

Teaching with Technology

Teaching with Technology

FRANCES COCHRANE AND TRINE PAERATA

James Cook University
Townsville



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Acknowledgement of Country

James Cook University is committed to building strong and mutually beneficial partnerships that work towards closing the employment, health and education gap for Australian Aboriginal and Torres Strait Islander peoples. Our students come from many backgrounds, promoting a rich cultural and experiential diversity on campus. We acknowledge the Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the Australian lands and waters where our staff and students live, learn and work. We honour the unique cultural and spiritual relationship to the land, waters and seas of First Australian peoples and their continuing and rich contribution to James Cook University and Australian society. We also pay respect to ancestors and Elders past and present.



Kassandra Savage (JCU Alumni), 'Coming Together and Respecting Difference', acrylic on canvas, 2014, 90cm x 90cm. © Kassandra Savage, reproduced with permission of the artist.

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Preface

This book is designed to help you plan, design, develop, and teach technology-enhanced subjects and courses. We have included information, strategies, and recommendations that illustrate good practice pedagogical design; tips on planning, developing, and writing online subject content; as well as planning and facilitating online interaction.

We have designed this guide to provide an overview of the entire process, from planning to implementation. If you have any questions or would like to discuss your unique course or subject needs, please contact an Educational Designer via cee@jcu.edu.au.

The material in this book has been adapted with gratitude from the open textbook [*Guide to Teaching with Technology: eLearning at Brock*](#) by the Centre for Pedagogical Innovation. We have adapted the book to reflect the James Cook University and Australian higher education contexts. The *Guide to Teaching with Technology* was cloned from a source that is no longer available. The source URL was <https://ecampusontario.pressbooks.pub/adulteducation>.

Related websites

[JCU Centre for Education and Enhancement](#)

CHAPTER 1: ONLINE TEACHING AND LEARNING AT JCU

1.1 Benefits and challenges

Learners are increasingly identifying with a networked, connected society that privileges interactivity as a learning strategy, and acknowledges new media literacies as indigenous modes of expression. Traditional pedagogical principles are still valued, but this new context offers unique opportunities to consider new approaches.

Technology offers solutions to a diverse set of instructional challenges, and instructors choose to augment courses with learning technologies for a number of reasons. Some examples include large lecture courses managing hundreds of students or dozens of topics; introductory courses providing access to significant amounts of basic materials throughout the semester; courses that shift in-class quizzes to an online format allowing for more class discussion time; or courses and programs using the Internet to reach a nonresident, national, or international audience.

The following videos discuss how teaching online positively impacts both the teaching and learning experience and what challenges to expect.

BENEFITS AND CHALLENGES OF ONLINE TEACHING

This video discusses the benefits and challenges that online teaching might present for educators.



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[Benefits and challenges of online teaching](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

This video discusses the benefits and challenges that online learning might present for students.



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[Benefits and challenges of online learning](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

OVERCOMING THE CHALLENGES OF ONLINE TEACHING

This video discusses strategies that educators could use to overcome the challenges of online teaching and learning.



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[Overcoming the challenges in online teaching and learning](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

Educators want to better manage time and resources, provide engaging learning opportunities to students outside of class, and/or want to offer a course to a nontraditional or off-campus audience. Although there are many themes and recommendations in common, you will find specific strategies through this guide to prepare for a variety of challenges that each unique set of circumstances may present.

1.2 Skills and competencies for teaching online

ONLINE TEACHING SKILLS

This video discusses the skills necessary to teach online.



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[Online teaching skills](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

TEACHING ONLINE AND TEACHING FACE-TO-FACE

This video discusses the differences between teaching online to teaching face-to-face.



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[Teaching online and teaching face to face](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

COMPETENCIES FOR ONLINE TEACHING

These short, self-assessments are based on Penn State University's [Faculty Competencies for Online Teaching](#) and have been adapted from [Guide to Teaching with Technology](#). Use them to get a sense of your current readiness to teach online. For *fun*, they give you results based on [downhill ski trail difficulty ratings](#).

Technical Competencies



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Administrative Competencies



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Pedagogical Competencies





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<https://jcu.pressbooks.pub/teachwithtech/?p=22#h5p-7>

CHAPTER 2: ASSURING THE QUALITY OF ONLINE LEARNING ENVIRONMENTS

2.1 Quality frameworks and governance structures

It is important that you have an understanding of the overarching legislative environment that higher education institutions in Australia (such as JCU) need to comply with, as well as the JCU policy environment. These influence the way courses are structured, designed and delivered, and the information (e.g., subject outline; course handbook) that is mandatory for each subject and course.

In Australia, there are several quality and legislative frameworks in higher education that exist to ensure the quality and reputation of the higher education sector. All Australian higher education providers need to be accredited by the Tertiary Education Quality Standards Agency (TEQSA).

JCU is authorised under the Tertiary Education Quality and Standards Agency ([TEQSA](#)) Act (2011), to self-accredit each course of study that leads to a higher education qualification that it offers or confers. A course of study that is self-accredited may also be 'accredited' by a professional body for different and separate purposes. JCU has developed a suite of policies and procedures that contribute to meeting the requirements of these quality and legislative frameworks. The [JCU Learning and Teaching Policy Library](#) is a useful resource. You should ensure that you keep updated about the policy suite and any updates that occur from time to time.

One of the primary policies that you will refer to in your everyday role will be the [JCU Learning, Teaching and Assessment Policy](#) and the associated [Procedures](#). The Learning, Teaching and Assessment (LTA) Policy underpins JCU's approach to excellence by assuring the quality of learning, teaching and assessment so that students have every opportunity to achieve academic success. The LTA Procedures specify how the policy must be enacted. The LTA Policy is driven by four principles related to students, the curriculum, assessment, and teaching.

When engaging with the JCU Learning and Teaching Policy Library, underpinned by TEQSA requirements, you will notice some common themes regarding the online course and subject design requirements. These themes include, but are not limited to:

- The requirement for subject and course **learning outcomes** must be achievable, measurable and appropriate for the level of learning;
- Assessment, learning activities, and subject content must be **constructively aligned** to the subject and course learning outcomes;
- Course and subject design, including all learning materials and assessments, must be **inclusive and accessible** for all students.

Before exploring teaching with technology in more detail, it is important that we review the fundamentals of learning outcomes and constructive alignment. We will further explore inclusive and accessible subject design in a later chapter.

2.2 Learning outcomes

*The learning outcomes are constructed as a taxonomy of what graduates are expected to **know, understand and be able to do** as a result of learning. They are expressed in terms of the dimensions of knowledge, skills and the application of knowledge and skills.*

(Australian Qualifications Framework Council, 2013, p. 11)

THE ROLE OF LEARNING OUTCOMES

This video discusses the role of learning outcomes in (online, face-to-face, and blended) course design.



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[The role of learning outcomes](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

A learning outcome is a statement that describes what knowledge, skills and values learners should have acquired by the end of a subject. Outcomes focus on what the students will know, do, or value when they exit the course, program or degree. Note that the focus is on the student rather than the teacher. These are not instructional objectives: they are statements describing the desired abilities of the student with respect to the discipline. Learning outcomes must be **measurable, achievable** and **observable**.

Outcomes include a **verb** (or action/behaviour) that describes **what the student will be required to do and demonstrate** to assure the outcome has been achieved (think about assessment).

Learning outcomes should NOT begin with subjective or non-measurable verbs such as “know” or “understand”. Be specific. What will the student need to demonstrate in order to be successful in the subject? Student success with outcomes should be measurable by the assessments. Clearly identifying the desired learning outcomes, corresponding activities and assessments can help both students and educators know when and how students will be successful.

LEARNING TAXONOMIES

Various learning taxonomies and associated verbs are commonly used to develop learning outcomes. Some of the commonly used learning taxonomies include:

- Bloom's Taxonomy of Educational Objectives (revised by Anderson & Kathwohl, 2001)

- Structure of Observed Learning Outcomes (SOLO) Taxonomy (Biggs & Collis, 1982)
- Fink's Taxonomy of Significant Learning (Fink & Fink, 2013)

Try to use verbs across the domains of learning (e.g. cognitive, affective, psychomotor). Note: this may not be relevant depending on the context of the outcome.

