Motivating and Supporting Online Learners

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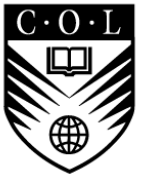

COMMONWEALTH *of* LEARNING

Motivating and Supporting Online Learners

The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources, and technologies.

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Table of Contents

Motivating and Supporting Online Learners

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Course Introduction

You may have heard the phrases "**Build it**, and **they will come**," "**one size fits all**," "**online learning is about putting a bunch of text and resources up for my learners to access**" and so forth. Many people have the impression this is what online learning is about. Some still envision a traditional correspondence distance course.

Some are just too overwhelmed with the myriad of digital technologies today that they are not sure where to start with their online teaching practice. Then they run into issues with:

- Learners' engagement
- Learners drop out
- Teachers are at a loss to know what they have done wrong.

Note

We hope this course, Motivating and Supporting Online Learners, will help to address some of these issues.

Online Learning

Online learning has gained popularity since the emergence of the World Wide Web in the early 1990s. Organisations and institutions are increasingly adopting online learning and training as a means of promoting access to and opportunities for education and training.

Looking to the future, the World Economic Forum (WEF) Future of Jobs report (WEF, 2020) indicated that 84% of global employers surveyed will look to digitalise their processes and expand remote working.

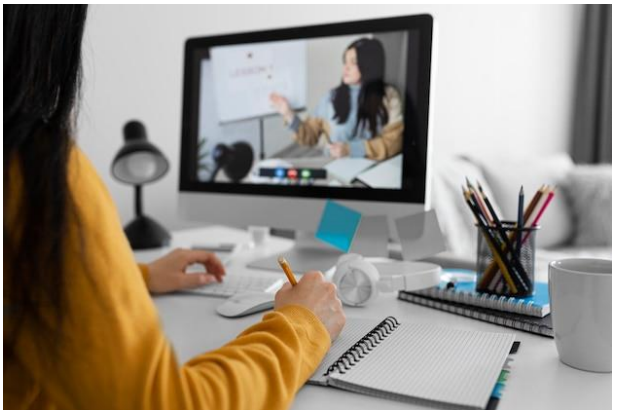
One-third expect to rely on digital and online tools to create a sense of community, connection and belonging among employees.

Need for Online Learning

The global Covid-19 pandemic-induced lockdown in 2020 spawned an exponential increase in diverse online, social media and digital technologies for maintaining and enhancing connectivity (and one's connections within such connectivity), as well as communication, team collaboration and overall community building.

Learning platforms and pedagogical approaches

Over a short span of time, educational and training institutions have had to transfer to and rely on online learning platforms and pedagogical approaches to maintain professional and educational activities.



Although such short-term reliance on online emergency remote teaching and learning was necessary to sustain learning, there is an increasing move towards developing more robust and pedagogically engaging online learning environments (Hodges et al., 2020).

One way forward is to gain understanding and skills related to motivating and engaging online learners.

This course draws from the existing body of research on online learning since the conception of the Web in the 1990s and is based on our combined research and practical experience. A focus on supporting learner motivation is warranted, as it is deemed the essence of education across educational and training contexts (for example, Bransford et al., 2000; Dennen and Bonk, 2007).

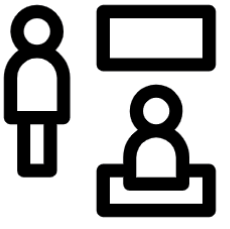
Target Audience and Purpose of the Course

Let's now learn about the target audience and purpose of the course.

Target Audience

Although the course is freely accessible and open to anyone in the world, it is designed for educators and learning facilitators/trainers in general — for example, in-service and/or pre-service educators — from varied backgrounds and levels of experience, intending to further develop their online teaching and learning skills and understanding. Course participants will be introduced to the range of learning opportunities on the Web and will be encouraged to consider how they could personally use and apply various technology tools and web resources effectively in their practice.

Purpose of This Course



The course will focus on ideas that will enable educators to create interactions for a variety of educational strategies to support student motivation and learning across different contexts in online environments.

Covering theoretical principles with accompanying suggested pedagogical strategies/activities, the course will provide practical and innovative ideas for creating active and engaging online learning environments to enhance student motivation to learn. This short course has the general aim of enhancing participants' knowledge, understanding and skills in:

- Creating engaging online teaching and learning environments.
- Enhancing online learner motivation to learn more effectively in their nuanced online contexts.

Book: TEC-VARIETY

The course is based on our book *Adding Some TEC-VARIETY: 100+ Activities for Motivating and Retaining Learners Online* (Bonk and Khoo, 2014), which was published as a free e-book to offer online educators a framework to motivate and meaningfully engage online learners and increase learner retention.

What's in it for Me

Upon completion of the course, you are expected to be able to:

- Understand the online motivation and learning theories underpinning the TEC-VARIETY framework
- Use the framework to develop strategies for mitigating challenges affecting online educators and online learners
- Recognise the issues and challenges faced by online learners and educators
- Identify the ten principles of motivation in the TEC-VARIETY framework
- Discover the different pedagogical strategies associated with each of the ten principles to create more engaging online teaching and learning environments

Learning Journey

This course has six modules, below is an overview of the course modules.

