Microlearning

MICROLEARNING

Engaging learning experiences made easy

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FRONT MATTER

ENGAGING LEARNING EXPERIENCES – MADE EASY

Chris Kossen

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Preface

This 'how to' guidebook is a practical resource for lecturers, teachers, trainers and instructors. It shows how microlearning design and delivery principles and techniques can be applied to your learning materials and teaching delivery in ways that are basic and easy to implement, yet powerfully effective. Much of the power of microlearning lies within one of its key design objectives, which is to simplify the learning process to make it more appealing and engaging. The book provides practical instruction and guidance accompanied by class and teaching videos.

1.

INTRODUCING MICROLEARNING

Introduction

First and foremost microlearning design involves

(1) reducing the overall volume of learning content in a course

(2) segmenting recorded learning sessions into bite sized instalments that are easy to digest and access.

It is a 'less is more' approach that aims to reduce unnecessary cognitive load as a major impediment to learning so that focus can shift to prioritising the most essential skills and knowledge. It makes learning materials less overwhelming, and as a result more attractive and engaging. It also allows students to manage their learning at their own pace and at times convenient to them.

This book extends on microlearning's core approach of information load-reduction, with additional approaches for increasing engagement, like frequently linking to benefits of the content and designing activities that aim to be appealing. These also work to further reduce cognitive load.

This '*how to*' guidebook is a practical resource for lecturers, teachers, trainers and instructors. It is aimed at those interested in getting '*up and running*' with microlearning quickly and easily. It shows how microlearning design and delivery principles and techniques can be applied to your learning materials and teaching delivery in ways that are basic and easy to implement, yet powerfully effective. Much of the power of microlearning come from one of its key design objectives, to simplify the learning process by making everything as clear and direct: *to-the-point* as possible.

Microlearning has become well established, and it is continuing to grow rapidly, gaining ground over other contemporary pedagogies like Flexible Learning and e-Learning (Alias & Razak, 2024; Olivier, 2021). Its popularity in universities and in industry training continues to pick up pace (Hogle, 2021; Pandey, 2020). It has accumulated a strong track record as an effective way to increase student engagement and learning performance, with results often visible in a short time (Corbeil et al., 2021; Kuzminska et al., 2022; Leary et al., 2020; Mohammed et al., 2018).

Microlearning has a large body of theoretical literature and branched into many forms (e.g., apps, software), many being highly specific. However, in this book I confine microlearning to a broadly applicable approach based on my own development and application of microlearning, which includes the fields of Public Relations and Communication, along with my interest in what others are doing in other fields.

Microlearning utilises widely available digital technologies that allow you to 'do it yourself' so I view it as quite '*low tech*' because you can apply microlearning without advanced technological knowledge or specialised technologies. In this book I draw on my research and experience to show how elements of microlearning can be adopted with modest effort. Adopting it incrementally is the easiest way to get started.

This first chapter introduces key principles for understanding how and why microlearning design works. Microlearning targets above all **student engagement**, as engagement is a well-established pathway to learning success. Research consistently shows that increasing engagement leads to increased learning performance and as such increased completion rates (Kahu et al., 2020; Kamel, 2018; Torgerson, 2021).

Microlearning's 'bit-by-bit' small-form, chunks-of-learning approach also creates a gateway to engagement with its capacity to generate continued and increasing engagement. As an approach it can create its own momentum, and getting students engaged from the beginning is a good start for keeping them engaged.

Learning environment: challenges and trends

Universities today, especially the many now in the online learning space, face challenges. While on one hand there are more students studying today, with the accessibility of online education being a positive factor, students are also struggling more than ever before. High non-completion and dropout rates show this.

Why are so many students struggling?

Firstly, study, is by nature hard. It is cognitively demanding, often to the point where it is overwhelming. In addition to information overload and complexity, motivational strains and challenges of lifeload today also take a toll, with many now studying part time while also working full or part time and have caring responsibilities. These factors can be further compounded by factors like financial constraints, disability, chronic disease and mental health (Nelson et al., 2017). '*Time poor*' students can become strategic learners with a focus on efficiency based on working out the minimum they need to do to pass, while many others become so overwhelmed they fail to complete.

Traditional course materials and classes appear to lack value for many students today if they are not made clear, focused and interesting. Students often describe study content as pointless and boring when they have difficulty in connecting the content to their lives, especially when resources are not made sufficiently relevant and when sheer volume makes them seem overwhelming. Hence, study can seem alienating and demotivating, and thus far from empowering.

An adjustment hurdle for students starting university studies is underestimating the time and effort study requires. This is another barrier we need to think about and try to manage: '*What can we do to ensure our learners can transition easily into study?*' Well – we can make what is required of them explicit and show them how to achieve what is required in ways that are effective and ethical.

Our technological and social environment is yet another factor. We are immersed in a digital, online and social media environment. Digital media along with the demands and pace of life today have increased pressure on people's attention resources and shortened concentration spans. Conventional long-form lecture delivery and pages of dense text are no longer effective for many.

Lack of informatively explicit communication (i.e., lack of full and clear information) is a common

barrier to learning. Not making information and meaning explicit enough leaves learners insufficiently informed and hinders their progress and success in learning.

(1) Students can spend a lot of time trying to accurately understand information e.g., key concepts, key instructions leading to a *'guessing game'* dynamic that adds to cognitive load and impedes effectiveness and efficiency.

(2) Students can fail tasks due to misinterpretation or lack of *full and clear information.*

It is in this context that we are competing and even struggling for the attention and engagement of many of our students. What is also important to realise, is that they too are in this struggle.

What can we do?

- How can we reduce the volume of materials, so they are not overwhelming?
- How can we make materials easily accessible and more manageable?
- How can we make content more attractive and appealing?
- How can we make learning more engaging, enjoyable and empowering?

Microlearning aims is to address these issues. Its first and foremost objective is to reduce cognitive load by reducing volume to make learning more manageable. Reducing volume and impediments to ease the demands and difficulties of learning help make the journey more engaging and something students want to do.

Microlearning design

Microlearning enables the delivery of instructional content in short manageable bursts, at times that are convenient to learners. It is well matched to how people now access information through small devices, phones and tablets. These devices themselves now drive people's preferences for sourcing and consuming information in bite-sized form, making them accustomed to doing things this way.

Microlearning is multimedia based because it draws on online digital delivery of audio-visual materials, that are then accompanied by shortened text-based learning resources. Microlearning is regarded as an online educational design and delivery method. However, learning design and delivery practices in microlearning are applicable to on-campus as well as online learning, e.g., by designing learning sessions aimed at being engaging, relevant and interesting.

- Much of microlearning is based on learning and teaching approaches developed and proven effective long before digital technology, e.g., scaffolding learning, incrementally with segments;
- Many learning resources for on campus learners now reside in the same online Learning Management Systems (LMS) used by online learners; and
- A great deal of on-campus learning now takes place online, e.g., peer-discussion and learning activities that students participate in online.

On-campus study has been blending with online study for some time, on-campus students now expect recordings of lectures and classes to be recorded and available online. Similarly, many aspects of day-to-day life have moved online in today's world, like the consumption of many goods and services e.g., booking travel and accommodation.

Students today, also have high expectations that courses follow good design logic; they are becoming more accustomed to frameworks such as universal design for learning (UDL) that provide a more systematised and coherent learning experience. The need to embrace learning design to successfully engage students has been increasing and hastened further by COVID (Singh et al., 2022).

Growing reliance on online technology today is moving higher education teachers toward roles as content and delivery design specialists and strategists (Corbeil et al., 2021). Microlearning itself is geared toward designing and engineering content and delivery to increase engagement and optimise learning.

Design fundamentals

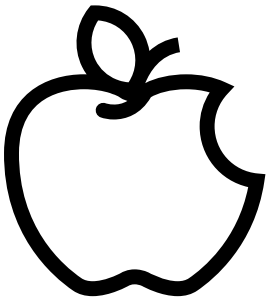
While there is a wide range of definitions for microlearning, the following description encapsulates its key elements:

- The delivery of instructional content in short and focused bursts
- each designed to elicit responses
- each linked to one, or more, specific learning objectives (Kapp & Defelice, 2019).

At its core, microlearning entails (1) reducing content and then (2) segmenting the selected high relevance material into easily digestible '*bite-size*' instalments. This makes information more attractive and engaging and increases absorption and comprehension. It is underpinned by cognitive load theory which focuses on optimising instructional design (Gobet, 2005; Kamel, 2018; Sweller, 2010). Segmenting materials into '*bite-size*' instalments can be achieved with short microlectures and class learning sessions.

Making course resources and delivery more accessible and attractive, and a more positive experience, increases success in learning, e.g., course completion, grade performance, skill and knowledge acquisition and employability.

Microlearning – bite-sized, digestible bits



Microlearning uses a '*less is more*' principle to reduce unnecessary cognitive overload and associated stress, as major impediments to learning (Corbeil et al., 2021; Kapp & Defelice, 2019). This makes learning less daunting and more manageable, and shifts focus onto the most important and relevant content.

Instructional delivery through short, interlinked, segmented units of learning, designed sequentially is a central feature. It is a process of incremental learning by building knowledge and skills using step-by-step instalments. This makes it a scaffolded approach to learning design and reduces cognitive load.

In this way microlearning seeks to optimise cogitative processes for the transfer of learning from short, to long term memory (i.e., memory retention), as well as facilitating deeper level understanding and proficiency. Through this design, learners' abilities to apply skills and knowledge can be significantly improved (Jomah et al., 2016; Kamel, 2018).

Micro-hedging: personal insight into breaking a large task down

The importance of this idea of breaking tasks into smaller, more manageable units really came home to me in my struggles with trimming a very large hedge. It was a job I dreaded – one that would exhaust me physically and mentally. Eventually, I realised that there had to be a better way: '*pay someone else to carry the burden*' maybe? But the solution was to break the task down, splitting it up into 15-20 minute sessions, one per day, or every second day. This worked. It solved my problem. I was able to complete the whole hedge in good time, in as little as a week, even better than expected. Furthermore, this work became more of a relaxing activity than a dreaded burden.

While this example does not capture all there is to microlearning, it helps demonstrate the benefits of breaking work (including study tasks), down into smaller, more manageable bits. Avoiding overload makes life easier, and study more manageable and more enjoyable. It is a key element in the microlearning approach.

Cognitive load and components

Cognitive load theory draws on educational psychology as a brain-memory framework for advancing instructional design theory with a focus on reducing cognitive load (Sweller, 2010).

Cognitive Load: an overarching term that refers to the demand on working memory capacity for a task (Lovel, 2020; Sweller, 2010). The larger or more complex the task or subject matter the greater the demand on cognitive load. The terms that follow include subset components for the cognitive load framework, aspects of cognitive load and points where cognitive load can occur. Note, that the term cognitive load is

often used to refer to **cognitive overload** even though that is not technically correct (see *cognitive overload* definition below).

– **Element/s:** content / units of content: anything that needs to be learned e.g., concepts, skills, processes.

– **Intrinsic (cognitive) load**: is the natural difficulty of the content or a subject area. Complexity of content can vary e.g., low, mid, high. The cognitive load for a complex recipe is higher than for a simple one as demand on the working memory required increases. Hence, difficulty often increases with volume of information /or elements.

Intrinsic load also increases in areas where concepts cannot be understood without an understanding of related concepts (i.e., constituent concepts) because it increases complexity. This is known as *element interactivity.*

– **Working memory**: is a person's capacity for information in-take needed for processing i.e., processing power. Working memory is highly limited and hence a major barrier and limitation in learning, especially if not managed well. Processing new information requires also retrieving knowledge from long-term memory, and in doing so places demand on cognitive load.

– **Germane load**: refers to the mental resources required to grasp and integrate new information into long-term memory. It is closely connected to the concept of ***working memory***, and translates to, load on working memory, or *'working memory load'*. Hence, germane load is commonly referred to as *working memory*. (see *working memory*).

– **Long term memory**: the brain's information storage system. Long term memory is significant because it is widely accepted that for learning to take place, content must be absorbed into long term memory. However, its robustness for close-to-permanent storage can be overestimated. Accessing the information stored not only requires retention but retrieval with both having limitations.

We depend on retrieval for learning. This is because learning involves drawing on (retrieving) existing knowledge (which incorporates mental schemas) as a mental framework for interpreting new information so that it can then be encoded into long term memory. Retrieval is also required for application (ability to apply in practice) which includes testing for retention and competency e.g., examinations. Storage retention and retrievability can be strengthened by repetition and practice to fortify neural connections.

Repetition and active participation in *practice-based* activities are learning design approaches used to increase memory retention and retrievability to help ensure knowledge and skills remain memorable for longer.

– **Extraneous (cognitive) load**: arises from how information is presented, the way learning and delivery are designed (i.e., learning design load). It is an area where lecturers, educators and learning designers can work to reduce cognitive load through design by reducing volume and extraneous information e.g., unclear explanations, poorly design graphics.

– **Cognitive overload**: occurs when volume and, or, complexity of information exceeds working memory limits, i.e. exceeds a learner's cognitive load capacity for processing and storing to long term memory. Segmenting information delivery into units that that can be processed in working memory is one important way to overcome cognitive overload and ensure learning takes place.

– **Cognitive overload stress**: stress brought on by anxiety due to overload and perceptions of overload

e.g., "this looks too hard". Overload induced stress creates confusion making comprehension and processing of information more difficult, and further compounds feelings of being overwhelmed. Stress impedes learning by adding to cognitive load while also undermining confidence and motivation.

– **Learner load**: (a term I have introduced) refers to impacts, stressors and impediments associated with learners. This includes personal and lifeload factors like the competing demands of work and family (covered earlier), and includes learning difficulties and emotions learners may bring to learning.

Our aim as learning designers

Our aim as learning designers, is to design learning, (which includes content and delivery), in ways that ease or lower *learning design load* (i.e. extraneous load). Approaches and measures covered in this chapter and those that follow, include:

– reducing unnecessary, or extraneous content e.g., clear '*to-the-point*' communication

– segmenting learning into smaller units

– designing learning materials, sessions and exercises that aim to appeal to, and actively involve learners: i.e., using a learner engagement-centred mindset (covered in following topic).

Cognitive overload depletes learner interest and confidence and occurs when cognitive load exceeds the capacity of working memory to process and retain information. Reducing content and streamlining design can increase attentional capacity, interest and motivation for learning (Nelson, et. al., 2017), and thus increase learning performance.

Microlearning is learner engagement-centred

Breaking learning down into small bites not only makes learning easier to digest, it provides students with increased opportunities to identify specific pieces or areas of content they see as best serving their individual interests and needs. Enabling students to engage in learning at times most convenient to them is another feature that helps them gain more control over their own learning. As you go on you will notice more and more design features in microlearning that are aimed at better empowering learners.

Microlearning is well aligned with how the human brain learns and naturally takes in and processes information (Jomah et al., 2016), allowing learners to seek out specific information on their journeys to build understanding and skills. In this sense it can be linked to Information Foraging Theory (Khapre & Basha, 2012). This learning as foraging perspective can help us orient our design of learning in ways that allow learners to locate and access specific pieces of information around their curiosities and interests, making learning a more enjoyable and rewarding experience. When combined with learning in digestible increments, it helps further sustain learner interest, while also, very importantly, keeping stress in check.

Microlearning is learner engagement-centred in many ways, it is multifaceted in this respect. In its quest for increasing learner engagement it seeks to identify and subsequently address students' struggle points. The box below, shows the key barriers to learner engagement to be addressed in chapters that follow and

are based on research literature (Korstange, et al., 2020; Gutierrez, 2018; Lizzio & Wilson, 2010) and also my experiences with the feedback I receive from students.

Barriers to learning and motivation: pain points

Cognitive overload: feeling overwhelmed by volume and perceived volume; attention span limits; competing life and work demands of our age (i.e., life-load)

Lack of relevance and practical value: When the relevance of material covered is not obvious, nor how it can be usefully applied to:

- employability (e.g., profession specific knowledge competencies)
- assessments

Lack of conciseness in presentation information: Attention span limits demand brevity and clarity

Lack of explicitness (full and clear information) can leave learners insufficiently informed and hinder learning.

Lack of appeal and stimulation of interest in materials and learning sessions

Insufficient sense of involvement: lack of ownership, control in the learning process (alienation)

Lack of sense of belonging and being supported: feelings of learning being impersonal; of learner not feeling valued in the learning process (isolation)

What learners desire

Learners want information and learning to appear clear, to the point, relevant and practical while also interesting to them. This makes sense. We are all learners; this is what we all want.

What learners need

Learners also need information (knowledge) and skills that are aligned to work and employment, to ensure they are well prepared for success in work, career and in life generally. Learners will derive a sense of purpose from course content when they can see its value in: helping them understand and develop in their discipline area; supporting them to build their vocational competence; and personal development and competencies. We can help here by ensuring the criterion of '*relevancy*' is tied to industry and job market demand (covered in Chapter 2). For content to be effective, learners also need, and desire, support, in line with their interests

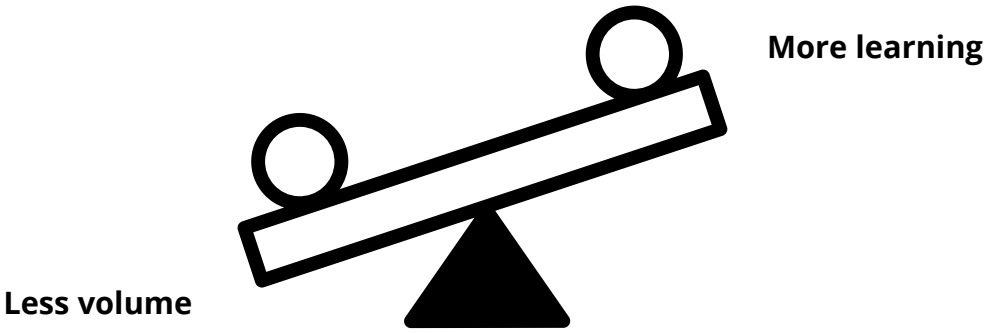
and needs. Incorporating practical activities to assess or gauge learning into information and lesson delivery is also key to learner engagement (i.e., practice-based learning, below).

Again, a key aim in microlearning design is to reduce cognitive overload – that is, the high levels of difficulty and stress many students experience with learning with two core approaches:

- reducing volume of content (in a course).
- reducing the length of units of learning (or learning sessions) by segmenting them into shorter, easier to manage instalments of learning.

We have touched on the second, which is segmenting delivery. But ideally we should begin with the first, reducing overall volume of content. This means cutting out unnecessary content to make learning less daunting, more manageable, and as such more inviting and attractive. This '*selective*' reduction approach also helps ensure interest, relevance and value for learners.

Microlearning's 'less is more'



Active practice-based learning

Microlearning design involves creating short and focused learning experiences that incorporate '*practice-based*' learning through activities designed to elicit participation in applying understandings and skills, ideally, through interaction with peers (Kossen & Ooi, 2021; Leary et al., 2020).

Microlearning seeks to achieve better transfer of learning from short term to long term memory and in doing so improve knowledge retention, as well as deeper level understanding and mastery (Kamel, 2018).

Increasing student involvement, with engaging practical exercises, can be challenging, but achievable with the right blend of encouragement and design measures to make participation attractive and worthwhile for learners.

Other key design measures I use, and in the chapters that follow, include:

1. variance and novelty, e.g. in media, voice and delivery style, fostering positivity, use of humour
2. lecturer presence and personalisation through promotion and nudging, e.g., weekly lecturer videos and weekly messages that include advice and encouragement.

Key Microlearning Design Features

Reduce content: prioritise relevance and practical value

Clear and concise communication: direct, to-the-point (is also a content reduction measure)

Informative and explicit communication: full and precise information and direction to ensure students are sufficiently informed for study and assessments

Segment delivery into small units of learning e.g., recorded audio visual presentations

Relevance-linking: frequently and explicitly explain relevance and practical value

Activate and draw on prior learning: use experiences and knowledge; involve learners in the development of their own understandings and learning

Prompts to encourage active participation: performance/practice-based learning, designing activities to make participation interesting and rewarding, and also, by providing useful feedback

Nudging to promote interest and personalise support: with lecturer videos and supportive written messaging (encouragement and assignment tips, 'feeding forward', giving advice on common pitfalls to avoid in student work.

Novelty and variance: in media e.g., podcasts; also vocal dynamics, like using formal and conversational styles, strategic use of humour to further stimulate appeal, interest and relatability; and by including co-presenters

Practical and collaborative activities in course design and delivery.

Applying microlearning design

Adopting microlearning is not difficult; it is much easier than people think. It is achievable. While it does require some effort and change, one way to make it manageable is to make changes incrementally. Doing so is actually in keeping with microlearning principles. My own case study research with a colleague on implementing microlearning at a Malaysian university, concluded that microlearning can be implemented with relative ease, that is, with modest, rather than onerous demands on time and effort for those interested in implementing (Kossen & Ooi 2021).

The more you become familiar with microlearning, the more you will notice that it draws heavily on long established and effective teaching practices. Key among these are: clear and 'to the point' information (i.e. clear and direct); breaking content into bite size units so it is not too mentally demanding; ensuring 'high

relevance' practical content based on industry needs; clear and explicit learning objectives; and developing interesting activities (e.g., including those that have worked well in your classroom teaching). These points help show that a great deal of good common teaching practice is transferable to microlearning. It does not require us to reinvent our style or the essence of our approach.

So, while the term microlearning is relatively new, a great deal of what constitutes it is based on long-established and proven learning design and teaching practices. Microlearning from a teacher's perspective is more about refining and enhancing aspects of one's approaches rather than having to make large scale changes.

This guidebook will help guide you through your own journey from someone who has experienced it personally and with a good deal of success. The recording and segmenting of lectures, or instructional presentations, may well be the greatest change for many. Even so, this is much more achievable than it may first seem, even for those like me with virtually no prior technical knowledge.