Bloom's Taxonomy

This video discusses the relationships between Bloom's Taxonomy of Educational Objectives, learning outcomes, and the course design process.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=43#oembed-2>

Bloom's taxonomy and course design, Brock University, Centre for Pedagogical Innovation, [CC BY-NC-SA 3.0 AU](#)

FURTHER LEARNING TAXONOMY AND DOMAINS OF LEARNING RESOURCES

- [Revised Bloom's Taxonomy Action Verbs](#)
- [Bloom's Digital Taxonomy Verbs](#) [TechThought University webpage]
- [Bloom's Taxonomy](#) [Vanderbilt University webpage]
- [How to write learning objectives using Bloom's taxonomy](#)
- [Dee Fink's Taxonomy of Significant Learning](#)
- [Fink's significant learning outcomes](#) [The Peak Performance Centre webpage]
- [Action verbs for each dimension of Fink's model and Bloom's taxonomy](#)
- [SOLO taxonomy](#) [John Biggs website]
- [SOLO taxonomy](#) [The Peak Performance Centre webpage]
- [Three domains of learning](#) [The Second Principle webpage]
- [How do I write cognitive, affective and psychomotor learning objectives?](#) [Rasmussen University webpage]

PRACTICAL STRATEGIES FOR WRITING LEARNING OUTCOMES



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LEARNING OUTCOMES REVIEW CHECKLIST

This checklist may assist you to reflect, review, improve learning outcome quality, and ultimately improve teaching, learning and assessment practices. This checklist may be used by you and/or a peer reviewer.

[Learning Outcomes Review Checklist \[PDF\]](#)

2.3 Constructive alignment

In the previous section, we explored some foundational aspects associated with learning outcomes. We will now build on this knowledge by looking at the essential concept of **constructive alignment** as this is fundamental to our teaching and assessment approaches, and ultimately students' learning.

You have a responsibility to ensure there is **alignment** between the **course learning outcomes**, **subject learning outcomes**, the **teaching and learning activity approaches**, and the **assessment**, to assure students' achievement of the learning outcomes. Constructive alignment of these elements is certainly associated with positive student experience and outcomes, and is embedded within [JCU Learning and Teaching Policy and Procedures \(Core Principle 3\)](#): Assessment design and learning and teaching activities have an overt alignment to subject knowledge and skills, and their application to assure standards.

The work of [John Biggs](#) is frequently referred to when discussing constructive alignment in educational settings.

"Constructive alignment is a design for teaching in which what it is intended students should learn and how they should express their learning is clearly stated before teaching takes place. Teaching is then designed to engage students in learning activities that optimise their chances of achieving those outcomes, and assessment tasks are designed to enable clear judgments as to how well those outcomes have been attained" (Biggs, 2014, pp. 5-6).

Essentially, constructive alignment occurs when the learning activities that we ask students to engage with (i.e., they have the opportunity to construct knowledge) help them to develop the knowledge, skills and understandings intended for the subject (i.e., learning outcomes) and measured by the assessment tasks.

This video discusses the basics of constructive alignment.



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[What is constructive alignment?](#) Blended Learning and Digital Education (BLADE)

2.4 Tools to assess and assure quality of online learning environments

So far, we have highlighted the key academic quality and governance components including legislative and policy environment, as well as the importance of learning outcomes and constructive alignment. Now we will outline two frameworks or tools that are useful for assessing and assuring the quality of online learning environments.

SUBJECT REVIEW TOOL (SRT)

We have developed the [Subject Review Tool](#) (SRT) that you can use to review various elements of your subject that are associated with teaching and learning. You can use this tool for all learning environments, including online. The SRT has been adapted for the Australian and JCU context from the [Quality Matters Rubric](#).

The Subject Review Tool (SRT) has been designed to be a simple tool you can use to review your subject's alignment with eight core focus areas that relate to learners' experience.

1. Subject overview and introduction
2. Learning outcomes
3. Assessment
4. Learning materials
5. Learning activities and learner interaction
6. Use of technologies
7. Learner support
8. Accessibility and usability

TECHNOLOGY ENHANCED LEARNING ACCREDITATION STANDARDS (TELAS) FRAMEWORK

In 2021, the Australasian Society for Computers in Learning in Tertiary Education ([ASCILITE](#)) developed the [TELAS Framework](#) in response to the increasing demand for online learning. The TELAS Framework is a set of internationally benchmarked standards, criteria and performance measures associated with the assessment, certification and recognition of online learning.

You can view and download the *Accreditation Framework* as [PDF \(1.4 Mb\)](#) and [Word Doc \(67 Kb\)](#).

The TELAS Framework focuses on the following key practice domains:

1. Online learning environment;
2. Learner support;
3. Learning and assessment tasks;
4. Learning Resources.

These domains are further divided into standards, specific performance criteria, and associated success indicators.

You will notice that there are similarities between the JCU-developed Subject Review Tool (SRT) and the components of the TELAS Framework. The TELAS Framework does focus in more detail on aspects of the online learning environment, however, it does not take into account foundational quality aspects such as constructive alignment.

The TELAS Framework review process is multifaceted. There is an opportunity for a formal peer review and accreditation process; however, academics can also use the [TELAS Self-Assessment Tool](#) (follow this link for more information).

As part of the ongoing cycle of quality improvement, we recommend that you consider using both tools to review your subjects to identify areas of strength and those areas that require enhancement.

Note: Key members of the JCU LTSE team have undertaken the 'Applying the Quality Matters Rubric' and the 'TELAS Certified Reviewer' training.

CHAPTER 3: FOUNDATIONS OF ONLINE TEACHING AND LEARNING

3.1 Learning theories and principles

LEARNING THEORIES AND STRATEGIES

In our teaching and learning design, we typically use a combination of pedagogical approaches based on a range of foundational theories, methodologies, strategies and/or constructs. Generally, theories or philosophies of **learning behaviours** end with the suffix “...ism”, and the study of common **learning strategies** include the suffix “...ogy” (Sankey, 2020). This is a good way to easily identify theories versus strategies.

These theories often overlap and in general explain how people learn or what educators can do to enhance students' learning. Pedagogic strategies are typically based on the following general learning theoretical or philosophical concepts (Sankey, 2020):

- **Behaviourism** – the idea that all behaviours are learned through interaction with the environment.
- **Instructivism** – knowledge is transferred directly from the instructor (learning agent) to the learner (passive information absorber).
- **Cognitivism** – how learners actively receive, organise, store and retrieve information; educators help to refine and elaborate information so students can refine their thinking.
- **Constructivism** – typically a hands-on or active learning approach where learners construct their own knowledge based on their experiences.
- **Socio-constructivism** – learners make sense of information and new knowledge by collaborating with others.
- **Connectivism** – learning is a process of interacting, collaborating and sharing information via social networks to construct knowledge.
- and more...

There are also theories about teaching different cohorts of students (e.g. **Andragogy**, the teaching of adult learners) and those focused on online learning such as **Heutagogy** (self-directed learning) and **Paragogy** (peer-assisted learning).

Your pedagogical approach/es will largely be determined by factors such as your student cohort, discipline practices, available resources, learning modes, platforms, learning outcomes and competencies required.

3.2 Online pedagogy

Effective online pedagogy is one that emphasises student-centred learning and employs active learning activities. "Interactivity, faculty, and student presence are essential in an effective online learning environment." (O'Neil et al., 2004, p. 21).

Whether you are teaching face-to-face or online, the **basis** of teaching remains the same. However, the **form** of interaction may change. There remains a strong emphasis on content, pedagogy and assessment.

- **Content:** What are the core concepts or ideas that we want our students to learn in a particular class, lecture, tutorial, module, and course?
- **Pedagogy:** What is the most effective way that we can get our students to engage with the material to understand these concepts and maximize learning? In particular, how should students engage with the material (a) before the class (asynchronously); (b) during class (synchronously); and (c) after class (asynchronously)? ***Remember: Pedagogy before Technology*
- **Assessment:** How can we assess and assure students' understanding and learning of the material most effectively?

PRINCIPLES OF EFFECTIVE ONLINE PEDAGOGY

1. Let the students do (most of) the work, the more time students spend **engaged with the content**, the more they will learn.
2. **Interactivity** is the heart and soul of effective asynchronous learning.
3. Strive for presence: social, cognitive, and teaching **presence**.

THE INTERACTION PERSPECTIVE

Developing high levels of student engagement in online learning is dependent on **interaction**.

We need to design and foster learning and teaching that incorporates the opportunity for students to engage in the following types of interactions in online learning environments (Moore, 1989):

- Learner-instructor interaction
- Learner-learner interaction
- Learner-content interaction

In the video below, Dr. Erika Smith (Mount Royal University, Associate Professor and Faculty Development Consultant) illustrates important ways that educators can **foster three key types of online interaction** in remote teaching and learning. Examples and strategies for balancing asynchronous and synchronous approaches to these educational interactions are also provided.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=100#oembed-1>

3 key types of interaction in remote teaching and learning, Mount Royal University (MRU)

3.3 Presence in online learning

THE THREE PRESENCES INVOLVED IN ONLINE LEARNING

Developing an **online learning community** where there is interaction between learners, with educators, and with content involves consideration of **three presences**. These three presences help to establish a sense of place and belonging that contribute to student engagement and educational experience.