Theory: Practical Teaching & Facilitating Learning Activities

Module 1: Introduction and theoretical underpinnings

Module 2: Supporting online learners and educators

Module 3: Engaging online learners through the principles of tone, encouragement and curiosity (TEC)

Module 4: Engaging online learners through the principles of variety, autonomy and relevance (VAR)

Module 5: Engaging online learners through the principles of interactivity and engagement (IE)

Module 6: Engaging online learners through the principles of tension and yielding products (TY)

Modules 1 and 2 lay the foundational conceptual and theoretical ideas for the course, while Modules 3, 4, 5 and 6 offer a range of practical online teaching ideas and activities relating to specific motivational principles. Although you are welcome to access the modules in any order according to your interests, the course has been designed in this particular sequence to provide you with a core foundation before progressing to the practical online motivation-related pedagogical strategies in the course.

Module Structure

Each module is organised in a similar way, beginning with an overview of the module's learning outcomes. This is followed by an introduction that sets the scene to focus on participants' learning. Further, the content is derived as follows:

1. Contents in each section of the module will progressively unfold and make use of videos, tables and figures.

2. Summaries at the end of each module will help participants revisit and reinforce the key ideas covered earlier.

3. As self-assessment is an important component of this course, participants will have opportunities through the Checkpoint Questions to check their understanding of key ideas in the module.

4. Responses to these questions, and further recommended resources and references, are provided at the end of each module.

5. We will refer participants to the relevant chapters in our book at *Adding Some TEC-VARIETY* to further explore most topics mentioned in the modules.

Let's Get Started

We hope you enjoy working through the modules, watching the videos and self-assessing your understanding as you progress through the course. All the best in your professional learning and exploration.

Module 1

Introduction and Theoretical Underpinnings

Learning Objectives

Upon completion of this unit, you are expected to be able to:

- Define online motivation and learning
- Recognise common learner and educator issues in online learning contexts in relation to online motivation
- Describe the four different theories of learning underpinning the TEC-VARIETY framework
- List the ten motivational principles in the TEC-VARIETY framework for motivating online learners
- Describe how the TEC-VARIETY framework can be applied in practice

Introduction and Theoretical Underpinnings

When online learning gained popularity in the 1990s, especially in adult learning, higher education, and government agencies, many were intrigued and jumped at the opportunity to offer their courses online. Other sectors, such as schools, started to adopt online learning in the early 2000s. The early days of online teaching and learning were characterised by key issues such as:

- Online course contents being purely text-based and prescriptive
- Adhering to a one-size-fits-all teaching model
- Information dissemination

These led to the term electronic page-turning, as that was basically what learners had to do. Unfortunately, in some instances today, these issues are still being encountered, with concerns raised about learner completion rates, sustainability, cost-effectiveness, low-quality content, slow or minimal feedback from educators about learners' online work, and the general impact of online learning or training programmes.

Note

In this course, we use the term online and Web interchangeably to refer to the activities and digital technologies that are supported on the Internet.

Advantages of Online Learning

In today's age of Web 2.0 and progressing towards Web 4.0, there is much free and open learning content available, enabling learners to take advantage of web-based and digital technologies to interact, collaborate and create.

Note

This has in part driven the evolution from Education 1.0 to 4.0 and perhaps even beyond (Almeida, 2017; Salmon, 2019). The list of technologies today and possibilities for using them are limited only by educators' imagination and willingness to try them out.

Let's hear it out from learners' and experts' perspectives.

Learners no longer have to be passive consumers of knowledge and learning, as they can now add and contribute to one another's learning. They can interact, collaborate and participate in dynamic learning environments relevant to their learning interests and work on their professional aspirations and development.

Experts from around the world can be invited into the classroom, or global mentors and peers can be accessed for discussions and debates to enhance reflection and understanding.

This increases the curiosity and feedback and offers the learners a more authentic audience beyond their local context, all of which can enhance learner motivational levels.

As motivation is a key term in this course, we will look at what it means in the next section before delving into a framework for supporting and enhancing online learner motivation and learning.

This module introduces various concepts, as it:

- Defines online motivation and learning.
- Introduces the TEC-VARIETY framework for motivating online learners with its ten motivational principles.
- Outlines four key theories on human learning and motivational concepts underlying the framework — behaviourism, cognitivism, constructivism, and sociocultural theory — and their explanations for the role of motivation in learning online.
- Includes key psychological principles of the framework, such as feedback, psychological safety, control, dissonance, fantasy, engagement, goal setting, and interactivity, which are most relevant to online learning environments. The overall intention is to help educators, trainers, and instructional designers create more motivationally effective and engaging learning environments.

Introductory Video

Watch the video to get a better understanding of the introduction and theoretical underpinnings.

"*Motivation is the art of getting people to do what you want them to do because they want to do it*".

– Dwight D. Eisenhower

Watch Video: Introduction and theoretical underpinnings

Defining Online Motivation and Learning

One of the key challenges faced by new online lecturers is that of motivation. How do they motivate their learners to engage productively in web-based learning environments? In web-based contexts, understanding what motivates learners to study online and to continue their studies through to completion can give educators insights into how best to design and structure online courses to productively engage their learners (Hartnett, 2019). Enhanced knowledge of learner motivation can inform educators why some learners are more likely to be more successful than others in their online learning journey. Let's see how different scholars define the definition of motivation.

Atkinson (1964):

Defined motivation as "the immediate influences on the direction, vigour, and persistence of action". (p. 11)

Maehr and Meyer (1997):

Motivation can explain the initiation, direction, intensity, persistence and quality of behaviour, especially goal-directed behaviour.

