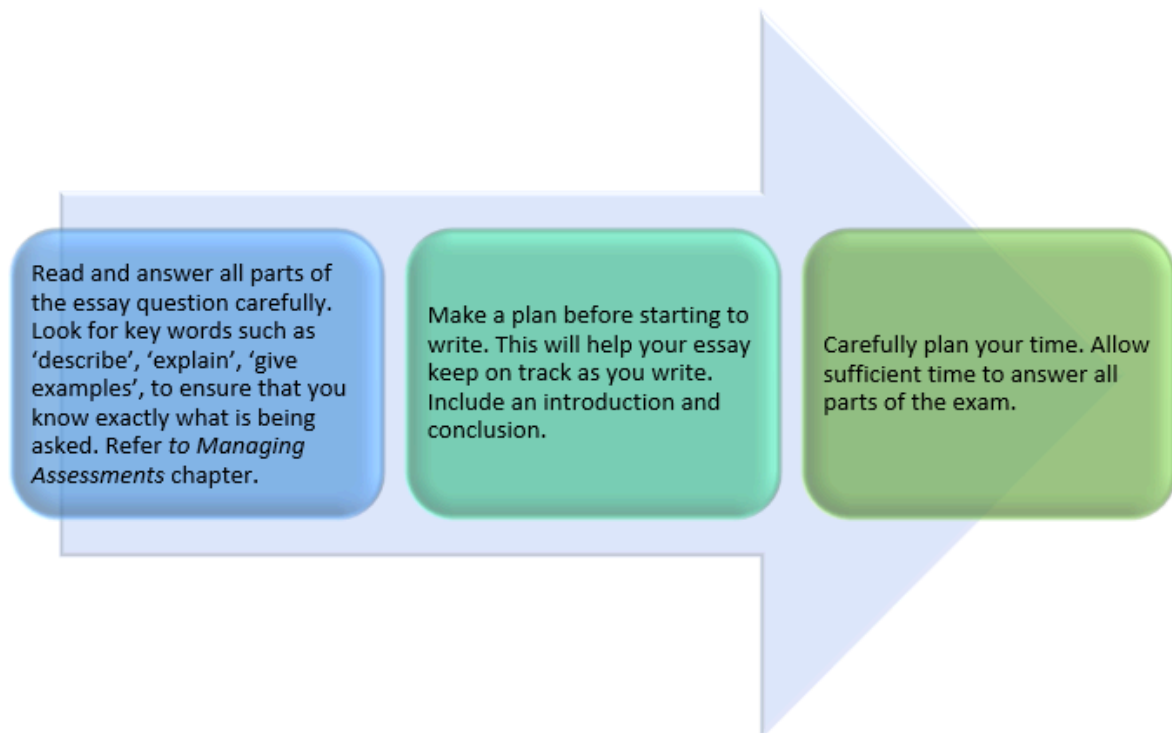


Figure 23.7 Three tips for essay exams. Image by USQ.

Case study exams

Case study questions in exams are often quite complex and include multiple details. This is deliberate to allow you to demonstrate your problem solving and critical thinking abilities. Case study exams require you to apply your knowledge to a real-life situation. The exam question may include information in various formats including a scenario, client brief, case history, patient information, a graph, or table. You may be required to answer a series of questions or interpret or conduct an analysis. Follow the tips below in **Figure 23.8** for completing a case study response.

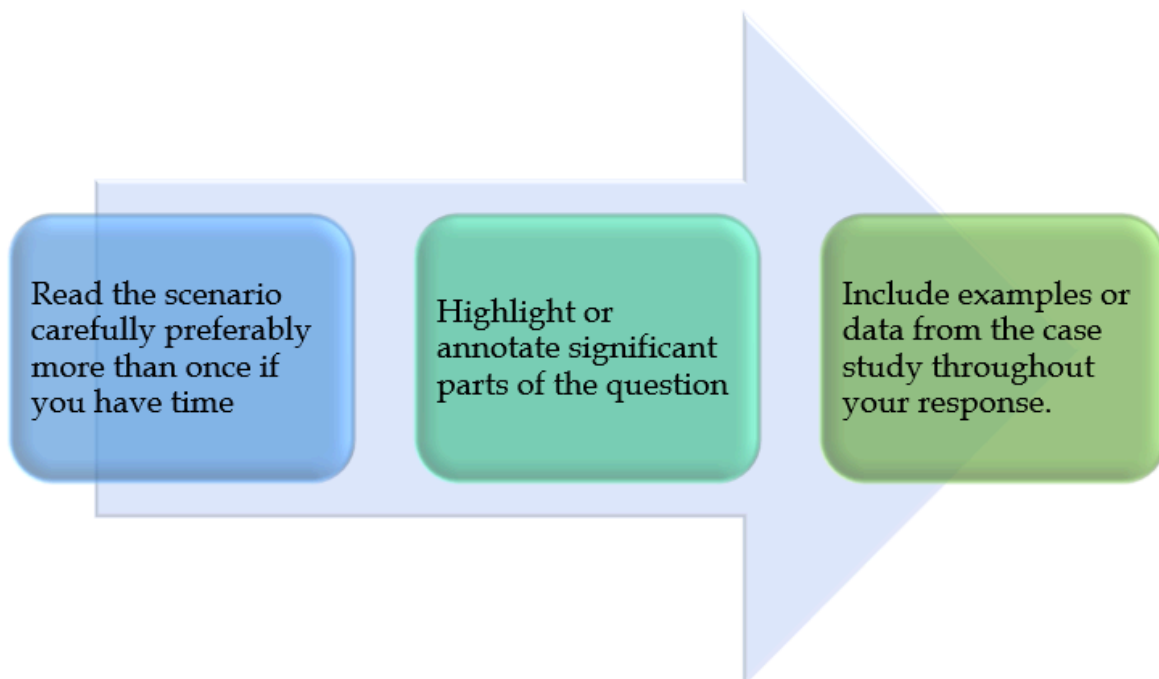


Figure 23.8 Three tips for case study exams. Image by USQ.

Maths exams

This section covers strategies for preparing and completing, maths-based exams. When preparing for a maths exam, an important consideration is the type of exam you will be sitting and what you can, and cannot, bring in with you (for in person exams). Maths exams may be open, restricted or closed. More information about each of these is included in **Table 23.2** below. The information about the type of exam for your course can be found in the examination information provided by your university.

TABLE 23.2 TYPES OF MATHS EXAMS

Exam type	Materials allowed	Study tips
Open exam	Access to any printed or written material and a calculator.	<ul style="list-style-type: none">• Avoid bringing in too much information—as you may not be able to find the information you need quickly enough.• Organise any notes or books you bring to the exam, use tabs to identify different sections.• Summarise and highlight key points in different colours to find easily.• If you have an online textbook/studybook, consider if there are sections you may need to print out.
Restricted Exams	Bring in only specific items, normally a calculator and sometimes a formula sheet.	<ul style="list-style-type: none">• Practice using the formula sheet while studying to familiarise yourself with using it to be able to quickly find everything you need.
Closed Exams	Access only writing and drawing instruments.	<ul style="list-style-type: none">• Know what will and will not be assessed in the exam.• You may be provided with a formula sheet, if so, know what will be included and practice using it.

Once you have considered the type of exam you will be taking and know what materials you will be able to use, you need to focus on preparing for the exam. Preparation for your maths exams should be happening throughout the semester.

Maths exam preparation tips

- Review the information about spaced practice in the previous chapter [Preparing for Exams](#) to maximise your exam preparation
- It is best NOT to start studying the night before the exam. Cramming doesn't work as well as spending regular time studying throughout the course. See additional information on cramming in the previous chapter [Preparing for Exams](#).
- Review your notes and make a concise list of important concepts and formulae
- Make sure you know these formulae and more importantly, how to use them
- Work through your tutorial problems again (without looking at the solutions). Do not just read over them. Working through problems will help you to remember how to do them.
- Work through any practice or past exams which have been provided to you. You can also make your own practice exam by finding problems from your course materials. See the Practice Testing section in the previous [Preparing for Exams](#) chapter for more information.
- When working through practice exams, give yourself a time limit. Don't use your notes or books, treat it like the real exam.
- Finally, it is essential to get a good night's sleep before the exam so you are well rested and

can concentrate when you take the exam.

Multiple choice questions in maths exams

Multiple choice questions in maths exams normally test your knowledge of concepts and may require you to complete calculations. For more information about answering multiple choice questions, please see the multiple choice exam section in this chapter.

Short answer questions in maths exams

These type of questions in a maths exam require you to write a short answer response to the question and provide any mathematical working. Things to remember for these question types include:

- Read each question carefully (a couple times). Consider:
 - what the question is asking you to do?
 - what information are you given?
 - is there anything else you need to do (multi-step questions) to get the answer?
- Highlight/underline the key words. If possible, draw a picture—this helps to visualise the problem (and there may be marks associated with diagrams).
- Show all working! Markers cannot give you marks if they cannot follow your working.
- Check your work.
- Ensure that your work is clear and able to be read.



Figure 23.9 Ensure that you read each question carefully so that you are clear on what the question is asking. [Image](#) by [tjevans](#) used under [CC0 licence](#).

Exam day tips

Before you start your maths exam, you should take some time to peruse (read through) the exam. Regardless of whether your exam has a dedicated perusal time, we recommend that you spend time at the beginning of the exam to read through the whole exam. Below are some strategies for perusing and completing maths based exams.

When you commence your exam:

- Read the exam instructions carefully, if you have any queries, clarify with your exam supervisor
- During the perusal time, write down anything you are worried about forgetting during the exam
- Read each question carefully, look for key words, make notes and write formulae
- Prioritise questions. Do the questions you are most comfortable with first and spend more time on the questions worth more marks. This will help you to maximise your marks.

Once you have read through your options and made a plan on how to best approach your exam, it is time to focus on completing your maths exam. During your exam:

- Label each question clearly—this will allow the marker to find each question (and part), as normally you can answer questions in any order you want! (If you are required to answer the questions in a particular order it will be included as part of your exam instructions.)
- If you get stuck, write down anything you know about that type of question – it could earn you marks
- The process is important—show that you understand the process by writing your working or the process, even if the numbers don't work out
- If you get really stuck on a question, don't spend too long on it. Complete the other questions, something might come to you when you are working on a different question.
- Where possible, draw pictures even if you can't find the words to explain
- Avoid using whiteout to correct mistakes, use a single line to cross out incorrect working
- Don't forget to use the correct units of measurement
- If time permits, check your working and review your work once you have answered all the questions

CONCLUSION

This chapter provided an overview of different types of exams and some specific preparation strategies. Practising for the specific type of exam you will be completing has a number of benefits, including helping you to become comfortable (or at least familiar) with the type of exam and allowing you to focus on answering the questions themselves. It also allows you to adapt your exam preparation to best prepare you for the exam.

Key points

- Know your exam type and practise answering those types of questions.
- Ensure you know the requirements for your specific type of exam (e.g., closed, restricted, open book) and what materials you can use in the exam.
- Multiple choice exams – read the response options carefully.
- Short answer exams– double check that you have answered all parts of the question.
- Essay exams – practise writing essay responses under timed exam conditions.
- Case study exams – ensure that you refer to the case in your response.
- Maths exams – include your working for maths and statistics exams
- For handwritten exams write legibly, so your maker can read your work.

FAILING ASSESSMENT

WENDY HARGREAVES



Figure 24.1 Failure can become a pathway for future achievement. *Image* by [Allan Mas](#) used under [CCO licence](#).

INTRODUCTION

Students experience many ups and downs while at university. Successes are exciting and energising, however finding a way to deal with failures can be a challenge. Failing is a common student experience that, with the right approach, can become a pathway to future triumphs. This chapter aims to help students understand an experience of failing assessment and plan for positive change. As strange as it may sound, failing can be a powerful enabler of success.

The chapter begins by explaining why assessment is a necessary part of tertiary study. Next, it examines students' common reactions to failing, and highlights important actions you may need to take immediately. The chapter then outlines a three-step process for identifying the cause of the failure and for building an action plan for future success. It also discusses how to approach lecturers and tutors respectfully to discuss your grade. The chapter concludes with a recommendation to review your life goals to ensure you are on a path to success.

WHY DO WE HAVE ASSESSMENT AT UNIVERSITY?