I will provide practical guidance and examples illustrating how I navigated my way through the challenges to provide you with valuable lessons I learned to help you manage the process with greater ease. Having said this, it is also important not to oversell the idea that it is easy to implement. The extent to which you decide to apply microlearning will influence the amount of work involved.

Public relations industry presentation on microlearning

The following introductory section of my presentation (*below*) at a Public Relations Institute of Australia (now named Communication and Public Relations Australia) Education Committee Seminar, provides an overview of microlearning. The presentation starts with the proposition, that: *learning is, by nature, inherently difficult*; or in other words, cognitively demanding. It is worth noting again here, that microlearning's focus of identifying key barriers to engagement and learning, has proven to be effective as a starting point for developing ways to address and reduce them.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=76#oembed-1

Microlearning critiques, considerations and pitfalls

One criticism levelled at microlearning is that its reduction of content and segmenting of learning into short units '*dumbs down*' quality in education. Contrary to this, microlearning design aims to facilitate deeper learning and mastery of high priority knowledge and skills and is well supported with a track-record of success (Corbeil et al., 2021; Kuzminska et al., 2022; Leary et al., 2020).

Another misguided assumption is that microlearning is suited only to simple types of learning, but not more complex learning. This stems from often repeated myths that describe microlearning as learning

in 3-to-5 minutes bursts. This is far too restrictive and misrepresents microlearning. Microlearning can be more accurately understood as optimising length, by taking cognitive processing capacity into consideration. It is also guided by the nature and complexity of the learning involved.

Microlearning is well suited to dealing with complex learning because of its design method of building complexity incrementally through scaffolded segments. Information delivery, and learning session lengths can extend depending on the nature and complexity of material and the level of learning required.

While microlearning has proven to be a valuable approach, well worth considering, building up unrealistic expectations about any method or approach and touting it as a panacea is unwise.

The need for microlearning approaches is greatest where overcoming learning barriers is most challenging. Examples are first year courses and those with high attrition or failure rates, often due to inherent difficulty of the subject area, and at times, poor design (structuring and delivery).

One pitfall to avoid is overloading courses with too many learning supports and help and '*bells and whistles*'. This can undermine the benefits microlearning's '*less is more*' principle brings. Loading on too much support, while carried out with good intentions, adds clutter and noise that can overload learners and undermine positive experiences and outcomes. Even though, it is tempting to squeeze in extra supports, like 'extend your knowledge' readings, and even 'handy hints' for assessments can be overdone, creating noise and clutter.

The principles of microlearning should be applied to learning resources so that they are carefully selected i.e., curated. Consideration should be given to the purpose of the support material to target it to the particular needs of your students, and checked to ensure materials are well-timed and placed, and follow a '*less is more*' approach.

Monitoring and interpreting data and results

Features like bite-sized video presentations and interactive online classes are highly appreciated by, and benefit, many learners. But, as I have learned, there are others who prefer to focus on reading set materials and go on to perform very well in their assessments. It is often a case of providing for differing learning styles within a course. It is important we remember that many learners enrol in online learning because it allows them to learn independently without the need to attend and participate in classes. So while there may be many learners who seem disengaged, high levels of engagement are revealed later when utilisation and application of course learning resources become evident in their assessments. Early assessment is a critical tool, serving as a litmus test to gauge engagement and learning performance early on.

Measuring engagement by class attendance, frequency of access to resources including recorded classes and presentations, and responses to course forum activities, can be misleading. That is not to say that these measures and analytics (e.g., whether resources have been accessed) should not be discounted or have no importance. But they do need to be interpreted and understood holistically in relation to other indicators like increases in assignment grades, completion rates and student feedback (e.g., course satisfaction ratings and accompanying qualitative responses in course satisfaction evaluations).

Making early engagement a high priority

Again, the first and foremost goal of microlearning is to increase learner engagement, a strategy at the heart of our quest to increase rates of learning success. The importance of early engagement in achieving course engagement overall is a point that is obvious to us all. It is especially important for the complex equity groupings of students typical of regional, rural and remote universities. Positive first encounters support and help ensure a positive learning experience overall, together with overall well-being, engagement (Nelson et al., 2017) and sense of belonging (Crawford et. al., 2023).

Making a 'splash' at the beginning should be given high priority. '*Welcome to the course*' messages and videos as well as first lectures, tutorials, or classes, warrant special attention in order to set the tempo, i.e., establish vibrancy, positivity, and sense of purpose and belonging. This also helps establish a sense of confidence, not only for our students, but for ourselves as well. But again, keep a student-centred mind set, they are the focus. They the centre and always the '*stars of the show'*.

The methods and strategies we can draw on to help ensure our first learning sessions are engaging are discussed in following chapters. However, an important strategy worth mentioning at this point, is authenticity at the personal level. This is different for everyone. You achieve it by harnessing your personality and conviction, the natural strengths that sit within your authentic self. You can make classes and presentations engaging in your own way, which may not involve being highly animated.

Finally, it is important to mention here that we should aim to treat students as up and coming professionals from the outset. For example, we can draw links to the rewarding aspects of a profession which they can expect to encounter and experience. In this way we can help them develop their own sense of career identity and overall sense of purpose and belonging. This also helps to sustain them through the duration of their studies.

Conclusion

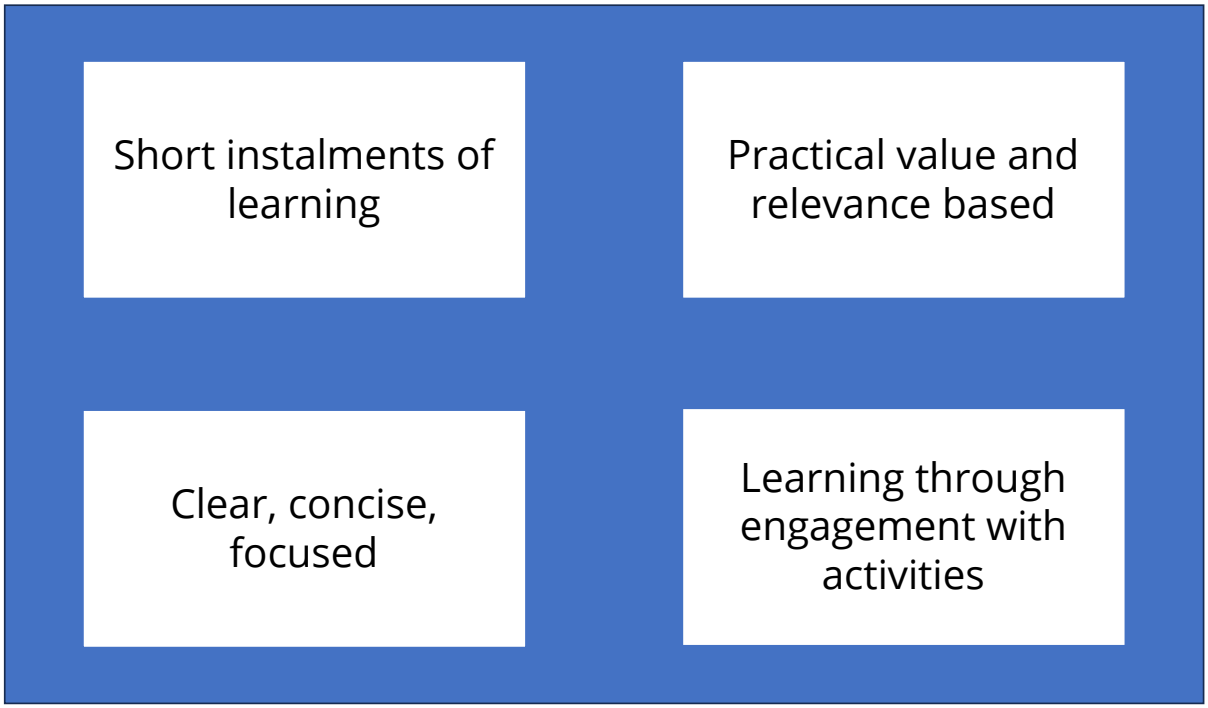
Microlearning refers to the delivery of learning content in short and succinct chunks or units. Microlearning design involves reducing and condensing large quantities of information into bite-sized units of learning. Its purpose is to reduce learner fatigue, overload and associated stress and thus encourage greater engagement and knowledge retention, which increases learning performance and resulting rates of completion.

The purpose of this book is to provide educators interested in adopting and applying microlearning with a practical resource to do this. This chapter introduced the rationale for using microlearning and key tenets for understanding its design, information important for those wanting to apply it in developing and refining their curriculum.

It is helpful to think of microlearning as a menu of learning and engagement principles and practices which can be combined powerfully to enhance teaching and its resulting learning experiences and outcomes. How you go about choosing and applying these depends on the nature of your subject area, student cohort, type of curriculum, your teaching style, and the expertise you have when starting.

As a set of principles rather than a set of technical procedures or rules with precise and specific steps to be followed, you interpret and apply it using your own judgement, common sense, abilities you have developed and all you know about teaching. There is no need to adopt and apply all the techniques available for every lesson; but rather, choose combinations you think may work well for specific situations.

Key features of Microlearning Design



Microlearning design: key points

- Reduce content to reduce cognitive overload (fatigue) and associated stress
- Reduce based relevance and practical value to increase attractiveness of content and usefulness
- Recording and segmenting information delivery into small easy to digest chunks (instalments)
- Link each focused chunk to one or more stated learning objectives
- Microlearning increases student engagement (learning and grades)
- Draws on multimedia or multimodal forms e.g. audio visual forms, with reduced text volume

- Much of microlearning is based on learning and teaching approaches proven effective before digital technology, like scaffolding learning (e.g., incrementally with segments)
- Convenient and efficient: easily accessible online via digital technologies
- Self-paced: learner control over when to fit study around life and work commitments
- Learner autonomy: to focus on items of content based on their needs and interests

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Attributions

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2.

REDUCING AND REVIEWING CONTENT

Introduction

The core strategy underpinning microlearning is to increase learner engagement by reducing barriers to learning. Increasing learner engagement is a proven pathway for increasing learner outcomes and accounts for microlearning's success (Kamel, 2018; Kapp & Defelice, 2019; Torgerson, 2021).

Volume overload, and perceptions of high volume are at the forefront of why learners find learning difficult, (and even the prospect of learning on first encountering materials overwhelming), make learning look unappealing and demotivating. Lifeload demand pressures, like: part and fulltime work, family and caring responsibilities etc. also add to the load and overall stress learners have to deal with in learning (discussed in **Chapter 1**).

A central design principle in microlearning is *'less is more'* – as a mindset to reduce cognitive load in learning and the anxiety it brings. While cognitive overload is an impediment to information comprehension, absorption and attracting interest, it also adds to the difficulty of being able to see the value and relevance of the content being covered, and this can lead to disengagement.

Microlearning seeks to address these barriers to engagement with its focus on optimising instructional design to help make learning resources and experiences more attractive and engaging for students by reducing volume in content based on relevance and practical value.

Reviewing content to reduce volume in learning materials like written modules (often called course guides or lecture or notes), along with set readings and video resources, is a good place to make a start. If you are able, to begin by reviewing course learning objectives, better still. Or, one step further, reviewing whole degree program objectives, or the objectives of a Major in a program.

But in all cases, we can use the following kind of question to guide us through our review of materials:

- *Do the learning objectives and content fit current industry and educational requirements?*

These content reduction and selection principles are also applicable when developing new courses and curriculum.

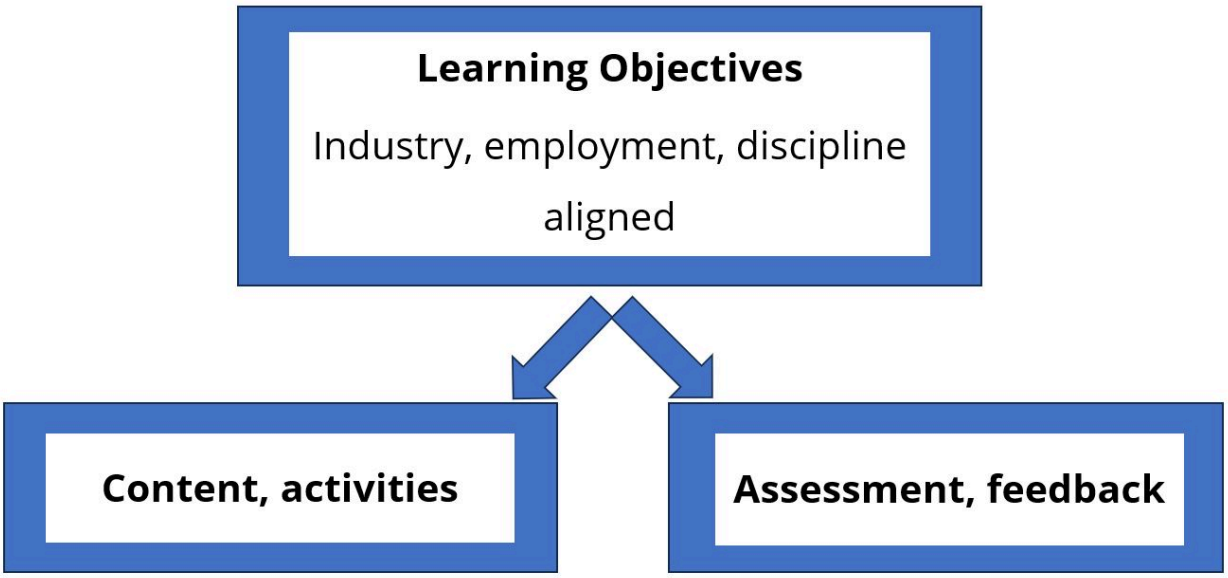
Constructive alignment

Constructive alignment is an approach to learning design that helps ensure consistency between learning

objectives, course content and assessment (Biggs & Tang, 2011). We can also draw on it as an approach to help us audit courses so that we can remove objectives that are no longer relevant and add new and up-to-date objectives where needed.

Auditing learning objectives involves ensuring continued alignment with the current needs and demands of industry (i.e., industry alignment), as well as Higher Education (HE) e.g., quality compliance.

Constructive alignment



As a starting point, we can think about constructive alignment by contrasting it with its opposites:

1. courses with imprecise, unclear or ambiguous learning objectives
2. content that is not aligned with stated learning objectives and assessment
3. content that is not industry aligned

Once learning objectives have been bedded down, do not stray, keep content within the stated course objectives. Keep in mind, our goal is to reduce unnecessary load.

Reviewing and streamlining content involves running frequent checks to make sure that the content matches the stated learning objectives. This then follows through to assessments to ensure consistency with assessments. Quality design means all components are matched and fit together. *Course learning objectives* (CLOs) should also be included in assessment instructions and in assessment marking criteria.

Relevancy or value can also be included in assessment instructions but kept brief and partitioned to avoid unnecessary overloading and diverting of attention for learners trying to interpret assessment instructions.

Having CLOs in Marking Criteria forms, also helps close the loop in constructive alignment in ensuring consistency and congruency between CLOs, course content, assessment design and instructions, and the marking criteria used to grade assessments (see Marking Criteria Rubric, below).

Course learning objectives (CLOs)	HD	A	B	Pass	Fail
CLO 1 Communication – expression, – grammar, – spelling, – writing /10%	Exceptionally high in spelling, punctuation, grammar, clarity of written expressions.	Very high standard in spelling, punctuation, grammar, and clarity of written and expression. Very high standard in spelling, punctuation, grammar, and clarity of written and expression.	Reasonable standard spelling, punctuation, grammar, expression. Some lapses and errors apparent.	Poor but passable spelling, punctuation, grammar, and expression. Recurrent errors and instances of poor, unclear expression.	Poor standard in spelling, punctuation, grammar. Frequent errors and instances of poor, unclear expression.
CLO 2 Referencing and Support /20%	Exceptionally high standard of academic support: Correct referencing Very high quality and quantity of relevant sources. Course resources very well utilised.	Very high standard of academic support: Mostly correct referencing. High quality and quantity of relevant sources Minimal errors Course resources well or reasonably well utilised.	Reasonably sound referencing support: Errors apparent Course resources could be better utilised.	Poor but sufficient /passable standard of academic support: Recurring errors Poor quality and/or quantity: sources Course resources could be better utilised.	Very poor standard of academic support: Many errors apparent Poor quality and/or quantity: sources Course resources could be much better utilised.
CLO 3,4,5 Understanding application content/ concepts & originality /30%	Demonstrates very thorough and advanced understanding and application of course content and concepts. Advanced interpretation and originality.	Demonstrates thorough and advanced understanding and application of course content and concepts. Notable degree of originality of thought.	Demonstrates reasonably sound understanding and application of course content and concepts. A degree of originality of thought.	Demonstrates somewhat poor understanding and application of course content and concepts. More engagement with course content to improve.	Does not demonstrate an adequate understanding of and application relevant course content and concepts.

CLO 6 Analysis and Strength of Argument /30%	Exceptionally high standard of synthesis and analysis of ideas & course content; and strength of reasoning and argument to support points.	Very high standard of synthesis and analysis of ideas & course content; strength of reasoning and argument to support points made.	Sound standard of synthesis and analysis of ideas & course content; reasoning and argument. More argument and analysis as opposed to descriptive work to strengthen.	Poor or often poor but sufficient standard of analysis of ideas & course content; reasoning and argument. More argument needed as opposed to descriptive work.	Poor standard or insufficient analysis of ideas & course content; and reasoning and argument. More argument needed as opposed to descriptive work.

Note, *marking rubrics* often include feedback built-in with detail on level of performance on criteria. In doing so they provide guidance on areas where further development could strengthen the quality of work.

Marking and feedback are a '*bottom-line*' matter, for educators as a measure of learning performance, and also for students.

AUDIT QUESTION: Is the design of this assessment appropriate and reliable for assessing knowledge and abilities as stated in the learning objectives and required for professional performance?

Selection and reduction: relevancy and practical value

My success in teaching has been based on relevancy and practical value, which has a natural and logical fit with microlearning. Reduce content with selection based on usefulness to students in relation to value and practicality for: employability; professional work competencies and for producing quality assessments. This helps in aligning content, optimising learner relevance and managing cognitive load. It also makes it easer to answer a student who asks, '*Why do I need to know this?*'

We can start reduction of content, module by module, and then follow through to the other learning resources, like reducing set readings and videos.

Core criteria for retaining and selecting content based on relevance and practical value:

- **Employability:** building industry-relevant proficiency: e.g. PR work performance, strengthening employability.
- **Assessment:** aiding learners to produce high quality assessments in efficient ways.

Employability

The criterion of employability divides into subcategories of **(a)** technical knowledge, including skills specific to a profession (or discipline), then **(b)** job specific transferable-based skills and knowledge, these are transferable to a degree, but also specific to a given industry or profession, and then **(c)** generic transferable skills, which are more general and applicable across professions. Employers today prioritise these competencies to the level '*essential*' in recruiting and selecting employees. This boosts their relevancy to curriculum.

The term '*graduate attributes*' is also used to refer to transferable skills and knowledge competencies that are linked to, and aligned with, employability – and used in HE institution quality assurance required by government. Graduate attributes are largely derived from studies into employability that involve input from employers and graduates working in industry (Chan et al., 2017; Suleman, 2018).

Summing up, employability areas can be divided into the follow categories.

- **Technical profession-specific**: profession-based knowledge and skills
- **Transferable job-specific**: general skills and knowledge, that are highly specific to a profession
- **Transferable generic**: general skills and knowledge that are widely applicable across industries or employment broadly and for life and career success
- **Career and employability curriculum**: inclusion of career literacy is increasing

Profession specific technical skills and knowledge

This section outlines technical and transferable skills in the public relations discipline area as an illustration of the considerations that need to be made when reviewing learning objectives and retaining and selecting content based on relevance and practical value. In the case of public relations, professional technical knowledge for public relations includes being able to create written content in ways that are specific to the profession, for example, writing in styles that are suitably journalistic, (e.g., ordering information according to its importance), and in styles that are publishable and suited to a variety of specific media (e.g., media releases, social media posts). Skills and knowledge in being able to use current platforms and applications for producing outputs are essential, including writing in Word Press and Adobe InDesign in place of Microsoft Word, and competence in using Adobe Illustrator for graphics. Competency with platforms required for disseminating outputs is also essential. So is the continuing importance of social media and keeping up to date with proficient use of social media, so much so, that this is now well embedded throughout the curriculum in public relations.

Profession based skills and knowledge also include the theoretical knowledge that employers expect graduate practitioners to hold. In the case of public relations, theoretical knowledge employers consider

essential includes Corporate Social Responsibility (CSR), and theory on Stakeholder Engagement and related practices e.g., Two-Way Symmetric Communication and Mutual Benefit decision-making principles (Eggensperger & Salvatore, 2022; Smith, 2022).

Critical 'threshold' content

Critical and threshold are high priority content areas in microlearning design, the knowledge and skill areas essential for competence in profession and discipline, and, for progressing with study in an area. Formal writing for assignments, especially, essays and long form writing, is common area of difficulty among my public relations students. So, I cover essay and long form writing as a priority area of need by presenting students with the most common pitfalls people encounter when writing essays and how to avoid these by guiding students through step-by-step planning methods to help them stay on track and write efficiently (as shown in essay learning design in **Chapter 4).**

Microlearning design can also be used in other discipline areas, for example, to address critical mathematics skills and knowledge, by breaking complex processes down into smaller steps to allow students to build their capacity and make complex processes more achievable in areas where students experience more difficulty (Alias & Razak, 2024; Chamorro-Atalaya et al., 2024; Wijaya et al., 2022).