Wlodkowski (1999):

Expanded on this definition to describe motivation as

"…the natural human capacity to direct energy in the pursuit of a goal.... [W]e are purposeful, we constantly learn, and when we do, we are usually motivated to learn, we are directing our energy through the processes of attention, concentration and imagination, to name only a few, to make sense of our world." (p. 8)

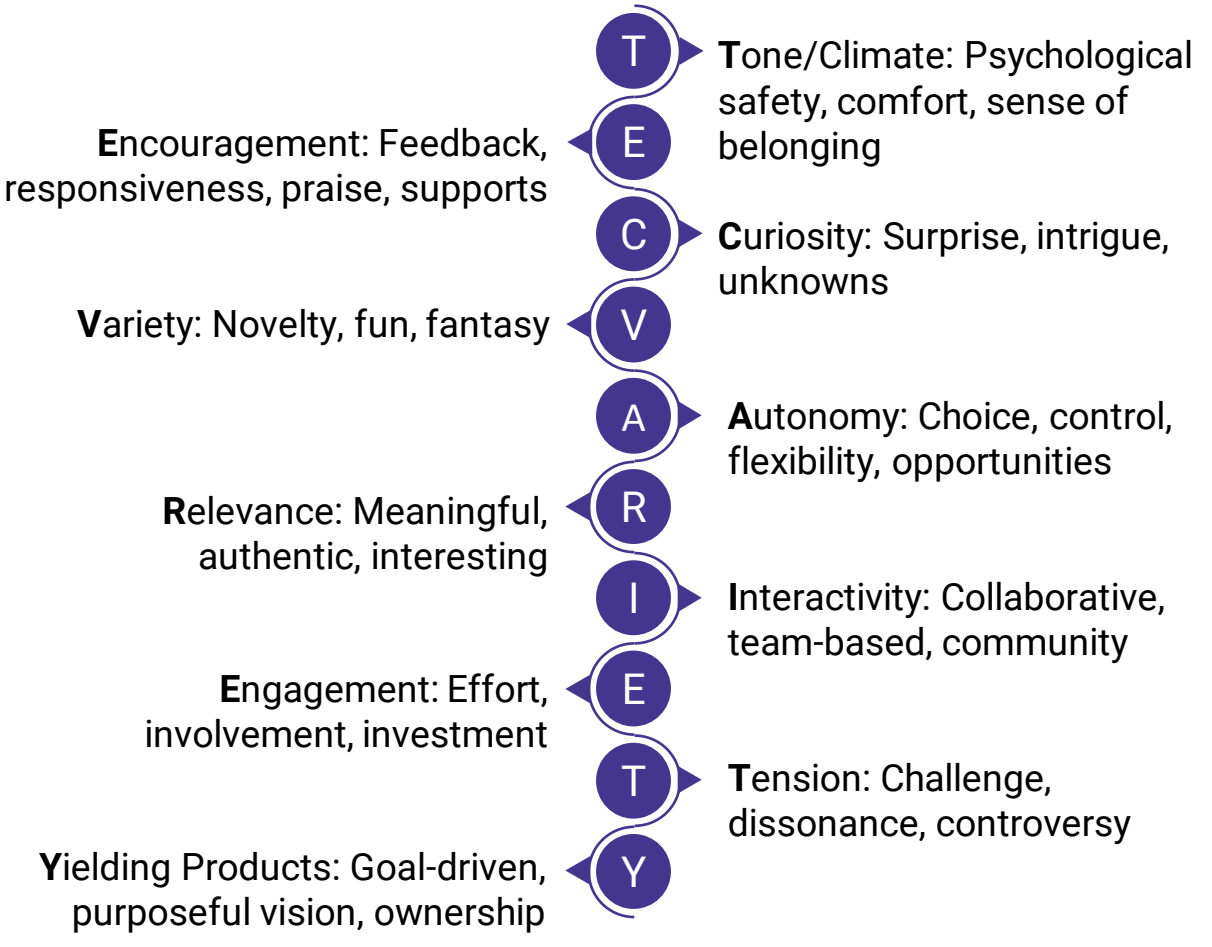
Fundamental in these definitions and viewpoints is the idea that human beings are purposeful in their actions and intents; that is, they focus their energies and interests in the process of striving toward a desired goal.

Educational theorists have typically considered the issue of human motivation based on current thinking about how humans learn. Much has already been researched and reported on the topic of motivation in education (for example, Ames & Ames, 1989; Deci and Ryan, 1985; Schunk et al., 2008; Stipek, 1998).

The next few sections introduce the TEC-VARIETY framework based on research on human motivation and learning before scoping the theoretical ideas underpinning the framework.

The TEC-VARIETY Framework – An Introduction

Motivation has a direct bearing on learner satisfaction and ultimately, their retention in online and blended courses. The TEC-VARIETY framework is a synthesis of research and practical ideas for enhancing online pedagogy and guiding online learner success. The framework condenses different aspects of learner motivation as explained by theories of learning and motivation. The TEC-VARIETY framework has ten main principles. Each letter of TEC-VARIETY stands for one or more motivational principle.



TEC-VARIETY – Comprehensive Look

Each of the ten principles plays a key role in the creation of motivating online learning environments.

Benefits for educators

Educators who pay attention to enhancing student motivation can capture student interest in the specific learning activity and even in the overall course or programme.

Benefits for researchers

Much research in the online learning field highlights the importance of moving away from traditional learning formats, with teacher-telling or lecture-based practices, to an environment where there is much more learner active participation, discussion and reflection on content.

Benefits for learners

Besides a desire to learn, students need to feel curiosity and excitement about the course contents, as well as some sense of tension and challenges along the way.

Learner choices

Offering learners choices and control over their learning destinies and some degree of flexibility in learning helps to empower them.