The purpose of assessment at university is to check whether a student is meeting the course objectives (or goals). In other words, it is a way to collect proof that you have the knowledge and skills that were taught. For students, assessment can feel like jumping over hurdles. The university will only award your qualification if your results reach set benchmarks. Consequently, assessment is a necessary part of tertiary study; and where there is potential to pass, there is also potential to fail.

Failure at university can look like a lot of different things. Perhaps it is a little comment someone makes about one component of one small task or perhaps it is a failing mark for an entire course. The good news is that, whatever the size or nature of the failure, there are strategies that can turn this experience into something useful and positive, and put you back on the road to success. The journey begins when you first receive news of your results.



Figure 24.2 Assessment can feel like jumping over hurdles. [Image](#) by [Roman Biernacki](#) used under [CCO license](#).

ACKNOWLEDGING YOUR FEELINGS

Finding out that you have failed something is often an uncomfortable experience.

Failing can evoke strong, unpleasant feelings and thoughts that may negatively affect your confidence, self-esteem, motivation and mood. You may feel angry, sad, disappointed, shocked, worried, distressed, anxious and many other things, and you can feel them all at the same time. It is normal to experience strong feelings, particularly when you invested a lot of time and effort in a task. It may be helpful to talk with a trusted friend or relative to vent and defuse some of those powerful emotions. Services offered by your university such as academic learning advisors, psychologists and other healthcare professionals can offer perspectives and support to help you to manage your thinking and feelings productively.

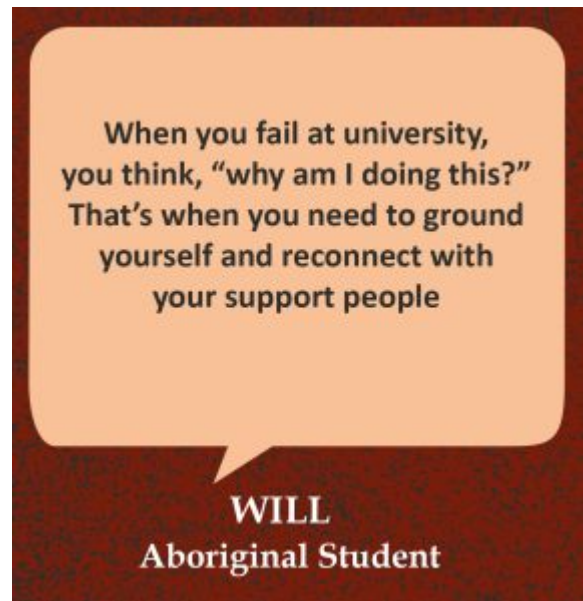




Figure 24.3 Failing can evoke strong unpleasant feelings that affect your mood. [Image used under CC0 license.](#)

Those first few hours, or day, of dealing with the news can feel particularly intense. The discomfort is raw and fresh, and can consume your thinking. Sometimes people find it helpful to “stand back” to lessen the power of the feelings a little. Try to do something to give your body and mind a break from the stress. Perhaps you might enjoy some sport or exercise, watching a movie, eating some chocolate, catching up with friends, or playing a computer game. Spending this time on self-care buys critical time for your body and mind to return to a healthier state where they can function better. Taking this time may also stop you from acting out rashly when you are angry or

sad, before you have considered which course of action will achieve the most helpful outcome. Most importantly, if you find that your negative thoughts and feelings continue to interfere with feeling okay, and with living your everyday life, then access healthcare workers for professional support as soon as possible.

The purpose of dealing with your feelings is not to eliminate them, but rather to find a place for them in your thinking where they do not stop you from moving towards a positive future. Acknowledging the power and influence of your feelings and finding an acceptable place in your world frees you to take actions that maximise the learning from an experience of failing. It’s all part of having the growth mindset discussed in the chapter [Beginnings](#).

AN IMPORTANT ACTION

Dealing with your feelings can consume energy and focus, but there’s one important action to take in the first day or two of receiving the news of failure — check to see if there is anything that the university requires you to do as a consequence of failing that must be completed by a certain date. If you miss this important step, it may affect your academic future.

A required action could be a number of different things so look out for any notifications, emails, and instructions from your lecturer or university. For example, have you been told to re-sit an exam next month? Do you need to re-enrol in a compulsory training module next week? Are you required to meet with an academic integrity officer within eight weeks? Have you been asked to submit within a fortnight a “show cause” statement so you can continue studying at your university? Responding promptly and appropriately to time-sensitive instructions set by your university or lecturers can make a critical difference to your academic future. Be sure to make enquiries if you need clarification of what to do. Once you clearly understand and respond to any required actions and deadlines, you can slow down and take time to reflect on what happened.

IDENTIFYING WHY YOU FAILED

Once you have addressed any time-sensitive instructions and you are prepared emotionally to explore what happened, you can turn your attention to identifying why you failed. Pinpointing the cause, or causes, can help you figure out what to change in the future. Self-examination can be a personally confronting and uncomfortable experience. It’s human nature to defend our weaknesses and shift the blame for a failure to something or someone else. Unfortunately, at times our desire to protect our self-esteem and reputation reduces our willingness to admit objectively if

we contributed to our failure. The trick here is to be able to tell when an external factor genuinely caused your failure and when it is your own mind being overprotective of you.



Figure 24.4 Self-examination can be uncomfortable but it can lead to learning. Image by Kc Rae, Aboriginal artist, used under [CC-BY-NC-ND](#) license.

“This picture uses Aboriginal Art to depict self-reflection. The blue and purple tones represent the mirroring qualities of water, with flowing water in the centre showing the continuity of self-reflection and personal growth. Notice how the shapes on each side are similar, yet the colours are switched, and the forms are mirrored and inverted. This shows that reflection can distort but the core remains the same. Likewise, self-reflection helps us to change without losing who we are in the process.” Kc Rae, Aboriginal artist.

If you want to learn from what happened so you can change your results next time, there’s no benefit in misdiagnosing what went wrong. If you don’t admit to yourself truthfully why you failed, then you may try to change the wrong things. Even if you don’t wish to tell others why you failed, being honest with yourself is essential. It ensures that you change the things that really will make a difference to your progress.

3-STEP ACTION PLAN FOR FUTURE SUCCESS

The next part of this chapter is an activity for building your personal action plan to turn assessment failure into future success. The three-step process helps you to identify what happened and what to do about it. You will be creating a table for this activity.

Step 1: Identify the contributors

Begin by thinking about one specific assessment task or exam that you failed. The “Action Plan for Future Success” table shown below lists common factors that contribute to why students fail (See **Table 24.1**). You can print out this page or access a copy in the Appendix ([See Appendix](#)). Place a tick in the TICK column beside every factor that you think contributed to the result. Tick as many factors as you like. There are empty lines at the bottom of the table to add factors you think of that are not listed.

To help you complete the table, refer to any feedback you have received about your performance to establish why you failed. As explained in the chapter [Managing Assessment](#), written comments and a marking rubric can help you pinpoint where things went wrong. If you have trouble understanding the feedback, you can ask to meet with your lecturer or tutor, a learning advisor, or another academic staff member to help interpret it. The feedback may include what you did well too. Don’t forget to congratulate yourself on your successes. Sometimes we are so focussed on the negatives that we forget to be proud of our achievements.

Table 24.1 Action Plan for Future Success

FACTORS THAT CONTRIBUTED TO FAILING A TASK	TICK ✓	ACTION <i>I can change this next time by...</i> <i>I can seek help to change this by...</i> <i>I can investigate this situation further by...</i>
I didn't understand part or all of the assessment task requirements.		
I misinterpreted part or all of the task.		
I didn't observe the required number of words.		
I left something out of the task.		
I included work that wasn't relevant to the specified task.		
I had errors in the work I submitted.		
I had insufficient references providing evidence.		
I didn't correctly cite my sources of information.		
I didn't refer to the case study I was given.		
I didn't paraphrase correctly.		
I didn't do my own work. I claimed work from someone else or from artificial intelligence as my own.		
I worked with other people on my assignment or exam when it should have been an individual task.		
I performed poorly on the day of the exam.		
I cheated in an exam.		
I couldn't remember everything I needed for my exam.		
I didn't study or prepare for some of the topics asked in my exam.		
I didn't attend my exam.		

I failed due to non-attendance at class or another mandated event, other than an exam.		
I had technological difficulties in completing a task or exam.		
My practical skills were not adequate for a practical skills test.		
I believe my assessment item was graded inaccurately.		
I believe my assessment item was graded unfairly.		
I didn't submit part or all of the assessment.		
My writing skills affected my grade negatively.		
My writing style wasn't appropriate for the specific task e.g., it was too descriptive, emotive, personal, not analytical, not critical, not reflective.		
My ability to speak or write in English affected my grade badly.		
My maths skills affected my grade negatively.		
I didn't show all my working in a maths task.		
I used a calculator or an online calculator when I shouldn't have.		
A personal circumstance disrupted my study and ability to perform or complete a task e.g., health, safety, finance, caring for others, living arrangements, lack of a personal support network that values study.		
I have an ongoing physical or mental health condition that impacted my study.		
I experienced a change in life that affected my priorities and/or time.		
I did not manage my time well, and ran out of time so I produced poor or incomplete work.		
I had more commitments that I had time to meet them.		
I procrastinated.		
I think I self-sabotaged my work (consciously or unconsciously did something to block my success).		
I had difficulty understanding the whole subject I'm studying.		

I don't know what I did wrong.		

Download a PDF of the Action Plan for Future Success here: [Table 24.1](#).

Step 2: Review and amend

After you have completed the table, take some time to reflect on your responses. Ask yourself, “Were my answers completely realistic and honest, or did I try to protect myself by blaming something or someone else for why I failed?” You might like to ask another student, a close friend or a relative whether they think you have been objective about what happened. People who know you well may identify factors that you missed. After you’ve reflected on your responses, make any adjustments you need so your list is as accurate as possible. Remember, the more accurate your list, the more likely you’ll be fixing the right problem.

Step 3: Write an action

The third step is to identify and write in the table what action you can take in the future to produce a different result. There are three kinds of actions you can take. The first is an action where you feel confident that **you can change something yourself**. For example, if you lost marks on your assignment because you didn’t observe the word limit, you may feel sure that you can fix it. Then, your action could be to pay close attention to the word count on your next assignment.

The second kind of action is to **seek help to change something**. Perhaps you didn’t reference correctly in your essay but you don’t know how to improve your referencing. Then, your action is to find someone who can help you learn the skill of referencing, such as a university librarian. If you don’t know exactly who will be able to help you, you can write down the name of someone, like your lecturer, who can help you start your search for the right person. It may take a little effort, but if you follow the trail, you’ll be able to find who or what you need to help you succeed.

The third action is to **investigate if there are any options, services, procedures or pathways** that could make a difference to your past or future study success when something beyond your control stopped you from succeeding. For example, if you are concerned that you have not been graded fairly on your exam, your action may be to investigate the formal procedure for lodging a request for your work to be re-assessed. Alternatively, if you failed because you didn’t attend an exam due to illness, you can investigate if the university has a procedure for this situation. With a medical certificate, you may be able to apply to re-sit your exam without penalty.

To complete your plan, write an action beside each item you ticked in your table. If it is something you can change by yourself, then write down what you will do. If it is something you need help to change, then write down who you will approach. If it is something you need to explore further, then write down how you will begin your investigation. Use one of the three sentence stems provided in the column header to write your action sentence (e.g., “I can change this next time by”; “I can seek help to change this by”; or “I can investigate this situation further by”). Your table could look something like the extract below. (See **Table 24.2**).