We can determine these high priority areas in course reviews to identify, and take into account, common struggle points. We should also look out for, and include where needed, necessary and expected prerequisite knowledge. We can begin by gathering intelligence in course audits and reviews including from student feedback and our experiences in running the course.

Tackling common struggle points or deficits can then be addressed by integrating '*support-designed*' content and skill development into courses to help overcome these stumbling blocks and minimise their flow-on effects. Putting these kinds of measures in place can save lecturers and students a great deal of time and angst, which makes for a good return on investment.

Profession specific transferable skills and knowledge

Transferable skills and knowledge required for professional competency in public relations include being able to write well. Dimensions of public relations writing include: writing in informative-story form; writing clearly, concisely and precisely; writing in ways that is easy to read and understand; writing in ways that appeal to general and target audiences; and demonstrate mastery of grammar and punctuation. Then, in addition to these professional-practice based ways of writing, more formal and academic forms of writing, like essay writing, become useful because they help students build and integrate an array of skills, such as conducting research, gathering and arranging information, and applying logic for case building, which are useful for and can be applied in professional work, that is, they have high levels of transferability.

Many employers of public relations graduates, believe essay writing provides students with valuable practice and preparation in learning how to write well and to do so in extended forms that are often required, for example, case building for campaign proposals, evaluation reports, and long-form magazine style prose for feature articles (Johnston & Glenny, 2021; Macnamara, 2018; Mahoney, 2017).

Generic level transferable skills and knowledge

Transferable skills and knowledge at this more general level are given high priority in HE education program design today. Global employer surveys across all disciplines identify generic transferable skill areas as critically important (Pennington & Stanford 2019; Quacquarelli Symonds, 2019; World Economic Forum [WEF], 2018). This is also reflected in graduate job selection criteria where they are commonly classified as essential. Employers often refer to these as 'employability skills'.

Commonly include:

- problem-solving
- critical thinking and analysis
- adaptability
- interpersonal skills
- teamwork (ability to cooperate, negotiate, coordinate, lead and motivate).

My recent research with public relations employers (Kossen et al., 2025) revealed that they rate transferable skill and knowledge areas more highly than profession specific skills and knowledge. Why is this the case?

Research also shows that the majority of those employing graduates, (including employers of public relations graduates), view generic transferable skill areas as more durable i.e., longer lasting, than those in the technical or profession specific domain, due to the shorter shelf-life of profession specific skills and knowledge areas (Macnamara, 2018; Olesen et al., 2021). The lifespan of a good deal of specific professional '*know-how*' knowledge is shortening at a faster pace as the pace of change continues to accelerate. Public relations employers involved in my recent graduate employability study stressed that they themselves found keeping up to date with change a struggle (Kossen et al., 2025).

Of note, public relations employers identified *independent learning* (interchangeable terms include life-long learning, self-directed learning) at the top of their priority list in recruitment decision-making. They felt that the ability to be able to learn independently gives those entering industry the ability to adapt and keep up with change. Independent learning is a higher order transferable skill which incorporates subset transferable skill components, like critical thinking and analysis and problem-solving.

Public relations employers also viewed emotional skills, especially enthusiasm and eagerness to learn, as playing a critical role in an employee's capacity for learning, adaptability and keeping pace with change. For example:

> *They can't be expected to come in and know everything, but if they want to learn and grow then that is the most important thing of all because skills can be learned by those that have this attitude. That is why it is so important.* (Public Relations Employer)

Employers viewed these traits as ultimately more important than being across all profession specific

knowledge areas, because these can be acquired by employees who have a well instilled willingness to learn. For these reasons employers of public relations graduates (Kossen et al., n.d.) stressed that it is very important for educators today to place a great deal of focus on developing these general 'transferable' capacities as a part of the curriculum for meeting industry and employability needs.

My colleague Michael Howard (University of Southern Queensland) and I provide an overview on the nature and the role of generic level transferable skills in education in **PODCAST EPISODE 4** from '*Communicating for Success*' (audio; 6'26"; CC-BY). Public relations work, as a profession example, involves dealing with and relating to people and communities and this requires interpersonal skills that help facilitate cooperation, negotiation and managing conflicting priorities between parties tactfully. These skill areas, often called 'people skills', overlap with life skills. People draw on these to manage their lives, e.g., to manage personal relationships like friendships. They are transferable, they have high applicability for professional settings and relationships.

Career and employability learning curriculum (CEL)

Employers today expect graduates to be able to demonstrate the value of their transferable skills with evidence of their ability to apply these to work-type situations, for example, interpersonal and problem-solving skills feature strongly in position descriptions and selection criteria. However, many graduates and job seekers have great difficulty in communicating and demonstrating the value of their achievements and abilities in relation to these selection criteria within their profession (Bridgstock, 2009; OECD, 2019). Accordingly, I incorporated Career and Employability Curriculum (CEL) in recent years to further strengthen employability in public relations teaching. It is an example of microlearning content selection based on relevance and practical value.

Case study: The impact of an employability focused curriculum on a final year course

CEL has proved to be highly and particularly successful in the case of my final-year level course, Organisational Communication and Culture, which has a CEL focus on transition to employment. CEL curriculum adopted in this course was designed to assist learners in preparing themselves to maximise their employability (i.e., attractiveness to employers) with timely and effective transition into employment, and ideally, into employment for which they are well-suited. Skill and knowledge content incorporated into the course included: how to generate evidence for individual employment portfolios, undertaking occupational research and scanning, addressing selection criteria as well as professional networking and profile marketing (e.g., LinkedIn profiles). These topics and skills areas were built into course assessments to provide students

with opportunities to apply their learning on these topics in relation to their individual circumstances and benefit further from constructive feedback provided.

The course has consistently rated very highly with students since incorporating microlearning and the CEL employability initiative in 2019 and was well received by the ten employers consulted to evaluate the curriculum (see USQ 2022, Teaching Excellence Showcase Poster link/QR code below). Feedback revealed that students were very pleased with the quality of the curriculum and valued the curriculum for its opportunity to learn and apply practical skills and knowledge which prepares them for a smoother transition into employment.

> *It was really helpful having it come from the university, that they wanted to support you with that transition rather than just sort of finishing up... then it almost feels like you're being kicked out on your bum.* (Public Relations Student)

The CEL employability initiative was supported through obtaining USQ Excellence in Teaching grant funding. I have included this case example because it clearly involves microlearning and is a good demonstration of what is possible and can be achieved with microlearning. I have used it here to demonstrate and inspire, not overwhelm.

View: Teaching Excellence Showcase Poster 2022.

Assessment

Selecting content based on its usefulness to students for producing quality assignments and assessments aligned to course objectives is an obvious and effective way to approach not only reduction, but also increasing and ensuring high relevancy content for learners. Assessments are of utmost importance in learning. They are the measure we use to determine pedagogical effectiveness and learning performance. They are very much the 'bottom-line' for students and for educators. Assessments are at the centre of both, providing and assessing professional preparation for students, and hence highly relevant and practical, in developing professional work competency and future employment. This shows how microlearning design incorporates constructive alignment principles to ensure assessments meet profession competency requirements, and how the criterion of employability is used to guide content selection and reduction.

Relevance linking should also be included in the instruction section for each assessment by providing explanations that make the practical value of an assessment explicit by in relation the role it plays in developing valuable and essential skills and competencies for success in given industry or profession/s.

As mentioned earlier, we should also make these links frequently in course modules as well as in lectures, classes and presentations. A point to note here, is that while microlearning design is largely about reducing volume, by removing unnecessary redundancy, e.g., repetition – strategic or well-placed redundancy plays an important role in keeping learning focused. Relevance linking, is a prime example, linking to relevance and benefits of material being covered, frequently (yet not too frequently). We use repetition strategically

because it helps learners keep focused and engaged and we rely on our judgement to achieve optimal balance.

This video segment from '*Microlearning presentation*' 2022 (4'00"; CC-BY), discusses reducing volume in content.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=43#oembed-1

Decluttering

In combination with relevance and practical value, the idea of decluttering is a useful way to think about and approach reduction. For instance, in helping guide decisions **(a)** source some shorter reading resources and **(b)** dispense with resources that do not seem necessary or of low importance. Reviewing your course is a great opportunity for decluttering for 'spring-cleaning' refreshing.

It is worth pausing for thought here, the majority of us, as educators, have a tendency to write too much when writing modules (course notes) and so they become unnecessarily high in volume. While we're trying to pack in as much value as possible for our students, it is one of the biggest pitfalls in writing learning content, believing that 'more is more'. While the intention is good, we create overload and clutter, and this reduces value, rather than adding to it. Our own mindfulness and vigilance about this is our best defense against this common pitfall. This points also helps demonstrates the importance of adopting microlearning as a 'perspective' when developing learning materials. It is a perspective that helps us see that pruning material is usually necessary, or at least, beneficial.

Reducing and decluttering involves reviewing module content and learning resources critically and try to approach them more objectively, with fresh eyes. The questions below are focused on course readings to help demonstrate a process, the kinds of questions used here can be applied to other learning materials such as videos.

These questions can help guide thinking and focusing for decluttering set readings:

- *Is this reading necessary?*
- *Is it relevant enough? Is it critical, is it valuable enough?*

- *Would removing this reading **reduce** course quality and learning needs?*
- *Do I need to retain the whole chapter as a reading, or could I just specify which pages are relevant?*
- *Would summarising key points from a reading be effective?*
- *Is there a better reading available? – a clearer, more concise, less unnecessarily complex reading available?*

Students are much more likely to read set readings if we confine them to one or two short readings. Content curation plays an important role in our profession as educators. We are always looking out for stimulating, interesting and highly relevant resources, and the shorter the better, whether they be readings, videos or podcasts. Sourcing peer assistance or collegial opinion in searching for and deciding on course resources is worth considering, another could be to invite students to help identify resources, this can also help increase engagement.

Criteria for selecting video learning resources

- Videos that are as short as possible (micro)
- Attention-attractive (interesting)
- Relevant and value-adding (with learning objectives in mind)
- Comprehensible: clear, concise, precise, effective in conveying information (easy to understand explanations, demonstrative examples)
- Provide specific time segments that learners should view when using longer videos

Decluttering: slides

In addition to writing and presenting written modules, we should apply decluttering principles to our

lectures and slides. Reducing, so there are fewer points on any single slide and take opportunities to reduce text, dot points typically work better than sentences and paragraphs. Also aim to use fewer slides when planning a presentation, but avoid doing so at the expense overcrowding slides, it is better to spread content out. Take opportunities to replace or reduce text with graphics, graphs and tables, for example, can be powerful conveyers of information. *Infographics* can also convey ideas more effectively and can also be used to make slides crisp, clear and uncluttered.

Infographics

Graphic visual representations of information, data, or knowledge intended to present information quickly and clearly. These can improve cognition by utilizing graphics to enhance the human visual system's ability to see patterns and trends.

Simple icons (below): **Heart** (icon) **Hand** (caring) **Clock** (time management) **Cognitive load**

Infographics and graphics can bring many benefits, e.g., attract attention and add appeal, if we avoid too many on one slide, otherwise they too become clutter. Graphics can be also used to help break up text, and large blocks of text. But when overused they become distracting and add to load rather than ease it.

While not wanting to undermine the power of graphics, they are not always necessary, for example, I often present with dot points only. However, formatting for visual appeal and for ease of readability, like, choice of slide styles and backgrounds, choice of type-fonts and line spacing are all important. Managing these kinds of elements efficiently is often best achieved by keeping things plain and simple. Dot points on a white background can work well. Simple variance, like changes to backgrounds, can keep presentations fresh, for little effort.

Litmus test questions to ask ourselves when we design slides and arrange content include:

- '*Are they easy to read and understand?*'
- '*Are they attractive or unattractive?*'
- '*Are they cluttered?*'

Chapter 3 and 4 examine use of graphics as a part of multimedia design in more detail, from those that decorative to those that are more directly illustrative, such as graphs. These can all be useful, and they can all be overused. Hence, the self-check questions remain useful when trying to assess whether your graphics are adding or subtracting from ease of understanding and the learning experience.

Accessibility

- Logical heading structures – use headings and subheadings sequentially
- White space – don't overcrowd content
- Alt-text for images (the description of an image)
- Clear colour contrast
- Closed captions and transcriptions for multimedia

Increasing accessibility by adopting accessibility features/or protocols can be kept in mind and added further down the microlearning design path.

Accessibility: universal design for learning (UDL)

Students expectations of design are increasing, expectations that courses follow good design logic, that they use frameworks such as universal design for learning (UDL), so that they are provided with a consistent and well-structured learning journey. Center for Applied Special Technology (CAST) has identified a series of principles to guide design, development, and delivery in practice:

- Multiple means of engagement
- Multiple means of representation
- Multiple means of action and expression

Universal Design for Learning (UDL) Examples

Multiple means of engagement

- Explicitly state learning goals and easy to relate to examples
- Give opportunities to celebrate
- Provide opportunities for discussion and reflection

Multiple means of representation

- Provide content in multiple ways: such as text, audio cast, video, e.g. short lecturer '*overview*' videos, audio casts and diagrams, in addition to written text

Multiple means of action and expression

- Provide access to resources to deepen learning
- Interactive learning activity: all presentations and classes
- Include a variety of communication options
- Provide opportunities to review content or practice skills

Accessibility with modular design

Modular design is already a common practice convention in education where content for courses is segmented into units of learning called modules. Written content and instruction are organised by topics, similar in approach to chapter formatting in books. Modules contain key content and guide learners through sequenced learning resources including a<>ctivities. They are sometimes referred to as lecture notes. The importance of keeping content volume manageable, which is the topic of this chapter, cannot be overstated. It is something we need to keep working at. Volume '*blow out*' is an ever-looming risk. It pays to keep *more is less* in mind, always.

Based on my observations, it has been common to segment courses into about five modules where students study individual modules over two or three weeks. Segmenting modules into week-by-week units of learning is better. It provides greater clarity and consistency in contain units of learning and volume.

Keeping modules as short as possible, a two-to-five-page range is best where practical. Remember, the

goal in microlearning design is to increase engagement by increasing appeal. To increase the likelihood of students reading modules and materials with the appeal of conciseness and ease of reading load.

Conclusion

Volume overload, and perceptions of high volume (volume shock) are at the forefront of reasons why learners find learning, and the prospect of learning, overwhelming, and as a result unappealing.

Microlearning content reduction seeks to address cognitive overload and the stress it brings by reducing volume to make study more manageable, appealing and relevant.

Reducing volume involves retaining content based on relevance and practical value for (1) work and employability and (2) successful completion of assessments to support and increase success in study – as ways to keep learners interested and motivated in their learning. Further reducing volume involves decluttering by removing overly long or complex explanations. Clear and direct '*to-the-point*' communication of information plays an important role in reducing cognitive load.

Packaging content in smaller, more manageable chunks, makes learning less demanding and as a result more accessible, and helps alleviate the pressures of the high-volume information world and competing lifeload demands facing many learners today.

Key points

Reduce volume: select/retain content on relevance and practical value, based on:

- equipping students to meet industry needs (industry alignment)
- equipping students for success in assessments

Drawing on **constructive alignment** to ensure alignment with clear and well-focused learning objectives, that are consistent with the design of course content, practice learning activities and assessments.

Relevance linking frequent highlighting of benefits of content and skills being developed. This is an important strategy for attracting student engagement and learning effectiveness.

Decluttering: to further reduce cognitive load and increase engagement

- Streamlining of content with modular design – by segmenting content into manageable modules
- Review and aim for ease of readability and understanding with direct, clear, concise

and focused materials

- Simplify explanations and remove unnecessary words
- Review and aim for optimum balance with text and visuals, including presentation-slides

Reducing and refining content and ensuring alignment and relevance and practical value, enhances information assimilation, it provides both educators and learners with a route to enhanced educational experiences.

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3.

PRODUCING MICROLEARNING DELIVERY

Introduction

Microlearning is about designing learning content and delivery in ways that optimise cognitive load. Chapter 2 focused on reducing overall volume of content. This chapter tackles cognitive load barriers with emphasis on attentional resources, especially working memory, i.e., processing capacity, with a focus on bite sizing time-lengths, or durations of learning sessions to try and optimise these. The focus on cognitive load reduction here turns to ways we can produce and segment learning sessions and recordings of these, e.g., lectures and classes, into easy to digest instalments.

Microlearning draws on multimedia design principles to produce 'short form' learning materials that are compact and interconnected to improve learning by allowing learners to process information more effectively in small step-by-step units (Alias & Razak 2024; Mayer, 2019; Tufan, 2021). Bite-sizing delivery into instalments is used to reduce cogitative load in the learning process (Gobet, 2005; Kamel, 2018; Sweller, 2010), especially helpful for those studying online. Our aim is to make online learning resources, like recorded lectures, seem less overwhelming and more manageable, and as a result more attractive and engaging.

Pedagogical and mechanical processes for producing recordings

Media Production

- *Producing content presentation and learning sessions suitable for recordings*

  (recordings which go on to serve as learning resources)

Variety in media

- *Video recorded learning sessions, voiceover slides auto-play format, still slides*
- *Demonstration styled videos, animation videos, podcasts*
- *Include graphic and visual elements*

Skills and Equipment

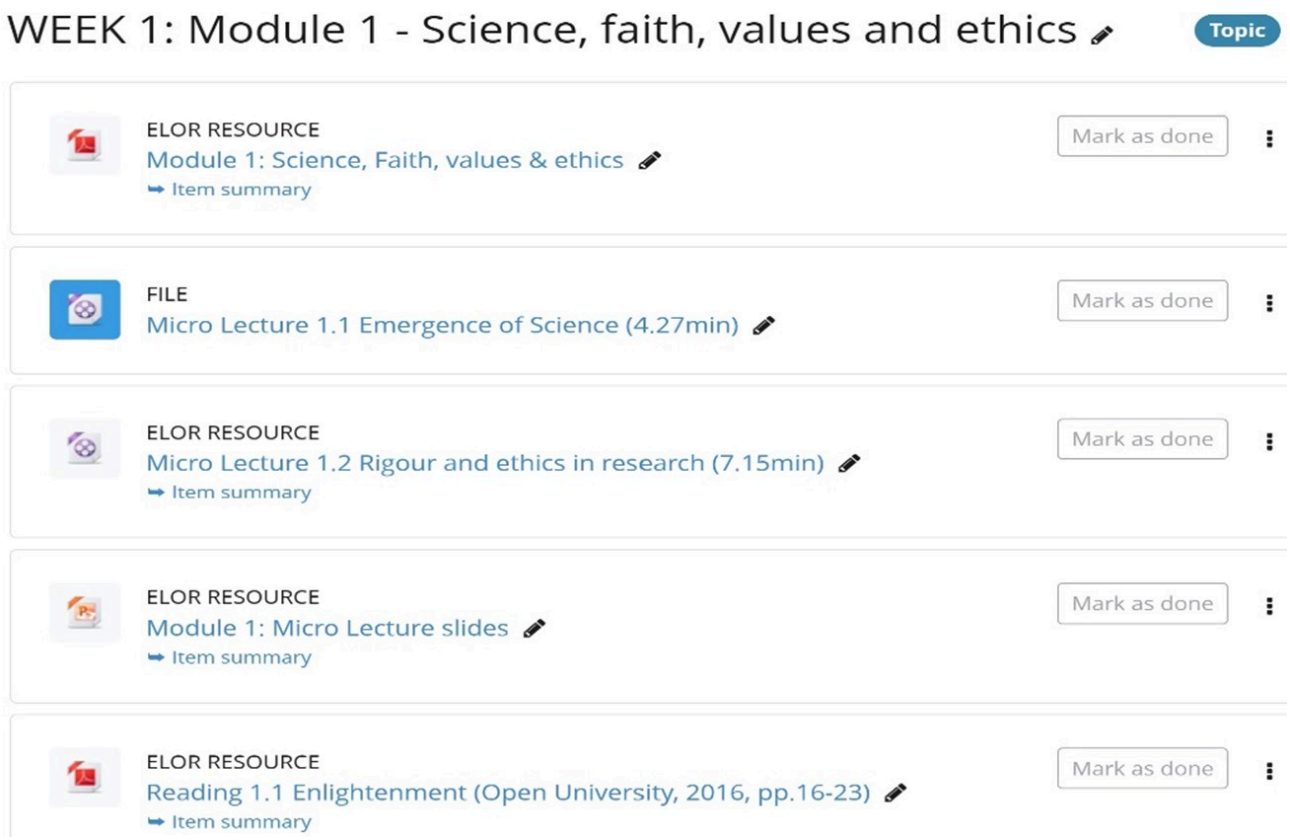
- *Production skills required for recording and editing are easily attainable*
- *Equipment needed is readily accessible*

I think you will find the journey to becoming a media producer of your own teaching and delivery, rewarding and enjoying, once you get going.

Micro delivery

In designing course home pages, make ease of access to learning materials noticeable from the moment learners enter, and that they can view and listen to recorded presentations and learning resources in short bite-sized segments. Presenting learning resources in an attractive and accessible way enhances the appeal of the learning from the very beginning. It is a strategy that helps address the challenge of students feeling overwhelmed by lengthy content. It provides a more inviting and appealing learning environment.

When they arrive at the course homepage learners should be able to immediately see an orderly sequencing of learning activities e.g., *Lecture 1: Part 1* with topic and time length in title. They can switch onto the recordings at any time of day or night when they have some spare time, whether they're waiting for a bus, doing some exercise, or have just put their kids to bed. It allows learners to individually plan and manage their time in ways that suit their circumstances.



An example of microlearning design in the learning management system (LMS), in this case, Moodle.

Having audiovisual at the centerpiece of delivery by providing easy to access audiovisual learning resources is an important step in making content appear more appealing accessible and equitable to students.