Learners take ownership

When students take ownership over their learning, and when galleries of learner projects and products are on display for others to discuss and debate, a more hands-on, collaborative and active learning environment is created (Kim and Bonk, 2006).

Learner success

Learners also experience success when they feel they know each other well and trust their peers to collaborate.

Note

The TEC-VARIETY framework can guide and facilitate online courses and activities towards such educational transformations and be a catalyst for discussing, developing and delivering online courses or course components.

Rating Parameters

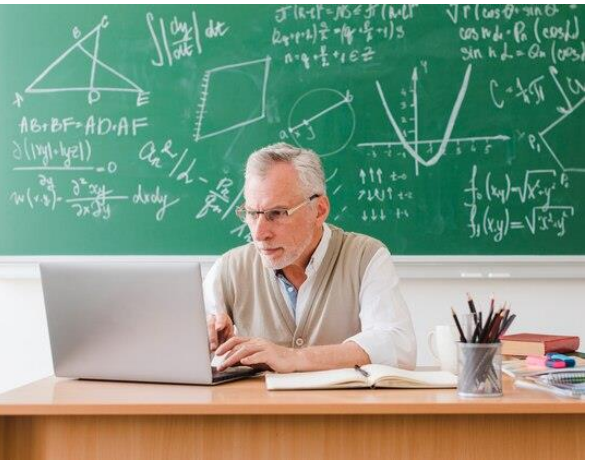
Each of the ten motivational principles in the framework is supported with at least ten online pedagogical strategies/activities, which make up 100 easy-to-implement online pedagogical activities (see Modules 3 to 6). Each pedagogical strategy/activity is further detailed according to:

- The degree of risk an activity poses: For educators, this is in terms of how much risk they are taking to trial/try out this new tool/activity; for learners, it could be in terms of how much risk is involved in their sharing personal information/work with their classmates
- Time
- Cost
- Degree of learner-centredness
- Duration

All of these are rated from low to high.

Although most online educators will initially begin by experimenting with low-risk, low-cost and low-time activities in their teaching, more-experienced educators may be willing to trial the use of activities involving higher risk, cost and time that they have not previously considered.

100+ Activities for TEC-VARIETY



Refer to annexure 1 for an overview of the ten main motivational principles of the TEC-VARIETY framework and the corresponding 100 activities, which will be detailed in Modules 3 to 6.

The following sections will consider the various motivational ideas through a brief overview of four major theoretical areas on which the TEC-VARIETY framework is based:

- Behaviourism
- Cognitivism
- Constructivism
- Sociocultural perspectives

Click annexure 1 to know 100+ activities for TEC-VARIETY.

TEC-VARIETY – Four Theoretical Perspectives

Much has already been written on the following theoretical ideas, and for further details, participants can refer to the many handbooks, reports and articles that have been published on learning theories. The key ideas in each of the four theoretical perspectives in relation to the TEC-VARIETY framework are highlighted here.

Behaviourism	Learner motivation through carrots and sticks
Cognitivism	Learner motivation through intentional goals, beliefs and expectations
Constructivism	Learner motivation through the active and social construction of meaning
Sociocultural Views	Learner motivation through considerations of the cultural milieu

Note

On the next few screens, you will learn about them in detail.

TEC-VARIETY – Theoretical Perspective: Behaviourism

Behaviourists generally believe in scientific and objective measures of behaviour to provide plausible explanations for learning. This theoretical perspective was prominent throughout the first half of the twentieth century and still permeates educational settings today. Examples include highly structured or “canned” approaches to online course delivery as well as in Massive Open Online Courses (MOOCs), which often rely on the educator’s preset delivery of content and later student regurgitation of it in computer-scored objective tests.

Central Aspect of Behaviourism

A central aspect of behaviourism is that animals (including humans) learn by associating a stimulus with a response (or paired responses) that is promoted through external manipulation. In effect, human behaviour can be reinforced or extinguished. It can also be shaped through rewards or punishments — hence the notion of carrots and sticks.

Although considered antiquated by many psychologists and educators today, behaviourist elements still exist in many education, training and clinical settings. For example,

Educational Strategies

Educational strategies embracing behaviourist ideas were pervasive in first-generation online learning programmes through their use of clear objectives and learning outcomes, clear presentation of content and multimedia materials and the incorporation of online testing to assess the individual learner's achievement and provide rapid and individualised feedback.

Extrinsic Motivation

Extrinsic motivational factors such as online scaffolds and guides, praise from tutors and instructors, and certificates offered on the way to master's degrees are deemed important to online learners (Singh et al., 2012).

TEC-VARIETY – Theoretical Perspective: Behaviourism and its Principles

Encouragement and feedback principles provided by the different scholars.

Skinner (1938)	Highlighting the role of feedback in enhancing student motivation and learning.
Wang and Wu (2007)	Providing feedback has been shown to enhance student performance and self-efficacy in learning.
Chickering and Gamson (1987)	Timely feedback is widely recommended as part of an online lecturer's pedagogical repertoire and is consistently mentioned as a vital principle of effective teaching and of learning in general.

Note

Based on the theoretical and empirical ideas emerging from this era, behaviourist ideas related to shaping, feedback and support underpin the second aspect of the TEC-VARIETY framework.

TEC-VARIETY – Theoretical Perspective: Cognitivism

In the 1970s and 1980s, cognitivist theories became prevalent and shifted behaviourist ideas emphasising external or environmental conditions towards a focus on the internal or mental processes occurring between a stimulus and response (Schunk, 2008). Simply put, the black box was opened up.