Table 24.2 Extract from a Completed Action Plan for Future Success

FACTORS THAT CONTRIBUTED TO FAILING A TASK	TICK ✓	ACTION <i>I can change this next time by...</i> <i>I can seek help to change this by...</i> <i>I can investigate this situation further by...</i>
I didn't follow the task instructions fully or correctly.	✓	<i>I can change this next time by reading the instructions more carefully and highlighting the important parts. When I have finished my assignment, I will check the instructions again to make sure I followed them correctly.</i>
I didn't correctly cite my sources of information.	✓	<i>I can seek help to change this by making an appointment with a librarian.</i>
I didn't attend my exam.	✓	<i>I can investigate this situation further by searching online through the university's procedures to see if I can apply to re-sit my exam.</i>
I didn't observe the required number of words.	✓	<i>I can change this next time by checking the specified word limit before I start my essay and keep checking it while I write.</i>
My ability to speak or write in English affected my grade badly.	✓	<i>I can seek help to change this by speaking with the general University Help Desk to see if they can direct me to someone or a service who can assist with my English communication skills.</i>
I had technological difficulties in completing a task or exam.	✓	<i>I can investigate this situation further by examining what caused my technological difficulties and what resources, people, or university policies I need to access in the future for a different outcome.</i>
I didn't submit part or all of the assessment.	✓	<i>I can change this next time by noting all of the assessment due dates in my calendar and adding reminders. I will also carefully check that I'm submitting all parts of an assessment task.</i>
I had difficulty understanding the whole subject I'm studying.	✓	<i>I can seek help to change this by joining a peer study group at the university to discuss what we are learning and to help me revise the course content each week.</i>
I have an ongoing physical or mental health condition that impacted my study.	✓	<i>I can investigate this situation further by searching online or approaching the university staff on campus to see if they offer any special ongoing support for students with physical or mental health conditions.</i>

PUTTING YOUR PLAN INTO ACTION

At the end of the process, you will have your action plan. Taking action can make you feel better about a failure because you're already on the path to a better future. Put your plan in a prominent place to remind you to monitor it. You can also add it to a visible spot on your electronic device.

Some actions will be quick and easy to implement, while others will take longer and involve multiple steps. One way to stay on track is to make your behaviour accountable by telling someone else about your plan. Perhaps there is another student in your class, a mentor or a personal friend you can talk with periodically to discuss your progress. You can also put reminders into your calendar, phone or other electronic devices as check points to assess your commitment to change. A key element to making change happen is to stay self-aware. This means that you monitor what you *want* to be doing and compare it with what you *are* doing. If your strategies aren't working, look for alternative approaches to try. You have already done the uncomfortable work to identify what went wrong. Now put in the effort to find ways to make the positive changes you need.

Universities are well equipped with people and resources to help students succeed. Whatever caused your failure, there is usually someone or something at university that can make a

difference. After all, your university wants you to succeed too. Your priority is to take action and find the people and resources you need.

DID THE LECTURER GET IT WRONG?

It is possible you may have failed because a lecturer or tutor marked your work inaccurately or unfairly. Teachers do make errors when designing and marking assessment. Perhaps they miscalculated your final total grade. Maybe there was an ambiguous instruction on your exam paper or a contradiction in your assignment task that misdirected you. If you wish to investigate the possibility that their error produced your failing grade, make sure you approach them respectfully and in a calm manner. Communicate the facts of the situation clearly. Follow any formal procedures set out by your university. Be aware that if you ask for your assessment piece to be re-marked by another examiner, it is possible that the second examiner may score it lower than the first.



Figure 24.5 Teachers do make errors. Image by [Max Fischer](#) used under [CCO license](#).

There was one time when I think a lecturer marked me wrong. I still passed but my mark wasn't as high as I expected. I never questioned it because I feared that if it was remarked I'd get a worse grade. So, I just left it. In hindsight, I think I should have questioned it. It's all about having that confidence in yourself.

WILL
Aboriginal Student

As a student, you have the right to question whether your marks are accurate, but before proceeding make sure you're not doing it to protect your self-esteem by blaming something or someone else for what happened. Try to adopt an open, non-aggressive outlook so you can discuss any sensitive issues objectively. If you can see objective evidence that suggests something has gone wrong in how you were examined, then proceed with your investigation and enquiries, calmly and respectfully. Your university may have a student advocacy group who can assist you in this process to achieve the best outcome in a positive way.

REVIEWING YOUR GOALS

An experience of failure is an opportunity to review your life goals and priorities and double check that you are heading in the direction you really want to go. To do this, you can re-read the chapter [Goals and Priorities](#) to see if you're still on the pathway you want. You can also make an appointment with a careers counsellor at your university to check your options.

Sometimes failing an assessment task can be a subconscious way of telling yourself that you're not happy about something. You might be trying to tell yourself "actually, I don't like nursing. I want to study engineering" or perhaps "I'm studying because I'm expected to. What I really want to do is travel right now, then study after that". In circumstances like these, students can deliberately or unknowingly self-sabotage their assessment results. If you think this could be a factor, you could make an appointment with a counsellor or psychologist to help you explore your feelings and make decisions about the direction you wish to take. At other times, failure at university is caused not so much by a disinterest in study, but rather by a greater interest or prioritising of other

things. For example, a student might think, “I want to keep my tennis coaching business growing. I’m going to reply to business emails today instead of studying for my exam”.

For some students, reviewing goals will affirm that you are heading in the right direction, and that you just need some assistance for a smoother journey. For others, reflecting may raise doubts about whether the subject, the degree, the university or even studying at all is the best thing for you to be doing at the moment.

Changing direction with your university study is a major decision with significant consequences for your time, finances and academic future. If you are considering withdrawing from study, be sure to seek advice from university support services so you are well-informed of consequences before acting. You may discover alternatives that are best matched with your life goals, such as switching degrees, changing from full-time to part-time study or putting your study on hold temporarily (called deferment). With a few changes, you might discover you are happy to continue studying after all.

A PATH TO SUCCESS

Failing an assessment task can feel like a catastrophe however it can be a valuable step towards achievement. In the big scheme of life, failing something at university is probably a smaller event than you think. Remember, you’ve had lots and lots of successes in your life too. No grade, however bad, defines who you are. It matters less that a failure happened, and more that you can use it to get where you want to go. A failure can be a positive opportunity to check your goals and tweak your methods for reaching them. It’s an opportunity to learn how to succeed, a motivation for change and a catalyst for growth. Approached with a growth mindset, failure may be just what you needed to put you on a path for academic success.



Key points

Figure 24.6 Failure can be a step to where you want to go. Image by Tembela Bohle used under CC0 license.

- Failing is a common student experience.
- Failing can be a powerful enabler of success.
- Assessment provides evidence of meeting benchmarks which is a necessary part of tertiary study; and where there is potential to pass, there is also potential to fail.
- Failing can evoke strong, unpleasant feelings and thoughts.
- Allow some time to deal with the feelings in a positive way.
- Seek professional support if you are having difficulty feeling okay.
- Check to see if there is anything that the university requires you to do by a certain date as a consequence of failing.

- Follow the three-step process to identify why you failed and build an action plan for the future.
- Set reminders and tell someone about your plan to help you stay on track with it.
- If you think a lecturer or tutor has made a mistake in marking your assessment, approach them calmly and respectfully to discuss it.
- Review your goals for choosing to study at university to check you are still on the pathway that is right for you.

PART V.

PART E: SUCCESSFUL FUTURES



Successful Futures

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PREPARING FOR EMPLOYMENT

CRISTY BARTLETT



Figure 25.1 It's not too early to start thinking about your post-university employment. Image by [amtec_photos](#) is licenced under [CC BY-SA 2.0](#).

INTRODUCTION

Many people study at university because they want to work in a specific profession, or perhaps gain employment with better conditions. This chapter outlines some steps that you can be taking now, while you are a student, to increase your employability when applying for work after you graduate. These activities do not need to be time consuming and many will also be helpful to you as a student learning in your field of study. Field of study is referred to as your discipline area in this chapter, and describes the major or key area of study, for example education, nursing or creative arts. It's not too early to start thinking about your post-university employment, and many of the activities suggested in this chapter can be undertaken now, regardless of how far you are through your studies. This chapter begins by discussing the importance of having a general career plan and then describes some activities that can assist in developing your career readiness and make you more attractive to future employers.

WHAT ARE YOUR PLANS?

Part of increasing your employability is understanding the profession or career you are planning to enter. You have chosen a program of study, but what types of jobs do you plan to have when you graduate? Some students will have a very clear picture of what their future work will be. For other students, the pathway to a career is not as straightforward. If you are in the latter category, then we recommend that you have a chat to a Career Practitioner (or Careers Advisor/Counsellor). Most universities will provide free access to expert careers advice. This doesn't mean you are locking yourself into only one career path. However, having a clear picture of your future profession will make it easier to work on the skills and attributes that your future employers will be seeking.



Figure 25.2 Having a clear idea of the profession you wish to enter is an important part of developing your employability. *Image by Megan Rexazin used under CC0 licence.*

PROFESSIONAL IN TRAINING

It can help to think of yourself as a professional in training, rather than as a student. This happens from the moment you start your university experience and provides you with opportunities to develop your professional identity, ready for your first new role after graduation. You demonstrate your professionalism (or lack of) in your interactions within your subjects, with fellow students, university staff and others. This includes how you interact with others in forum posts, in lectures and tutorials, and in the assessment work that you submit. This doesn't mean that studying cannot be fun. It's more about ensuring that you are not acting inappropriately or creating a negative impression.



Figure 25.3 Developing positive relationships with your lecturers is part of developing your professional network. *Image by Mohamed Hassan used under CC0 licence.*

Developing a positive professional relationship with your lecturers can have many benefits. Your lecturers will often have connections with employers in your discipline and they are usually happy to share their knowledge of employment practices and opportunities with students. Many graduate employment programs require applicants to submit academic references and your lecturers need to know who you are before they can be your referee. You can connect with university staff and demonstrate your career readiness in a number of ways. This can involve being an active participant in your classes, including discussing the subject content in classes and tutorials, engaging in the forums for your subjects and joining discipline clubs (e.g., Engineering Club). Not all of these options will be possible for all students. If you are studying online, you may need to consider different

approaches compared to a student studying on campus. For example, students attending live online lectures can use a webcam to show their presence, be dressed appropriately, ask questions during the session and consider their video background view (Quick tip: Use a virtual background image if your actual background isn't ideal).

PROFESSIONAL IMAGE

Your professional image is important. Many employers will view the social media pages of applicants, so consider if your public profile is what you want potential employers to see. As an employee, your behaviour and image reflects on your employer, so employers are looking for people whose image matches the business. It's important to be aware that anything you post or upload online may be accessible forever, even if you remove the original post. Once something is online you may lose control over how it is distributed or shared. This doesn't mean that you cannot have personal opinions or share your personal life with friends and family online.

However, you may consider having a private personal profile and a public professional profile on social media and other online platforms, such as LinkedIn.

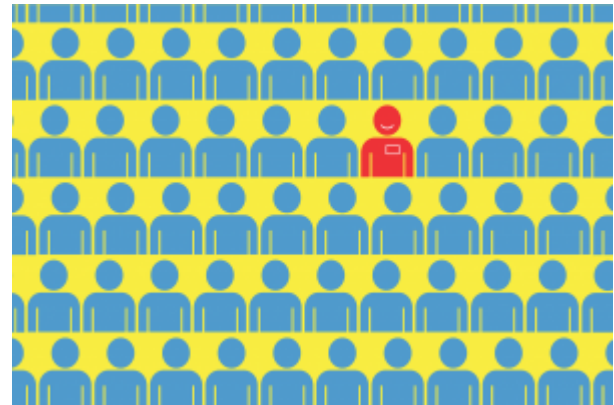


Figure 25.4 It's important that you stand out from the crowd in a good way, or for the right reasons. [Image](#) by [Katie White](#) used under [CCO licence](#).

PROFESSIONAL MEMBERSHIPS

Many professional organisations have free or reduced cost membership for students. These organisations often provide useful resources to members, have graduate programs and advertise job vacancies. They will also often provide professional development opportunities and mentoring programs. Professional groups provide opportunities to meet people to develop your professional network and are also an opportunity for you to become more familiar with your profession and the types of jobs that might be available.

Your university website may list relevant professional organisations for your program of study. Your lecturers and career practitioners will also be able to provide you with advice regarding the most relevant organisations for you to join.

Joining a professional organisation is the first step. To get the most out of your membership, consider participating in professional development opportunities, accessing member resources, joining mentoring programs, or attending local branch meetings. These activities demonstrate to potential employers you have done more than just complete a membership application form.