In the case of micro-lectures or content presentations, they are primarily informational as the purpose is to communicate key content knowledge such as concepts, principles, and theories. We can illustrate concepts and principles by including examples and case studies that demonstrate applicability and stimulate student interest. Another important strategy is use of clear, to-the-point communication. Guided by 'less is more', means we should always be striving to convey points and information as concisely and directly as possible to minimise unnecessary and avoidable cognitive load. These are points worth keeping in mind as we now move to steps involved in producing audiovisual based learning delivery.

Learning delivery typically commences with a lecture style presentation of a unit of content that is recorded and segmented into instalments of two to three bite-sized learning resources that are between 5 to 15 minutes in length. If a topic requires a longer time frame and presentation can be kept interesting, e.g. inherent nature of topic, delivery dynamics) that is justifiable. However, the key point with microlearning still holds, delivery should more often be in the form of short bite-sized instalments. This is key feature that marks microlearning as a distinct shift away from the traditional one hour long-form lectures. Bite-sizing is the way to make online lectures and recordings more attractive and convenient, noting that on campus students today also expect access to online recordings.

Because microlearning is learner centred and thus focused on increasing student engagement in the process of their own learning, it is important that we build in opportunities for learners to engage and participate with appealing and purposeful activities. Learning activities are an essential component in

online learning, presentation-based delivery of information, and interactive classes, such as tutorials, workshops, and labs. (Activities and exercises covered in detail **Chapter 4**)

Pre-recording content delivery: lectures, presentations

A common method, for producing lectures and presentations is to record voice-overs to accompany slide presentations. Voice recordings can take place in a work office or at home and the process is relatively simple, you're probably doing recordings like this already. I continue to use voiceover slides as a main-stay method because it gives high level control over content including wording and time-lengths for the learning resource being produced. Once voice-overs are recorded, that can be embedded into slides, and then converted from *slide-show* to *video-play* format.

However, there can be drawbacks with the recording voice-over for slides option. It can be time consuming, especially for those who encounter difficulty in adjusting to the seemingly void and unfamiliar world of voice recording. Then, a common challenge people encounter is being able to deliver an '*easy to listen to*' style of voice. This is mainly due to the absence of an audience whose facial and body language features give instant feedback. I was caught by surprise myself with this, like many others, I found it difficult to break out of a '*robotic*' voice. A listenable voice is one that includes fluctuating intonations, stress on certain words and pacing that creates a rhythm that adds to ease of listening.

Do not become too surprised or disheartened if you encounter hurdles when starting with voice recording. There are ways to manage it. Vocal aesthetics are important for attracting and sustaining interest. Experimentation, with trial and error, is a good way to fast track your search for a natural, relaxed tone the one that feels authentic to you. You will know when you find it by listening to playbacks. It is important listen to recordings one minute in, to see if you are satisfied with the way you are sounding and as a check for any technical glitches e.g. making sure the microphone is correctly. This is a valuable time saving tip, to avoids frustrations of having to delete and re-record sizable recordings.

My early experience with recording

My focus on presentation and delivery was on information content with precision and direct and easy to understand explanations. And also, including supporting high relevance examples. These hallmarks of microlearning design ticked a lot of boxes in what makes for high quality teaching practice. However, after a while I realised that by focusing overly on information quality, I was falling short. The missing ingredient was vocal dynamics to achieve an easy-to-listen to voice. I wish I would have gotten onto this earlier because it makes a big difference. I was also puzzled about the difficulty I was having transferring my public speaking ability to recordings.

You can choose and experiment from tips listed that follow, to find out what works well for you, and try any others you may think of. Tips and approaches include, but are not limited to, limbering up before recording or *psyching up* or imagining a class or audience. Another approach, to consider is inviting a co-presenter to make contributions or delivering and recording presentations live as it can facilitate enhancement of your own vocal dynamics and overall dynamics with an additional voice.

Voice recording tips

- Sound check recordings one minute in to identify and address any audio issues quickly.
- Voice experimentation use trial and error recording and listening to playbacks.
- Consider standing, moving, and gesturing during recordings, or even walking while speaking. There is a variety of mobile device options available to help with this.
- Try reading from written scripts, it can make it easier to focus on voice delivery for some. Also, teleprompter (free software), but it can take a while to get used to.
- Try recording using video conferencing applications to record with your image displayed. I have found visual cues helpful for overcoming monotonous delivery.
- Collaborative recording: Invite someone to join in and help you with some vocal contributions via video conferencing platform. Voice file recordings can then be used for slide presentation. You also have the option of providing them with some questions they can ask to prompt responses you can provide.
- Invite guest speaker, or co-presenter to co-present with you. You can include slides and record on video conferencing platform. In this case, it is a good idea to record with cameras turned on so students can see presenters while watching the slides.

The co-presenting option can work very well and segues into the topic that follows '*Variation and novelty: presentation styles and formats'* for adding value to delivery and thereby the overall learning experience.

However, there are some aspects of recordings that do not need to be pristine when considering audio quality. Background sounds, unless loud or disruptive, or particularly irritating, tend not to impact on lease of listening, so mild car and traffic sounds and bird calls are usually fine. The key litmus test question for audio quality is to ask: '*Is it easy to listen to?'* But if audio quality is poor to the point where it is not easy to hear or listen to, you may need to re-record. A second option could be using audio enhancement features in recording software. That aside, a natural and relaxed sounding voice usually works well, this is because it tends to produce a warm conversational tone, which students prefer because they find it '*relatable*' and personal (Kossen & Ooi, 2021).

Vocalised fillers like *ums and aahs* are fine as they can add to the conversational style learners find more relatable, so I leave some of these in. But if they are too frequent, they become distracting and detract from ease of listening, in which case they should be edited out. Auto removal functions for removing unwanted sounds like *umms* and *aarrhs* are becoming standard in editing software, making their removal easy. It is worth noting that people generally overlook the power they hold to leverage their own individual voice qualities and natural aspects of the way they speak as a means for increasing ease of listening and thereby relatability. However, good presenters tend to be more aware of this.

Variation and novelty: presentation styles and formats

Vocal tone and style

Providing learners with variety and variation in vocal tone and style can play a key role in attracting and maintaining interest, because it helps breakdown monotony in voice presentations by adding vibrancy through vocal dynamics. I have also found varying style between formal and informal is one good way to increase impact through variety. I draw on or include a more formal style for lecture presentations, while sticking to a more informal, conversational style, for short weekly introduction videos. I recommend using a conversational style most often because it is an effective way of making information seem more welcoming and relatable, and it helps create the feeling of lecturers talking directly to learners. It provides an inclusive tone and sense of a more personal experience, one which helps break down the barriers of psychological distance between learner and teacher. Nonetheless, keeping some variation between styles, remains effective in creating impact and interest, largely because it provides learners variety.

Voice contributions for slides

Additional perspective and interest to a slide presentation and can be achieved with voice-overs for as little as one or two slides. Interspersing guest voice contributions not only adds vitality, but further increases relatability as well, is a way to add variety and interest to slide presentation is to invite a guest to independently voice record some slides or sections. Asking a colleague or guest for vocal contributions

can improve ease of listening by breaking some of the monotony of having only one voice. This is not something that you need to do for every class. Over time, you can add voice contributions from others in years that follow. Including student voices is another option to consider and can also be used to create opportunities for increasing student engagement, but a consent or '*permission to use*' form is advisable.

Options for organising and facilitating voice contributions include:

- providing colleague with word-for-word scripting, or
- bullet points to indicate what you would like covered in slides chosen, or
- provide interview style questions ahead of time, or
- leave the wording of contributions to the discretion of your guest.

Providing colleagues with a script they can work for voicing slides can be an efficient and effective way to achieve specific and desired impact when aiming for precision with tightly focused messaging, while at the same time helping to keep demands on colleagues to a minimum. Producing scripts for voicing is a '*high control*' approach that can work well when precision, clarity, brevity and impact are being sought. The trade-off is it limits perspectives and ideas a colleague may be able to bring. However, there is room for flexibility, you may opt for a combination of word-for-word scripting and guest input, and the added option of negotiating input. But in any case, providing guidance helps ensure best results.

The following lecture-type presentations lean more toward formal voice styles and tones because the aim was to provide a sense of formality. Notice how the guest voice qualities are suited for formal and semi-formal/conversational styles.

The following examples demonstrate approaches ranging from formal to conversational presentation styles.

Example 1: taken from '*PRL2012 Microlecture 2-1: The positivist paradigm*' shows a formal, scripted style (video: 1'01"; CC-BY).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=23#oembed-1

Example 2: taken from '*PRL3004 Microlecture 2-1: The Hawthorne Studies*' combines formal and conversational styles (video; 1'02"; CC-BY).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=23#oembed-2

Example 3: shows a semi-formal, conversational style, '*PR Persuasion Tactics*' (video, 0'25", CC-BY).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=23#oembed-3

Activity: Your evaluation of the voiced recordings

In this activity, we are focusing on presentation qualities in voice delivery rather than actual content. Reviewing the sample recordings provided above

1. *Consider what you feel are strengths and weaknesses of each recording. What elements are appealing, and what does not appeal?*
2. *Do any of the approaches to voice delivery align the methods you use?*
3. *Generate ideas inspired by the samples for future voice delivery strategies.*
4. *Create a list of approaches you would like to trial and incorporate in your own recordings in the future.*

Co-presenting voice recordings for slide presentations

Inviting a guest or colleague to join in and co-present in recording a slide presentation is another way to add variation and vibrancy to lectures and presentations. It goes a step further than having voice-over contributions for slides. Content delivery with a co-presenter can be transformative in helping make presentations '*come to life*' with even greater synergies of energy and increased perspective. Co-presenting is a commonly used format, we see it used in broadcast news, especially television, with the use of two news anchor presenters to add vibrancy and breakdown monotony. It is an approach based on variation and novelty as a way to maintain interest.

This video is an example of co-presenting for micro-lecture, 'Facilitating group processes for participation at meetings and workshops' (video; 0'43"; CC-BY).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=23#oembed-4

Co-presenting is a valuable tool in the microlearning toolkit and so I use it frequently. That said, having variety across a course still works best, that is, having a mix of my voice only presentations, along with some with guest voice contributions.

Recording live content: lectures, presentations

Recording presentations during live delivery is another good option, if circumstances allow, as many lectures are recorded live either on campus or online, or a simultaneous combination of both where a presentation is being delivered live on campus in a room, with access also open to online learners. This kind of combined learning type context is quite common today, especially for institutions that have large cohorts online and on campus.

Live delivery recording helps overcome hurdles commonly encountered with voice-over recording for slide presentations as we've discussed. This leaves us with the task of segmenting the recorded content into bite-sized instalments, which will be covered shortly.

Advice on inviting guest contributors and co-presenters

My advice here is to keep microlearning principles in mind, strive to keep tasks easy, keep time and effort demands as small as possible, and sell these positives to people when approaching them for contributions. While one can provide co-presenters with fully scripted content, it can be easier to provide key points, or a basic lesson plan or lesson slides.

When asking for co-presenter contributions, be clear about what it is that you're wanting and that you

make the task easy for them. For example, for an in-class guest or co-presenting contribution (whether on campus or online) you can explain that you are the one who is responsible for taking the lead and managing the class. Asking for a twenty minute or even shorter appearance is another option.

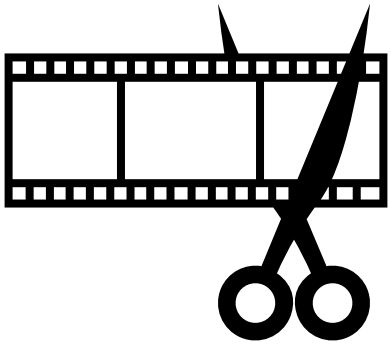
Finally, we can use payback principles which is offering '*help in return*' when we approach others for contributions. Bonus benefits here, potentially, include spreading microlearning practices among colleagues and beyond as well as greater collaboration and integration of cross disciplinary and interdisciplinary curriculum.

This video 'Microlearning Presentation: Engagement: Variety and Novelty – 'Co-presenting', (video: 1'05"; CC-BY) from 2022 presentation, covers points for keeping in mind when co-presenting.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=23#oembed-5

Editing

Editing is not all that difficult and can be mastered quite quickly, with easy to use editing software readily available. Tips for fast tracking getting started with editing, sourcing, and learning software, include seeking help and guidance from colleagues who are already using editing programs, you can also make a start with some online searches. You will need software for (1) audio editing (voice recordings for slides) and for (2) video editing.



Videos can be recorded to screen by the camera built into your computer or can record on phone. I prefer the computer screen camera for videos which feature me presenting to camera (i.e., '*talking head*'). If I am presenting with slides, I use '*share screen*' so that I can include my physical presence. However, I avoid slides in '*welcome to course*' and minimise using them in '*introduction to week*' recordings to foreground my presence because this personalises the course experience for students. (covered in **Chapter 5**)

Video Production and Editing Software

1. Panopto is a very easy to use platform for editing videos of recorded lectures and classes. You can import videos e.g., recorded on zoom, you can also record presentations directly to Panopto with computer screen capture (webcam and microphone). I recommend Panopto because it makes video editing very easy, it also makes managing and sharing videos to select audiences simple and easy. For example, you can also reuse videos or sections of video in multiple courses and semesters. A free version can be downloaded if your organisation is not using it. To preserve original copies and create separate segmented videos, use '*Create Full Copy'* under '*Manage'* in Edit icon. For dividing recordings into three, duplicate three times and apply section names.

2. YouCut (free version available) is a user-friendly video editing app primarily for mobile devices. It provides a range of editing features such as cutting, merging, adding music, filters, and text to videos. YouCut is popular for its simplicity and accessibility, making it a convenient choice for quick editing tasks on the go, especially on smartphones and tablets. It can be used to create videos that are easily accessible on students' devices and an efficient way to produce and edit video recordings using readily available resources, over highly professional production standards (Ooi, Kossen & Jamal, 2022).

3. Animaker is a user-friendly animated video creation platform that empowers users to produce animated videos without animation experience and skills. It includes a variety of templates, characters, backgrounds, and music options. Animaker can be used to create visually appealing animations for a wide range of purposes including educational content, marketing videos, and social media posts. It is popular for its intuitive interface and versatility in making animated content accessible to creators with very little or no experience. (A free version can be downloaded)

Video lengths and where to make cuts

Enhancing microlearning video production involves a focus on editing recordings to tailor content delivery into digestible segments that promote engagement and interactivity. A practical initial step is to divide recordings into manageable parts, deciding where these breaks should occur. This process allows one to get a quick start, subsequent refinement can then proceed in later iterations with more detailed editing. Determining ideal lengths for segments and how many segments, involves judgment based on

1. your knowledge and expertise on content
2. distinct subtopics covered within
3. break points, to break-down / scaffold complexity
4. your awareness of student struggle points.

Having microlearning principles in mind, to reduce cognitive overload and optimise learning and

information absorption, also help to guide us. Remember, cognitive overload is a major barrier to learning because people's capacity for learning is constrained by volume, complexity, and attention span over time durations. Microlearning design can help us reduce or limit the rates at which we exceed the cognitive limitations of our learners (Clark & Mayer, 2016).

Complex content often requires increasing scaffolding, for example, breaking down content into smaller bursts (i.e., shorter instalments) and more detailed planning of sequencing content. Increasing the number of video instalments here is a solution, rather than a problem. Increasing scaffolding is an effective and often-used measure, such as, providing learners with more time and processing space to grasp their understanding of critical concepts and content. Keeping all video segments short is generally best, because makes them more attractive and reduces cognitive load.

> Having information and learning instruction, in person-like presented forms, available for students as video recordings, as resources for learning, is a big advantage for students. It is one that students themselves greatly appreciate, recordings have generated a great deal of positive feedback in the form of ratings and comments in courses where they have been trialled and used (e.g., Kossen & Ooi, 2021).
>
> Common among these are comments are benefits derived from being able to re-watch sections in recordings that deal with concepts and ideas they find difficult to understand. Feedback has shown that students benefit from being able to rewind, or track back and re-watch, sections they find more difficult to grasp. (Points similar, have also been made in relation to recorded classes).

Editing plays another important role in microlearning design delivery. We can use reduction editing to reduce the volume and the length of our recorded lectures and presentations. We can also apply it to live recordings, as well as pre-recorded slide presentations to reduce excess volume e.g., where explanations are unnecessarily long or repetition is unnecessary and not helpful. Undertaking this kind of editing work becomes easy quite quickly, e.g., identifying the best places to make cuts. Microlearning principles of clear and to the point communication come into play as we have the opportunity to edit out unnecessary or distracting content. An obvious target is editing out presenters talking themselves through the technicalities of getting share-screen up and running.

We use our own judgement to decide which sections of a recording may not be 'on-point' enough or sufficiently valuable or interesting to escape the 'cutting room floor'. These are professional judgements you make based on your assessment of the value sections of the recording have for learners who come to view it.

A feature of class teaching (tutorials or workshops) is focus on student participation and interaction. Hence, we design activities to encourage responses and interaction that occur in real time i.e., synchronously (covered in **Chapter 4**). Some of the conversations that occur during these activities can help build rapport and reflection valuable for those participating at the time the class is being held. However, some of these conversations and interactions are unnecessarily long for the online learner audience.

But also, keep balance in mind in terms of capturing and preserving natural flow and authenticity in interactive learning processes, don't let obsession with reduction lead to over-cutting to the point where it detracts a recording's value as a learning resource.

A great deal of class or tutorial type teaching takes place online using video-conferencing platforms, this is certainly the case for me. I push record to begin and then have a recording of the class afterwards. I then edit the recording to volume and divide it into segments. But make sure you keep a copy of the original recording in full, a backup in case of a technical glitch e.g., accidental deletion, file corruption. Finally, remember to include time-lengths for segments as well as titles that indicate segment content.

Elements of segmenting in structuring content and delivery

- Segmenting delivery is not achieved by editing alone. We segment, both lecture type presentations and interactive type tutorials and workshops, when we're in the process of designing and structuring lessons or learning sessions. It is, therefore, a part of the chunking process and it makes decisions about where to cut-edit for splitting into microlearning instalments easier, especially for live recordings, like live class recordings.
- Structure for delivery or lesson content for any given week typically involves several topics, also keep in mind each topic should include at least one activity in learning sessions, this includes lectures. Principally, we cut by topics, while also taking volume, complexity and time length into account. In practice, a ten-minute learning segment may consist of two or three subtopics, ideally, logically grouped e.g., are closely related.
- A feature of class teaching (tutorials or workshops) is the focus is on student participation and interaction. Accordingly, we strategically design activities designed to encourage responses and interaction that occur in real time i.e., synchronously.

Tips for video files and edit-cutting

- Remember, check to ensure '*recording*' is in progress
- Setting up in classroom or online: e.g. finding '*share screen*', asking can people see and

hear you.

- Responses and conversations that were enjoyable and maybe even useful '*during class*', but off track or less interesting or overly lengthy in the context of an optimally timed online resource.
- Likewise the end of the class when you're making announcements, these will not be reusable (not evergreen) and be announced in a message or forum.
- Keep a copy of the original recording in full. Backing up in case of a technical or some other glitch.

Evaluating your delivery when reviewing recordings

One of the great benefits of editing is that it forces you to watch your recordings and engage in reflective practice. It is a great opportunity to review and critically evaluate your own teaching and improve it. I've been able refine my teaching practices closer to the microlearning principle of '*less is more*' by keeping explanations shorter, clearer and more direct, after noticing that some of my explanations were longer than needed.

This video '*Microlearning Presentation: Recording and editing*' (video, 2'21"; CC-BY), covers editing recordings.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=23#oembed-6

Variety and novelty in media Delivery

Approaches to microlearning design centre around making learning more engaging and applies to making learning resources more attractive and interesting. Providing variety in media delivery helps to achieve this by making it more dynamic as borne out in student feedback: '*it makes study less boring'* is a common sentiment in evaluations for my courses.

Students report many advantages with having access to recorded classes, including the flexibility and

convenience that mobile access offers. Many said they use ***video*** recordings as a way to listen to the content when driving, travelling or walking and that it helped reinforces learning.

Students also appreciate the ability to listen to recordings while engaged in activities like household chores, which reinforces learning content. Microlearning enables multitasking opportunities like learning on the go, aiding productivity with daily tasks. The freedom to move physically during learning sessions is also valued as way to break up the sedentary (stationary) nature of study. Some students report that they use the mobility opportunities of listening to move around and exercise as a way to help refresh their concentration and prolong alertness. Students also responded favourably to audio-based delivery (e.g., podcasts, to be covered shortly).

The fluidity in learning modalities benefits all learners but especially those with neurological conditions and attention challenges e.g. ADHD. Multi-sensory content can facilitate ease of absorption as well as deeper learning allowing learners to develop connections with spoken words, text and images (Clark & Mayer, 2016).

Slide presentations (video playable, some standard format)

Again, having recorded playable media as a centrepiece of the learning experience plays an important part in making learning more attractive and convenient. Converting voices slide presentations into video-play format is a microlearning staple for presentation of content. One way to add variety in media format is to provide some slide presentations as voiced slides, that is, without converting them to media play format. It provides students with a variation in experience, where they step through slides one by one, I include voice-overs most times, but occasionally provide slides only, because it is another simple way to add variety into the learning experience.

However, it is better to use media play files most often because they provide more conveniences, including the option of listening without vision (like a podcast). Feedback shows that students appreciate the conveniences of being able to listen to media files while driving, carrying out chores and other tasks.

Audiocast/podcast presentations

Another way to add variation and vibrancy it can bring is to include voice only recordings, now we're getting into the area of **podcast-type** form. I have found two-minute audiocasts can work well to conclude a module with a summary of key points as '*takeaways*' for the week. It can be be a good way to reinforce critical points.