- Teaching Presence
- Social Presence
- Cognitive Presence

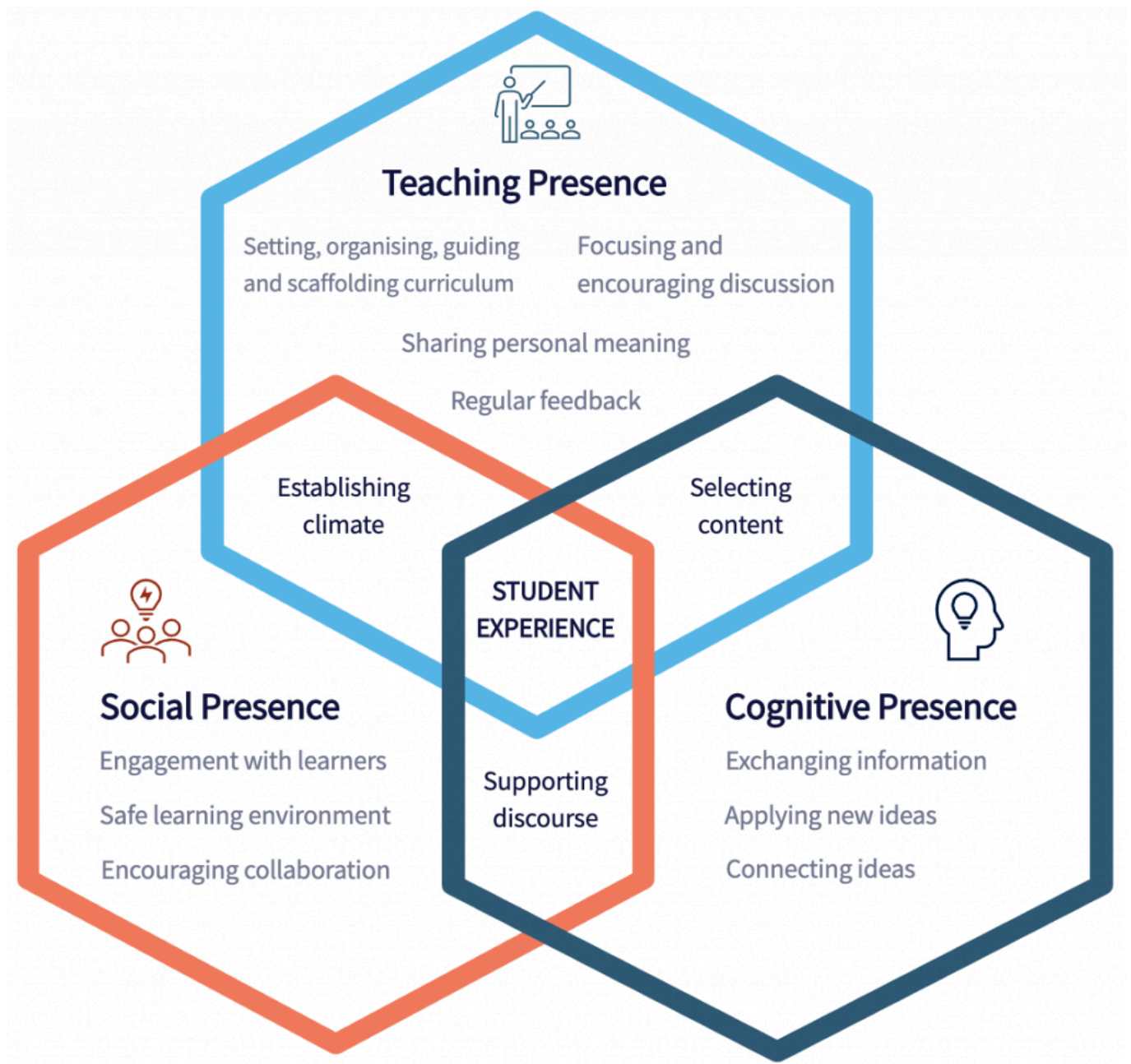


Figure 1: “Three Presences” by Fran Cochrane (adapted from Garrison & Anderson, 1999) is licensed under [CC BY 4.0](#)

The presences are further explained:

Teaching Presence

‘Teacher-presence’ plays a vital role in building a sense of belonging to the learning community, it is crucial in helping students engage and stay engaged with their learning, and in improving student retention.

Teachers establish their presence through establishing their persona and taking on different roles such as a designer, instructor, and facilitator.

The ideal combination is of course to have both a strong teacher-presence and [engaging course design](#).

[Essentials of teacher presence](#): Communication, consistency, courtesy.

Social Presence

Students need the opportunity to project their social and emotional selves into the online learning environment. They need a safe place to express their ideas, opinions and beliefs, and engage in authentic conversations.

Teachers need to establish and nurture a safe online community and social presence by facilitating social opportunities such as purposeful conversations, online synchronous meeting spaces (e.g., video conferencing), online asynchronous meeting spaces (e.g., discussion forums), and discourse (synchronous and asynchronous) that encourages students to explore different perspectives and deeper reflective thinking.

Cognitive Presence

The cognitive presence allows students to construct and confirm meaning through their own individual learning processes and through interactions with peers, their teacher, and with content.

The instructional design and the 'triggering' event (i.e., a question that sparks their interest, curiosity and encourages them to explore) is important to consider.

A useful framework is the [5E's Instructional Framework](#).

ESTABLISHING TEACHING PRESENCE

In the video below, Dr. Mark Kassel (Robert Moores University, Instructional Designer) discusses establishing teaching presence within a Community of Inquiry in an online learning environment.



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[Teaching presence in online learning](#), Fox Chapel Area School District

ONLINE LEARNING TIPS, INTERACTION OPPORTUNITIES AND PRESENCE

In this video, Emma Stirling and Deanna Horvath from La Trobe University share some tips about teaching online. They also discuss some strategies related to interaction and presence and align these with the [NCSEHE Opportunity through Online Learning National Guidelines \[PDF\]](#).



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[Online learning tips](#), Emma Sterling and Deanna Horvath, La Trobe University

ADDITIONAL RESOURCE

- [Simple tips for creating YOUR online presence](#)

CHAPTER 4: INCLUSIVE DESIGN FOR ONLINE LEARNING

4.1 Universal design for learning

It is important that we design our teaching, learning and assessment practices with all students in mind. This intent is articulated in various quality and governance frameworks and policies including specific references to inclusive learning environments. Designers of inclusive learning experiences recognise that every learner is different.

Inclusive design, as conceptualized by the [Inclusive Design Research Centre](#) (IDRC), is:

"design that considers the full range of human diversity with respect to ability, language, culture, gender, age and other forms of human difference."

Universal Design for Learning (UDL) is a common framework used in education settings worldwide that is based on knowledge about how people learn and is used to guide the design, improvement and optimisation of teaching and learning (including assessment, learning outcomes, teaching approaches) for all learners.

We are all diverse in terms of our background experiences, heritage and culture, languages we speak, knowledge and skills, interests, preferences, and the way in which we learn. As educators, we have a responsibility to ensure that the teaching and learning approaches we design and implement are done so in a way that the curriculum can be used and understood by all students.

Let's find out a little more about what UDL means using an ice cream truck analogy.



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[UDL Ice Cream Truck Analogy – Dr. Katie Novak](#), AHEAD Start



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As outlined in the slides and video above, there are three (3) core [UDL principles](#) that, when applied to the design and implementation of teaching, enable greater flexibility for learners to use and understand the curriculum.

1. **Multiple modes of student engagement** that tap into learners' interests, challenge them appropriately, and motivate them to learn.
2. **Multiple methods of representation** give learners a variety of ways to acquire information and build knowledge.
3. **Multiple means of student action and expression** provide learners with alternatives for demonstrating what they have learned.

For more information about UDL including strategies for how you can design teaching and learning aligned with the three core principles, please visit [CAST](#) (Centre for Applied Special Technology).

ADDITIONAL RESOURCE

- [ADCET](#) (Australian Disability Clearinghouse on Education and Training). ADCET have excellent inclusive design resources and run regular free webinars.
- [Universal Design for Learning in Tertiary Education](#) is a free online course released in late 2021. This course is for educational staff working in higher education and has been designed in collaboration with ADCET, the National Disability Coordination Officer Program, and the Australian Government Department of Education, Skills and Employment. There are 4 modules and you can work through these modules at your own pace (approx 90mins in total).

UDL WORKSHEET ACTIVITY



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<https://jcu.pressbooks.pub/teachwithtech/?p=35#h5p-13>

4.2 Designing inclusive and accessible digital learning materials

Our students access the majority of their learning materials and engage with learning via our Learning Management System (LMS), LearnJCU. Therefore, we need to ensure that the digital content we create and make available to students is accessible and meets students' needs regarding how they want or need to access their learning materials. Ideally, we should be aiming to adhere to the global [Web Content Accessibility Guidelines \(WCAG 2.1\)](#).