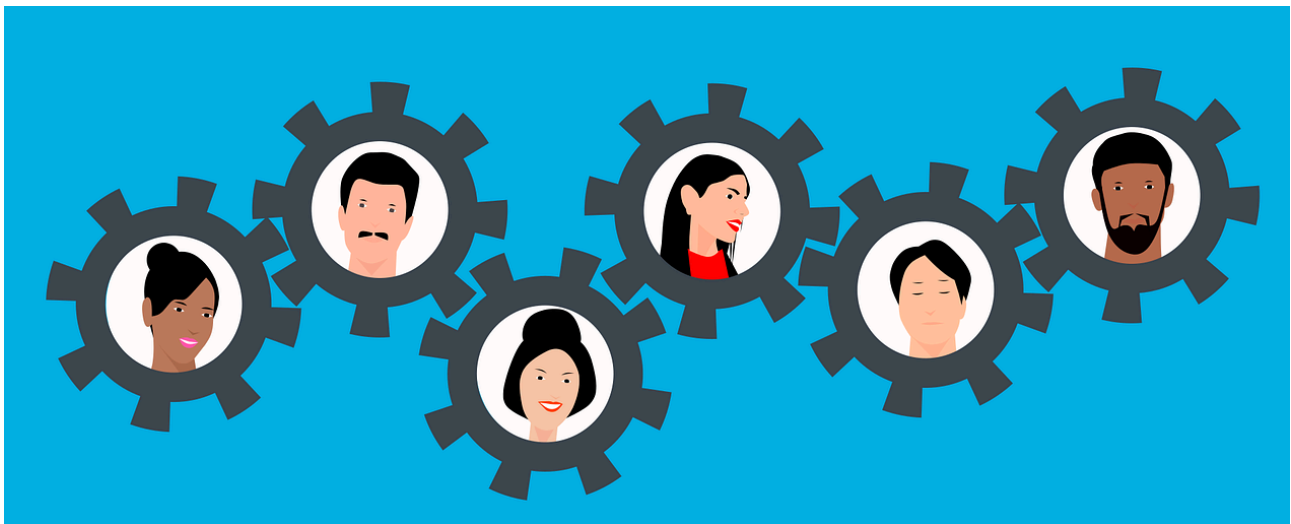


Figure 25.5 Consider joining a professional organisation and participating in member activities. [Image](#) by [Mohamed Hassan](#) used under [CCO licence](#).

ACCREDITATION BODIES

Many professions require registration or have optional registration. This process is overseen by organisations known as accreditation bodies. For example, the Queensland College of Teachers is the organisation responsible for teacher registration and for accrediting teacher education programs, or teaching degrees, within Queensland, Australia, and membership with Engineers Australia is often required before you can be employed as an Engineer in Australia. We recommend that you review the competencies and skills you will need to demonstrate for registration if this applies to your profession or discipline. These are also likely to be many of the same skills that employers will be looking for. Be prepared to submit your application for professional registration as soon as possible. You may need to have completed your degree before you can apply for registration, however you may be able to prepare the other elements of your application beforehand. You don't want to miss a great employment opportunity because your professional registration isn't finalised.

INTERNSHIPS AND OTHER WORK EXPERIENCE

Many students do not have industry experience when they commence their studies. However, there are often opportunities to gain discipline experience while you are a student. This can include professional placements as formal components of your studies, work integrated learning, internships, industry placements and paid junior roles. Your university's careers and employability team, your lecturers and other support staff will be able to inform you of the options available within your discipline area. These placements provide excellent opportunities to not just develop discipline skills, but to also expand your professional network, gain professional references or recommendations, and may lead to ongoing employment. They also give you an opportunity to see what it might be like working in your chosen profession and what employment opportunities exist. Ideally, you will be excited by your work or placement in your discipline area and be even more motivated to finish your degree.

Don't worry if you are unable to undertake work experience in an area directly related to your study. Any recent employment where you can demonstrate that you are a good employee (e.g., that you are punctual, reliable, appropriately presented) will be helpful. Skills you may be able to

demonstrate from other paid employment include experience in customer service, working with others, written communication skills, managing budgets, following policies and procedures, plus many more. Consider asking your employer for a reference that verifies that you have demonstrated these key qualities.

Volunteer activities also provide opportunities to develop skills that future employers will be seeking. For example, if you prepare your cricket club newsletter then you may have valuable experience in written communication, working with contributors, using the software or program used to create the newsletter and graphic design.

OTHER EXTRA-CURRICULAR OPPORTUNITIES

Most universities will offer extra-curricular opportunities, such as student representation positions, peer assisted learning, sporting clubs, debating clubs, etcetera. These provide opportunities for you to develop and demonstrate skills that employers are looking for (as well as being good fun). Participating in these activities also shows that you have some balance in your life and are not “just” a student. For example, playing in a team sport may indicate to an employer that you are able to work with others and are generally fit and healthy; and holding student representation positions can allow you to develop and demonstrate leadership skills.

PREPARE YOUR RESUME OR PROFESSIONAL PORTFOLIO

We recommend that you prepare your resume or CV (Curriculum Vitae) now, at least in draft form, so when positions are advertised you are ready to apply. Graduate employment programs are often advertised six months (or more) before the program is due to commence and may only be open for submission for a short period of time. There are a lot of resume preparation resources available online and your university is likely to provide support in developing your resume. Your resume is an opportunity to highlight your skills, experience, and abilities and why you are a desirable candidate. It is important that you spend some time preparing a professional resume. A poorly prepared resume may lead employers to believe that you are a poorly prepared professional.

Some disciplines will require students to develop a professional portfolio during their studies. For example, a creative arts student may develop a digital portfolio of their paintings, a film and television student may develop a showreel, an education student may create a showcase portfolio of lesson plans, or an engineering student may develop a skills development portfolio. This is a great opportunity to gradually build a portfolio of evidence of your skills and abilities and your

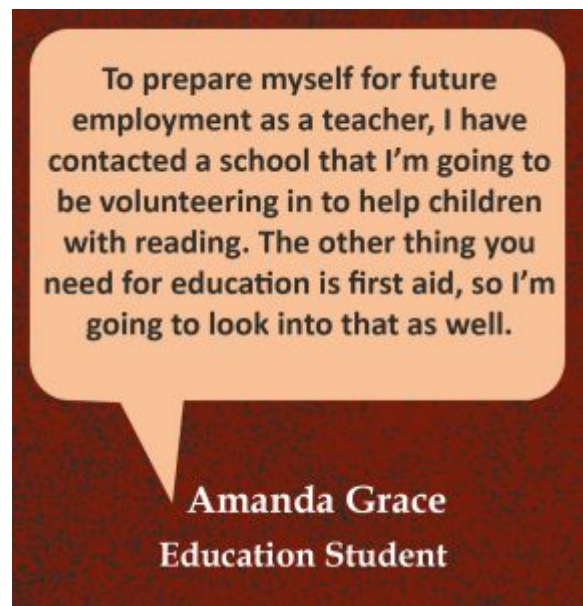


Figure 25.6 Participation in extra-curricular activities provides additional opportunities to develop and demonstrate skills that employers may be looking for. Image by [S. Hermann & F. Richter](#) used under [CC0 licence](#).

professional learning. Carefully consider any feedback you receive on your portfolio, as your lecturers are likely to know what potential employers are seeking.



Figure 25.7 Having a professional and comprehensive resume is an important part of the application process. *Image by Coffee Bean used under CC0 licence.*

You will often have to submit a number of other documents with your application, which may include a cover letter, statement of claim, selection criteria statement, university transcripts, referee reports, or samples of work. Your university careers and employability team will have resources and support to assist you in preparing a comprehensive application.

INTERVIEW PREPARATION

It's exciting when your resume, professional image, skills and abilities lead to an interview for a position. Don't let all that good work go to waste by being unprepared in your interview. There are a number of things to consider during the interview stage to maximise your chance of being the successful candidate. These include:

- your personal presentation, including what you wear,
- body language,
- punctuality (not too early and not late),
- understanding the employer and the business,
- knowing what skills to highlight,
- how to answer interview questions, and
- how to manage nervousness during the interview.



Figure 25.8 Spend time preparing for the interview to maximise your chances of being the successful candidate. *Image by VIN JD used under CC0 licence.*

Your university careers and employability team will have resources to help you prepare for an interview and may provide opportunities for you to practice your interview technique. There are also many useful resources online.

INDUSTRY EVENTS ON CAMPUS

Your potential employers may attend events at your university, either on campus or virtually. Your

university may host careers fairs and other opportunities to connect with potential employers. A careers fair is an event where employers from a wide range of professions will attend to discuss their recruitment processes and provide information about their organisations. Other employers may offer information sessions at key recruitment times, for example your local state education system may offer recruitment information sessions for students about to graduate with teaching degrees. These are all great opportunities to connect with your potential future employers. Consider these events as a mini job interview and aim to make a positive impression when you attend. You never know; the people you meet may be the ones who interview you formally for a job in the future.

OTHER SKILLS REQUIRED IN YOUR PROFESSION

As mentioned in earlier sections of this chapter, not only are employers interested in your technical or discipline skills, they are also looking for candidates with other skills. These may include the ability to communicate clearly, work with others, problem solve, manage their time, show initiative and adaptability, and demonstrate leadership. It is important that you consider how you will demonstrate these skills.

DEVELOP A CHECKLIST OF SKILLS AND EXPERIENCE

When you know what potential employers might be looking for you can develop a plan for acquiring any skills that you don't already have.

Job vacancies, your university careers and employability team, professional bodies and accreditation or registration bodies are all possible sources of information. For example, you can review the skills, training and experience applicants are asked to demonstrate in relevant job vacancies.

UNIVERSITY CAREERS AND EMPLOYABILITY SUPPORT

Most universities will have a careers and employability team that will offer a range of services, including promoting job vacancies, resume and application writing support, and careers advice. They may also offer internships, mentoring, and other programs designed to assist you. The careers and employability team are also a great resource if you aren't sure about what activities might be helpful, who your professional organisations might be, or what job opportunities might be available. They are experts in the field of employment, career development, and employability and their services are usually free to university students, so make the most of this great resource.



Figure 25.9 Demonstrating skills such as ability to work in a team is often as important as demonstrating your discipline knowledge. Image by [GraphicMamaTeam](#) used under [CCO licence](#).

LEADER
 KNOWLEDGE
 QUALIFICATIONS
 EDUCATION
 TIPS
 SKILLS
 REFERENCES
 MULTITASKING
 CREATED
 CAREER
 WORK
 JOB
 SUCCESS
 CHALLENGES
 ABILITIES
 IMPRESS
 RESPONSIBILITY
 FUTURE
 TIE
 WEEKNESSES
 BENEFITS
 RESULTS
 DEGREE
 TEAM
 PLAYER
 INTERVIEW
 STRENGTHS
 EXPERIENCED
 CONFLICT
 EXAMPLES
 TEAM
 INITIATIVE
 OBJECTIVE
 AGENCY
 CANDIDATE
 PROBLEM SOLVER
 QUESTIONS
 CAN-DO
 TRAINING
 DREAMS

CONCLUSION

Starting your career preparation while you are still a student at university can help you to build a comprehensive portfolio demonstrating your readiness and suitability to enter your profession. Universities usually offer a number of opportunities for students to develop employability skills so take advantage of them. Other activities such as joining a professional organisation, connecting with your lecturers and joining university clubs will provide you with opportunities to develop skills and widen your professional network. By developing these skills and gaining experience you will improve your readiness to enter your profession and the transition from student to professional will be easier.

Key points

- Preparing to enter your profession starts when you commence your studies at university.
- Knowing about your future profession will help you to choose appropriate career readiness activities.
- Developing positive relationships with your lecturers is part of developing your professional network.
- Ensure that your public social media profile shows you as a professional to potential

employers. Consider creating a professional LinkedIn profile.

- Join professional organisations relevant for your future career and participate in their activities and services.
- Gain work experience, either in your chosen industry, as a volunteer or in other work areas.
- Participate in extra-curricular activities. Not only are they often good fun, but you are developing useful skills at the same time.
- Prepare a professional resume.
- Consider developing a list of skills, experience and abilities that you will need to demonstrate in your profession and use it as a checklist as you prepare for your future career.
- Your university careers and employability team will have resources and services to assist you.

POSTGRADUATE STUDY

DOUGLAS EACERSALL; MORIA DRAKE; AND ALLISON MILLWARD



Figure 26.1 Postgraduate study offers great opportunities after completion of your undergraduate degree. [Image](#) by [StockSnap](#) used under [CC0 license](#).