In providing variety in learning resources, I also source podcasts, including episodes from my own podcast ***Communicating for Success*** at chriskossen.com.me which accompanies a higher education study skills textbook, I coauthor. These micro-sized (5 to 15 minute) podcasts are aimed at making communication concepts and how to apply them and make them accessible e.g., by relating them to everyday and real-to-life type situations. They are based on microlearning principles of a warm and relatable conversational style with a variety of guests and a high relevance focus, that is on how to apply and benefit

from the ideas and concepts being covered. That people associate podcasts as a medium for relaxation is also a point of attraction that makes them valuable as a learning resources pool.

In addition to the benefits and conveniences with portability of audio learning already identified with students using ***video*** recordings to listen to, e.g., movement, multitasking and allowing a break on the eyes. Audio media takes a load off the needed for visual processing and reduce stress. Audio format also helps engage the brain other ways, it allows learners to construct and visualise as a part of the information absorption process which can improve comprehension and retention and build stronger mental connections (Bernabe & Orero, 2020). An informative audio or podcast format is often more convenient and inviting to re-listen to.

While well selected visual display can greatly reduce cognitive load, it also adds sensory load and as such can add to mental load as a drag on the senses. As an alternative, audio delivery has potential to better engage attention and penetrate more deeply. This level of increased focus, '*cut through*', can come with the one sensory mode audio brings.

Consider, that there is less need for visual accompanied presentation when reliance on visuals for understanding a topic in cases where visuals do not contribute significantly to understanding or help reduce cognitive load.

Lecturer video presentations

These are short video presentations that feature the lecturer, some can feature a course tutor or instructor. They not only provide variety in media and presentation style, they personalise and humanise the learning experience for students. In addition to a short '*welcome to course*' video, I produce short '*introduction to module*' videos for each week and '*assessment how to videos*' for each assessment. (Covered in **Chapter 5**, on student supports)

Demonstration videos

Animation videos are often designed and used for demonstrating, but demonstrative videos are not confined to animation. Demonstration videos are useful because they can be used to show students how a process works. In public relations for example, demonstrating the process of composing a purposeful Tweet for an employer organisation. Demonstration videos are popular in teaching areas like mathematics, for example, solving an equation using a step-by-step method to demonstrate the application of principles and procedures for example solving problems (i.e. worked-examples).

Animation and Artificial Intelligence generated videos

Animation videos, up to 3 minutes recommended, can be produced and then edited to condense. These short micro size videos have been popularised as a medium in social media communities, they allow users to share their experiences and ideas and life hacks, inspiring their use in education as a highly appealing way to attract views.

Animaker is an easy-to-use software that includes functions for: text, graphics, video animation and audio that can be included into '*scenes*' to convey content in novel and appealing ways to help increase engagement, aid comprehension and improving memory retention.

AppyPie AI Animation Generator allows you to create animations at a high quality by typing text descriptions into the AppyPie AI Animation Generator and then transferring the animated frames generated into to the animation maker. Then there re are options to add music, sound effects and voiceovers. The AI function can also transform static images into animations. Software, like Animaker and AppyPie, are available in free version form, with options of upgrading to low-fee versions with increased functionality.

The '*bells and whistles*' of animation and animation videos are an option, not a requirement, so there is no need to burden yourself. But having said this, AI continues to make the once complex task of producing animation much easier.

Animation can be incorporated with increasing ease into slides (e.g., PowerPoint). Animation has the potential to significantly, and even powerfully, increase engagement-appeal, information absorption and ease of learning. But keep in mind, we want to avoid spending too much time on time-consuming work for too little return. Nonetheless, AI driven automation and animation technologies will continue to transform the way education is designed and delivered at an increasing pace.

Video-play slide presentations	which can be listened, in a similar way to podcast
Static slide presentation	students step through manually (voiced, or unvoiced)
Audiocast presentations	in style of podcasts, can also include sourced podcasts
Short lecturer videos (support, promote interest)	e.g., weekly welcome for each module e.g., 'how to' guides for assessments
Demonstration videos	e.g., demo how to solve a maths problem e.g., demo how to write a media release, tweet, or post
Animation & AI videos	e.g., a character in place of instructor or yourself e.g., demo a process, method, (to aid understanding)

Graphics and imagery in multimedia design

Multimedia is a key feature in microlearning design, (therefore incorporated throughout) is based on the idea that the demands of learning can be eased when it is broken into digestible chunks, and also combined with variety in media and use of imagery to reduce reliance on dense text to boost absorption

(Clark & Mayer, 2016). Multimedia design offers benefits of multi-sensory learning, but the focus in this section is on images or graphics. Images can ease and enhance information absorption if selected well. If they are poorly selected, for example, overused, the effect is reversed, they detract absorption and add unnecessary mental load. This is a good example of less is more.

Types of graphics, each can be useful

Cosmetic: can be used increase appeal or attract attention (e.g., eye catching) and can help make content appear more attractive, and at a subtle level cosmetic can include style of background in used in slides.

Representation: visual representation to show shape of an object e.g., components of anatomy components or visualise a process e.g., a diagram that tries to show how combustion engines work.

Connection: diagrams to show connections e.g., flow chart, map/mapping topics for a lesson

Relational: to visually convey information and relationships, especially useful for conveying quantitative information with graphs e.g. using line graphs to represent income over the year, or pie graphs to show areas of expenditure by proportions. Graphs can be used represent groups of numbers in ways that make that information tangible and easily understood.

Using graphics and images

Cosmetic graphics can be used to good effect when used sparingly, but harnessing the signifying power of the more functional graphics deserve greater attention, representation in visual form can be an effective way to make phenomena **tangible**. A word of caution here, be careful not to fall into the mindset that graphics need to be included on every slide.

Images can also be used to attract attention, and in doing so can ease cognitive load, by providing impressions that are more memorable then written text and easier to recall. Public Relations and marketing, for example, use images to boost chances that information they distribute will not be discarded, e.g., in media releases, social media posts. That companies and organisations commonly use logos to visually represent themselves, bears out the power of imagery.

Congruency: Ensure consistency between material being displayed both text and graphics and narration often called congruence). Spoken explanations should match what is being displayed and the number of words displayed on a slide should be kept as short as possible, point form mostly, sentences can be

used when needed and an occasional paragraph can work well. While it is important to avoid overly or unnecessarily long explanations speaking at some length to several dot points on a slide can still work well, in which case keep the number of points on a slide to only a few.

Design Tips

- Point form is effective, limit number of words used on screen to a minimum
- Remember, most often, to talk to points in the order they are displayed
- Avoid narration or speaking that is unnecessarily long
- Avoid speaking at length on individual slides (rather, spread points out)
- Be careful of too much talking on points not on screen or not closely related enough to justify
- Check-question: '*Do the graphics contribute to effective conveying of information and ease of understanding?*'
- Keep in mind that graphics do not necessarily need to link directly to a concept to be effective, a cosmetic graphic can be effective if it helps attract interest.
- Formatting is also effective for increasing visual appeal, like font type, spacing, colour, etc. While not wanting to undermine the power of graphics, they are not always necessary, I often present with dot points only, with minimal background or use of colour.

Conclusion

This chapter covered pedagogical and mechanical processes involved in producing recordings of content delivery and interactive classes as learning resources. Editing is a primary way to reduce cognitive by: (1) splitting recordings into short, segmented sections and (2) cutting out unnecessary conversations in class recordings. Segmenting recordings makes them more inviting, which not only increases engagement, but improves information absorption and learning retention. Keeping video content and segments short is important because it makes them more attractive to students and reduces cognitive load, also influenced by increasingly busy lives and limits on attention spans.

Microlearning sized recordings can increase engagement in terms of popularity with numbers of students accessing them and positive comments in course evaluation. Students appreciate the conveniences of being able to listen while driving, listening while making dinner and while carrying out chores, some say they continue to keep an eye on the slides when doing chores. Video recordings overall, regardless of whether they be from pre-recorded lectures or from live recorded classes, provide students with great flexibility in ways they can consume information in recorded forms.

Recording and production

Recording and segmenting are a hallmark of the microlearning design approach in its quest to seek out ways to assist learners with cognitive load challenges they face.

- Voicing slide presentations and converting to video play form
- Vocal delivery conversational tone overwhelmingly most effective
- Inviting guest voice-overs, or co-delivery by recording with guests
- Recording live lecture presentation delivery and recording of classes

Editing: Segmenting and reduction

Reducing recorded content by editing into short segments and then cutting out less relevant parts reduces cognitive load and further increases engagement of audio and video recordings

- Use editing techniques and principles to guide reducing volume and length of recordings
- Use easily available and easy to use editing software

Media and variety in media

Increases engagement and advantages for learning and information processing

- Provide variety in media: video recorded learning sessions, recorded audio delivery
- Demonstration styled videos, animation videos, providing some still slides
- Design in graphics and visual elements

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4.

LEARNING DESIGNS AND DELIVERY

Introduction

This chapter covers approaches we can draw on for increasing learner engagement in delivery and delivery design. It is supported with examples to demonstrate how these approaches can be applied, including video recordings of classes.

Delivery is critical to engaging people as encapsulated in cliche "*It's all in the delivery*". Techniques and strategies in this area stem from thought and planning around 'What would make lessons and delivery an interesting and engaging experience for my learners?'. Our options are wide ranging: from attracting interest and attention with novelty e.g., props, humour; including elements of gamification in activities and developing some positive habits like projecting our own enthusiasm to attract engagement. Keep in mind, increasing engagement, as a path to increasing learning success lies at the heart microlearning design.

This chapter covers learning design for (**a**) presenting information or instruction e.g., lectures; and (**b**) for interactive learning sessions with greater participation and interaction e.g., tutorials, workshops. Incorporating activities is important in all delivery and lesson types, including lectures, so that application of what is being covered becomes an integral component of all learning. However, this chapter also shows learning delivery is moving into a blending of presentation and interactive-activity formats toward a **blended** format (i.e., a combination of the two: some presentation bended in with interactivity).

The term relatability features in this chapter as an engagement construct. ***Relatability*** pertains to conveying information in ways learners can relate to easily, to increase appeal and subsequently engagement. The challenge here is to make information as easy as possible to grasp and process or internalise.

Relevance Linking (previous chapters) and *Constructivist Learning* (chapter 4) are pedagogical strategies that also support our aim to design and deliver learning sessions that are relatable and thus more engaging. The constructivist approach leverages, by using associations; from things that are already familiar (or understood) as a base for constructing understanding of new (unfamiliar) information. It views learning as an active process rather than a passive one (Jarvis, 2006), and is not only more engaging but also works to reduce cognitive load. Based on a student-centred mindset, it helps guide choices around relatability, for trying to meet learners in their space.

From a holistic viewpoint, delivery of learning in the forms of pre-recorded and live delivery recordings are an accompaniment to modules that make up a 'textual' component of learning packages. Print modules should also be written to be relatable and include activities, and some of these activities can also be used in lectures and interactive classes.

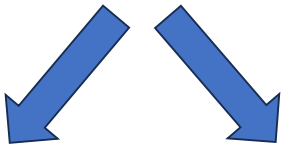
Relatability can be broken down into practical approaches that include:

1. use of easy to relate to examples (accompanied by relatable tone of voice),
2. drawing on existing learner knowledge,
3. making learning practical and relevant e.g., for success in employment and career and in assessments (Chapter 2),
4. designing activities aimed at getting students to participate in their learning, and
5. breaking content into easy to process bite-sized pieces (to scaffold learning and optimise cognitive load (chapters 2 and 3).

Relevance Linking and *Constructivist Learning* approaches are also included to stimulate interest and support the aims of making delivery relatable for learners.

RELATABILITY

To Make Learning Engaging



Relevance Linking	Constructivist Learning (design)
Learner relevant and purposeful	Learner centred - Drawing on existing understanding for constructing new knowledge/understanding
Practical relevance and value: what learners gain - Work, assessment, plus life skills	Relatable and engaging: - building on relatable associations - attractive, interesting, comprehensible e.g. easy to understand examples e.g. novelty / interest attracting strategies
Sense of belonging Identity, meaningfulness	Incremental segmented learning for cognitive load optimisation

Relevance linking

Even after the process of increasing relevance in course content (Chapter 2), some may still struggle to see value and relevance, and find study unappealing and demotivating. The goal for microlearning design at this point becomes:

"What can we do to convince learners that the benefits they can gain are worth the effort?"

Here, we can draw again on relevance linking (Chapter 2) to make practical value explicit in delivery. This means frequently drawing attention to the benefits to be gained from topics and concepts as we cover them – making this central to the way we design and deliver learning.

Key points of focus for relevance linking are: **(a)** advancing employability i.e., professional skills and competency and **(b)** guidance aimed at enabling students to understand and produce sound assessments.

Life skills (or transferable skills) can also be included into professional skills, and range from managing relationships, to managing demanding environments and well-being.

> Relevance linking during delivery is an approach we can use to address the difficulties many learners have recognising the relevance of content. It plays an important role in increasing attractiveness to learners and helps prompt and increase engagement.

It is important to promote learning resources including any readings you have set, along with the key ideas and concepts involved. One way to link to relevance is to point to and explain how they, as practitioners in development, can benefit from the learning materials, whether live or recorded.

A prime place to 'sell benefits', is the opening of a lecture. Another is in ***Introduction to week videos*** (Chapter 5), as these are opportunities to 'sell' to students the rewards and benefits they can gain from a course's content, including applicability of concepts, principles, theories, and lessons to be learned from case studies.

The mindset I use when selecting resources like set readings is: 'If a resource such as a reading is good enough and relevant enough to be in the course, then surely it is worth promoting it to students?'. Especially if you want them to read it and get value from it. This also applies to videos and other learning resources.

Relevance as practical value in learning design and activities

Weaving relevant activities into microlectures helps attract engagement and aid comprehension and retention of learning, which includes the ability to apply learning.

Activities should be designed with the aims of eliciting interest and involvement in mind. Accordingly, the practical value of the activities needs to be explained and made evident. In public relations, we often use short, scaffolded writing exercises that are authentic, based on industry work scenarios and expectations, which again needs to be made explicit. In addition to building professional competency and **confidence** for undertaking professional work, learning activities should be linked to assessments. Be sure to explain how the activities they are undertaking have been designed to prepare them for tackling their assessments.

Learning design approach

In public relations writing courses, students are told from the start they will be doing a lot of writing, with writing exercises. We also explain that the exercises are designed to build their skills and confidence gently and gradually, and not to overwhelm them or frighten them off. We further explain that this regular practice-based system of learning is designed to dispel fears about writing, as they will become confident writers by the end.

These writing exercises are an example of a scaffolded approach to learning, in microlearning design. Segmenting is used to break learning down into small units, that build on one another. It is a practice-based

learning design, where students 'learn by doing' repeatedly as a way to help them become accustomed to writing i.e., build 'reflex memory' skill, as a public relations writing competency.

This kind of scaffolded activity-based learning helps show student-centeredness in microlearning design and one firmly based in *relevance* (explicit) to professional employment skills and preparation for assessments. It is natural that students would want to know how course materials and activities relate to the assessments they have been set. They are interested in being well prepared for carrying out what is expected. Linking relevance to assessments, almost unfailingly, hooks interest; for them it is seen as the 'bottom-line'.

EXAMPLE Learning Activity: *writing a media release*

The following activity is from a course with the overarching aim of introducing and building understanding of public relations core principles and practices. This class activity is aimed at:

(1) developing some understanding of public relations job requirements for an entry level position

(2) an introduction to understanding and developing core skills through an activity that involves developing ideas for writing a media release.

The lesson uses an advertisement for a typical public relations job as a source of guidance for approaching the task. The exercise itself is the application of knowledge, featuring the use of early engagement and diagnostic test to formatively assess learning and provide feedback.

Design elements

- Early engagement and learning performance, formatively assess, with guidance feedback
- Elicit proactive participation: being able to play an active role in one's learning
- Active, constructivist, and practice-based learning
- Aims to instill sense of lesson relevance and worth: value for time spent attending session (or viewing recording)

Read: The following slides demonstrated the activity.

'Lecture 5: Strategic alignment. 4-1 Class Activity: Media Release' [pdf slides] (CC-BY-4). The activity is divided into the following four steps:

1. Develop points for a media release
2. Based on news of an increase in ***international*** enrolments...
3. ... at Regional Community University this year, and
4. Provide points that would support and promote University objectives

Activity

SELF-GUIDING QUESTIONS TO GUIDE LINKING RELEVANCE IN LESSONS

The self-guiding questions below are framed from a learner perspective:

- *How does what we're learning (here and now) relate to career and preparation for the kinds of work duties and situations that that I am going to be facing?*
- *How does what we're learning (here and now) relate to the kinds of tasks I have to carry out for the assessments for this course?*

Constructivist Learning Designs

The constructivist perspective views learning as a process in which new information and understandings are built, through people drawing on their existing knowledge, experience and understanding (Jarvis, 2006). The taking-in of new information is seen as an active rather than passive process (Lutz & Huitt, 2004). Learning can be more effective by using designs that build understanding of new content by drawing on students' existing knowledge (Vygotsky, 1978) to increase engagement and reduce cognitive load. Microlearning utilises constructivist design to engage students in ways that are meaningful to them, this makes it, student-centred.

Existing understanding can be harnessed by tapping into what is already familiar as a base and a bridge from which to build new knowledge and understanding (including skills).

Connecting new information to existing knowledge (e.g. previous content) also facilitates the transfer

of new information from working memory to long-term memory (Kapp & Defelice, 2019). Drawing on existing knowledge by actively involving students also makes learning more appealing and less confusing.

There are a number of ways we can go about activating existing knowledge (before we go on to build on it), one is to draw on previous lesson content to begin new learning sessions.

Key approaches for harnessing existing knowledge:

(a) tapping into **previous content** (e.g., previous module or lesson)

(b) tapping into **learners' personal knowledge,** understandings, experiences and interests

(c) tapping into **common knowledge** understandings

We should view these as valuable learning resources that we can use to good effect. We frequently draw on existing understanding in our natural learning processes in life. We can easily use and combine all three approaches in one lesson.

(a) Previously covered content

Microlearning draws on a constructivist approach when it seeks to build knowledge and skills incrementally with a series of short segments of clear and focused information combined with embedded performance enabling activities. These singular microlearning events fit together as a part of a wider whole, in a process we commonly call scaffolding. The harder the conceptual material becomes, the more scaffolding we need to use to optimise and ensure effective learning.

Increasing the number of learning sessions with shorter duration lessons reduces cognitive load i.e., scaffolding aids retention of knowledge incrementally. Scaffolded sessions often use additional measures, like repetition, knowledge check quizzes, and frequent practice-based activities that include feedback and appraisal of those activities to help learners grasp difficult content. These are commonly used as high-engagement design measures that aim to keep students involved and facilitate deeper level learning, advanced mastery and comprehension, and also increase retention of knowledge and skills (Darby & Lang, 2019; Lutz & Huitt, 2004).

(b) Learner personal knowledge

Drawing on learners' life-experiences can be an effective tool for guiding students to construct their own. This approach empowers students to become more directly involved in the process of their own learning. They begin to sense their own agency because motivation is intrinsic. Playing an important role in their self-development, they become more invested in ways of learning that feel rewarding. As educators, a part of our responsibility is to help get students on board with their own learning. Our role necessarily involves 'winning hearts and minds', doing what we can to make learning interesting, relevant, engaging, and rewarding for our learners.

Encouraging and providing opportunities for students to draw on their personal experiences, understandings and perspectives aids their understanding of content and concepts in new learning material. It is an effective way to stimulate learner participation, encouraging active learning.

We can activate and leverage learner's personal knowledge into content delivery, like lectures, by including activities that help them draw on their experiences and understandings.

Online Forums: We can take this a step further by setting up forum activities, providing students with opportunities to interact and learn from each other. Using an in-course online forum to prompt open discussion can lead to productive spirited and learning exchanges among students. Lecturers can join in or make contributions at points where it is helpful e.g., provide clarifications or corrective guidance, and commentary and encouragement.

(c) Common knowledge understandings

The shared knowledge and understandings in common culture provide educators and learners with a rich and plentiful treasure trove of conceptual learning resources. These are widely understood concepts and ideas that we can use as bridges for new learning and building understanding. To do this, I search for common knowledge and ideas to help introduce and build understanding of new concepts and processes, as well as build confidence and competency for tackling assessments and professional work.

An example of a common knowledge idea that could be used as a point of comparison is, 'game'. We could use 'game' to examine a topic area like life, or life-skills (target domain). We can leverage it as a bridging comparison point to activate existing knowledge to build new understandings and insights of 'life'. For example, comparing ways in which aspects of life can be seen as being 'game' like, in some ways, e.g., it can be competitive. Another point of comparison could be – life is like 'acting' e.g., acting out a variety of roles, like parent, colleague, friend, etc.

Applying common knowledge to learning activities

Using metaphors (for comparisons) tend to work for activities that aim to stimulate interest and participation, generating exploration and co-construction of understanding with deeper levels of insight. We could narrow 'life-skills', used above, to explore interpersonal life-skills needed to make work -life effective (e.g., negotiation, cooperation, empathy), imagining work-life as like a 'game'.

It is possible to have students explore ways in which work-life can be likened to a game by asking them to explain and justify the supporting example and scenario they use, and having it critiqued by peers in class discussion. Discussion activities of this kind should be linked to practical aspects, like what lessons can be learned, or to be knowledge gained, (e.g., by viewing work-life skills in these ways).

Further, *gamification* could work well for generating added interest and enthusiasm – e.g., adding a popular vote competition which may involve small prize.

In designing a presentation or lecture, you may decide to use a common knowledge concept as a starting point and centrepiece. Alternatively, it could be woven in at a later point e.g., be used as the basis for an integrated learning activity. A common option for activities that have been built into lectures is to invite students to post responses to an online forum; example to follow shortly.