Learning Became Analogous

With the rise of the computer and computing technologies, human learning or information processing became analogous to computer processing that could address more complex forms of learning (thinking, memory, problem-solving, language, concept formation, information processing) (Ertmer and Newby, 1993).

Cognitive Psychology as a Process

Learning in the era of cognitive psychology was viewed as a process of knowledge acquisition, where the teacher transmitted information and assisted learners to develop more efficient processing strategies to organise information in a meaningful way. From this viewpoint, learners are active seekers and processors of information, able to attend to, code, select, transform, rehearse, store and retrieve information. Along the way, they develop the appropriate metacognitive skills, including self-planning, self-regulation and summarisation. With such skills in place, learners can assert greater control over their own learning (Schunk, 2008).

TEC-VARIETY – Theoretical Perspective: Cognitivism – Various Theories

At the height of the cognitive psychology movement, much headway was made in terms of motivational theory development (Brophy, 2010; Svinicki, 1999). Key motivational theories derived at that time included attribution theory (Weiner, 1980), self-efficacy (Bandura, 1989), goal-orientation theory (Ames, 1992; Dweck, 1986) and self-determination theory (SDT) (Deci et al., 1991). Let's learn about each one of them in detail.

Attribution Theory

Attribution theory focuses on explanations for motivation based on individuals' beliefs about the causes of their success or failure. Learners may attribute their success or failure on a task to themselves (for example, their own ability) or to external situational factors (for example, luck). Teachers can take appropriate measures to focus students' attention on factors that they have control over instead of uncontrollable external forces.

Self-efficacy

Self-efficacy is the belief in or judgement of one's ability to perform a task at a certain level to achieve particular goals. Learners with a high self-efficacy for learning believe in their ability to successfully initiate, cope with and complete their learning task. Self-efficacy determines the level of effort and the degree of perseverance a learner is willing to invest when faced with setbacks (Bandura, 1986). Bandura's notion of self-efficacy and self-regulation has been successfully applied in the design of motivationally engaging online learning environments to encourage learner personalisation, adaptivity, effective tutoring, and collaborative learning (Cocea and Weibelzahl, 2006).

Goal-orientation Theory

Goal-orientation theory examines individuals' cognitive motives and their relationship to intrinsic motivation. It highlights learners' behaviour based on the type of goals they hold, such as learning goals or performance goals. When focused on learning goals, students are motivated to learn for intrinsic reasons, such as to enhance their knowledge, skills and attitudes. Students with performance goals, on the other hand, are motivated by the need to demonstrate their competency and capability, especially in competition with their peers. Performance-oriented goals tend to lead to more shallow and less diverse learning strategies.

Self-determination Theory

Self-determination theory (SDT) describes motivation as being intrinsic or extrinsic in nature (Deci et al., 1991). Intrinsically motivated individuals are driven by an interest in or enjoyment of a task, whereas extrinsically motivated individuals are driven by external rewards such as grades, punishment, coercion and money. SDT emphasises that individuals need to be self-determining or to have some degree of control in determining behaviour. Importantly, it advocates that individuals' natural and intrinsic tendency to grow and develop can be fostered through supportive learning contexts that encourage learner autonomy, competence and relatedness (Ryan and Deci, 2000). Autonomous individuals exhibit higher levels of control and tend to experience a sense of freedom and choice over their actions.

TEC-VARIETY – Theoretical Perspective: Cognitivism and its Principles

Cognitive psychology research inspired many experimentations with distance learning. A cognitive approach leverages the processing and multimedia capabilities of the computer to present information in different modes — textual, verbal or visual — and to allow learners to explore such materials according to their personal needs. This approach encouraged information encoding through the use of concept maps as well as analogies and acronyms. Similarly, online notecards, outlining tools, task aids and question prompts could augment or support learners' limited working memory capabilities when reading or writing (Bonk et al., 1994). Let's now learn about cognitivism principles.

Autonomy

Studies on how to facilitate learner intrinsic motivation support the need for autonomy, competence, and relatedness (Pink, 2009). Hartnett et al. (2011) studied how situational factors can disrupt online learner autonomy and competence, thereby having an adverse impact on learners' levels of intrinsic motivation and collaborative effort in a blended learning context. Without sufficient intrinsic motivation, online learners will fail to elaborate on their arguments or problem solutions in group discussions (Xie and Ke, 2010). Not surprisingly, Xie et al. (2006) found that learners' intrinsic motivation was significantly related to their participation rates and thus to the overall learning process. In fact, intrinsically motivated learners exhibited two to three times the participation rate of those who were extrinsically motivated.

Curiosity

Applications of SDT in educational settings to promote learners' intrinsic motivation have been extended to include learner-centred elements in the design of face-to-face as well as online courses. Such elements include enthusiasm, challenge, curiosity, choice, engagement, control, novelty, fun, fantasy, relevance, collaboration and project tasks (Deci et al., 1991; Kawachi, 2002; Lepper and Hodell, 1989). Developments in using games in education also draw from intrinsic motivation (e.g., Malone, 1981). Games can be used to foster a sense of fun, fantasy, challenge and curiosity. Curiosity (surprise, intrigue) and autonomy (choice, control) underpin the third and fifth components in the TEC-VARIETY framework.