CREATING ACCESSIBLE DIGITAL CONTENT

Typically, we create learning content using products such as Microsoft Word, PowerPoint and PDFs. Then we upload these to LearnJCU for students to access. There are a few simple design and structure tips and strategies we can use to greatly improve the accessibility of the learning materials we add to LearnJCU.

Tips for creating accessible digital content



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<https://jcu.pressbooks.pub/teachwithtech/?p=108#h5p-28>

The [JCU Inclusive Design Good Practice Guidelines](#) provide more detailed instruction for how to create more accessible content.

LEARNJCU ACCESSIBILITY FEATURES

There are a number of features and tools that are already available in LearnJCU that help to provide accessible and flexible content for students.

Firstly, the [Blackboard Ultra](#) layout has been designed in accordance with the WCAG 2.1 guidelines. A logical and consistent heading structure is in place to allow users to navigate using headings. As is required, a single Heading 1 (H1) is provided to identify the page the user is looking at. In Blackboard Learn, the page title, for example, "Course Documents," is always the H1. H2 headings are used to delineate major sections of a page. Industry-standard keyboard interactions are used throughout Blackboard Learn to move between menus, open menus, and select items within a menu. The page layout (centred, vertical structure) enables improved accessibility for mobile devices and screen readers.

Secondly, staff and students have access to Blackboard Ally. Ally is a tool within LearnJCU that scores content

for its accessibility using the WCAG 2.1 Guidelines; it provides students with alternative content types, and it advises where and how to make improvements while giving indicators to help you prioritise your efforts.

Find out more about Blackboard Ally at JCU by exploring [Accessibility in LearnJCU](#). Includes step-by-step screencasts that show the basic operation of the tool, along with how to engage with the Subject Accessibility Report.

CHAPTER 5: DEVELOPING YOUR ONLINE SUBJECT

5.1 Writing for e-Learning

When writing material for the Internet, avoid long blocks of text. Break material into logical chunks of no more than two to three screens worth of information, using ample content-specific headings and subheadings as cues for the content, and keep paragraphs short. Experienced eLearning course instructors recommend that you develop lesson activities (e.g. discussion questions and group activities), at the same time you are creating lesson materials. Having lesson goals and content fresh in your mind coordinates these interactive experiences.

When developing eLearning course materials, keep in mind that to reduce student confusion and questions that may arise without face-to-face contact, it is important to develop specific, self-explanatory materials. You will not have the opportunity to self-correct or explain confusing points when students access material outside the classroom setting.

MAKE WRITING YOUR OWN

As you begin developing content, avoid outlining or summarizing textbook material. Assert your presence and personality. As an experienced content expert, you add richness with personal experiences, observations, and other real-world examples. As you write, consider these tips:

- Use real-life examples, stories, problems and solutions, case studies, striking facts, or quotations to challenge students and spur interest
- Use simple language students understand and find approachable
- Treat materials as a one-on-one conversation, addressing the student as “you”

COMMENTARY OR LECTURE MATERIAL

This section relates to the body of information within the lesson itself. We recommend writing content in sentence format, with headings and subheadings to guide the reader. We also recommend using the second-person pronoun “you” within the instruction so readers feel the material is personalised. The instruction section is an opportunity to accomplish any or all of the following:

- Expand areas not discussed in the text
- Explain or illustrate difficult concepts
- Interpret textbook or other printed materials
- Provide worked typical exam problems not addressed by the text
- Present contrasting viewpoints
- Anticipate questions students may raise

Remember also to list corresponding or optional books, journal articles, and Internet readings including book chapters, page numbers, or Internet addresses.

5.2 Subject template and layout

At JCU, we provide you with a template to help structure your subject sites. When your subjects become available each year, you will notice a suggested template is included. You can use the template as a guide for building an easy to navigate and accessible subject site. The template is updated each year and includes important design elements that are aligned with good teaching practice as well as the [JCU Student Digital Experience Policy](#) and the [JCU Learning, Teaching and Assessment Policy](#).

For further information about the template, including an instructional video, please refer to the [JCU Subject Site Setup](#).

Also, a useful resource for ideas regarding subject site layout is the [LearnJCU-Layouts](#) document.

5.3 Video and media

CREATING VIDEO LECTURES

Successful eLearning courses often use online lectures and other multimedia as methods of delivering course content. Video, whether teacher-created, licensed or sourced from open repositories, allows students flexibility in accessing resources and increases engagement and success. At JCU, we recommend you use [Panopto](#) to create your video content. Panopto provides secure video recordings, viewing, editing, sharing, and streaming capabilities, all from within LearnJCU.

A recent publication from TechSmith ([TechSmith-Video-Viewer-Study-2021-Report](#)), highlighted that respondents preferred videos of between 5 and 19 minutes in length, and used words such as “concise”, “interesting”, “engaging”, “interactive”, “easy-to-follow”, “relatable” and “innovative” to describe an engaging video.

Tips on video production

A 2014 paper by Guo, Kim and Rubin titled “How Video Production Affects Student Engagement: An Empirical Study of MOOC Videos”, presented an empirical study of how video production affected student engagement in 862 videos from four edX courses offered in the Fall 2012 to 128,000 students. [Guo’s seven summarized recommendations from his 2014 blog post](#) match the CPI’s guidance and experience:



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<https://jcu.pressbooks.pub/teachwithtech/?p=66#h5p-22>

Most importantly, do not aim for perfection – students appreciate enthusiasm and hearing authentic messages over a highly polished but robotic end product.

TIPS FOR USING OPEN-SOURCE VIDEO

Sometimes you may wish to incorporate open-source videos such as YouTube or [Open Educational Resources](#) (OERs). Here are a few tips for consideration when using these materials:

- Ensure video falls within fair dealing and [copyright](#) regulations
- Make sure you reference the resource appropriately
- Incorporate accessibility measures, such as captioning or transcripts where possible

- Watch the selected video from start to finish to ensure it's appropriate
- Provide students with plenty of guidance and instruction for any activities associated with the video.

CONTENT FILE TYPES USED IN WEB-ENRICHED COURSES

There are a variety of file types that will contribute to your course website. Depending on the content and media you select to complement your subject goals, you may capture and edit video files; develop written content; or simply distribute lecture notes in Microsoft Word, PowerPoint or in PDF format. The following file types are used most commonly by educators in course websites:

- **PDF (Portable Document Format) files** are very popular for distribution via the Internet. PDF files are excellent for disseminating papers, readings, or image-rich lecture materials and tend to be more accessible than many other types of web-based documents.
- **Word files** are often uploaded by educators to their course sites. However, as some students may not have similar or up-to-date programs with which to read DOC files, a safety measure would be to save Word files as PDF files. Note that doing so should keep nearly all formatting provided by Microsoft Word intact.
- **PowerPoint** is another file type popular among instructors. However, as PPT files are often completely inaccessible if the end-user does not have a compatible version, and because file sizes are generally much larger than is recommended, consider exporting the text or slides to Word (File > Send To > Microsoft Word), which gives the same content in a more manageable format. It is also possible to export a PowerPoint presentation to PDF which will open in a student's web browser, rather than needing a program to open.

LOW-BANDWIDTH TEACHING

Remote teaching and learning brings with it a number of considerations and challenges. If learners are able to connect to free/institutional networks (e.g., from local libraries, or on-campus student work areas), they will likely be able to access a safe, reliable, and robust internet connection. However, if these learners are relying on home-based connections, or live in remote locations, these will likely have a slower speed connection, and their service may be shared with others in their house (for work, education, or entertainment).

Daniel Stanford's (2020) article provides some guidance on the issues of bandwidth and immediacy of information that require consideration when designing teaching for the online environment. His **Bandwidth Immediacy Matrix** (adapted below) prompts educators to consider different interaction or information dissemination technology approaches for students who may experience different bandwidth to ensure that subjects are more flexible and accessible for all students.