INTRODUCTION

Postgraduate study is further education that follows the completion of an undergraduate degree. As an undergraduate student, graduation can seem a long way away, and often the goal is to complete your degree and move straight into employment. It is important, however, to consider postgraduate study options and how these might align with your future goals. Postgraduate study is an opportunity to delve deeper into a specific field of interest, expand your knowledge, develop specialised skills, and open doors to additional employment prospects. From traditional disciplines such as business, engineering, and the humanities, to emerging areas like artificial intelligence, renewable energy, and biomedical sciences, postgraduate study caters to a diverse range of academic pursuits. This chapter begins by outlining postgraduate study in Australia and the benefits of furthering your education through a postgraduate program, including increased professional skills, employment opportunities and personal growth. Following this, the different postgraduate study options are explained and the various pathways into postgraduate study are

described. The chapter concludes by discussing study load, and finances and scholarships. This chapter provides you with the information to consider and plan for future postgraduate study.

POSTGRADUATE STUDY IN AUSTRALIA

The postgraduate experience focuses on the practical and theoretical application of knowledge either through coursework or research. This often enables students to engage in research projects, collaborate with industry partners, and contribute to meaningful discoveries that have real-world impact. As a postgraduate student, you can expect to benefit from university facilities, well-equipped laboratories, and advanced technology that facilitate a dynamic learning environment. The multicultural nature of Australian society enriches the study experience. You will have the chance to interact with fellow students from around the world, exchange ideas, and gain valuable insights into different cultures and perspectives. This diversity fosters a global outlook and prepares you for an interconnected world where collaboration and cross-cultural understanding are highly valued.

BENEFITS OF POSTGRADUATE STUDY

Undertaking postgraduate education is an exciting endeavour that can lead to many different positive outcomes. It can advance your career; grow your earning potential, knowledge, and expertise; develop higher level thinking, writing and research skills; and provide networking opportunities with like-minded individuals that are invaluable for personal and professional life. The benefits of postgraduate education are especially evident in the development of professional skills, increased employment options, and personal growth.

Professional skills

Students who pursue a postgraduate degree, graduate with an important set of professional skills that will help them in their careers. When you pursue a postgraduate degree, you will be introduced to the skillset of those who practice the profession. For example, a postgraduate degree in journalism will expose you to faculty staff who have newsroom experience, technology within the field, and lessons in press writing. A postgraduate degree in history will expose you to courses on archival and primary source research work – the core of the historian’s job. Students will also be exposed to the culture of the profession and its language or jargon. It is a great start to enculturating yourself in your field, especially if you lack prior professional experience.

Employment opportunities

A postgraduate qualification can result in additional career options and opportunities for promotion and greater career advancement. Postgraduate degrees build specialised expertise on a topic, leading to employment requiring levels of expertise that exceed those provided by an undergraduate degree. Working within a university is a common option for successful postgraduates, as the research-focus and service-focus of universities naturally lend themselves to the content students studied while in postgraduate education. Postgraduate study can also incorporate internships, industry placements, and networking opportunities, which can significantly enhance your employability upon graduation (see the chapter [Preparing for Employment](#) for more discussion). Postgraduate qualifications can result in promotions and new pathways in already-established careers, as the degree can prepare you to critically think, analyse, and lead.

Personal growth

As you progress through your study, you may find that career progression becomes less of the focus, and personal benefits and growth starts to take a front seat; you may note the benefits of increased self-confidence, problem-solving abilities and critical thinking skills (Neary, 2014). Motivations for study exist on a continuum and relate to life course and context (Swain & Hammond, 2011). Typically, while undertaking postgraduate study, it is important to keep this motivation in mind as it will serve as a driving force during the postgraduate journey. Pursuing a postgraduate qualification can build upon your perception of self, especially concerning the future employment pathways you wish to pursue. This is a primary motivator to start a postgraduate journey. Although the reason for engagement in postgraduate study may fluctuate, the result will likely still be further development of skills that can be used in your personal and professional life.

POSTGRADUATE STUDY OPTIONS

Postgraduate study programs include, graduate certificates, graduate diplomas, masters' degrees by coursework, masters' degrees by research, and doctorates. The table below (see Table 26.1) compares the differences between undergraduate study and the different types of postgraduate study, in terms of degree type, structure and workload.

Graduate certificates are often the first step students can take towards postgraduate study. Typically, these qualifications take between four to five months of full-time study. Undertaking a graduate certificate program can be a good way to add to your resume or explore a new topic or passion.

Graduate diplomas fit the ideal middle-ground between a graduate certificate and a master's degree program, taking about a year of full-time study. Diplomas cover the same course options as the graduate certificates but extend into further study. The offering can be similar to a master's degree program without committing to a complete master's degree.

The master's degree comes in two distinct forms; a master's degree by coursework and a master's degree by research. Each type of master's degree is designed to build upon existing knowledge and requires approximately two years of full-time study. Similar to undergraduate coursework, a master's degree by coursework involves attending classes and completing course-based assessment items. A master's degree by research can also include coursework but this will be limited as most of the program is focused on undertaking independent research and presenting the results as a research outcome. This outcome is usually a written thesis. A master's degree by research is a good stepping-stone towards doctoral study.

A doctorate is the highest academic program achievement at university. Doctorates focus on developing significant, original research, typically taking three to four years of full-time study. The goal of a doctorate is to make an original and significant contribution to the existing body of knowledge in a specific field. It involves independent research, critical thinking, and the production of a substantial research output, usually a written thesis. It is a highly regarded degree and often required for academic and research employment at university, as well as for career



Figure 26.2 There are many different postgraduate study options to choose from. [Image by Pexels](#) used under [CCO license](#).

advancement in certain fields. It represents the pinnacle of intellectual achievement and expertise in a chosen area of study.

Table 26.1 *Undergraduate and Postgraduate Study*

	Undergraduate	Postgraduate	
		Coursework	Research
Degree Type	Bachelor and diploma	Graduate certificates, graduate diplomas, and masters' degrees by coursework	Masters' degrees by research and doctorates
Structure	A fixed curriculum with predefined course sequences	More flexible curriculum based on type of study program or career goals	More flexible curriculum based on research interests
Workload	Clearly defined expectations. The ability to put more into study to achieve a higher result, but not a requirement at every step	Compared to undergraduate, the workload is usually more self-directed and self-driven	Self-directed. Most of the workload involves research and producing research outputs (e.g. publications, a written thesis)

COURSEWORK VERSUS RESEARCH

Both coursework and research postgraduate degree programs are designed to provide you with further opportunities to expand your knowledge, investigate issues within your field of study, and understand the important practical and theoretical underpinnings in your discipline.

The basics of postgraduate coursework

Although the two routes allow you to better understand your discipline, they have several key differences. Similar to undergraduate study, students studying a postgraduate degree by coursework achieve their degree by taking courses until they have met the number of required units for the degree. Depending on the institution, students undertaking a degree by coursework may be required to complete a final assessment that may include a comprehensive exam, practicum, project, or thesis. This is to test the content learned and the skillset necessary for a specific field.

In coursework, lecturers often serve as mentors guiding you on specific pathways or specialisations within a program. Relationships with lecturers are important during postgraduate study. Although the primary focus is for a lecturer to lead a course, in postgraduate coursework they often provide so much more in the form of guidance and assistance for you through the lifespan of your program. Indeed, sometimes in postgraduate coursework degrees, you may develop a mentor/mentee relationship with your lecturers who can later help you gain access to industry employment, postgraduate research degrees and other opportunities.

The basics of postgraduate research work

Although a postgraduate research degree may also contain courses, it is based on your success in producing a research outcome such as an independent thesis. Typically, these degrees include research master's degrees and doctoral degrees. Research degrees are largely undertaken as independent study usually with assistance from at least two academic supervisors/advisors. The process of undertaking research includes sourcing these supervisors, proposing a research topic that will make an original and significant contribution to the field, designing a research methodology, working with your supervisors to plan and undertake the research, possibly producing research publications, and writing a thesis.



Figure 26.3 Postgraduate research involves contributing original knowledge to an academic discipline while learning and engaging in the research process. *Image by Lucas Vasques used under [CCO license](#).*

Undertaking research can be challenging (Brownlow et al., 2022), but this avenue of study offers a rewarding experience for those that choose to pursue it (Villanueva & Eacersall, forthcoming 2024). This is because research work allows you to contribute original knowledge to your field of study while learning and engaging in the research process. This prepares you for careers in academia, government work, consulting agencies, and the private sector. A research project commences with a student identifying an area within their field that they believe requires further investigation and crafting a proposal which presents a research question, identifies research goals, and establishes a

research methodology. Both students at the master's degree and doctoral levels (depending on program requirements) typically present their proposals at a Confirmation of Candidature

seminar where they deliver their preliminary proposal to a panel of experts in the field (Bartlett & Eacersall, 2018). Many research projects require ethical approval to ensure that they are conducted in an ethical way. This is facilitated by the university ethics office and should be a supportive and collegial experience for student researchers (Hickey et al., 2021). Usually, Confirmation of Candidature and ethical approval will occur in the first third of the degree.

Because of the independent nature of the research degree, students need high-level organisational and communication skills. Indeed, communication is key for research students, as they are positioned at the intersection of their research teams, the university, and outside stakeholders. Research students must communicate with their supervisory teams in regard to meeting and drafting schedules. Further, research students need to prioritise their work. Since they are contributing a significant piece of research to their field, they may have to communicate with outside organisations such as labs, archives, and/or government offices to retrieve data or necessary supplies. Consequently, research students must be self-advocates, clearly explaining their needs. Finally, since each university has milestones for research degrees, students are expected to organise their time to meet these. In many instances, they must organise their research and writing schedule, but at a micro level, they must organise their daily research tasks so they can stay on track. The research study experience is an excellent way for students to hone these soft skills along with their content skills.

Coursework or research – How do I choose?

Both research and coursework postgraduate programs have immense benefits for an individual's overall personal and professional growth. As you progress through your undergraduate degree program, you can plan for future postgraduate study by considering the following:

- What do you enjoy most about your undergraduate experience? Do you enjoy a more guided learning approach (coursework) or more self-directed opportunities to investigate solutions using theory, research, and/or knowledge-based results (research)?
- Do you desire structure and firm deadlines set by lecturers (coursework) or a more fluid structure (research)?
- Do you enjoy engaging with an existing body of knowledge to add to it (research) or applying it more directly to your own context (coursework)?
- Do you prefer, shorter projects and collaborative thinking (coursework), or do you prefer independent work, presenting research to a small community, and keeping up-to-date with scholarship in your field (research)?

Ultimately, as you explore different opportunities at university and answer these questions, you will be able to make a choice about the next steps in your academic journey.

PATHWAYS TO POSTGRADUATE STUDY

There are several pathways into postgraduate education, and it is important to recognise that not everyone's pathway is the same. Postgraduate study occurs after successful completion of an undergraduate degree, or sometimes after evaluation of experience through work. Some may decide to pursue further study immediately after completion of their undergraduate degree and others might start a postgraduate qualification after time in the workforce. It is useful for undergraduate students to be aware of the pathways to postgraduate education so that they better understand the potential opportunities open to them for further study (see the chapter [Life after Graduation](#) for more discussion of pathways).

The typical way to apply for entry into a postgraduate degree is to first decide which degree you are aiming for. The degree you choose can have a great impact on your postgraduate experience and your career. Earlier in this chapter we outlined the graduate certificate, graduate diploma, master's degree by coursework, master's degree by research, and doctorate. Knowing which level of degree you are applying for is a good first step. Next, is figuring out which discipline to focus on. There are going to be many to choose from, be it social sciences, engineering, education, arts, law, science, business, etc. Once you have decided on the degree and discipline, focusing on the entry dates and prerequisites is next. In Australia, each institution has their own method of segmenting their calendar year, some use two semesters per year, some a trimester model, others use a combination, or divide their study periods into smaller blocks. Be sure to check the entry dates with your institution.



Similar to entry windows, institutions will have differing entry requirements for each of the postgraduate degrees on offer. For undergraduate, in particular Australian school-leavers, this would have been a rank dependent on your performance in your secondary education, potentially accompanied by an interview, audition, or folio entry. Postgraduate study is similar, though differs slightly as these secondary school rankings are replaced by a grade point average (GPA) requirement, which is a reflection on your performance in undergraduate studies. For a master's degree by research and doctorate level courses, prior experience undertaking research may also be a requirement. For example, it is common for doctoral level courses to require successful completion of an honours degree or a research master's degree. Elements such as recognition of prior learning can also be considered under certain circumstances. Different universities will have different entry requirements and so, the best source of specific information will be the university you are interested in.