TEC-VARIETY – Theoretical Perspective: Constructivism

Although cognitivism is progressive in bringing the need for students' control of their own learning to the forefront, it is still a highly individualistic concept of learning and knowing. In the 1980s and into the 1990s, constructivism became increasingly popular in promoting a view of learning where learners are actively involved in creating meaning from their experiences instead of being spoon-fed knowledge through instruction (Ertmer and Newby, 1993). Proponents of constructivism included notable theorists such as John Dewey, David Ausubel, Jerome Bruner and Jean Piaget. Let's learn:

Constructivist Views

Constructivist views consider learning to occur best in problem-based settings where learners can make use of their prior knowledge and experiences to explore, inquire, interpret, reflect upon, judge and construct understandings for themselves.

Constructivist Approaches

Constructivist teaching approaches shift the focus from the teacher to the learner. In this approach, the teacher becomes the coach or the guide at the side who helps learners acquire knowledge on their own schedule.

Constructivist Strategies

Specific constructivist-advocated teaching strategies include many active learning principles such as situating tasks in real-world contexts, goal-based learning attuned to learner interests, and guiding and coaching a novice toward expert performance, as in a cognitive apprenticeship (Collins et al., 1989). Using authentic examples and offering opportunities for reflective awareness about solutions are important for fostering the development of self-regulatory skills (Jonassen, 1994).

TEC-VARIETY – Theoretical Perspective: Constructivism and its Principles

Let's now learn about constructivism and its principles.

Tension

Motivational theories that embrace constructivist ideas encourage learners to have "consistent, accurate and useful understandings of the world" (Svinicki, 1999, p. 20). For example, Jean Piaget (1926) and his followers found that tension or controversy can move learners into a state of disequilibrium, thereby motivating them to find out more information in order to return to a state of equilibrium.

Variety

Constructivist-inspired pedagogical ideas in online learning have included, for example, the use of online games. Leslie Miller and colleagues (2011) at Rice University found web-based forensic games to be useful in engaging secondary school science students to consider science, technology, engineering and mathematics (STEM) careers.

The games were designed to be ill-structured situations where students had to role-play and solve a real-life scientific problem. This process appealed to students and challenged them to engage with new science ideas in a novel manner. It also tapped into their imagination and provided a fun and relevant context for them to engage with science content. At the end of the study, students' content knowledge increased, and more importantly, the role-play exercise enhanced their motivation and interest in pursuing future science careers.

Setting the Tone/Climate

Learner-centred ideas that place the learner at the core of the education process are central to humanistic psychology doctrine. Offering learners the autonomy, choice and control over what they are learning and how best to learn was proposed decades ago from the work of humanistic psychologists, such as Carl Rogers (1983) and Abraham Maslow (1987). Both Rogers and Maslow recognised the need to create a psychologically safe environment for learning. The learning environment should be filled with respect, genuine forms of learning, and choice or freedom to learn. This has been a challenge for online learning environments, particularly those involving only asynchronous forms of communication, which are often presumed to be cold and impersonal. Such environments lack the usual communicative cues taken for granted in face-to-face learning environments. The lack of social presence and verbal cues from the educator and from peers in the course is often blamed for the acute sense of isolation and disconnectedness that online learners experience.

TEC-VARIETY – Constructivism: Teacher Immediacy Behaviours

Research conducted during the past couple of decades has shown that it is possible to reduce the traditional social and psychological distance perceived by participants in online courses. For example, teacher "immediacy behaviours" are pivotal in establishing a social presence in the online course. Teacher immediacy behaviours can be verbal or non-verbal.

Verbal

Verbal immediacy relates to the increase in the psychological closeness between teachers and students. It is displayed by using student names and humour, encouraging student feedback, finding out how students are and sharing personal experiences. In online environments, the teacher's verbal immediacy behaviour is particularly essential for setting a tone and climate conducive to enhancing student participation, satisfaction and overall learning.

Non-verbal

Non-verbal immediacy actions include cues communicated through smiling, eye contact, body movements and vocal expressiveness (Hutchins, 2003). A sense of immediacy can also be related to course design or how a teacher arranges the course components in support of learners' internal learning processes. For example, embedding help systems, online tutorials and computer-scored exams can lend a sense of immediacy to feedback and support (Hutchins, 2003).

TEC-VARIETY: Influence of Constructivism

The TEC-VARIETY framework reflects the important principles, specifically that of setting an appropriate tone or climate in the class (first principle in the framework), using a variety of interesting tasks (fourth principle), and incorporating tension or challenge (ninth principle) to facilitate learner interaction and exploration of course materials.

TEC-VARIETY – Theoretical Perspective: Sociocultural Views

Note

In the 1990s, there was a clear shift in education and psychology towards acknowledging the role of social and contextual processes in how we learn.

Some have argued that our cognitive processes are inherently cultural and thus inseparable from the specific situations in which we live (Rogoff, 2003).

Prominent among sociocultural theorists is Russian psychologist Lev Vygotsky (1978). Vygotsky proposed the zone of proximal development (ZPD), which recognises that novice learners can benefit from supportive learning activities (scaffolding) provided by more knowledgeable others to guide them in tasks they are not yet able to perform on their own. Various technology tools can foster new forms of such scaffolded support with word processors, grammar checkers, concept mapping tools, online think sheets and reference works such as Wikipedia.

People learn through their participation in commonly valued activities of a particular group, where cultural tools such as language and artefacts help mediate learner understanding and meaning-making in a highly collaborative learning process (Lave and Wenger, 1991).

The sociocultural perspective is manifested through learning approaches and instructional ideas that have arisen since the late 1980s in different scholiasts. It includes:

- Situated cognition (Brown et al., 1989)
- Problem-based learning (Savery and Duffy, 1995)
- Communities of practice (Wenger, 1998)
- Various ecological perspectives on learning (Barab and Roth, 2006)

The key point is the change in the role of the educator from an expert to that of a co-learner or learning concierge and curator.