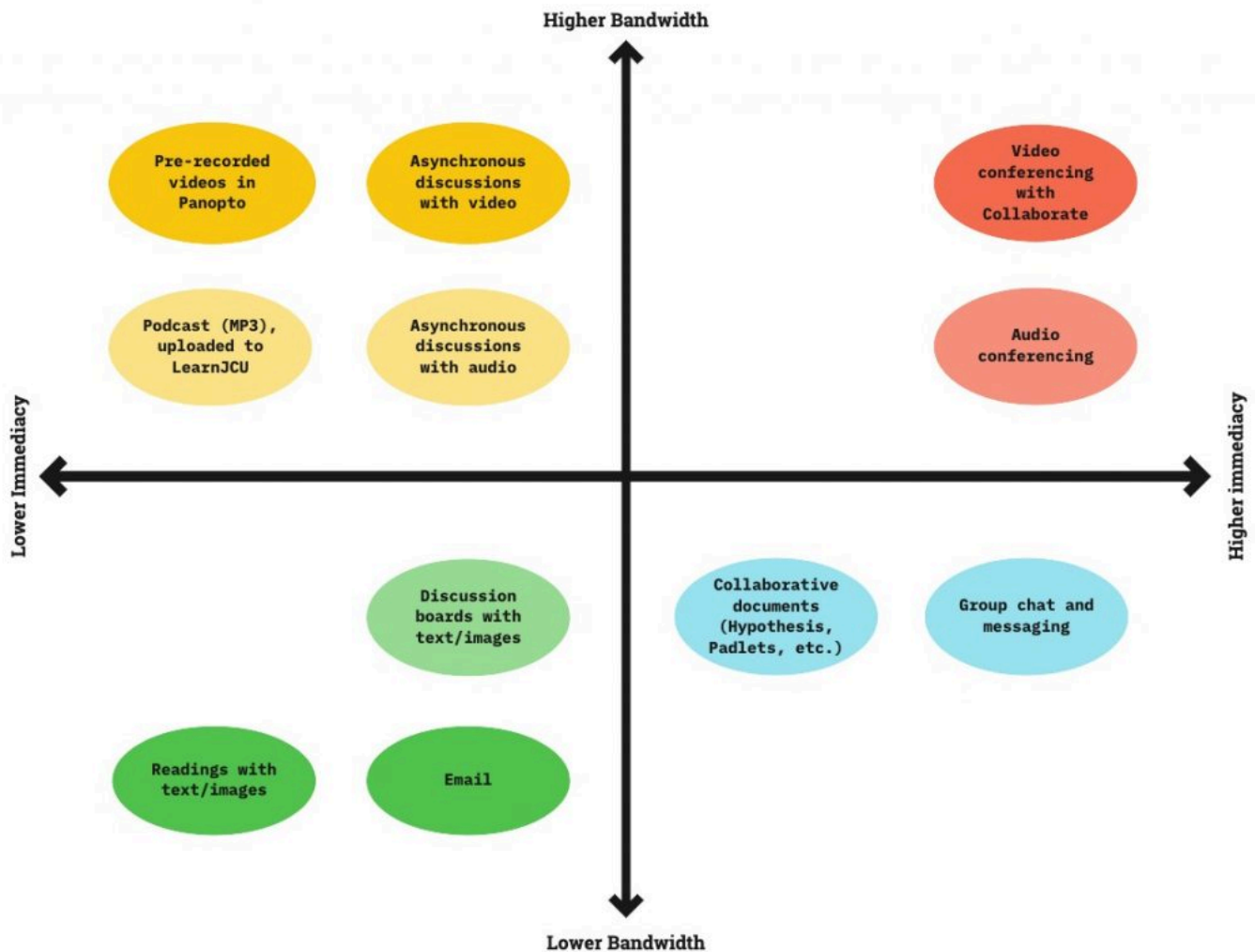


Figure 2: “Bandwidth Immediacy Matrix” by Trine Paerata (adapted from Daniel Stanford’s [Twitter: @dstanford] diagram) is licensed under [CC BY 4.0](#)

>> Definition of each coloured zone in the Bandwidth Immediacy Matrix

While considering activities that lower the bandwidth it’s also worth having a refresher on optimising images, PDFs, etc., for effective distribution *before you upload them to your course or send them via email*. Follow these links for more detail on how to optimise certain files.

- [Optimising docs](#)
- Optimising video files – [Panopto](#) will do this for you
- [Optimising pdfs](#)
- [Optimising images](#)

TIPS ON COURSE WEB PAGE DESIGN

Course subject sites need to meet a variety of requirements. Pages must contain quality information. In addition, the site should be visually pleasing, download quickly, and have intuitive navigational features.



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<https://jcu.pressbooks.pub/teachwithtech/?p=66#h5p-23>

For additional information on general style and layout issues, as well as issues specific to the Internet, consult [Yale's Web Style Guide](#).

5.4 *Integration of educational resources*

Where students are required to engage with readings or other materials not created by someone at JCU (i.e. the copyright is not owned by JCU), the best practice approach is to ensure these learning resources are added to the subject's [Readings](#) list. This best practice ensures that learning content adheres to copyright legislation, and also enables students access to a single repository for all readings (including text books, Open Educational Resources [OERs], webpages etc.).

When considering text books for your subject, we encourage you to explore if e-versions (including [OERs](#)) of suitable text books are available. E-versions and OERs greatly reduce the costs for students in accessing their required learning resources, these resources are more accessible and also enables students to interact with these resources more flexibly.

Please contact your discipline's [Liaison Librarian](#) for assistance with creating and planning Readings and electronic resources for your subject.

CHAPTER 6: ENGAGING STUDENTS ONLINE

6.1 Building online communities

Palloff and Pratt's (1999) book, "Building Learning Communities in Cyberspace", maintains that a learning community is the defining hallmark of the successful distributed/distance education effort. Using the computer for significant course interaction can be an experience different from teaching a face-to-face course. This section guide will provide information on the following issues:

- How can educators create interactive learning environments?
- How can educators become successful interaction facilitators?
- What interaction tools are available for distributed/distance education?
- What interactive teaching methods could be implemented in a course?

CULTIVATING SUPPORTIVE ONLINE ENVIRONMENTS

This video discusses strategies for developing an online community.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=69#oembed-1>

Developing an online community, Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

CHARACTERISTICS OF EFFECTIVE TEACHING IN ANY SETTING

How do you engage and facilitate learning with students? One report, titled "Students' Perceptions of Effective Teaching in Higher Education" (Delaney, Johnson, Johnson, & Treslan, 2010), examined student feedback on what makes an effective and engaging educator in a traditional classroom, hybrid, and online modalities. They listed nine characteristics held consistently valuable across the spectrum, which is provided below in the sequence specifically relating to an eLearning context (Delaney, et al., p. 6, 2010):

1. Respectful
2. Responsive
3. Knowledgeable
4. Approachable
5. Communicative
6. Organised

7. Engaging
8. Professional
9. Humorous

Quality teaching (regardless of the time, place, format, or modality) enhances the student experience. Some of these characteristics are certainly easier and more familiar, in a physical classroom; but given experience, practice, and sometimes patience, they are just as attainable in the online classroom. Moreover, these characteristics align closely with the course design rubric created by [QualityMatters \(QM\)](#). The QM tool addresses the content, instructional strategies and approaches, as well as resources that comprise a well-designed course. The nine characteristics outlined above relate back to the 'human side' of teaching.

THE IMPORTANCE OF INTERACTION

Interaction is important for quality learning. It may be defined as direct communication, with the telecommunication infrastructure (interactive video, computer, telephone, fax, or other technology tools) acting as the mediating tool. The emphasis is on communication and not technology (which is the tool for communication). There are many types of interaction. There is interaction with instructional content, among peers, or between educator and students. Most importantly, it needs to have a purpose. This implies that a learning environment has been created and interaction strategies can be guided to support learning outcomes. Interaction can be particularly supportive of:

- Higher-order learning skills (e.g., analysis, synthesis, or evaluation)
- Collaboration and cooperation skills
- The sharing of new ideas
- Creative thinking
- Equalising mutual acceptance

Engaging online students

This video discusses ways to improve interaction and engage students in online and blended learning environments.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=69#oembed-2>

[Engaging online students](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=69#h5p-24>

THE ROLE OF THE EDUCATOR

Effective interaction must have adequate educator preparation. Keep the following essential points in mind as you structure your online classroom.



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<https://jcu.pressbooks.pub/teachwithtech/?p=69#h5p-25>

MOTIVATION

There are two kinds of motivation: intrinsic and extrinsic. Goal-oriented students and those who are experienced with technology may have intrinsic, or inner, motivation. However, most who initially encounter distance education and its technology, or who are inexperienced in the dynamics of group work, will need support, monitoring, facilitating, and feedback. For those who require extrinsic, or outside, motivation, you can attach a small percentage of students' grades to participation and contribution to encourage perseverance.

Motivation in learning

This video discusses taking student motivation into account when designing courses.



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Motivation in learning, Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

Improving student motivation

This video discusses strategies to improve student motivation in your course.