Design tip

The purpose of lecture content should be made clear and relevance and value explained. Likewise, the purpose of learning activities should be explained along with the value they provide. This is a way to prompt student interest and motivate them to engage with activities. In other words, the value of activities should be pitched to learners' interests to ensure they work well and serve their purpose.

Activity design

Designing engaging activities needs thought and effort. In addition to making them relevant and purposeful they should be enticing, so they hook interest and look enjoyable (e.g., gamification). following example is a novel **ice-breaking** activity also designed to introduce students to a fundamental course concept, engaging and familiarising them with social constructivism and giving them a *feel* for the nature of the course.

This microlearning topic and activity, placed at the start of the course should introduce and stimulate exploratory interest in social constructivism, a perspective in which everyday knowledge, or commonsense knowledge, is viewed as being socially created through shared language and culture.

Ice-breaking activities like this can be embedded into bite sized lesson recordings as an asynchronous activity, well suited for online learners. It is designed to appeal to students and thereby attract participation and interaction.

It encourages ***active learning*** as students construct their own understanding, as well as peer-driven where they are encouraged to learn from each another. It is used to encourage students to get to know each at course commencement. It has proven popular as well as effective in orienting students to the course. **Gamification** is also employed as an 'interest' hook. It involves playing a friendly game that is softly competitive. We could intensify the competitive intensity, for example, if we were to have students rate results.

Example activity

In interactive online forum – format

The following demonstrates procedures for the activity which involves generating and explaining clichés, also referred to as folk theories.

Description:

Asynchronous, **online activity designed to elicit:**

- Responses and discussion of activity on online forum
- Facilitate learner understanding of social constructivism with folk-theory / cliché exercise

TITLE OF THE ACTIVITY ON ONLINE FORUM: "Add to our list of folk theories"

Initial explanation and instruction:

This activity is to get you "into the swing of things" (that's also a cliché) for the start of this course.

I have commenced this exercise to get you started and demonstrate the steps you take.

I look forward to seeing what clichés and interpretations you come up with.

Wishing you a great week one!

FORUM POST – TO START

"Instructions for explaining latest cliché and adding new clichés"
Cliché 1*: "Don't put all your eggs in one basket"*

1. ADD explanation of existing forum cliché (i.e., *What does it mean? What does it mean to you?*)
2. THEN ADD a new cliché

My example: of a response of explanation

"*Don't put all your eggs in one basket*" means don't put all your efforts into one thing because if it does not work out you could lose all the efforts you put in. It is a risky choice.

My example: of a new cliché

"*Don't bite off more than you can chew*"

Common knowledge: ***essay writing*** *lessons*

The following demonstration is a series of lessons and activities designed to help students make a correctly focused start on an essay, in the first week. These lessons provide guidance on how to approach essay writing. Guidance includes the importance of utilising course resources like set readings and the relevance of these for demonstrating learning in essay assignments.

These are public relations lessons aimed at helping students transition into their first semester of university study. Accordingly, they are designed to help students develop the skills of understanding the relevance and value in content, including the applicability of concepts and course materials to assessments and then also real-life practice.

Lesson design here takes common understandings people hold about the legal domain as a bridging comparison scaffold. It is a metaphor used to help students develop a strong understanding of what essays require and useful ways to approach the tasks involved in producing an essay. Given the approach is based on providing guidance and preparation for an upcoming essay, it serves as a demonstration of relevance linking.

The key idea being used or leveraged here, centres around how *lawyers* are required *to* produce argued cases to support a given position. An easily relatable example would be to defend someone against an accusation.

This 'think like a lawyer' theme is one of the most effective I have used for helping learners quickly gain a clear and firm grasp on the **mindset** that is conducive to helping them produce quality essays (largely by avoiding pitfalls). It has proven to be effective as a way to launch into essay writing and facilitating understanding across all aspects and processes involved, from developing well-reasoned arguments supported by credible evidence, through to the mechanics of formal writing and referencing.

STEP 1 MICRO-LECTURE – INTRODUCING TOPIC AND LINKING CONTEXT

In this first session students are introduced to the topic: the historical development of public relations. It incorporates ethical developments and runs over the next four weeks. While the **content** is key in this session, it is stressed, that understanding and application of their learning will be assessed in the upcoming essay. Students are advised to keep the essay task in mind as a centre point for guiding their approach and focus for their study of the topic. It is an example of relevance linking to assessment, which continues in the lectures that follow. Below, is a diagrammatic overview of lesson design – for introducing topic content and linking it to the essay assessment.

LEARNING CONTEXT

Step 1

Week 1 Microlecture

History and Ethics of Public Relations

- Content — History and ethics
- Essay — with relevance linked to essay

Content continues weeks 2,3,4,

Essay due week 5

STEP 2 INTERACTIVE CLASS Part 1 (LESSON DESIGN)

Students come to this learning session primed with information about history and ethics in public relations, knowing that they have to write an essay based on this topic area. The key learning aim here is to help students equip themselves with knowledge and perspective to help them perform well in producing the set essay assessment. It also motivates them to engage with ethical issues which remain relevant today.

Two of the biggest problems students encounter in essay writing, especially when new to university, are (1) not staying on topic (task adherence) and (2) failure to produce argument i.e., developing supported and reasoned conclusions, which results in description rather than argument.

Pointing to these two stumbling blocks to raise awareness is a brief but important preliminary step as the start of the lesson, to set the context for focus and thinking. The 'think like a lawyer' theme (as a key to good essay writing) is then introduced to prompt students to draw on their commonsense understandings to explore the topic (essay writing), and theme, (what makes a good lawyer?) to begin the interactive discussion activity. Narrowing focus to this one theme effectively constrains cognitive load. The following video presentation explains this part of the lesson.

'Essay writing discussion activity: Class 1-1 Think like a lawyer', (video; 3'57", CC-BY) below, outlines lesson design used for Class 1-1 on essay writing.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-1

STEP 3 INTERACTIVE CLASS 1: Part 2 (INTERACTIVE LESSON DESIGN)

The tangible aim in the "Start your essay" session is to have students make a start on their first assessment, by making a draft essay plan. The activity is designed to prompt students firstly, to decide on

and write a stated position (a thesis statement), then secondly, to choose two main points they could use to support their position, taken from topics covered in the prior lecture.

View

The following slides provide a step-by-step illustration of the '*Start your essay*' activity.

'Interactive class design: Class 1-2 Start your Essay' [.pdf slides], (CC-BY-4)

This approach has been published in the following free access journal article:

Kossen, C. and Ooi, C.-Y. (2021), "Trialling micro-learning design to increase engagement in online courses", *Asian Association of Open Universities Journal*, Vol. 16 No. 3, pp. 299-310. https://doi.org/10.1108/AAOUJ-09-2021-0107

Once a thesis statement and main points are written, students have, in effect, started their essay in the course of the first week of study. This provides the platform for progressing with information and discussion activities of other **components** required for the essay (as covered in slides linked above). Components include strategies for (1) constructing an argument, including logic and reasoning, (2) supporting with credible evidence, (3) using formal language, (4) ensuring referencing protocols as a part of (5) effective persuasion. Notice that exploration of these aspects and components can be continued without reference to the 'lawyer theme' after the value of this perspective has been established.

Threshold skills and content for essay writing

The podcasts below on academic and essay writing, cover discussion the topics areas covered in these classes, despite being in an alternative format. These podcasts are now used to serve as additional learning resources for students on critical threshold skills and content for planning and writing essays for meeting task and topic requirements. While these podcasts do not draw on a 'think like a lawyer' theme directly, Chapter 4 Podcast Episodes, are based on conversations with a lawyer about similarities between legal case building and essay case building, in reference to producing convincing cases and arguments and selecting evidence.

Listen

Communicating for Success: Micro-Podcasts

These micro-sized podcasts examine processes and components of essays. Episode 9 sets a context using the same public relations essay topic used above as the working example for explaining and analysing the process of producing and writing an essay.

Episode 09 Analysing task and scope, (CC-BY-4) (same PR essay topic used above)

Episode 10 Planning thesis and scope, (CC-BY-4)

Episode 11 Developing main points, (CC-BY-4)

Episode 12 Ensuring argument, (CC-BY-4)

Episode 13 Covering all bases (assessment criteria), (CC-BY-4)

Episode 14 Editing, proof reading, (CC-BY-4)

Episode 15 Case building: evidence, referencing, (CC-BY-4)

Episode 16 Evidence: sources, (CC-BY-4)

Episode 17 Formality in writing, (CC-BY-4)

Areas covered in these podcasts are:

- Formal persuasion: logic, reasoning
- Argument: balance and quality (what is compelling, avoid overstating)
- Clear and concise expression
- Formal language protocols (avoid casual language)
- Technical language protocol
- Evidence: sourcing and evaluating
- Referencing protocols

Participative class learning

We now move on to a stronger focus on active participation in classes, progressing from constructivist learning to social constructivist learning. This includes measures and activities we can use to attract and prompt interactivity in learning and also promote successful outcomes of community and social belonging. This fits microlearning's first and foremost goal – to increase learner engagement – as it is a pathway to increase rates of learning success.

Constructivist learning, as discussed, is based on the principle that learning can be more effective when students have the opportunity to develop or construct their own knowledge for better understandings through active engagement with principles and concepts (Steffe & Gale 2012) while also containing cognitive. We can facilitate this through activities that place the student at the centre of learning (discussed earlier). Accordingly, we can encourage students to draw on their personal and existing understandings to help learners grasp new information in ways that are meaningful to them.

The **social constructivist learning** approach goes on to posit further that learners construct knowledge more effectively when they are able to interact with other learners, i.e. group or peer learning is preferable (Vygotsky, 1978). This often requires effort on our part to facilitate the breaking down of 'sense of isolation' among learners, and even more so for online learners.

Interactive participation in activities facilitates social bonding and belonging, i.e., breaking down isolation, developing a sense of purposefulness, and building student confidence in their learning abilities.

Providing welcoming and non-threatening environments where students feel safe, supported and encouraged to express themselves, makes participation more inviting, providing them with the opportunity to develop and advance their own thinking and understandings of concepts. This kind of learning also facilitates active evaluation about the value and applicability of concepts, ideas and principles e.g., how these may be applied to professional practices and associated pitfalls overcome.

Creating supportive interactive ecosystems

As facilitators of learning, we have a responsibility to lead the way in breaking down barriers to participation by providing a positive and welcoming class atmosphere, which is genuinely supportive. To do this, it is important that we give students a genuine sense of ownership and belonging, by treating them as 'professionals in development' and working with them to instil their own sense of professional identity. We use this kind of relevance linking so that they can begin to recognise themselves in relation to their chosen area, connecting with it and viewing themselves as already being a part of it (i.e., instilling a sense of professional belonging).

Making all first encounters positive, enjoyable and of value to learners is critical. So, making a 'splash' at the beginning is a high priority for setting the tempo: establishing vibrancy, positivity and sense of purpose, belonging and appeal. Give time and thought to designing activities that are interesting and inviting to students and as enjoyable as possible. Our aim is to work together with our learners to create a class experience that inspires them to keep attending and participating. Advice to consider here is to

place a light warm up activity within ten minutes of commencing, as a way to break the ice, set the tempo for participation, and include something enjoyable. We have the option of being more relaxed about purposefulness to a learning objective with a first activity.

The following questions can help ensure that an activity will work well and serve a worthwhile purpose.

'*What is the purpose of the activity?*'.

So too, about the value: '*What's in it for me, the student?*', and

'*What is it about this activity that makes it interesting?*'.

These points should also be pitched to learners' interests. Preference quality of activities over quantity (less is more); simple activities often work best. If an activity is not working as well as expected, then move on to another or modify it midway.

Design elements, and features to include in classes and activities

The following is a checklist of design elements to keep in mind when developing learning activities and class environments, for social peer type learning (but not limited only to), in interactive class environments.

Checklist of design elements

- **Appeal**: What makes the lesson and activities interesting, inviting, enjoyable and beneficial e.g., design that provides a sense of achievement and satisfaction
- **Frequent activities, practice-based** for competency and confidence building with first activity early on: usually within 10 minutes, and light as an easy warm up
- **Active participation** (learner empowerment in constructing understanding) apply and further develop e.g. practically explore and resolve issues or problems
- **Prompts to elicit proactive participation**: prompting learners to take an active role in their learning
- **Interactive social learning**: peer-learning
- **Develop sense of value**: worth the time spent attending (that learning as rewarding
- **Facilitating sense of belonging and community**: learning as social and enjoyable

- **Safety and support** show that all responses have value
- **Guidance in learning** (corrective guidance from peers and educator/facilitator)
- **Testing learning (practice, application, construction), providing feedback on learning,** which can also serve as preparation for assessment.

Participative learning design – video examples

Classes are designed with the aim of making participation and interaction appealing to students, by providing an environment that is welcoming, supportive, enjoyable and purposeful. It is a collaborative space where everyone's voice matters. The sense of ownership motivates students to engage enthusiastically in lessons; and discussion activities with technology functions like 'chat' gives those who are less confident the opportunity to participate and be included.

Video 1: Fostering a Learning Community

This first video (below) '*Class Opening – community building'* (video; 1'12", CC-BY) demonstrates cultivating a sense of belonging and setting foundations for a (strong) learning community. Note, I pick up on a somewhat incidental 'hello' from one student to another, and use this to promote a sense of community, belonging and ownership of class learning. I then go on to address an earlier question on 'reflective practice'. My response here validates the value of that question, and thus the student, while also providing further guidance and clarification.

Summation: It shows the adopting of a participative approach by prioritising student connections. I start with inclusive gallery view to foreground the class, to create a supportive, connected and enjoyable environment. Then student contributions and comments are also used as community-building opportunities to help make them feel relaxed, safe and encouraged to put forward their thinking and ideas.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-2

Video 2: Interactive Discussion showing Social Learning

This segment (below) '*Activity: Benefits of Workplace Democracy*' (video; 1'56", CC-BY) reflects the kind of interactive social learning I aim for in classes. This discussion activity focuses on the benefits of workplace democracy. Slides are used (PowerPoint) to present information and activities where students

construct understanding by building on each other's contributions as I type their responses onto the slides in real time. This works to validate and acknowledge the value of their efforts and contributions. Also note, I normally start activities by providing the first response to lead and to demonstrate, by example, the process of participating and formulating responses.

Students are encouraged to participate, but not placed under pressure to do this. Participation often increases as those eager to respond show the way. Students are also able to participate in ways comfortable for them, by speaking with camera on or off, or by choosing the chat function.

While the exercise used here was designed to examine benefits (of workplace democracy), a critical perspective emerged naturally and added of depth of understanding. Accordingly, guidance to redirect focus was not needed.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-3

Video 3: Strategies for Creative Thinking

This section (below) '*Strategies for creative thinking*' (video; 1'35"; CC-BY) is taken toward the conclusion of a discussion on creative thinking strategies designed to encouraged exploration and taking advantage of unexpected creative breakthrough ideas that often arise while taking a break. Also the idea of deliberately stepping away from a problem is a strategy for enabling more free and open thinking on problems. It facilitates deeper understandings of creative thinking processes and insight into strategies that enable students to apply these in study tasks, and in other aspects of their lives.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-4

Video 4.1: Culminating Activity, Co-Teaching and Rapport (Town Hall Meeting simulation)

This segment (below) '*Practical Activity Part 1 – Town Hall Meeting Prep*' (video; 2'30"; CC-BY) showcases a learning activity where students host and facilitate a mock Town Hall Meeting with a scenario provided at the start of the course. A sense of community, rapport and confidence, using practice-based learning and positive learning experiences, had been built throughout the term in preparation for it. As a final activity for the course it helps validate the value of student-centred design approaches in empowering students to take control and ownership of their learning. This approach helped equip the students with the knowledge, confidence, and skills conducive to future success, especially in community consultation and engagement work.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-5

Video 4.2: Fostering Reflection, Appraisal and Growth (Town Hall Meeting Debrief)

This segment (below) '*Practical Activity Part 2 – Town Hall Meeting Debrief*' (video; 2'27"; CC-BY) is a debrief, it shows students reflecting on their performance and perceived areas of strength and weakness. Combined with the whole practice activity, allowed students to solidify their understanding of meeting facilitation processes examined throughout the course and identify areas for further refinement.

This performance-based activity, in whole, provides students with the opportunity to apply the skills and knowledge they have developed, and to reflect, and receive feedback, as well as acknowledge and celebrate their performance. Positive and supportive learning environments in the activities leading up to the Town Hall have enabled them to feel confident in taking risks, engaging in self-reflection and striving for continuous improvement.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-6

Hybrid teaching: participative learning design class video examples

Hybrid delivery design is increasingly common where short bursts of information are blended with interactive activity-centred classes. Although these activities, such as polls, quizzes and breakout room discussions, are not shown in the videos here, these tools can also increase comprehension and retention of learning.

Video 5 Employment applications

This video (below) '*Job applications*' (video; 2'53"; CC-BY) shows exploration on the topic of producing applications for employment, featuring a student sharing her experiences and reflections. Insights and comments by peers added further detail on applying knowledge, i.e., for producing strong job applications and increasing chances of success in gaining desirable and suitable employment.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-7

Video 6 Facilitation Skills (highlights Social Learning)

The recording (below) '*Facilitation skills*' (video; 6'22"; CC-BY) highlights an array of techniques including co-teaching, where an industry guest and I both project enthusiasm for the topic. Video conferencing features like screen sharing are used for presenting information and for learning activities. Switching between ***share-screen*** and ***full gallery view*** is used to help produce a sense of community and belonging. Typing student responses using shared screen slides gives validation and encouragement as they are able to see their responses being included in the construction of knowledge. This affirms value being placed on their thinking and perspectives. The satisfaction they derive from engaging in their own learning encourages further participation and continuing class attendance. This is a mainstay of my teaching practice.

Critical thinking was encouraged in the examination and analysis of facilitation techniques. A relaxed and positive atmosphere facilitated engagement for developing deeper understanding. The video demonstrates the benefits of a blended learning approach, use of social learning principles, use of co-teaching, and encouragement of critical thinking by students – to equip themselves with the skills needed for success in this area.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-8

Video 7 Communication as Transactional (Fostering Active Social Learning)

The transactional perspective of communication is a topic usually dealt with in lecture format. I guide students through critical concepts only, before moving on to encourage their input on what they think the *transactional* concept could entail, which enables the combination of peer learning and social construction of understanding. Providing only necessary information gave students a base to participate in building understanding of the transactional notion of communicator 'credibility', for example, factors that influence credibility and trust and these can fluctuate.

Corrective feedback fits with a social constructivist design, as it is mainly student generated. This allows students to learn from one another to refine their understanding incrementally, without teacher direction as demonstrated in this video '*Communication as Transactional*' (video; 4'57"; CC-BY).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-9

Video 8 Collaborative Learning through Co-teaching and Student Enquiry

This segment (below) '*Public speaking, facilitating – prep and confidence building*' (video; 3'12"; CC-BY) illustrates a collaborative online learning approach to understanding public speaking skills, including the topic of building speaking confidence. It highlights the value of having a co-teacher take an active role in sharing teaching responsibilities and coordination. Combining the strength of our different perspectives allows students to experience variety in style and expertise.

The session also demonstrates the value of student contributions in posing questions that open up discussion in ways that would be less likely without them. This allows students to cover individual needs, e.g. their aspirations, career interests, perceived areas of strength and weaknesses, and contributes to lesson quality.

Note, I hide/reserve points I do not want overlooked by changing colour of the type to white or very pale grey. They are made visible when required by changing colour back to black during class.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-10

Video **9 Practical Application of Facilitation Skills: Facilitator Intervening**

This section (below) '*Intervening as a facilitative skill*' (video; 1'45"; CC-BY) shows transition from foundational information to real-life scenario type application, illustrated through a student driven inquiry about how to manage finer details in working as a facilitator; in this instance exploring circumstances where a co-facilitator should intervene. This gave visibility to the relevance of course material and practical insight with bridging between theory and practice.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-11

Discussion points

'Student presence' participation is encouraged, i.e., their appearance with camera on and spoken responses

to activities, as it is best suited for developing sense of community. However, there is no pressure applied, and some prefer to participate with written 'chat' responses and the option for not revealing their name on screen. Classes accommodate all comfort levels to foster participation, with participation the overriding goal. Encouragement to add to and continue discussion on forums also attracts student engagement, including from those unable to attend class.

When students respond incorrectly or with a degree of misunderstanding that requires teacher / facilitator involvement, I firstly affirm a correct or relevant aspect of that response. I then build on that aspect of the response with the student until s/he arrives at a point where appropriate understanding is attained.

Answer questions wrongly in Chris's class and he doesn't make you feel like an idiot. (Student feedback)

Encouraging students actively to construct their own understandings of concepts, and how they can apply these to professional practice and their assessments, is an important way to elicit participation for active and social (peer-to-peer) learning.

Classes for online students allowed us to enjoy 'learning by doing' with interesting activities that are practical and useful. (Student feedback)

With HE education shifting to a more 'active' student–learning delivery, so too the role of teacher is moving away from information presenter into roles of learning facilitator and learning environment designer: designing environments that are student–centred, in which students have greater control and agency over their learning. It increases engagement and is a more rewarding experience.

Learning activities, like open discussion questions shown in class videos above, allow students to 'trial and error' their thinking to arrive at understandings that are valid while still largely developed on their own. It allows learners to actively work through their understandings through verbal responses – *cognitive processing by talking*. It is a process of learning by talking through one's own reasoning along with thoughts and reasoning from peers and facilitator.

Delivery and Design Tips

- **Transforming fear and anxiety into shared community support:** Establishing a supportive and welcome tone when starting classes encourages students to participate in, and contribute to, community-building and mutual support.
- **Encouraging participation:** Encouraging students to share their experiences, including their own thoughts, tips and ideas, fosters interactive student-driven

learning.