Note

As this change occurs, students are increasingly empowered to be responsible for their own learning.

TEC-VARIETY: Sociocultural Views and Interaction Principle

Sociocultural approaches highlight the role of interaction with educators, tutors and expert guests as well as with peers. Various types of interactions are necessary to promote a supportive community of inquiry or learning community in online learning contexts. Let's see a few examples shared by different researchers.

- Learner interaction with the course content, the lecturer and peers (Swan, 2001). These interactions are also vital in designing environments rich with authentic and problem-based learning (Grabinger and Dunlap, 1995).

- Other online learning researchers have explored affective, interactive and cohesive interactions (Rourke et al., 1999), while yet others have highlighted intellectual, social and emotional interaction (Khoo and Forret, 2011).

- Studies have revealed that interaction and socialisation have a direct impact on online learner motivation (Xie and Ke, 2010). Specifically, interaction and socialisation foster learners' intrinsic motivation and engagement in a course (Shroff et al., 2007). They also influence students' satisfaction and their perception of learning (Swan, 2001), including students in online MBA courses (Arbaugh, 2000).

- So crucial is the notion of interaction in face-to-face and online learning environments that it is frequently cited as a key feature in principles of effective teaching practises (Chickering and Gamson, 1987).

TEC-VARIETY – Theoretical Perspective: Sociocultural Views and Relevancy Principle

Relevancy principle (also curiosity, interactivity, engagement, tension, yielding products). Another key characteristic of the sociocultural learning perspective is the need to design relevant, authentic and meaningful learning experiences. Herrington et al. (2006) have presented ideas on authentic learning in web-based learning contexts to encourage students to undertake deeper and more meaningful approaches to learning.

Authentic learning tasks are typically ill-structured and complex. They also tend to incorporate different forms of collaboration, involving creating a group product, embedding opportunities for reflection, and encouraging the exploration of a diversity of ideas and solutions. In such contexts, learners are empowered to choose what they need to learn, why they need to learn it, and how and in what order that learning will take place.

ARCS Model

Relevancy is also a cornerstone in the ARCS model developed by John Keller (1987, 2010). In the ARCS model, four dimensions of motivation — attention, relevance, confidence and satisfaction — contribute to students' interest, effort and performance in a course. Gaining students' attention through resources that increase their curiosity or sense of inquiry is foundational for learning.

TEC-VARIETY – Theoretical Perspective: Sociocultural Views and Tone/Climate and Variety Principle

Tone/climate and variety principle. A further contribution from the sociocultural era is the incorporation of ideas centred on "culture" in education. Social psychologists and anthropologists have long indicated the need to understand the virtues and unique aspects of how groups form, be it according to culture, ethnicity or gender. Understanding group formation and growth is increasingly vital for online educators as social media proliferates and web contexts continue to attract a rich and diverse range of learners across varied geographical locations, languages, cultures, gender, ages and socioeconomic backgrounds (Hartnett et al., 2007).

As online learning becomes increasingly global, it is critical for online lecturers to be culturally sensitive in their tasks and examples.

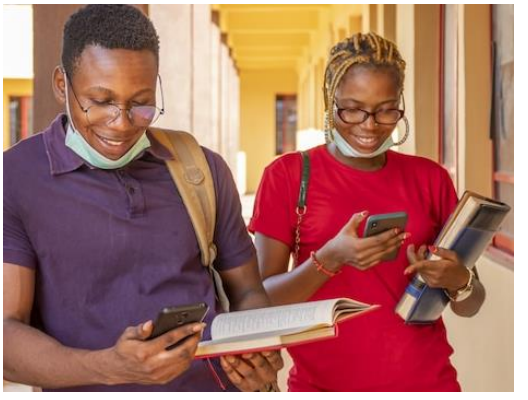
In order to ensure the success of all learners, effective online educators acknowledge the cultural capital and contribution that each student brings into the learning context. Wlodkowski shares the strategies and experiences that help in online learning.

Strategies

Wlodkowski (1999) highlighted how strategies adopted by educators may at times contribute to a lack of intrinsic motivation among some students. As an example, course icebreaker activities typically require students to share aspects of their personal experiences, beliefs or feelings with others in the course. Although some students enjoy such interactions, those from cultures unfamiliar with such self-disclosure may be distressed by them.

Experiences

Wlodkowski cited how such experiences can be disconcerting for Asian Americans, Latinos and Native Americans, who typically confine such expressions to family members. Tasks of this kind can, in fact, alienate some students from the rest of the class. Such studies across countries and cultures raise important considerations for online educators, who should take into account student diversity and cultural contexts when adopting learning and motivational strategies to ensure the success of all students in the course.



In sum, active and social collaborative strategies emphasising the use of relevant and meaningful tasks (sixth principle of the framework), interactivity (seventh principle), engagement (eighth principle) and yielding products (tenth principle) underpin the TEC-VARIETY framework.

Recognition of learners' cultural diversity is acknowledged in the TEC-VARIETY framework, specifically in setting an appropriate tone or climate to foster a sense of belonging in the class (first principle) and using a variety of culturally relevant and inclusive strategies (fourth principle).

TEC-VARIETY – Theoretical Summary and What it is Not?

The TEC-VARIETY framework offers a helpful mnemonic for ten key motivational principles to empower educators to create teaching-learning environments that promote higher levels of student motivation and engagement in online contexts. What the TEC-VARIETY framework is not?