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[Improving student motivation](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

Evaluating participation

This video discusses evaluating participation in an online learning community.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=69#oembed-5>

[Evaluating participation in an online learning community](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

6.2 Engagement and 'presence' strategies

EASY STRATEGIES TO ENHANCE STUDENT ENGAGEMENT

1. Attend to the basics

- Ensure your subject site is **easy to navigate** and content is easy to locate
- **Communicate** clear expectations in the subject outline (e.g., passing the subject, teaching and learning, assessment etc.) and continue this communication throughout the subject (e.g., align content and learning activities to the learning outcomes and assessment and make this visible to students)
- Ensure **quality audio and video** recordings are available
- [Plan and design subject communications](#)
- Establish **communication expectations**
 - For example:
 - Communicate how you will communicate with students and how students can communicate with you and each other;
 - Clearly articulate your expectations and students' participation requirements for synchronous and asynchronous communications (e.g., during Collaborate sessions; using discussion boards)
 - Provide examples of appropriate and inappropriate language choices for synchronous and asynchronous communications;
- Use the [Subject Review Tool](#) to review your subject and how it aligns with core elements related to the student experience, including interaction.

2. Establish and maintain your presence

One of the most important ways you can create an engaging online environment for your students is to ensure you are actively engaged and present in the subject.

- **Communicate regularly** (e.g., via weekly scheduled announcements) about what is happening in the subject and what is upcoming. This helps to build connection and a sense of belonging.
- Create a **welcome video** so students can see your face and hear your voice.
- Try establishing **'virtual office hours'** so students know when you are 'online' to respond to emails or questions.
- **Students like to 'see' you.** For online subjects, try incorporating a short weekly video announcement where you provide advice about assessment or where students should be in their learning or a short video introduction to weekly topics, or even try providing video feedback on formative or summative assessment.

- Make **regular contributions** to discussion boards, use students' names and acknowledge their contributions, scaffold the discussions where necessary – the more responsive you are with students, the more responsive they will be with you and each other.

3. Generate opportunities for student interaction

Active Learning + Collaborative Learning + Authentic Learning

Online discussions

Educational technologies can encourage and facilitate a variety of interaction and teaching styles. Though many educators are particularly familiar with solitary teaching techniques where learners attend lectures and interact with content such as library resources, databases, reading journals, etc., this section focuses on teaching techniques that encourage and facilitate peer interaction.

Small group assignments in your course provide students with an opportunity to learn from their peers, interact in a team environment, brainstorm and debate issues and ideas, and role-play. Two possible uses of groups include:

1. **Discussion Groups** focus on issues related to course content and require higher-order thinking skills. The educator facilitates the discussion, guiding and encouraging participation when needed. These groups may be a required aspect of the course, accounting for some participation grade or overall value.
2. **Project Groups** are generally small groups that interact to accomplish a shared goal (e.g., project, paper, presentation). Projects may be submitted to the educator or used as a learning activity for the entire class, possibly including a group presentation followed by a discussion.

Discussion forums are easy to set up, however it is important to provide clear instructions, expectations and ensure you have a presence to make discussion forums work effectively.

- Set your expectations of how you want students to behave and interact clearly and early in your subject. It's also important to model these behaviours and interactions yourself, such as being concise with your posts, being respectful and encouraging friendly conversation;
- Use discussion forums for subject-based topics, and also for more informal, introductory or general discussion;
- Provoke discussion through clear questions, controversies, cases, scenarios, issues or problems that are related to the content (or assessment) in the subject;
- Make sure you participate regularly in the discussion and acknowledge students when they make valuable contributions, provide links to resources or help other students;
- Refer explicitly to useful elements that are in other parts of your subject, such as in your digital lectures, in announcements, or in online tutorials;
- Consider whether it is appropriate to introduce a small percentage of the overall grade for discussion forum participation;
- Consider having students submit various media formats (e.g., audio, video, images) to discussion boards instead of text;
- If you have a large cohort, consider making mini-cohorts (i.e., smaller groups) so students get to know a smaller group of students and can work collaboratively with this group during the semester. Consider creating groups in LearnJCU – you can set up [group discussion boards](#).
- Exemplar: [Developing a community of practice using Padlet and Discussion Boards](#) (Griffith

University)

- See [Facilitating Positive Discussion Board Interactions](#).

The following video discusses strategies for creating and evaluating effective online discussions.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=58#oembed-1>

Effective online discussions, Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

Synchronous discussions and active, collaborative and authentic interactional learning

- If you have a large cohort, consider making mini-cohorts (i.e., smaller groups) so students get to know a smaller group of students and can work collaboratively with this group during the semester. Consider creating groups in LearnJCU – you can set up group (or class) conversations for content or assessment items.
- If the [class conversation tool is activated on a group assessment item](#), then students of that group and teaching staff can converse with each other in a chat-like panel and can also enter a **Collaborate** session together.
- Get to know the interaction tools (e.g., whiteboard, file sharing, polls, breakout rooms) available in [Collaborate](#). [Plan your Collaborate sessions](#) strategically including your communications and the planned activities.
- Create, share, and comment/annotate on images, PowerPoint presentations, documents, PDFs, etc in Collaborate or a shared document (can be synchronous or asynchronous).
- Use [polls](#) to help identify points of confusion or on reflection. This can help you to meet your students' immediate needs and produce opportunities for deeper learning.
- There are a range of interactive synchronous digital tools that are external to LearnJCU. Many of these tools provide interactive opportunities such as polls, quizzes, word clouds, interactive chat, pinboards. Most of these tools are unsupported by JCU which means that if you or your students encounter any difficulties, you will need to refer to the tool provider for support, not JCU. Examples of interactive synchronous digital tools include:
 - [GoSoapBox](#) (Note: JCU Institutional License)
 - [Padlet](#) (Note: JCU Institutional License)
 - [Mentimeter](#)
 - [Answer Garden](#)
 - [Poll Everywhere](#)
 - [Kahoot](#)
 - [Slido](#)
 - [Socrative](#)

Blogs

Blogs, a shortened term for “web-log”, are online personal journals or opinion articles publicly accessed on the Internet. They can also be password-protected by being placed on a secure server or private network. Blogs work well in small classes; however, they have been effectively used in large classes by creating a group or team blogs. Generally, blogs have frequent updates and posts that are displayed in descending chronological order. Blog entries can include images, recorded sound files or active links to other websites or blogs. A blogger is anyone who creates or contributes to a blog, usually by sharing ideas, feelings, hobbies, or work.

Educators have found blogs to be an effective communication mechanism to assist with a variety of outcomes. The following are examples from experienced educators:



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=58#h5p-17>

Social media

This video discusses how to use social media in learning.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=58#oembed-2>

[Social media in teaching and learning](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

The popularity of social networking websites has rapidly increased in the past few years. Social networking websites continue to be generally regarded as personal social spaces rather than platforms for teaching and learning (Baran, 2010). While this may be true, there are several pedagogies that utilise social networking sites for teaching purposes.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=58#h5p-18>

[Teaching with web 2.0 technologies: Twitter, wikis & blogs – Case study](#)

6.3 Educational technologies

SELECTING EDUCATIONAL TECHNOLOGIES

This video discusses the criteria for evaluating and selecting appropriate educational technologies for online courses. Remember, any technology you integrate into your teaching must have **pedagogical value**. You also need to **invest time** into learning how to use the technology and ensure you provide students with guidance and support for using technologies.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=63#oembed-1>

Selecting educational technologies, Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

COLLABORATIVE TOOLS

Within LearnJCU, there are a number of tools available for collaborative learning. These facilitate synchronous (real-time) or asynchronous (anytime) collaboration among educators and students participating in group projects, meetings, or lectures. Note that it is advisable to seek assistance from LTSE staff or to consult support documentation when enabling more complex tools for use in course sites.

Collaborate for teaching

[Blackboard Collaborate](#) is an interactive video-conferencing environment that is available in all LearnJCU subject and organisation sites. You can use Collaborate as a Moderator to deliver and record information sessions, tutorials, lectures, meetings plus functions such as chat, whiteboard, file and application sharing, polling, breakout rooms and more. Students can access Collaborate recordings (ensure descriptive labels) and you can also monitor attendance at sessions.

Like any teaching session, it is important that you plan your Collaborate session, especially as there is technology involved. We have developed some [tips and strategies](#) to help plan your Collaborate session as well as helpful advice for running and closing a session.

Here are some further tips for your Collaborate session: [Collab-Housekeeping](#)

Ultra Group Conversations

If the [class conversation tool](#) is activated on a group assessment item, then students of that group (or

the whole class) and teaching staff can converse with each other in a chat-like panel and can also enter a Collaborate session together.

Group Discussion Boards

In a [group discussion board](#), you can arrange the classroom into smaller groups and assign a specific topic to each group. Group arrangement can be custom, random, self-enrol, or reused. There is also a grading option.

GoSoapBox

GoSoapBox is a Bring Your Own Device (BYOD) Student Response System where students use Wi-Fi enabled devices on campus to interact online with their lecturer and peers before, during or after a face-to-face class. The tool promotes student engagement in an active learning approach. It has features where students can indicate their level of understanding through the Confusion Barometer; and lecturers can create quizzes and polls, discussion topics/questions. All data can be exported by the lecturer for later analysis and response. GoSoapBox is compatible with a variety of mobile devices such as laptop computers, tablets and smartphones.