In addition, many universities offer flexible pathways once enrolled in a postgraduate course, often breaking courses down to allow students to stop and start at their own pace. There can also be options to exit a master's program early, utilising the existing work for a graduate diploma qualification. The busy schedules of postgraduate students, especially those working and studying at the same time, have encouraged many institutions to adopt further flexibility. Again, investigating what individual institutions have on offer, is the best way to see what can fit you and your study needs.

For international students, Australian postgraduate programs are an attractive option for many academic disciplines, notably biology, engineering, chemistry, mathematics, social sciences, and the medical fields. It is important to note that each higher education institution has unique programs, entry requirements, costs, and culture. There are also issues for postgraduate international students to consider, including supervisory relationships, communication ability, and the benefits of positive engagement with the Australian community and culture (Brownlow et al., 2023). Doing thorough research and fact finding into your ideal institution and destination is vital to ensuring that you get the best possible postgraduate study experience. To study in Australia, you must apply for a student visa through the relevant Australian government department. For both domestic and international students, if you would like to know more about postgraduate study, reach

Figure 26.4 There are several pathways into

postgraduate education, and not everyone's pathway is the same. Image by Kc Rae, Aboriginal artist, used under [CC-BY-NC-ND license](#).

out to your intended institution's student support team. They are there to help you.

FURTHER CONSIDERATIONS

Study load: Can I work and study at the same time?

The question of whether to work while undertaking postgraduate studies plagues many students and is often one of the first questions they consider when deciding to pursue their degree. The answer is – it depends on the individual. The decision to work while undertaking postgraduate studies is often a personal, individual one that requires careful consideration. International students also need to consider the work conditions of their student visa. Working can be beneficial as it can reduce or negate any student debt you may need to take out. Working can also provide you with disposable income that scholarships, grants, and loans may not cover. For example, this income can be used for school supplies, personal/family emergencies, travel, and savings. If you are working in your field of study, you will be able to put into practice the content you are studying. Even if you are not working within your chosen field, students who work often bring many professional attributes to the classroom.

At the same time, working can present challenges. Students, especially in the first semester of postgraduate study, may struggle to balance work and studies, which may impact their results and their ability to make meaningful connections with peers and mentors. Similarly, if students undertake coursework programs, they may find it difficult to schedule work around their courses and vice versa. Research students, as well, may struggle to plan and begin their research journey while balancing work, as the research process can be intense initially. Although these may present struggles at first, you can use university resources to manage time and discuss this with specialist advisors and supervisors who can give you advice on managing work and studies. In all, working while studying hones postgraduate students' organisational, time-management, and communication skills (see the chapters [Goals and Priorities](#) and [Time Management](#) for more discussion).

Finances and scholarships



Figure 26.4 Students planning to undertake a postgraduate degree should organise their finances early. There are many scholarships available for postgraduate study. Image by Pexels used under [CCO license](#).

For students considering postgraduate studies, finances for both their educational and personal expenses can be crucial, and students should consider how they will fund their studies as soon as they decide that they want to pursue a graduate degree. Luckily, there is aid available for those interested in pursuing a postgraduate degree. One of the major areas of financial support is scholarships. Scholarships are awards students receive for achievements like grades, their participation in extra-curricular activities, or social beliefs and activities. Scholarships can be external or internal. External means the scholarship is awarded by an organisation or industry other than your university, while

internal is awarded by your university. Students should investigate scholarship opportunities by accessing resources on external scholarship websites as well as the university's scholarship webpages. Some scholarships are based on the student's research activities, so students should seek

out possible opportunities through professional and student organisations. Australian domestic postgraduate students undertaking a Higher Degree by Research degree (most doctorates and research master's) may be eligible to receive a Research Training Program place. This is a federal government scholarship that covers tuition fees for the stipulated duration of the degree.

CONCLUSION

There are many things to consider in relation to postgraduate study. These include the benefits of a postgraduate education, different types of postgraduate study, entry pathways, when to start, the differences between postgraduate coursework and postgraduate research, the expectations required of postgraduate students, and available resources to support your study. If you are in the early stages of your undergraduate degree, postgraduate study may seem like an option a long way off in the future. It is important, though, to be aware of postgraduate possibilities and the opportunities they offer. Careful consideration of this information, during undergraduate studies, can enable you to identify and plan successful pathways into postgraduate study.

Key points

- Postgraduate study occurs after successful completion of undergraduate study.
- The benefits of postgraduate study include increased employment opportunities, personal growth and professional skills.
- Postgraduate programs include graduate certificates, graduate diplomas, masters' degrees by coursework, masters' degrees by research, and doctorates.
- Postgraduate study can include coursework and/or research elements.
- Your undergraduate Grade Point Average (GPA) is important for entering postgraduate programs.
- For postgraduate research programs, your GPA and/or research experience may be part of the entry requirements.
- There are many supports to assist you with postgraduate study.
- During undergraduate study, consider the pathways and options for future postgraduate study.

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LIFE AFTER GRADUATION

WENDY HARGREAVES



Figure 27.1 Life after graduation. Image by Tristan Hargreaves used under [CC-BY-NC license](#).

INTRODUCTION

Academic success is achieved through a culmination of many things. This book has shown how managing your adjustment to tertiary study and connecting with resources and supportive people creates a successful beginning to a university experience. The book then discussed the fundamental concepts in English language, maths, technology and working with information that provide a solid knowledge base for study in every field. Next, it elaborated on the essential study skills you need to thrive and how to display them with academic integrity. It then explained how those skills can be applied to the assessment tasks you encounter throughout your studies, ultimately preparing you for a successful future.

This final chapter of *Academic Success* offers a glimpse into what happens *after* university study is complete. It begins by discussing the graduation process and the advantages of being active in your alumni. It then explores different directions you may consider, as you step into your future, and outlines some of the challenges you may face. It concludes with a reminder that learning remains part of your lifelong journey.

GRADUATION

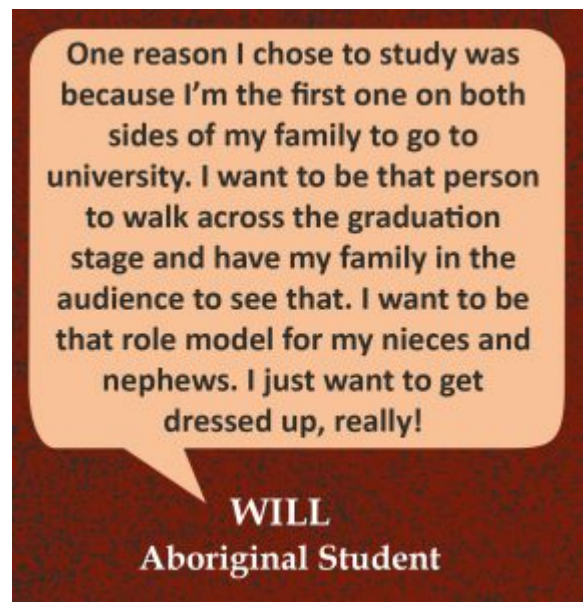
With hard work and resilience, and hopefully some fun along the way, the day will arrive when your study is complete and your final exams and assignments have been marked. Your university will check that you have met all the requirements of your degree and confirm that you are eligible to graduate. Now the celebrations can begin. You will likely receive an invitation to attend your graduation ceremony. Many readers will be familiar with movie scenes of graduations – students wearing robes with strange looking hats known as mortarboards, filing across a stage to receive a rolled piece of paper. This is all part of the graduation ceremony that universities traditionally hold to acknowledge your hard work and achievement. You usually don't have to attend the ceremony in order to be awarded with your degree but most students find it a rewarding, positive and memorable experience.

Family and friends who have supported you during your study can share the celebration with you. The graduation ceremony is your big moment. Enjoy it.

Different universities conduct their graduation ceremonies at different times of the day and year. If you're planning to attend, make sure you reserve the date in your calendar well in advance. You may need to hire an academic gown for the occasion. Your university will inform you of all the important information you need to take part in the event.



Figure 27.2 The graduation ceremony is your big moment. Enjoy it. Image by [Southeastern Seminary](#) used under [CC BY 2.0](#) licence.



ALUMNI

Once you have graduated, the university automatically regards you as a member of their alumni. This term simply means you are a past student. Being alumni doesn't require you to do anything but you may find there are some interesting privileges available to you. For example, alumni may have access to resources or special membership rates at the library. You may also receive membership discounts with professional or commercial organisations. There may be opportunities to network with other graduates in the same field, eligibility for alumni awards and invitations to special alumni events. There could even be opportunities to take an active role at your university to encourage or mentor new students. Overall, being an active member of your alumni gives you a way to stay connected with your university and its networks, which may in turn lead to further study or job opportunities. Search your university website for information on your alumni and the opportunities membership provides.



Figure 27.3 Wherever your journey takes you after graduation, there is no doubt that learning will be part of it. Image of Sam Conway by Wendy Hargreaves used under [CC-BY-NC licence](#).

CHOOSING YOUR DIRECTION

By the time you graduate you may already have a firm idea of the next direction you would like to take. For those who do not, here are five options to consider.

1. Finding Employment

Many graduates hope to transition quickly from study into a paid job in their field. You may have already started this process using some of the strategies provided in the chapter [Preparing for Employment](#). It can be advantageous to use the momentum of tertiary study and the recency of your training to immediately apply for relevant jobs. Remember however that not all new graduates will walk straight into a job that matches their qualification perfectly. You may be competing against other applicants who have a degree *and* work experience on their resume. You could consider whether it is advantageous to accept work that is outside your field initially with a view to gradually moving into your preferred profession.

2. Creating Employment

Being entrepreneurial is an alternative to job seeking. Self-employment allows you to tailor-make a job that uses your specific skills. For example, if you have a film and television degree you could develop a business as a free-lance photographer. If you have studied education, you could investigate working privately as a tutor. One advantage of being self-employed is you can control the kind of work you do and when you do it. It can be immensely satisfying.

Running your own business can be exciting but it is not necessarily an easy pathway. Business owners often talk about their long work hours, the difficulty of taking unpaid holidays, considerable amounts of administrative tasks and financial stress. There are also many legal aspects of business management that will require attention. Make sure you are well prepared and well informed. You may find it helpful to enrol in courses designed specifically to teach you the skills needed for running a small business. Government agencies often provide free access to

business development resources and to advice through workshops. Overall, make sure you are prepared for the challenges of self-employment before investing in the venture.

3. Taking a Break

Some graduates take the opportunity between earning a degree and committing to full-time work to take a break or a “gap year”. This can be an opportunity to rejuvenate after years of study and to explore other aspects of life and the world. A gap year can be particularly appealing to young graduates with little or no financial or family commitments that impact on their priorities. Traditionally, a gap year has been regarded as a prime opportunity to travel. There may be world or even country specific events including natural disasters, disease or border closures that stop you travelling but hopefully they are short-lived.

While taking a break can be a positive experience, it should be managed carefully to avoid impacting negatively on your future employment opportunities. Make sure you are aware of any time limits placed on converting any newly gained provisional professional registrations from your degree into full registrations. For example, your eligibility for teaching appointments or positions in health services may be compromised if you do not begin practising in your field within a certain time limit. Taking a “gap year” does not need to be a full year. Instead, consider when is the best time to return to the search for employment.

Investigate when any provisional registrations may expire and if there are any seasonal fluctuations in demand for employees in your field. Some countries have military service requirements, too, that you might need to fulfil ahead of taking a “gap year”. Keep all these things in mind when you prepare.



Figure 27.4 Traditionally, a gap year has been regarded as a prime opportunity to travel. *Image by [Lenny K Photography](#) is licenced under [CC BY 2.0](#)*

4. Further Study

Another direction you may consider is further study. Graduation opens the new world of postgraduate study to you. Postgraduate study offers the chance to extend your knowledge and expertise even further. A range of options exist such as postgraduate certificates, diplomas, masters, professional doctorates and PhDs. Explore the available options on tertiary websites. You may consider changing university if you find an appealing course at another institution or perhaps you are drawn to living in another city, state or overseas. Postgraduate study is also a popular option for those who have had several years in the workforce. It can be enjoyable to return to the role of student and to delve deeper into your field of interest.