- **Provide first response to activities**: Start activities by providing a first response, to model and lead the process and set a supportive tone for students to 'chip in' with their ideas.
- **Building Connection:** Referring to students by **name** conveys a sense of inclusion and belonging; it helps break down relational barriers (power distance) and personalises their learning experience.
- **Chat function** : Provides students with multiple ways to engage and express themselves to ensure participation from those most hesitant to speak. It also shows/ reinforces that all voices are valued.
- **Blended/ Hybrid learning approaches:** These encourage engagement and student- led enquiry of content as an alternative to information presentation (e.g., lecture formats).
- **Practice based activities**: learning by doing. For example, activities based on problem-solving (e.g. scenarios), simulations (Town Hall Meeting) and discussion questions (a feature of my teaching), that are also be used in blended delivery i.e., for building student- driven understanding around new concepts.

RECORDINGS AS A LEARNING RESOURCE

Online interactive classes are recorded as a learning resource and benefit those not attending. This kind of asynchronous involvement aids inclusivity as students can learn a good deal from observing interactions. Recordings often motivate non-attendees to join in future classes. Students unable to attend are also encouraged to contribute to class activities in online forums.

Stimulating interest and engagement: techniques

As presenters, and as hosts of learning sessions we naturally have an interest in gaining and maintaining the attention and interest of our learners. This section delves further into strategies and techniques we use to attract learner interest, that is, to make content and learning appealing. We use interest-appeals, i.e., ways to stimulate interest with enthusiasm, relatability and novelty.

Enthusiasm

Enthusiasm, one's own interest and commitment, is critical for conveying the 'interest' and value of the topics and activities that we are providing to students. Perceptions that study is hard because topics seem boring is a major barrier to learning. Our aim is to show them otherwise. Harnessing or marshalling our own passion and commitment is a vital starting point. It helps us to convey information with positivity and interest and to look for ways to show that a topic is in fact interesting and has value.

Relatability

Relatability is another important delivery strategy e.g., using easy to understand and relatable examples accompanied by warm tone of voice, and explaining of value and applicability e.g. relevance to work competencies and employability, to gain and maintain student interest.

Again, **constructivist** designs are based on relatability with the use use associative approaches like common knowledge comparisons. However, these are not always necessary and can be overused. The alternative, **direct route** approach is to convey information with clear *literal* explanations and definitions. This often works well and can be a better choice in some cases, especially when precision is needed, i.e., when specific definitions are best suited. Having said that, a combination of both approaches often works well, combining the advantages of both.

EXAMPLES: A direct explanation approach. These instructive pieces are from online presentations with a conversational tone (minimal novelty).

This first is example is drawn from '*Public Relations – Persuasion in Politics*' (video; 0'45"; CC-BY)

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This second example is taken from 'The Ratio Variable' (video; 3'30"; CC-BY)

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Novelty

Novelty in microlearning design, as a concept and strategy for interest and attention, has wide applicability, from (1) enthusiasm and harnessing your own unique i.e. novel personality (can cross over into humour), to (2) creativity, like searching out novel scenarios or attracting interest with an intriguing twist or surprising fact (i.e., an interest hook).

Achieving good ***balance*** is important across forms of novelty used to engage interest and make learning appealing. On one hand, we are looking to make learning and content attractive and enjoyable; on the other hand, we need to instil the realisation that learning also involves challenge (difficulty) and therefore considerable effort and commitment. Learning does need to be taken seriously, and we have a responsibility to equip students with expectations and understandings conducive to ensuring their success. (We explore this issue further, shortly)

Guidance Tip – *setting tone for balance*

Convey to students that success requires taking study seriously which includes working through difficult periods, but that it should also be enjoyable (even though not every moment is enjoyable) and that rewards are transformative as you see your knowledge and abilities advance.

Personality

The importance of harnessing the power of your own personality and style can be underestimated or overlooked. This appeal of your natural self is driven by authenticity i.e., drawing on natural strengths to make classes and presentations interesting and captivating in your own way.

It is an approach that does not rely on imitating others' styles, nor on being highly animated. Leveraging your own natural style can serve you well in conveying information and enthusiasm convincingly. Of course, it comes with caveats and pitfalls to avoid, like not being self-indulgent, but rather staying learner centred. This applies to areas coming up, like humour and narrative storytelling.

Interest hooks

Interest hook appeals are attention grabbers that can take many forms: format as table boxes

Interest Hook Type	Example
Catchy	music, catchy cliché (even as a topic theme)
Surprise	A startling fact, a confronting fact, an intriguing piece of information
Intrigue	Ask a thought-provoking rhetorical question
Eye catching novelty	Props, graphic

Interest hooks are another broad subcategory limited only by imagination. Like most forms of novelty e.g., humour, they need to be thought through with care and diligence so that they stimulate interest without giving offence or undermining the learning purpose.

We are working in a territory here that attracts wide debate around the extent to which educational delivery should be entertaining i.e. infotainment. We need to work on making learning attractive to reduce one of the biggest hurdles of all, the commonly reported difficultly that study is difficult because the content seems boring to learners.

It also draws us back to the issue of **balance** – balance between (1) retaining the seriousness of learning material and its purpose and (2) using reasonable measures to make learning interesting, including making room for enjoyment as a part of the experience. Decisions we make around this do need to be purposeful and justifiable. However, purpose in this case, does not always need to be directly linked to a learning objective, as stimulating interest is a justifiable purpose in itself. Overuse or reliance on interest hooks, however, undermines learning as the purpose and is not justifiable.

Humour

It is reasonable to say that infotainment needs to be a part of education: learning, where possible should be an enjoyable and uplifting experience. But we should also keep in mind that we are not entertainers; being too gregarious undermines the importance of the learning enterprise and erodes credibility. While we want to be warm and good humoured, and encourage students to be this too, we do not want to undermine their faith in us as credible and knowledgeable. We want them to understand that learning involves a great deal of work and considerable challenge, and also be aware that this is what makes learning rewarding and worthwhile (e.g. value-adding for them).

Degrees of humour can be used carefully and strategically to stimulate a positive and engaging environment to break down barriers, helping ensure learning is an enjoyable experience as well as a developmental one. Humour is a powerful ally that we should utilise, but it can also be risky if not handled strategically and thoughtfully.

Narrative – storytelling

Stories and anecdotes, both personal and professional, can work very effectively to engage and demonstrate concepts, principles, processes and lessons on effective and good practice. However, they can have the opposite effect if not well chosen. They can be unengaging and student feedback, worldwide (universally) confirms this. Having said this, narratives, including those based on personal interests, can

convey information powerfully and engage interest and therefore continue to be a valuable teaching approach.

I have drawn on my interest in guitars with the Stratocaster as one example when exploring brand identity creation. This 1950s brand naming sought to capitalise on space exploration as a new and exciting frontier; the name was derived from 'stratosphere'. It is a light touch example that takes less than twenty seconds to include, aiding understanding without requiring any knowledge or interest in music or instruments

Stories from professional practice can be a rich source of learning relevancy and authenticity. They are also referred to as *war stories*, by some educators. But once again, the same checks and balances need to be applied as for all forms of narrative, as outlined in check list below, like; being clear and to the point, and making the purpose explicit.

Common complaints from students

– Too many scenarios and examples that lack relevance.

– Too many personal life stories from teachers that and are too far off topic.

Note, that just because we find a story meaningful, appealing and useful, it is not enough to guarantee students will see relevance or appeal, even more so if the relevance is not explained and not kept short.

Checklist considerations

1. Critical self-awareness: Consider whether a story you find useful and appealing will be interesting to students.
2. Check or test your ideas with others for relevance, merit, appeal and comprehensibility before using.
3. Critically assess your story: Does it have clear relevancy and relatability for the student audience?
4. Attention to student feedback in all forms e.g. past surveys, body and language cues during learning sessions.
5. Critical self-awareness: Resist urges to drift into stories as they cross your mind: pause for thought first.
6. Be clear in your mind that a story connects to a learning objective.
7. Be clear in explaining story relevance and connection to a learning objective e.g., what

is the learning point to be learned? (make this clear before proceeding with story).

Awareness of modelling behaviour and the observational nature of learning

Modelling behaviour is a part of the package of education but, its importance is sometimes overlooked. A great deal of learning is observational: for example, how we learn language and the ability to speak in early life. For example, Social Learning Theory (Bandura, 1977) emphasises how people learn by observation through modelling by others, especially those who have influence. Students observe teachers as role models and points of reference e.g., whom they see as successful and possessing keys to success in both study and professional practice.

In the formal learning context of students, they tend to see us as being successful and knowledgeable, and naturally look to us, including our cues and behaviour patterns, as a part of the learning process. This then, includes our use of 'interest attracting' measures like humour and narrative.

Novelty in learning delivery examples

1. The interest hook here is a guitar used as a prop to convey a communication theory principle linked to a learning objective. The lesson seeks to give insight and understanding into how language, as a system is thought to work to produce meaning. Music is used as something somewhat comparable to a language system where musical notes produce meaning, but in the form of melodies. The key point is that, theoretically, it is the relationships between the 'words' in language systems that work to produce meaning, more so that words themselves and that this is not dissimilar to way musical notes work. Music is used to demonstrate that it is the relationship between notes that produces melodies, more so than the notes within themselves. Note, the sound of the music played was not captured on this video. '*Signification demo with music notes*' (video; 2'28"; CC-BY).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-14

2. This example shows using novel case study material to stimulate interest. The activity is a student critique of a social media campaign on endangered species which used Snapchat's 'disappear after 10 seconds' after a post function. Details of the campaign are provided at start – '*Last Selfie campaign*' (video; 1'50"; CC-BY).

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3. Gamification here is used as a hook in this *Folk-theory cliché* activity discussed earlier where it was presented in an activity forum. This '*Folk Theory trial demo activity*' (video; 1'31"; CC-BY) is an online live lecture rendition on demonstrating this exercise using student involvement, in preparation for the forum activity. It is also an example of **pre-teaching,** because it is short introduction for preparation.

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Gamification can take many forms, it is often effective for stimulating interest in subject content by adding enjoyment and rewards. It can increase engagement in ways that promote deeper learning that is highly interactive and facilitates more efficient learning i.e., faster acquisition. It can also promote a sense of community (peer relations) and belonging when design includes student interaction. Gamification can also be deployed as a fully blown learning design e.g., in language learning apps.

Learning design formats

Gagné's (1992) ***Instructional Design*** model provides a structured approach that can be used to aid planning and designing content and steps for learning sessions. Planning should begin with determining learning objectives, i.e., specific outcomes desired and then context factors like existing level of student knowledge (e.g., beginning, advanced) and the nature of the content and skill area. From there consideration can turn to the designing of approaches, techniques and specific steps for a learning session.

Instructional design (Gagné) Design steps, check list tips

1. Gain attention stimulate interest (interest hook)
2. Inform make learning objectives/aims clear

3. Stimulate recall (e.g., prior learning)and information needed for proceeding
4. Provide new information, involve learners to co-construct understanding[1]
5. Provide guidance corrective, supportive on comprehension
6. Activity to elicit performance practice, apply and analyse and/or explore[2]
7. Provide feedback corrective support during e.g. activities[2]
8. Assess performance, give evaluative feedback
9. Aid retention (opportunity) learners reflect on e.g., value, applicability[3]

NOTES

[1] **Providing new information** strategies and techniques

Providing new information can include clear and direct explanations, visual representations e.g., diagrams and mapping; demonstrative analogies; demonstrative case studies; real or realistic examples of professional practice; and workplace situations and other kinds of applications.

[2] **Activity** (allow application, or performance) and Feedback

Structured activities to ensure students receive feedback on their performance to advance their learning.

[3] Step 9 may not always be necessary. Keep in mind we want to avoid overload and lengthiness.

The model can work as a checklist, and one which we can develop specific detail from general considerations like those in the right column above. There is room for flexibility; not all nine steps need be included in every situation.

LEARNING DESIGNS OVERVIEW

Participative Learning Design	Example
Critiquing: Good, bad and in-between practice (examples)	Cases, campaigns, advertisements samples of previous assignments. project work industry examples
Concept creating e.g., campaign or project, or other initiative	Storyboarding (frame by frame with narrative and imagery)
Problem solving (solutions)	Brainstorming, charting and diagramming e.g. flow charts
Scenario planning (solutions)	Managing situations and developing potential actions/solutions
Discussion analysis	Build in-depth, practical understanding of new information
Question & Answer student driven learning	Aspects and subtopics of interest
Presenting student led teaching on topic	Short reports 1-2 minutes
Case arguing	A position (public relations is ethical), debating (rivalry)
Pitching	Campaign or project, or initiative
Practice based learning	Townhall meeting, writing media content
Application exercises	Enter data, follow instructions to conduct statistical tests
Role playing (as practice)	Interviewer/interviewee, client/practitioner or service provider
Repetition and quizzing: for countering forgetting curve	Recall quiz-testing - Where recall is critical e.g., exams - To ensure sufficient knowledge for adding new information - For professions reliant on memory muscle precision e.g., medical

Using worked examples

The following video (below) '*Public Relations Research 'mean' worked-example*' (video; 1'38"; CC-BY) provides a worked example to support teaching.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=253#oembed-17

This video Adaptability in jobseeking scenario based activity (4.10) (video; 4'10", CC-BY-4) gives an example of scenario-based learning.

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Recall 'muscle memory' learning

Repetition, like frequent practice (e.g., learning by doing) and performance evaluation (e.g., quiz checking) are learning design tools suited to learning where precise high-detail recall is critical e.g., from medical emergency professions, learning a musical instrument, learning to drive. Notably, *learning by doing* to support retention is used in the Information Technology (IT) support sector, where users are guided through problems by executing solutions step-by-step themselves, support technicians intervene as a last resort. In cliché terms, teaching someone how to catch fish is more effective and beneficial than providing them with a fish. The IT approach has shown that active engagement, e.g., the act of pushing the keys yourself aids retention. It also helps build familiarity and skills for greater independence in problems solving generally.

Content reduction "on the go"

Deciding what content to select for including into lessons and classes is an obvious part of lesson planning, reason being, to avoid overload. That said, content reduction during delivery, or "on the go" has been included to here as an idea to help manage situations where you may be required to deliver a course that is too content heavy (in its present form).

Selecting content on the basis of highest priority is a common sense way to manage delivery for highly loaded content situations. The aim in designing delivery here moves to pointing out to students content the content that is most critical, very often, what is required of them in assessments.

Ideally, learning objectives (i.e., desired outcomes), should be designed and communicated in learning sessions that clearly show how the skills and knowledge being covered are needed for success in assessments and for success in professional work and employment.

Conclusion

This chapter focused on designing activities in ways that help enable and encourage learners to build competency and confidence, which includes ability and confidence for tackling assessments and professional work tasks and duties.

Lecturers and teachers have a critical role to play in stimulating student interest and motivation to learn. This includes providing interesting content and learning sessions and striving to develop a genuine sense of ownership and belonging, a 'students as partners' ecosystem in learning sessions as they take place. High-engagement design features in microlearning are also aimed at deep learning which increases retention of skills and knowledge as well as mastery in applying them. Accordingly, we should encourage to learners challenge themselves to think creatively and independently, and then provide corrective guidance as needed in affirming ways and show them that all their contributions are a valuable part of the learning journey process.

Working from a student-centred design approach this chapter draws on constructivist-learning models to encourage students to draw on and leverage their own existing knowledge to build understandings of new concepts that meaningful to them and build confidence in their ability as learners to take in new information. It is important to provide supportive and non-threatening environments in the delivery and design of classes, so they feel encouraged to actively participate in building understandings in ways that are meaningful to them including how they can apply skills and knowledge covered to professional practice as well as assessments.

Strategies and techniques underpin design needed for effective engagement. They are used to attract and sustain interest and include novelty in various forms, like drawing-in intriguing and/or surprising information (e.g., fun facts), posing thought-provoking questions, interesting and relatable storytelling as well as use of props (this can include eye catching graphics or visuals).

For learning to be engaging, it is important that learning experiences are uplifting, for instance, contain elements of fun. Strategic use of humour (novelty) is conducive to creating positive and welcoming learning sessions. Humour can break down barriers isolation and alienation to help ensure learning is an enjoyable and all-inclusive experience while at the same time one that is developmental and outcomes based.

Designs for lessons and activities include discussion-based activities for grasping and building meaningful understandings and applicability, problem/solution-based activities, frequent practice-based activities for skill building e.g., writing for media activities and quiz-check activities for evaluating recall and reinforcement of critical and essential skills and knowledge.

Hybrid learning design, which blends presentation of short units of information with predominantly activity-based learning sessions is growing in popularity and proving effective for increasing learning and engagement.

An awareness of options and possibilities allows us to select, adapt and trial methods in ways that best suit our subject areas and learners, as well as leverage our own style and teaching strengths.

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5.

LEARNING SUPPORTS

Introduction

Previous chapters have covered reducing volume to making learning more inviting and manageable (Chapter 2), then bite-sizing learning sessions and recordings (Chapter 3), and developing engaging delivery and lesson designs (Chapter 4). This chapter focuses on how we can further reduce barriers to learning and engagement with the use of supports. Support measures we can provide include; short videos and written messages designed to motivate learners to keep going, (e.g., with encouragement and assurances), useful advice and guidance and communicate in ways that personalise their study experience. The messages we design, like tips on studying efficiently and guidance on assessments, can ease student load and impediments to success.

Student support serves as a student-centred support component in microlearning design. Providing support, can make a world of difference, especially for those who are vulnerable to losing hope and giving up. For many, supports we can build in, can be effective in activating motivation and instilling confidence they need to proceed and stick with it. It is often a critical factor for getting students engaged and keeping them engaged to retain them over the long term. While support measures, as covered, require some time and effort, this can be contained with routine and streamlining and pre-empting and catering for student support needs can also pay efficiency dividends.

Supports include lecturer presence, with brief lecturer videos, starting with a Welcome to Course (2 or less minutes), these can then be followed with Introduction to Week (preview) videos to stimulate interest, engagement as well as personalise the experience for students and help build sense of belonging. Students who feel comfortable and familiar with their lecturers, tutors and class peers are more likely to engage and less likely to feel isolated (Congiu & Moscati, 2021).

The concept of ***nudging***, at its broadest level, is seen as a key support-provision approach in the context of this book and involves personalised and supportive messaging. This includes messages of encouragement, nudge messages that prompt students to engage with learning resources and study related activities, assignment tips and reminders for upcoming due dates. While nudging is commonly understood as the sending of written message prompts, lecturer videos (mentioned above), also work in similar ways, as they too, are often used to promote engagement with concepts and recommended resources to help ensure success in a course. Announcement messages can be used to promote awareness of institutional support services, including learning and wellbeing.

Another important way to support our students is with the kind of feedback we give on assessments. Feedback that is specific and focused on improvement for future performance assessments or work type

tasks, e.g., public relations content writing. Where possible, feedback should be as instructive as possible. Ideally, feedback should maximise the efficacy of an assessment, in its function as a learning tool.

Make grading scoring realities explicit to students to minimise and prevent misunderstanding and disappointment and help alleviate damage to satisfaction and motivation.

Lecturer videos

Welcome (overview)

Providing a welcoming and supportive environment from the start is an important first step toward fostering a sense of connection with the course, and the lecturer, with the warmth of a friendly face to humanise the learning experience. A personal welcome by a course lecturer provides a positive start and first encounter.

This support and engagement strategy is aimed at helping students overcome feelings of isolation, especially for those studying remotely and online. While this is important for all courses, it is even more so for large courses where teaching interactions can be mostly with course tutors.

We can use lecturer videos, like a course welcome and course introduction, to try and nudge students towards active involvement and commitment to their learning journey. The personal touch and visual appeal of videos can be used to reduce feelings of isolation (especially in online environments), build sense of belonging, and set a positive tone for the course ahead. While this is important for all courses, it can be even more important for large courses where teaching interactions may be mostly with tutors.

An informal, conversational style works best, so that can see the lecturer is an approachable person and a supportive ally and genuinely interested in the value of the course to students (promote and stimulate interest) as well as the quality of their learning experience, demonstrating 'care factor'. It helps give a personalised experience in feel for students when entering the course. A way to personal delivery.

The lecturer should be foregrounded, so it is best to avoid use of slides. These videos can used for brief advice on succeeding in the course, selling the value to be gained, stimulating interest (e.g. what makes it interesting and rewarding) and conveying expectations, but in a positive and encouraging tone. Keeping videos as short as possible is critical to their success, ideally they should be kept to 1 to 2 minutes.

Learners are eager to see their lecturers 'in person' in videos, particularly, in welcome videos. But in many cases, they do not appear, and opt for voice-over slides. The problem here is that students want to see you! If you were in the student role, you would want that too.

Lecturer appearance is often talked about in the language of 'lecturer presence' an apt term that helps support why foregrounding physical appearance is important. It provides a way for students to connect with the teacher in a way that helps to humanise and personalise learning and in effect provides emotional support. While a welcome video is used to establish a connection, we can then continue to develop connection with follow on weekly introduction to topic videos (discussed next).

The example (below) '*Welcome video*' (video; 1'41"; CC-BY) establishes teacher presence, and prepares the foundation for connection.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=374#oembed-1

Ingredients for effective course welcomes include:

- enthusiasm: for the course and learners
- showing care: connection with concern for student success and positive experience
- brief but interest-capturing introduction e.g. what makes the subject area exciting, appealing and/or worthwhile (keep brief, follow on weekly videos can be used to further stimulate interest)
- concluding with a prompt for action to help students get active and involved. For example, asking students to introduce themselves on a course forum, recommending they familiarise themselves with the assessments and begin studying the first module.

Introduction to week

While similar to welcome videos, (as above), the aim here is to preview the week's topic, a taster to stimulate student interest, encourage engagement and build a sense of connection to their teachers, and the learning process itself (i.e., to view the learning as a worthwhile investment in themselves).