- [Staff sign-up](#)
- [Staff guide](#) [PDF]

Padlet

[Padlet](#) is an online bulletin board tool that you and your students can use to post text and other content types, such as images, audio and video.

With Padlet, you can create an online learning activity that is engaging and collaborative, and students can post their ideas asynchronously or synchronously. **Padlet is available within LearnJCU** and is supported by The Learning Environments Team.

Comments can be turned on or off providing ways to share Learner-Learner, Learner-Teacher, or Learner-Content interactions. Imagine the possibilities, here are just a few ideas:

- Introductions and ice breakers
- Brainstorming and mind mapping
- Assessment help
- Learning journals
- Interactive debate
- Study group discussion
- Questions and answers
- Topic-related collaborative learning
- Discussion forum alternatives
- Informal peer feedback activities
- Walkthrough presentation
- Task manager

H5P AND OTHER CONTENT MARKET ITEMS

There is an array of educational technologies available via the LearnJCU content market that you can add to your subject site. These include, but are not limited to:

- [H5P](#)
- [PebblePad](#)
- [Hypothes.is](#)

CHAPTER 7: ONLINE ASSESSMENT

7.1 Good practice assessment design

ASSESSMENT AS LEARNING

Assessment is an integral process of learning and teaching throughout a subject or course, it is not something that just happens at the end to measure student performance. **Assessment frames student learning** and provides **evidence of achievement**.

Assessments do not only measure how much students have learned, they also play an important role in the learning process. While exposure to learning content and activities introduce students to new information and concepts and may help students store this information, it is crucial that students **actively practice** retrieving and applying this information. **Regular formative and summative assessment** across a subject provides students with the practice opportunities that are essential to learning. If we want students to apply their learning in a wide variety of contexts, they must practice what they're learning in a **wide variety of contexts**. Providing a **variety of assessment types** gives students multiple opportunities to practice and demonstrate learning.

In this video, the concept of assessment for learning is further explained, including a focus on the importance of formative assessment across a subject or course.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=48#oembed-2>

[What is assessment for learning?](#) Oxford University Press ELT

QUALITY ASSESSMENT DESIGN PRINCIPLES

There are some general overarching principles associated with designing quality assessment tasks. These principles contribute directly to student achievement and experience, as well as quality and governance requirements.





An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=48#h5p-29>

AUTHENTIC ASSESSMENT

One of the core principles of JCU Learning, Teaching and Assessment Policy (2021) outlines that authenticity is an essential element of assessment. **Assessment** can be considered **authentic** when the task meets academic standards and prepares and challenges students to demonstrate knowledge, skill or application that is needed to negotiate the requirements of a **real-life setting**. As educators, we need to help students to be lifelong learners. An important benefit of using authentic assessment is the opportunity for students to learn **21st-century skills** (e.g., innovation, decision-making, collaboration, citizenship, cultural competence, metacognition, digital literacy).

This video provides an overview of authentic assessment including the benefits for students' learning and some principles of design.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=48#oembed-3>

[teachwithtech/?p=48#oembed-3](https://jcu.pressbooks.pub/teachwithtech/?p=48#oembed-3)

[Liverpool Hallmark: Authentic Assessment](#), Presented by Kris Spelman Miller, LivUni CIE

Principles of authentic assessment

Adapted from Hetherington & Hetherington (2006)



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=48#h5p-30>

Additional resources related to authentic assessment

- [JCU Assessment Case Studies](#). This resource showcases the work of several JCU staff in designing authentic assessment tasks.
- [University of QLD Assessment Ideas Factory](#) (Authentic Assessment). This site provides assessment

resources including tasks, criteria and descriptions.

- [Authentic Assessment Toolkit](#). This resource provides examples of authentic assessment tasks, rubrics and further information.
- [Inclusive assessment resources](#) (ADCET and Deakin University).

ASSESSMENT CRITERIA

As outlined above, one of the essential elements associated with quality assessment is ensuring students and staff have access to clearly defined and aligned criteria standards or rubrics. These criteria provide a framework that clarifies assessment requirements and standards of performance for different grades. In this, they support assessment as learning; students can see what is important and where to focus their learning efforts.

A marking rubric helps you to communicate the standards of the assessment task to your students and markers and is an effective way to implement standards-based assessment. A marking rubric contains descriptors of the standards for a number of criteria, usually in the form of a grid or matrix.

Grading rubrics, which have many forms, have been around for a long time. In simplest terms, they help you score assignments objectively and consistently. Walvoord & Anderson (1998) describe the components in creating a rubric (see their book, *Effective Grading*). This video discusses the use of rubrics for assessment in online learning environments.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=48#oembed-1>

[Assessment with rubrics in online environments](#), Brock University, Centre for Pedagogical Innovation, [CC BY 4.0](#)

Tips for designing assessment criteria and rubrics



An interactive H5P element has been excluded from this version of the text. You can view it online here: <https://jcu.pressbooks.pub/teachwithtech/?p=48#h5p-37>

Also review the JCU '[Developing Assessment Rubrics: Guidelines for Subject Coordinators](#)' resource.

7.2 Online assessment

Online assessment and assignment submission can greatly benefit students, teaching staff and administrative support providers. In particular, it improves workflows where students are remotely located or distributed across multiple campuses.

It is also environmentally friendly, as it means less paper. Educators can use tests or assignments and can encompass a variety of question formats (multiple choice, multiple answers, hotspot, fill-in-the-blank, true-false, short answer/essay and file) as well as automated marking and student/question performance analysis.

When combined with online marking, feedback and reporting, electronic assessment and assignment submission results in significant administrative improvements and provides faster feedback for students.

ASSESSMENT SUBMISSION TOOLS AVAILABLE IN LEARNJCU

There are a number of online assessment submission tools available in LearnJCU. These include assignments and tests.

The [assignment tool](#) is essentially a dropbox for student submissions. Students can submit an array of files including Microsoft Word and PowerPoint, PDFs, and media including audio/video files and images.

The [test tool](#) is a useful way to test students' understanding of key concepts or provide evaluative feedback. A range of question types are available in Ultra including Multiple choice, Multiple answers, Fill in the blank(s), True/False, Essay and Calculated Formula.

In the settings of all assessments, you can enable [Safe Assign](#) and [Respondus](#) to monitor the academic integrity of submissions.

TIPS FOR ONLINE ASSESSMENTS

- The assignment dropbox in LearnJCU accepts a number of different files: PDF documents, Word documents, presentation files and multimedia files, however large video files will likely require an [alternate submission process](#).
- Clear submission requirements must be given to students such as file types accepted, file names, the maximum number of files to be submitted and file sizes.
- Students must be provided with sufficient guidance on how to submit their work and technical assistance should be provided to individual students if required.
- Online submission allows one student within a group to submit on behalf of all group members. Subject coordinators are able to allocate the marking of specific assignments to individual tutors. Supported technologies.
- When writing your subject outline and planning the assessment, please consider the limitations of LearnJCU for marking and feedback. It is very difficult to resolve these issues retrospectively after subject outlines and assessment has been released. If you need advice in this area, please do not hesitate to contact an Educational Designer or one of the Learning Environments team members

([Ask LearnJCU](#)).

GOOD PRACTICES WHEN USING ONLINE ASSESSMENT

Explicitly teach students how to access assessment feedback

Take the time to show students how they can access feedback on their online formative and summative assessment tasks. This strategy contributes to enhancing students' feedback literacy skills.

Scaffold assessment

Make sure you scaffold all assessment activities for students. Ensure students are supported and have the opportunity to practice the assessment method prior to submission. For example, if students are required to submit a narrated PowerPoint presentation, ensure students are provided with media creation support and have had the opportunity to practice creating and submitting this assessment method prior to the due date.

Offer a trial run

Ungraded "Get to know you" or practice tests and assignments that approximate the configuration and flow of formal assessments for the course afford students the opportunity to familiarize themselves with the experience.

Offer high frequency / low stakes testing

Higher frequency assessments with lower stakes tend to be less prone to risk within the online environment than traditionally high-stakes mid-semester and final examination models. Educators may thus wish to release module, weekly, or monthly assessments to provide for small fractions of overall course grading but equating collectively to the fraction allocated to larger assessments.

Support academic integrity

Assume that all known risks that apply to traditional assessments apply to assessments done online. Consider the points below to help ensure academic integrity as online assessments are administered.