5. Life Events

There will likely come a time when life events play a part in your journey, whether it is by choice or not. Parenting children, personal health concerns and becoming a carer for an impaired or elderly person may steer you away from the pathways of work, travel and study. For some, the new direction is welcome, while for others it can be a frustrating change. Whether life events are planned or unplanned, welcome or not, you may find it helpful to regard them as a season – they will pass. The doors to a career, travel or further study may not be closed permanently. The good news is that your university degree is yours for life. When circumstances allow, you will likely be able to re-open those doors and progress in the direction you desire.



Figure 27.5 There will likely come a time when life events play a part in your journey. Image by Wendy Hargreaves used under [CC-BY-NC licence](#).

FLEXIBLE OPTIONS

There is a lot of flexibility in the five directions discussed above. You may experience all of these alternatives at different times in your life. The other possibility is pursuing two or more options simultaneously. For example, a full-time worker may benefit from undertaking some part-time postgraduate study at night to advance their career opportunities. Parents of young children may opt to balance family responsibilities with part-time work to generate some income and stay active in the professional world. Someone caring for an elderly relative may find self-employment offers the most manageable combination for maintaining a career while being able to work from home with flexible hours.

CHALLENGES

Life after graduation can appear like an exciting horizon you are travelling towards. However, when you finally reach it, it may hold some unexpected challenges.

Feeling Lost or Overwhelmed

It's not uncommon to experience difficulty when transitioning from university to the next part of your journey. Lectures, assignments, placements and exams provided a clear structure and expectations on your time and priorities. Moving beyond the rhythm of the university timetable and semesters to a total absence of boundaries can be surprisingly disconcerting. The initial freedom can feel exhilarating but soon after some graduates struggle with feeling lost or overwhelmed by an unknown future. If you are experiencing this, you may benefit from staying actively in communication with your peers who studied with you at university so you can support each other. Your university alumni organisation may also have resources and suggestions for managing these challenges. Staying connected with family and friends can be another supportive network you can utilise. Take steps to minimise any social isolation you may feel now that your regular contact with people at university has ceased. Most importantly, if you notice that your struggle is impacting negatively on your mental health or interfering with your ability to function, seek help from health professionals.

Starting Out with a Debt

In many countries, university study requires that you take a loan to pay for courses. For example, Australian students can elect to pay some or all of their university tuition fees using the government Higher Education Contribution Scheme (HECS). In effect, HECS is a loan from the government taken while studying which students begin to repay after graduation once their income reaches a specified threshold. It may feel discouraging when you are earning your first pay packet to have a student loan looming over you, particularly if you have other expenses to meet such as transport, accommodation and food. There may also be costs associated with a new job such as purchasing equipment, uniforms and professional registrations. Remember to do some research or seek help from financial advisors or budgeting experts to construct a plan for managing any study debt and ongoing expenses.



Figure 27.6 Seek help to construct a plan for managing study debt and ongoing expenses. Image used under [CC-NY-NC licence](#).

Unemployment

A significant obstacle you may face after graduation is unemployment. The job market can be unpredictable and fragile, particularly when there has been a global crisis. Some professions may have a high demand for new workers, allowing graduates to move straight from study into paid employment. Other graduates may be faced with an unwanted period of unemployment. Aside from financial stress, unemployment can impact negatively on your self-esteem and your sense of identity. This may make you anxious. Make use of your student and university networks to keep connected to new opportunities that arise suddenly. Review the chapter [Preparing for Employment](#) for positive steps you can take to prepare for work. Communicate with your family and friends about the difficulties you are experiencing. If you notice your mental health is declining or your ability to function is affected, seek help from health professionals.

Balancing Life

Those who fill multiple roles simultaneously will likely face challenges in managing time and priorities. Working while parenting, or running a business while studying part-time, can make it difficult to strike the best work-life balance. The more components you juggle, the harder it is to keep all the balls in the air. Recognise that this is not an easy task and do the best you can to make it work for your specific needs and priorities. Remain open to readjusting the balance as things change. As much as possible, stay tuned to those moments when you know you have successfully managed the balance. Consider what worked and try to replicate it. Like before, it may help to view these particular challenges as being only for a season and keep the finish line in sight. Keep in



Figure 27.7 Stay tuned to those moments when you have successfully managed the balance. Image by [Tatters](#) is licenced under [CC BY-SA 2.0](#)

mind that you have the capacity to stop and change your direction if the challenges are proving unworkable or if you feel that you can't maintain an acceptable balance.

CONCLUSION

A university experience is not a stagnant one. It takes you somewhere. Students begin with a set of beliefs, experiences and skills that are repeatedly challenged, extended and developed while studying. Equipped with the skills for academic success you can enter into life after graduation with the ability to think critically about any information you hear. You will know how to find information from credible sources, synthesise evidence, build an argument supporting your position and can communicate it effectively. Academic success is the passport to continued success in every direction in life.

Wherever your journey takes you after graduation, there is no doubt that learning will be part of it. Future learning may take place in a formal manner like enrolling in postgraduate study at university, or in attending a training course with a new employer. Conversely, learning can continue informally when watching a documentary at home or having an interesting conversation with friends. Opportunities to further expand your knowledge and challenge your ideas will always exist. Achieving academic success at university ultimately prepares you for successful learning throughout your life. The benefits keep flowing.

Key points

- It is common to be invited to attend a graduation ceremony when your university study is complete and you have met all the necessary requirements.
- Once you have graduated, you automatically become alumni.
- Being an active member of your alumni may have advantages.
- There are five directions for your future after graduation that you may consider: Finding employment, creating employment, taking a break, further study and life events.
- The options are flexible and can be combined.
- Some of the challenges graduates face are feeling lost or overwhelmed, starting out with a debt, unemployment and balancing life.
- Learning will continue throughout life, whether it is formal or informal.
- Achieving academic success at university prepares you for success throughout your life.

APPENDIX

Appendix A

Downloadable PDF of [Table 24.1](#) to accompany Chapter 24 Failing Assessment.

GLOSSARY

SARAH IRVINE; ROWENA MCGREGOR; ANBARASU THANGAVELU; KACIE FAHEY; MATTHEW THOMPSON; AND CHARLENE JACKSON



Serene Sunsets by Kc Rae, Aboriginal artist used under [CC BY-NC-ND Licence](#).

TERM	DEFINITION
Academic advisors	People at university who can help with your study. They could help with your enrolment, progression of study, or could even help to make sure you get the most out of your study.
Academic integrity	Creating the highest quality, accurate, and original response to an assessment task with the resources you have available.
Academic misconduct	An act of cheating that is related to your academic study. For example, cheating on an exam, or paying someone to do your assignment for you. It can result in serious penalties at university.
Academic writing	The type of writing used at university.
Allyship	The practice of supporting people who are part of a marginalised group, although you yourself are not part of the group.
Alumni	Graduates of university.
Analytical essay	An essay that analyses, examines, discusses, determines or explores a topic.
Annotated bibliography	An alphabetical list of suitable sources (books, journals or websites) on a topic, along with a short summary, evaluation and sometimes a written consideration on their usefulness or importance to your topic.
Argument	To express a position on a particular topic, and then support your position using evidence.
Argumentative essay	An essay that argues, evaluates, supports or determine features of a topic.
Assignments	The tasks you must complete and get marked on at university.
Attribute (author)	To recognise the author or copyright holder of a piece of work.
Bias	The prejudice you may hold about someone or something.
Boolean operators	The use of specific words or phrases to enter into an electronic record to help you find what you need.
Brainstorm	Taking time to think of ideas for a particular project, assignment or task.
Browser (internet)	The program used to browse the internet. Some examples of browsers include Google Chrome, Apple Safari or Mozilla Firefox.
CALD	The acronym CALD stands for 'Culturally and Linguistically Diverse' and refers to people of a multicultural background (excluding Aboriginal and Torres Strait Islander peoples).
Case study exams	Exams requiring students to apply knowledge to a real-life situation.
Case study responses	Written work, often organised as an essay that explores and applies theory, policy and or practices in relation to a case study.
Catalogue	A physical or online listing of items in a collection, such as a library catalogue.
Closed exams	Usually allows students to bring only writing and drawing equipment. Formula sheets (in the case of maths and statistics exams) may or may not be provided.
Coherence	Using words and ideas in sentences to make meanings clear.
Cohesion	Flow of the sentences and how they are connected together.
Collusion	Unethically working with another student/s to produce academic or assessment work.
Concept association	Exam studying approach that involves linking the information you are learning with information that you already know.
Concept map	A visual way of showing key ideas about a topic.
Conclusion	The conclusion should restate your thesis and summarise the key points used to prove this thesis.
Contemplate	Think or consider an idea.
Course	A subject that you will study at university.
Cramming	An ineffective exam revision approach that involves trying to learn and memorise all of the information required for an exam in a very short period of time.
Criteria sheet	Similar to marking rubric.
Critical thinking	Ability to think open-mindedly and analytically to come up with a conclusion about an idea.
Culturally safe	The creation of physical and virtual environments that do not threaten, deny, assault, or challenge the cultural identity of a person or group.

TERM	DEFINITION
Database	An organised collection of information.
Deadly	An Aboriginal English word meaning 'awesome', 'excellent', or 'great'.
Decolonisation	The undoing of colonialism and removal of colonial impacts on systems, procedures, and societies.
Degree	A tertiary qualification that is received after completing a program of study at a university.
Digital identity	Your individual online presence made up of your connections and involvement on various online platforms.
Digital literacy	Your level of ability in participating and using online systems and/or platforms.
Disability	A limitation, restriction, or impairment lasting more than, or is likely to last more than at least six (6) months and also restricts everyday activities.
Discipline-specific	Your area of study (for example Science, Engineering).
Dissertation	An original piece of academic writing at a higher level of study.
Editing	Finding and correcting important features of a work that support (or detract from) the bigger picture.
Enculturating	Gradually learning and adopting the norms and practices of another group of people
Encyclopedia	A reference book to look up various pieces of information.
Entrepreneurial	To achieve better outcomes by taking risks such as financial or social risks.
Essay exams	An exam requiring a response with numerous paragraphs that should be rational and well-structured.
Essay	Written work on a particular subject which is structured into: introduction, several body paragraphs and conclusion.
Feedback/ feedforward	Feedback: Notes on an assessment or performance that highlights strengths and weaknesses. Feedforward: Feedback that can be used in future assessment to improve your work.
Formal language	Communicating in a professional way using full expressions of words.
Formula	A set of processes/rules to follow.
In-text citation	Short bibliographic details provided within a written work indicating that the ideas or words were found in the mentioned (cited) document. The citation often includes the name and publication date of the document.
Intercultural fluency	The ability to successfully operate and communicate within diverse cultural contexts.
Interleaving	Exam revision approach defined by switching between study topics or subjects to help memory.
Introduction	Usually the beginning paragraph of an essay or written assignment that introduces the readers to the main ideas in the paper.
Learning management systems	An online platform where you will find your study information and resources.
LGBTQIA+	The acronym LGBTQIA+ stands for Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersex, and Asexual/Aromatic; the '+' encompasses those who may not feel that other identifiers are suitable for their experience.
Lecturer	A teacher at a higher education institution.
Literature reviews	A review which explores and appraises the literature on a research topic in a systemic (clear and understandable) way.
Major	Your specialisation in your area of study at university.
Marking rubric (See also Criteria sheet)	A document, often published as a table, detailing how marks are given for an assessment. Can be used as a checklist.
Methodology	A set of techniques used to investigate a question.
Mnemonics	Exam revision approach that can help you to remember things by using letters or phrases as a form of connection.
Mob	An Aboriginal English word, used primarily by First Nations Australians, to refer to their Country, Nation, or peoples.