Providing a 1 to 2 minute introduction for each week and module topic, delivered by the lecturer, not only personalises learning and increases sense of belonging and connectedness, but is again used to promote interest the topic and related subtopics week by week to sustain engagement. We can create interest by highlighting an intriguing aspect of the week's content or practical value i.e., what is to be gained. We can also use these videos to encourage engagement with high priority learning resources, for example, a textbook chapter, or a reading, or video.

Design tip

A lesson I learned through experience was that making 1 to 2 minute 'Introduction to module' videos can be done quickly and easily, especially, after the experience of making the first few. When I first started, I was making 5 to 6 minute videos and the time and effort needed to select and sequence the volume of detail and trying to ensure the video would be able to sustain attention, was much more difficult. Return on investment of time and effort for these longer videos at the rate of one a week was poor compared with the ease of short videos.

These videos are an opportunity to point out what makes principles to be covered interesting and to link to relevance, like the benefits students should expect to gain from this section knowledge. The importance of 'selling' engagement in the week's learning resources should not be underestimated. In do so, it is important to not only mention content topics, like concepts, but to refer to and promote and recommend content in the week's learning resources [1].

If we want students to engage with resources, we should be promoting interest factors, like, what makes this author's insights interesting and what is the value to be gained from a reading. As pointed out in Chapter 2, on reduction, if a reading is not worth mentioning, then we should ask "is it really worth keeping?"

These videos supplement engagement approaches covered in Chapter 4 learning design, like – drawing on interest (e.g., fun facts), injecting positivity and enthusiasm in classes to promote and generate interest in topics and material for starting each week. These steps are important because they help address risks that around perceptions that topics are not interesting (i.e., appear boring).

These weekly videos also fit with well with the microlearning delivery strategy of learning in small steps, key concepts are introduced, and students then begin their study for the week with some familiarity already established. In microlearning speak, some would categorise this as pre-teaching akin to prepping i.e. preparing or priming, prior to engagement with learning sessions and reading resources. In this sense, introduction to topics, is a delivery method and learning support combined.

Weekly videos are often best delivered by the lecturer, but they can be done by a course tutor, if need be. Alternating video presentations between lecturer and tutors can help build familiarity with both while also adding variety to the learning experience.

1. Promotion or 'selling' content videos like these are somewhat similar in strategy to nudging (covered shortly), because they also encourage students to engage with priority content and resources.

To help ensure the videos personalise learning, the lecturer or presenter should be foregrounded as much as possible. This includes keeping slides to a minimum, if used at all, to ensure screen display foregrounds the presenter. The frequency of weekly introductions is method aimed at providing continuity of connection for building and maintaining a sense of personalisation and belonging.

The three videos (below) offer examples of '*introduction to week*' videos to build continuity of connection.

Example 1: '*Introduction to Week (1) – Qualitative Research'* (video; 3'14"; CC-BY)

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Example 2: ''*Introduction to Week (2) – Criteria for Qualitative Research* (video; 2'03"; CC-BY)

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Example 3: ''*Introduction to Week (3) – Quantitative Research* (video; 2'18"; CC-BY)

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Assessment guidance

Short lecturer 'how to' video guides provide added support to assist with assessments. They help students to apply content more effectively for producing well focused assessment work. They can be used to help students avoid pitfalls, like misinterpretation of assignment instructions and to guide them so they address the tasks and criteria required for assessments correctly.

Videos are a relatable medium for students for conveying what is required of them to effectively and successfully undertake assessments. Again, a conversational tone can be used to create the feeling of the lecturer speaking directly to students in a manner akin to a face-to-face learning experience. The lecturer or teaching team member can foreground themselves for the opening before going on to display and work

through task instructions and marking criteria along with any other material that is useful, for example, checklists, points of note, pitfalls to look out for, etc.

A guidance assessment video should be provided from each assessment and therefore tailored for exams. A video length of 2-4 minutes for each works well. For assessments that require more time, like large or complex assessments, longer recordings can be segmented into instalments.

Providing or including an explanation of the relevance of the assessment, e.g. value of an assignment to employment or job capability or proficiency, is an option, but not needed if relevance details are already provided in the opening to assignment task instructions.

If relevance e.g., to industry, information is included with assignment instructions, ensure explanations are short and avoid repetition. Adhere to microlearning design principles of keeping materials as clear, direct and succinct as possible to reduce unnecessary overload to allow focus on the most essential and critical information. A good check-question to ask here: Is this information adding or detracting from the purpose of – useful 'need to know' assignment guidance?

Instructional 'how to tackle' the assessment item is very useful for students. A tour of the marking criteria and marks allocated also helps ensure that criteria are not overlooked and that they are fully addressed. Providing tips, like common pitfalls, help fend off slippages in criterion score. Doing this is an example of '*feeding forward'* ahead of post assignment feedback.

The first assessment guidance video (below) is informal in tone, and an update and addition to two previous assessment guide videos and as such more general (i.e. less specific).

Example 1: '*Assignment guidance 1*' (video; 1'44"; CC-BY), is informal in tone, and an update and addition to two previous assessment guide videos and as such more general (i.e. less specific).

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=374#oembed-5

Example 2: '*Assignment guidance 2'* (video; 1'50"; CC-BY), a snippet only, of a tour of the marking criteria for an assignment requiring more length than most due to the complex of the task.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://usq.pressbooks.pub/microlearning/?p=374#oembed-6

Nudging: to encourage, promote and support

Nudging refers to the use of positive message prompts and messages of support and guidance that are conveyed in a gentle and personalised style. They are often used to encourage students to engage with online learning resources and keep them on track with their progress. This support helps students manage assessment tasks, i.e., start and complete on time, lower the risk of falling behind, and flow on effects of becoming overwhelmed to the point of not completing assessments – ultimately risking failing a course (Graham, et.al., 2017).

Nudging is a learning support intervention technique designed to encourage learners to engage more actively in courses (Congiu & Moscati, 2021). It is a useful for motivating learners and for sustaining motivation to stay engaged and thus increase their chances of successful completion. Support can be especially important for online students who have fewer ways to engage and receive support, and often have greater demands on their time and attention, e.g. jobs, young family.

Learning resources nudging is the most widely known form of nudging in online learning education. Formally, and mostly commonly known nudging, is the Nudging Protocol (Congiu & Moscati, 2021), it is used for promoting engagement with course learning resources identified as most important or critical to success. Resources promoted, are often, but not limited to, set readings, probably because longer form text materials can seem more difficult and thus less inviting. Nudge messaging can also include reminders and alerts, like, nearing due dates.

A key principle underpinning the nudging strategy is that their effectiveness is not overusing them. Nudging becomes *nagging* when used too often (Congiu & Moscati, 2021). At worst, overused and overly directive nudging can overwhelm learners and make them feel that they are being threatened and criticised, and demotivate rather than motivate them. Overuse adds to information overload and as such, annoying 'noise' or clutter than can turn students off reading messages, let alone accessing resources and advice within. Overdoing engagement initiatives leads to engagement fatigue.

Resource: Pre-Nudge (week 1): Delivery as Forum announcement

ANNOUNCEMENT – IMPORTANT ASSIGNMENT RESOURCE

Review "Assignment One: sample" to help you get a start on studying the modules leading up to the assignment and for preparing for the first assignment.

Follow up: Nudge 1: (week 2) – Selected students, from LMS, received as email

Targeted message to students who have not accessed a previously promoted learning resource are issued as a follow up reminder and prompt.

Dear ABC1000 Class Member

REMINDER: SAMPLE ASSIGNMENT ONE

This is a gentle reminder, to remember to review Assignment One – Sample as recommended last week – doing so will help make sure you're on course in studying the course and doing well in this assignment.

Remember, I am here to support you in succeeding in ABC1000, you are welcome to contact me.

Final follow up: Nudge 2: (week 3)

A final third nudge, is optional, to selected students, the previous message can be reused or reworded.

Example nudge for those yet to access the online course

Dear [name of student]

YOU HAVE NOT ACCESSED THE COURSE YET

The [teaching team] team notice that at the end of Week 2 you have as yet not accessed the course. Please access the course to familiarise yourself with the course, and importantly the assessments as soon as you can. There is a recorded presentation to complement Assignment 1 instructions you can find in Useful Links Tab at the top of the Study Desk. Remember, the course team re here to support you for success in the course.

Direct messaging: Encouragement and support

Direct messaging usually involves messaging all class members, with the option of selecting students in need. It retains a direct and personalised style of communication in tone and feel, and probably more so than posting information and announcements on course forums because students receive these as emails. These are generated via the online learning platform and sent once a week, and when warranted, two in one week, being mindful to avoid excessive sending of messages. Having said that, email messages have the advantage of reaching students who may not have checked forums for messages and updates.
These 'check in' messages of encouragement, are aimed and trying to stay connected with students and provide encouragement and support. It is a strategy that works in conjunction with weekly videos, so they can also be used to promote interest in upcoming classes and topics and concepts being covered.

Check-in message: To promote class attendance

Dear ABC1000 Class Member

I hope you are enjoying [course name name]

REMINDER: CLASS TODAY 6pm

Our classes are short, practical and engaging, so drop in and join us.

This week we look at how to address ethics requirements for research and projects.

The topic is relevant and will help you with your next assignment.

We encourage you to bring questions and points you'd like to discuss.

Remember it's your class.

Look forward to seeing you 6pm!

Chris

Check-in message: Assignment due reminder

Dear ABC1000 Class Member

Special Greetings in the lead up to holiday season!

Remember we have a class today, Monday 7pm (Queensland time).

ASSIGNMENT DUE REMINDER

Assignment 1 is due 8 January (19 days away) but time will pass quickly with holiday season almost upon us.

I understand the pressure of studying over the holiday period, also, we don't want you feeling isolated while you are working to complete your assignment. So remember, you are still welcome to contact me during this time, but understand replies may sometimes be delayed a

day or two.

ASSIGNMENT TIP

Remember to include 'quality criteria for qualitative research' from Module 6 in your assignment. Some students have overlooked this in the past – but there are good marks to be had here by remembering to include them.

The lecture this week provides some practical support along with a demonstrative example to help you apply this in your assignment.

Check-in message: Helpful tips

Dear ABC1000 Class Member

My thoughts are with you at what can be a stressful time of semester. This is another check-in message of encouragement to keep going with the assignment

HELPFUL TIPS

Approach assignment as a series of smaller tasks and sections (headings: in marking criteria) that you do one-by-one, rather than looking at it as one 'big', whole assignment.

Doing a little each day, or as regularly as possible, a process of building it bit-by-bit can make the task quite easy. You can start by making dot points, as a planning method, for the section headings.

Remember, you do not need to go it all alone, especially if you're experience concerns or

difficulties.

I am here to help you succeed!

Resource recommendation as a direct email nudge

Dear ABC1000 Class Member WEEK 1:

RECOMMENDED VIDEOS

I hope you are enjoying the course so far, including our thought-provoking videos. Remember, I am here to support you and help ensure your success.

The first two modules and weeks lay important knowledge foundations on key principles and ideas underpinning science and research. This knowledge is essential pre-knowledge before moving into the study of research methods. You can draw on and include, in brief, some of the key ideas from this video in your assignments.

There is a lot of support available to you including sample assignments to review (these are now on study desk ASSESSMENT). Make an early start, starting by taking small steps often with your assignment work – is the key to success with minimal stress.

Remember, I am here to support you and help ensure your success.

Promoting learning support services

Promoting other learning support services, including institution supports offered by student support services and library services, including study sessions (e.g. mathematics, writing), generic assignment guidance and proof reading services, can be broadcast on course home pages and mentioned sparingly with announcement messages. Be careful not to over-do, i.e. repeatedly promote.

Assessment feedback and expectations setting

Guidance and feedback on assessments is a critical point for providing support.

'Paying it forward' is a useful strategy for pointing out pitfalls where students in the past have missed out on marks due to oversights – a way of heading off problems ahead of submission. Assignment guidance information should be timed to minimise overload e.g., bit-by-bit instalments, e.g., in nudge messaging.

Assessment is not only important for educators as our measure of learning performance, but even more so for our students, it is a 'bottom-line' matter. So, scoring (i.e., grading) submitted work and giving feedback warrant care and attention, as is, showing students that care has been taken.

Feedback should be as instructive as possible and maximise the learning-value an assessment. Instructive feedback is supportive as it provides information on areas for improvement to increase performance and in the quality of their work and where possible in assignments to follow. It should be a component of the learning journey. See Appendix: **Essay advice and Feedback**

Instructive feedback example

Congratulations James – 70% Credit

Your literature review effectively outlines the scope of your research, very well done here.

Further development in places would strengthen the work further still and add significantly more value, see feedback within. For instance, draw more on course readings on research methods (references) to strengthen support and justification for your chosen research methods with more detail about strengths and limitations.

Feedback from this assignment should be useful in assisting you with your final assignment.

Marking criterion-based rubrics: Well detailed criterion-based rubrics can also play an important role as a feedback tool (Refer: Chapter 2 on *Constructive Alignment*)

Setting expectations about grading

Student perceptions on the grades students are awarded for their assessment work is a major source of disappointment and dissatisfaction for many students.

This is understandable because the standards and conventions of grading the system in higher education appear harsh and the number scoring used are not explained early on. As a result, students often find grades they receive for their effort disappointing, demotivating and even distressing.

The answer to clearing up this issue lies in explaining the grade scoring system and making expectations clear is an important support-line for students. We carry responsibility for informing students to minimise and prevent misunderstanding and disappointment; not doing so runs the risk of misleading them. Clear and focused communication is warranted in this area of need, so that we can assist students with maintaining their motivation and help ensure their learning experience remains positive yet grounded.

Accordingly, we need to make grade scores and realities around levels of attainment explicit to students, especially merit grades e.g., 'distinction' and 'high distinction', to help our students realistically manage expectations on higher education grading standards and conventions. This is an area that warrants attention.

Supporting and managing learning journey stresses

The better we understand the stresses our students face the better able we are to be able to support them. Here are some stress factors to consider when working with students:

- Lifeload refers to the commitments learners bring to the study environment. They do not arrive free of other obligations beside study; they too live in a world of competing commitments e.g., work life and time pressures.
- Cognitive load is the load learning places on people. It becomes problematic when it leads to overload, which can be stressful, confusing, and depleting.
- The stresses of life and learning also create emotional strain, which can confuse and erode cognitive processing resources.

Recognising the realities of our learners helps us become more effective teachers. Being empathetic and responsive, including being a good role model, are ways we can support students through their learning journey. Setting respectful boundaries plays at part, pandering, i.e., giving in to unreasonable demands undermines the goal of developing responsible, resilient and self-reliant graduates and self-directed lifelong learners.

Conclusion

Lecturers and teachers have a critical role to play in encouraging student interest and motivation in learning. In addition to high-engagement design features in microlearning aimed at increasing engagement and improving learning performance. Providing additional supports can play a critical role in facilitating a genuine sense of ownership and belonging, and sense of confidence.

Supports include lecturer presence, through lecturer videos starting with a welcome and introduction to

course video. introduction and welcome and introduction to week (preview) videos can be used to help increase engagement and improve student experience. Personalised (styled) messages of encouragement including written nudging prompts can be used to stimulate interest in concepts and principles, promote critical learning resources, convey guidance tips and encouragement, and also, to raise awareness and uptake of available institution support services. We can also support learning with instructive feedback for future performance, especially on assessments.

Weekly introduction videos to introduce and promote topic for the week and personalise learning, reduce feelings of isolation and create interest and curiosity by highlighting interesting aspects of important learning resources and/or concepts to be covered. Short weekly videos personalise learning through a supportive and 'friendly face' for students i.e., lecturer presence, and promote content in ways that enthuse and stimulate interest in topics week by week.

- Nudge messaging helps make learning more engaging and enjoyable for students
- Use nudging to provide positive encouragement messages and prompts, like promoting engagement with learning resources of high importance.
- Assignment guidance support messaging (e.g., short weekly tips), increases grades and completions with the timely reminders and supportive alerts.
- Nudging has the potential to help prevent students from dropping out of courses and foster a culture of academic success by encouraging learners to set goals and monitor their progress.
- Make grading scoring realities explicit to students to minimise and prevent misunderstanding and disappointment (to alleviate depleting of satisfaction and motivation).

List of References

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Attributions

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GLOSSARY

Cognitive Load: the amount of working memory resources one requires for a task / learning task (Sweller 2010; Lovel 2020). A larger and more complex task increases demand on cognitive load.

- **Extraneous load:** in the context of the cognitive load framework, extraneous load refers to load that results from how information is presented (incl., design in the delivery of learning). It translates to 'learning design' load. Our aim as learning designers is to design and present content in ways that ease load. As an added note, interactive lesson design tends to increase learning absorption by actively involving learners.
- **Intrinsic load**: is natural or inherent difficulty of content and its volume (low, mid, high) e.g. ranging from a simple recipe to a very complex recipe.
- **Long term memory:** is the brain's knowledge storage system once new content has been absorbed. It is robust (normally), however, accessing information stored requires retrieval, it carries some limitations. We also depend on it for interpreting and processing information.
- **Cognitive overload stress:** stress associated anxiety, manifests as feelings of being overwhelmed and, or, confused.
- **Working memory:** capacity for information in-take, it equates to a person's processing power. Working memory is highly limited.
- **Germane load:** refers to the mental resources (load) required to grasp and integrate new information into long-term memory. It is closely connected to the concept of ***working memory***, and refers to load placed working memory (i.e., working memory load). Many use the term working memory to refer to germane load.

Constructivist learning: is an approach that posits that learning can be more effective when students have the opportunity to develop or construct their own knowledge for better understandings through active engagement with principles and concepts (Steffe & Gale 2012). We facilitate this through activities that place the student at the centre of learning (discussed earlier). We encourage students to draw on their personal and existing understandings to help learners grasp new information in ways that are meaningful to them (see social constructivist learning).

Practical value: refers to the applicability and usefulness content and/or skills being covered, In the microlearning context, practical value falls into categories applicability to: (a) profession and work competency, (b) competency and preparedness for performance on set assessments (c) transferable knowledge and competencies as life skills i.e. skills for managing the demands of life (e.g. communication, relationship skills), that can also serve profession and work competency.

Relatability: pertains to delivering information in ways learners can relate to easily, to increase appeal and subsequently engagement.

Relevance Linking: is/involves referring to the practical value of content and/or skills being covered. It enables learners to see purpose in material they are studying and being exposed to and as such attracts their attention and motivates interest. The relevance of content and materials are often not apparent to students (a regular criticism in student feedback). The value and efficacy of relevance linking is can inadvertently overlooked, or underestimated, by educators e.g., teachers, lecturers, instructors. (see practical value).

Social constructivist learning: an approach that extends constructivist learning, by going on to posit that learners construct knowledge more effectively when they are able to interact with other learners, i.e. group or peer learning is preferable (Vygotsky, 1978).

APPENDIX

Essay feedback sheet

MARKS ACCUMULATED FOR	Tick as appropriate	OPPORTUNITIES FOR MORE	Tick as appropriate
Question/task addressed		Address/focus on task	
Clearly stated thesis		Develop/refine thesis statement	
The main points support the thesis well		Develop the main points more so they support the thesis more (make regular links to the thesis)	
Provision of argument		Avoid mere description and work toward conclusions	
Convincing argument		Strengthen grounds/reasons	
Balanced argument		More balanced argument	
Understand content		Develop an understanding of the content	
Effective examples		More and better use of demonstrative examples	
Depth of analysis and interpretation		Deepen level of analysis and interpretation	
Well supported/ researched points		Greater use of sourced information	
Clearly expressed		Refine expressions	
Formal tone		Formalise use of language	
Integrated theory with the information		Incorporate relevant theory	
Syntax/spelling		Review and proofread	
Well-presented format		Work on presentation	

General feedback

Remember always – your central aim in an essay task is to argue your stated thesis in relation to the given question. Hence essays were assessed on how well the thesis was argued.

Note that producing an assignment at university level is a demanding task which involves coming to terms with the literacy skills of a new "academic" culture which has many pitfalls. The feedback comments are aimed at providing you with further direction in terms of developing your understanding

of the requirements of an academic paper/assignment. So please do not be discouraged by the feedback comments as they are intended to provide you with constructive criticism – as opposed to a form of punishment.

It is also important to note that the university requires markers to award a percentage mark – from which the grade is then extracted. This means that the marks given may appear to be unduly harsh. To illustrate: 65% = 26/40 = "B" credit level grade. While a "B" level grade represents commendable performance, the numeric representation can inadvertently give the impression of a low level performance.

The grading system is designed to rate and show level of performance, distinction (A) grades and higher indicate very high level and outstanding level performance.

GOOD ESSAYS:

- Started 'on task' with a thesis statement that addresses the set question accurately (that is, appropriate focus) as the first sentence – and then stayed 'on task' by linking back to the thesis regularly
- Consistently provided arguments (i.e., reached conclusions) that support the stated thesis as opposed to descriptive work

ARGUE CASE (FOR, AGAINST or TO AN EXTENT)

For example, "*Why and how public relations has moved away from a manipulation toward credible ethical practices*"

AS OPPOSED TO DESCRIBING – *The history of public relations and surrounding events*

- Provided arguments that were convincing, that is, logical, plausible, and good grounds provided for accepting the conclusions made
- Provided informed arguments with credible sources including course resources e.g. set readings
- Show good depth of understanding of the set topic and related concepts
- Provided examples which effectively demonstrate the plausibility of the conclusions being made (thereby demonstrating applied knowledge and depth of understanding of concept information)
- Adhered to the correct structure (intro, body, conclusion) intro = thesis + overview main points
- Expressed ideas and points clearly, concisely – in a formal tone e.g., avoid cliches and informal language