- Ensure students complete the [Coursework Academic Integrity modules](#).
- Explicitly teach and raise awareness of academic integrity and academic misconduct on topics relevant to the online submission. For example, paraphrasing, collusion, cheating, and self-plagiarism. Contact The Learning Centre (learning@jcu.edu.au) for further advice.
- Offer draft SafeAssign dropboxes where students can submit drafts for self-checking and show students how to read their SafeAssign reports.
- Assessment that calls upon participants to leverage critical thinking rather than memorisation skills will provide more opportunities for unique responses.
- Randomise question inclusion and ordering.
- Time assessments strategically, to reduce the opportunities for students to collaborate or refer to other sources of information when these behaviours are not intended.

TEQSA has a useful resource that outlines [strategies for using online invigilated exams](#).

7.3 Group assessment online

Group assessment tasks are critical for students to develop skills essential to their professional environments. Online teamwork can be used for the development of communication, collaboration and social skills.

Groups of students can be guided to work together on improving their understanding of key topics through debate, collaboration, information sharing, and inquiry.

Tools to support group activities are:

- Asynchronous and synchronous discussion forums (e.g., Discussion boards, Padlet);
- Document sharing tools;
- Wikis and Blogs;
- and email.

Online group assessment tips

- **Online group assessment tools** – can greatly facilitate interactions amongst students of multi-campus subjects. Wikis, for example, allow students to collaboratively research, structure, re-structure and interlink written and visual content to create a tangible product that can be used for group assessment.
- **To ensure reliability and fairness of grading** – it is important to provide students with clear rubrics and explicit marking guidelines for both group and individual input. Self-assessment and peer review forms can also assist teachers in evaluating individual contributions to the final product.
- **Team quizzes and online problem-based scenarios** – can provide students with formative opportunities to engage with content prior to workshops and tutorials. These activities can focus on relevant aspects of classroom content delivered via pre-reading materials and may help emphasise to students the practical application of subject learning outcomes

Supported technologies

[Creating Groups](#)

You can organise students into groups so they can interact with each other and demonstrate their knowledge while they learn to appreciate the perspective of others.

[Group Discussion Boards](#)

When you create a discussion, you can assign groups to help students feel more comfortable because fewer people are involved.

[Ultra: Group Conversations](#)

If the class conversation tool is activated on a group assessment item, then students of that group and teaching staff can converse with each other in a chat-like panel and can also enter a Collaborate session together.

[Group Assignments](#)

Group assignments can be created and released to one or more groups within your subject. Each group submits one collaborative assignment and all members receive the same grade. You can create a single assignment and assign it to all groups, or create several unique assignments and assign them to individual groups. Only you and the members of a group have access to the assignment.

7.4 Designing alternative assessment

The following outlines some considerations regarding your choice of assessment method, which includes [academic integrity](#), equity, and assurance of learning outcomes. Are there ways, other than an online exam, for example, that you can assure students' learning and achievement of the learning outcomes?

First, look at the range of assessment methods available as outlined in the "JCU Learning, Teaching and Assessment Procedures" (2022) [[section 3.2.1a](#)]. It is important to note that this list of assessment methods is not exhaustive and, while it has been provided to promote shared understanding, there may be some variation in definitions according to discipline and/or context.

ASSESSMENT METHODS



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=145#h5p-35>

ALTERNATIVES TO ONLINE EXAMS

Now that we have looked at a full range of assessment methods, based on academic integrity, equity, and assurance of learning outcomes, what alternatives can we consider when choosing the ideal assessment method for our cohort?

The chosen assessment method must be capable of measuring the intended learning outcomes not already measured in the subject and ensuring equity.

As with all forms of assessment, reasonable adjustments will still be needed for students with health conditions, disabilities and injuries.

The following item has been adapted from: [Giulia Forsythe](#)



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<https://jcu.pressbooks.pub/teachwithtech/?p=145#h5p-36>

ADDITIONAL RESOURCES

- [JCU's guide on designing alternative assessment](#)
- [JCU's assessment methods](#)
- [Interactive oral assessment](#) (Griffith University)

7.5 Online marking and feedback

FEEDBACK LITERACY

Feedback literacy can be defined as *“the understandings, capacities and dispositions needed to make sense of information and use it to enhance work or learning strategies. Students’ feedback literacy involves an understanding of what feedback is and how it can be managed effectively; capacities and dispositions to make productive use of feedback; and appreciation of the roles of teachers and themselves in these processes”* (Carless & Boud 2018).

The development of students’ feedback literacy is entwined with the development of students’ assessment literacy. Assessment literacy relates to students’ abilities to understand the assessment purposes and processes, and accurately judge their own work. In topic 3.1, you explored assessment design. As part of the principles of quality assessment, the assessment should be transparent and students should clearly understand the assessment expectations.

How students can benefit from assessment feedback

Sadler (1989) identified three conditions necessary for students to benefit from feedback in academic tasks. He argued that the student must know:

1. What good performance is (i.e., the student must possess a concept of the goal or standard being aimed for);
2. How current performance relates to good performance (for this, the student must be able to compare current and good performance); and
3. How to act to close the gap between current and good performance.

In this video, A/Prof Phillip Dawson discusses the importance of developing students’ feedback literacy.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://jcu.pressbooks.pub/teachwithtech/?p=147#oembed-1>

[9.00 am Keynote](#), Victoria University Videos

PRINCIPLES OF GOOD FEEDBACK PRACTICES

Adapted from Nicol & MacFarlane-Dick (2006).



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<https://jcu.pressbooks.pub/teachwithtech/?p=147#h5p-32>

ONLINE MARKING AND FEEDBACK

Online marking is the most convenient marking strategy for both staff and students

LearnJCU provides staff with options for annotating submissions, marking with a rubric, providing formal feedback in a variety of formats and controlling the release of marks and feedback.

Annotation of students' submissions

You can provide feedback directly into students' assessment submissions by using the [Blackboard Annotate tool](#). After you post the grade, students can access their annotated submission to view your feedback.

Marking with an online rubric

Prior to setting up an assessment item (i.e., assignment or graded discussion board), you can create and assign an [online marking rubric \(YouTube\)](#) to the assessment task. After you post the grade, students are able to access the marked rubric to view your feedback and marks assigned for each criterion.

Adding feedback text, files or audio/video feedback

You can add general [feedback text, files](#) or [audio/video feedback \(YouTube\)](#) to any assessment submission via the feedback panel. The feedback icon appears at the top of the marking submission page. Feedback in the feedback panel should build on the structured rubric feedback to include constructive feedback.

Additional resource: [Using video in assessment and feedback webinar](#) recording, slides and resources (Transforming Assessment SIG)

7.6 Academic integrity in the online environment

ACADEMIC INTEGRITY BEST PRACTICE PRINCIPLES

JCU takes an educative approach to academic integrity and has developed a series of online modules that support both teaching staff and students. The Coursework Academic Integrity Education Modules are available on LearnJCU. All JCU academic staff and coursework students must complete the modules as indicated in the [JCU Coursework Academic Integrity Policy](#) and associated [Procedure](#).

A useful resource to better understand the overarching principles that guide Australian universities' implementation of academic integrity processes is the [Academic Integrity Best Practice Principles](#) developed by Universities Australia (2017).

Universities Australia outline seven (7) principles for academic integrity including:

1. The primacy of institutional autonomy
2. Everyone is responsible
3. A whole of university approach
4. Consistent and effective institutional policies and practices
5. Engage with and empower students
6. Empower and engage with staff
7. Work together.

As you can see, these principles are a collaborative approach to academic integrity and you are encouraged to engage staff and students in regular conversations about academic integrity and promote a positive academic integrity culture. There is no single approach that will address academic misconduct (e.g., remote exam proctoring), rather a layered, multifaceted approach is required.

WHY DOES ACADEMIC MISCONDUCT OCCUR?

Students' perspectives:

- Students **lack understanding** about **academic misconduct** and the **consequences**;
- Students that fall into one or more **vulnerable** categories such as those who experience **financial, time, family, or peer pressure**, those who **do not** have strong **English and literacy skills**, or those who are **dissatisfied with their learning experience** are at a higher risk of engaging in academic misconduct;
- Students do not understand the assessment task, expectations or criteria (e.g., **poor assessment literacy**);
- Students have not received quality feedback nor the opportunity to action the feedback (e.g., **poor feedback literacy**);
- Students are unaware of, or **lack** access to **support** mechanisms;

- Students perceive that the assessment task is trivial and/or irrelevant and so is not worth their genuine effort, and does not require 'original thought' or an original voice (e.g., **not clearly aligned to subject learning outcomes or not authentic**).

Adapted from: Bretag & Harper (2019) and TEQSA (2020).

DESIGNING ASSESSMENT TO PROMOTE ACADEMIC INTEGRITY

There are a range of design strategies you can implement in your assessment practices that help to promote academic integrity and minimise the opportunities for students to engage in academic misconduct.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://jcu.pressbooks.pub/teachwithtech/?p=149#h5p-34>

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