TERM	DEFINITION
Multiple choice	Exam questions requiring students to select from one or more answers provided.
Open book exams	These exams allow you to have access to any printed or written material and a calculator (if required) during the exam.
Pagination	Differentiation and division of pages into sections.
Paragraph	Section of text made up of several sentences that gives more details on one idea. A paragraph usually starts with a topic sentence that introduces the idea.
Paraphrasing	Changing the writing of another author into your words while retaining the original meaning.
Patriarchal	Relating to the patriarchy, which is a social system where men hold the majority of political, social, economic, and religious power.
Peer assisted learning programs	Study programs are led by experienced students.
Peer-reviewed	A document which has been reviewed by experts in the field.
Presentation	Assessment that may be presented orally, as a poster, or mix of other media.
Primary education	Education of students from the age of around 5 to 12 years old.
Proofreading	Finding and correcting the fine details of a work – usually the grammatical and stylistic errors.
Rationalise	To carefully consider and explain an option.
Raw data	Data that has been collected and not changed in any way.
Reasonable adjustments	Reasonable changes to assessment conditions for students who meet disability support or equity criteria. May include additional time, assistive technologies, furniture changes, or different locations.
Reconciliation	The strengthening of relationships between parties by putting hostilities to an end.
Referee	An individual who can confirm your skills and qualifications.
Reference list	A list of sources used with detailed information used at the end of an assignment.
Reflective writing	Written work that requires you to break down a situation, problem or event, consider what you may have learnt and discover how this may impact your thinking and actions in the future.
Reflective/ reflection	Looking back on the past with the idea of finding any learning from the past and using that learning in the future.
Report	Detailed and organised document providing truthful information in a clear and simple manner.
Repositories	Storage and/or collection of resources.
Resources	Different types and/or sources of information.
Restricted exams	These exams allow you to bring in only specific things such as a single page of notes, or in the case of maths exams, a calculator or a formula sheet.
Rural & Remote	Areas outside of Major Cities – including Inner Regional, Outer Regional, Remote, and Very Remote areas.
Scholarly information (see also peer reviewed)	Information that has been peer-reviewed and is considered reliable.
Secondary education	Education of students from the age of around 12 to 17 years old.
Self-efficacy	A belief in your ability to do well with the skill that you have.
Semester	A formal period of study.
Sentence	A group of words that expresses a thought.
Short answer exams	Exam questions requiring students to write a sentence or a short paragraph.
Soft skills	Skills that are used often and related to different tasks, for example critical thinking, reading, notetaking.
Spacing/spaced practice	An exam study approach using short periods of study followed by a break to improve understanding, retention, problem solving and use of knowledge.
Synthesis	Combining more than one source of information to deepen your argument.

TERM	DEFINITION
Take home exams	Students are provided with the exam paper and are able to complete it in a location of your choice within a set period of time.
Task sheet	Assessment instructions and outline provided in written form.
Thesis	A piece of scholarly (academic) evidence-based writing covering a research topic. It can also mean the overall argument in a piece of writing.
Thesis statement	A sentence that tells the reader the purpose, reason, or direction you will take to answer your assignment question.
Topic analysis	Complete reading of the task that often involves breaking the task into smaller parts and developing an understanding of how each part might be covered.
Topic sentence	Often the first sentence in a paragraph that explains what the paragraph will be about.
Trimester	A study period that is about 3-4 months and will occur 3 times per year.
Truth-telling	A process of accurately discussing historical truths and their current day impacts on marginalised people to allow societies to move forward in a more inclusive, socially just way.
Tutor	A teacher in a higher education institution who mainly covers tutorial classes.
Two-way learning	Also referred to as both-ways learning, is the process by which people from two different cultural backgrounds can learn from one another without the assumption of one way being better than another.
Yarning	A First Nations Australian practice of two or more parties engaging in non-judgmental conversation that prioritises active listening, knowledge sharing, and genuine learning.

VERSION HISTORY

This page provides a record of edits and changes made to this book since its initial publication. Whenever edits or updates are made in the text, we provide a record and description of those changes here.

The files posted alongside this book always reflect the most recent version. If you find an error in this book, please let us know at open.content@usq.edu.au.

VERSION HISTORY

ITERATION 1

DATE	BOOK PART	TITLE	AUTHOR/S
20/01/2021	FRONT MATTER		
20/01/2021		Cover	Linda Clark
20/01/2021		Acknowledgment of First Peoples	Nikki Andersen
20/01/2021		Accessibility disclaimer	Nikki Andersen
20/01/2021		About the authors	Wendy Hargreaves
20/01/2021		Preface	Wendy Hargreaves, Debi Howarth
20/01/2021		Introduction	Wendy Hargreaves
20/01/2021	PART A: Successful Beginnings	Successful Beginnings	Wendy Hargreaves
20/01/2021		Beginnings	Kristen Lovric, Tyler Cawthray
20/01/2021		Adjusting to University	Kristen Lovric, Linda Clark, Anbara
20/01/2021		Successful Connections	Bianca Retallick, Debi Howarth, Lei
20/01/2021	PART B: Successful Foundations	Successful Foundations	Wendy Hargreaves
20/01/2021		English Language Foundations	Sarah Irvine, Linda Clark
20/01/2021		Working with Information	Rowena McGregor, Robyn Tweedal
20/01/2021	PART C: Successful Study Skills		Wendy Hargreaves
20/01/2021		Goals and Priorities	Kristen Lovric, Debi Howarth
20/01/2021		Combatting Procrastination	Aruna Devi
20/01/2021		Time Management	Linda Clark
20/01/2021		Study Space	Wendy Hargreaves
20/01/2021		Reading	Linda Clark
20/01/2021		Notetaking	Linda Clark
20/01/2021		Thinking	Tyler Cawthray, Akshay Sahay
20/01/2021	PART D: Successful Assessment	Successful Assessment	Wendy Hargreaves
20/01/2021		Managing Assessment	Cristy Bartlett, Kate Derrington, An
20/01/2021		Writing Assignments	Kate Derrington, Cristy Bartlett, Sa
20/01/2021		Types of Assignments	Cristy Bartlett, Kate Derrington

20/01/ 2021		Presentations	Akshay Sahay, Anbarasu Thangavel
20/01/ 2021		Preparing for Exams	Kate Derrington, Cristy Bartlett, An
20/01/ 2021		Types of Exams	Anita Frederiks, Kate Derrington, C

ITERATION 2

DATE	BOOK PART	TITLE	AUTHOR/S
28/06/2021	FRONT MATTER		
21/07/2021		Cover	Linda Clark
28/06/2021		Acknowledgment of First Peoples	Nikki Andersen
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21/07/2021		About the authors	Wendy Hargreaves
18/07/2021		Preface	Wendy Hargreaves, Debi Howarth
16/07/2021		Introduction	Wendy Hargreaves
28/06/2021	PART A: Successful Beginnings	Successful Beginnings	Wendy Hargreaves
16/07/2021		Beginnings	Kristen Lovric, Tyler Cawthray
9/07/2021		Adjusting to University	Kristen Lovric, Linda Clark, Anbarasu Thangavel
17/07/2021		Successful Connections	Bianca Retallick, Debi Howarth, Leanne
28/06/2021	PART B: Successful Foundations	Successful Foundations	Wendy Hargreaves
28/06/2021		English Language Foundations	Sarah Irvine, Linda Clark
28/06/2021		Studying Maths	Anita Frederiks, Akshay Sahay
28/06/2021		University Life Online	Marjorie Jeffers, Yvonne Rose, Karen Tweedale
9/07/2021		Working with Information	Rowena McGregor, Robyn Tweedale, Kristine Peters, Yvonne Rose, Susanne Schuch
9/07/2021		Integrity at University	Rowena McGregor, Robyn Tweedale
28/06/2021	PART C: Successful Study Skills	Successful Study Skills	Wendy Hargreaves
16/07/2021		Goals and Priorities	Kristen Lovric, Debi Howarth
16/07/2021		Combatting Procrastination	Aruna Devi
28/06/2021		Time Management	Linda Clark
21/07/2021		Study Space	Wendy Hargreaves
17/07/2021		Reading	Linda Clark
28/06/2021		Notetaking	Linda Clark
28/06/2021		Thinking	Tyler Cawthray, Akshay Sahay
28/06/2021	PART D: Successful Assessment	Successful Assessment	Wendy Hargreaves
28/06/2021		Managing Assessment	Cristy Bartlett, Kate Derrington, Anbarasu Thangavel
28/06/2021		Writing Assignments	Kate Derrington, Cristy Bartlett, Sa
28/06/2021		Types of Assignments	Cristy Bartlett, Kate Derrington
16/07/2021		Presentations	Akshay Sahay, Anbarasu Thangavel
28/06/2021		Preparing for Exams	Kate Derrington, Cristy Bartlett, Anbarasu Thangavel
28/06/2021		Types of Exams	Anita Frederiks, Kate Derrington, C
1/06/2021	PART E: Successful Futures	Successful Futures	Wendy Hargreaves
2/07/2021		Preparing for Employment	Cristy Bartlett
9/07/2021		Life After Graduation	Wendy Hargreaves

ITERATION 3

DATE	BOOK PART	TITLE	AUTHOR/S	STATUS
22/09/2023	FRONT MATTER			Retained
22/09/2023		Cover	Samara Hoffmann	New
12/01/2023		Acknowledgment of First Peoples	Nikki Andersen	Revised
22/09/2023		Accessibility disclaimer	Nikki Andersen	Retained
19/12/2023		About the authors	Wendy Hargreaves	Revised
22/09/2023		Preface	Wendy Hargreaves, Debi Howarth	Retained
22/09/2023		Introduction	Wendy Hargreaves	Retained
22/09/2023	PART A: Successful Beginnings	Successful Beginnings	Wendy Hargreaves	Retained
22/09/2023		Beginnings	Kristen Lovric, Tyler Cawthray	Retained
22/09/2023		Adjusting to University	Kristen Lovric, Linda Clark, Anbarasu Thangavelu, Sarah Irvine	Retained
15/12/2023		Successful Connections	Kacie Fahey, Debi Howarth, Sarah Irvine, Leigh Pickstone, Bianca Retallick	Revised
12/01/2024		First Nations Success	Kacie Fahey	New chapter
22/09/2023	PART B: Successful Foundations	Successful Foundations	Wendy Hargreaves	Retained
22/09/2023		English Language Foundations	Sarah Irvine, Linda Clark	Retained
18/12/2023		Studying Maths	Anita Frederiks, Rowena McGregor	Revised
12/01/2024		Maths Foundations	Raquel Salmeron, Anita Frederiks	New chapter
22/09/2023		University Life Online	Marjorie Jeffers, Yvonne Rose, Karanpal Singh Sachdeva, Robyn Tweedale	Retained
22/09/2023		Working with Information	Rowena McGregor, Robyn Tweedale, Lyndelle Gunton, Emma Peters, Yvonne Rose, Susanne Schultz, Karanpal Singh Sachdeva	Retained
19/12/2023		Integrity at University	Rowena McGregor Anita Frederiks	Revised
22/09/2023	PART C: Successful Study Skills	Successful Study Skills	Wendy Hargreaves	Retained
23/09/2023		Goals and Priorities	Kristen Lovric, Debi Howarth	Retained
24/09/2023		Combatting Procrastination	Aruna Devi	Retained
25/09/2023		Time Management	Linda Clark	Retained
26/09/2023		Study Space	Wendy Hargreaves	Retained
27/09/2023		Reading	Linda Clark	Retained

28/09/2023		Notetaking	Linda Clark	Retained
20/12/2023		Thinking	Douglas Eacersall, Tyler Cawthray, Akshay Sahay	Revised
22/09/2023	PART D: Successful Assessment	Successful Assessment	Wendy Hargreaves	Retained
19/12/2023		Managing Assessment	Cristy Bartlett, Kate Derrington, Anbarasu Thangavelu	Revised
22/09/2023		Writing Assignments	Kate Derrington, Cristy Bartlett, Sarah Irvine	Retained
22/09/2023		Types of Assignments	Cristy Bartlett, Kate Derrington	Retained
22/09/2023		Presentations	Akshay Sahay, Anbarasu Thangavelu	Retained
22/09/2023		Preparing for Exams	Kate Derrington, Cristy Bartlett, Anita Frederiks	Retained
22/09/2023		Types of Exams	Anita Frederiks, Kate Derrington, Cristy Bartlett	Retained
12/01/2024		Failing Assessment	Wendy Hargreaves	New Chapter
22/09/2023	PART E: Successful Futures	Successful Futures	Wendy Hargreaves	Retained
22/09/2023		Preparing for Employment	Cristy Bartlett	Retained
12/01/2024		Postgraduate Study	Douglas Eacersall, Moria Drake, Allison Millward	New chapter
22/09/2023		Life After Graduation	Wendy Hargreaves	Retained
22/09/2023	BACK MATTER			New
12/01/2024		Glossary	Sarah Irvine, Rowena McGregor, Eddie Thangavelu, Kacie Fahey, Matthew Thompson, Charlene Jackson	New part
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