Psychological or Educational Theory	**It is not a psychological or educational theory**. Rather, it is an eclectic way to view online teaching and learning, with a bias toward learner-centred practises. TEC-VARIETY is a compilation of well-researched and instructionally-effective motivational principles from the literature intended to enhance online learner motivation and retention. The suggested pedagogical ideas and activities for each motivational principle will continue to evolve with the available web-based and digital technologies in online distance learning.
Address Every Aspect of Motivation	**It does not address every aspect of motivation.** Motivational principles that are missing may vary according to the course, grade level and degree of educator or student familiarity with fully online and blended learning. With adult learners, there could be more emphasis on establishing an overall sense of purpose or mission for an activity or an entire class (i.e., the yielding products principle). With younger learners, there may be more emphasis on the variety or curiosity principles, and so forth. It is important for educators to be clear about their own teaching and learning goals and purpose at the start of each fully online or blended course experience and cater accordingly to learners and contextual needs.

Instructional Design Model	**The framework is not an instructional design model.** It is a toolkit or online teaching guide. The framework offers memorable, practical and easy ways to implement active learning ideas. Educators can use the framework for reflecting on the quality of online courses and course contents and as a guide for designing new ones. It is a useful toolkit to assist those encountering online teaching for the first time. It can also help more experienced educators seeking ideas to expand their online teaching practices and trial more innovative ways of teaching. The suggested pedagogical strategies are applicable for fully online and blended learning courses and programmes.
Technological Tools or Educational Design	**The focus of the framework is not on technological tools or educational design methods per se**. Rather, the framework addresses the intersection of technology, pedagogy and learning.

Applying the TEC-VARIETY Framework – What it is?

After learning what TEC-VARIETY framework is not, let's now see what it is.

Technology	The TEC-VARIETY framework considers current technological trends and attempts to stimulate their use in pedagogically effective ways. Educators today are faced with an onslaught of new technologies compared to those of the past decade — virtual, open, collaborative, massive and mobile learning platforms and formats — that can reach learners anywhere and anytime. The technology list and possibilities for putting them into use are only limited by one's imagination and willingness to try them out. The framework combines the educational affordances of emerging learning technologies, intrinsic as well as extrinsic motivation-related theories, and various perspectives on teaching and learning approach.
Pedagogy	TEC-VARIETY and the repertoire of practical 100 pedagogical activities are not intended to be prescriptive, as there are different ways each activity can be used. They are intended to provide options and opportunities to guide new and experienced online educators who are struggling to cope with technological advances and the lack of training in how to effectively use them in their courses. Educators are encouraged to trial and flexibly apply these activities according to their specific learning situation or context.

Learning

Educators can consider and design their online and blended learning environment based on theory-driven principles of learning and motivation in the framework. For example, the wider socio-cultural, developmental and ecological factors influencing learner motivation and actions are important aspects of successful and productive learning, as are learners' personal volition or drive to learn. The TEC-VARIETY framework invites educators to consider all of these factors — the individual motivational state of the learners, the technology tools and resources, the pedagogical practices or activities and relevant contextual variables in each learning environment. As TEC-VARIETY becomes part of educators' toolkits, it may even impact their teaching decisions in traditional face-to-face settings, leading them to design their learning environment in novel and exciting ways.

Recommendations to Apply the TEC-VARIETY Framework

Some recommendations for educators when applying the ideas from the TEC-VARIETY framework are:

1. Consider your own beliefs about how people learn. Then reflect on the extent to which you are comfortable with taking risks in using new technologies and teaching strategies.

2. Consider the usefulness of each motivational principle in TEC-VARIETY and consider how well it fits with your typical teaching/facilitation strategies, course goals, content, types of learners and overall teaching philosophy. This might help you begin to think about which motivational principles may be lacking or could be strengthened in your own courses.

3. Consider your course content and context, your students' cultural backgrounds, their familiarity with online learning and any learning preferences or contextual factors.

For example, the wider socio-cultural, developmental and ecological factors influencing learner motivation and actions are important aspects of successful and productive learning, as are learners' personal volition or drive to learn. The TEC-VARIETY framework invites educators to consider all of these factors — the individual motivational state of the learners, the technology tools and resources, the pedagogical practices or activities and relevant contextual variables in each learning environment. As TEC-VARIETY becomes part of educators' toolkits, it may even impact their teaching decisions in traditional face-to-face settings, leading them to design their learning environment in novel and exciting ways.

Summary

In this unit, you learned about quality and quality assurance as applied in education.

Let's review the key learning points we covered along the way.

- In this module, we started with an overview of online learning trends and common issues faced by new online educators. This introduced the importance of enhancing learners' motivation as a way to have a direct impact on their learning satisfaction and ultimately, their retention in online and blended courses.

- We have also covered the TEC-VARIETY framework with its ten motivational principles and 100 suggested pedagogical strategies. It was introduced as a way to address the common challenges in online learning and as a guide for educators to create productive web-based learning environments supportive of learner motivation and engagement.

- The module then described the four different theoretical perspectives and their underlying assumptions about how people learn and are motivated to take action to achieve their learning goals. Key theoretical ideas and motivational principles were linked directly to the TEC-VARIETY framework via studies that provided evidence for the viability of the ten principles.

- The TEC-VARIETY framework enables the combining of multiple meaningful strategies for educators to support learner motivation and engagement.
- The module ended with suggestions for how educators can consider and maximise the application of the framework in their own educational contexts through a consideration of technology, pedagogy and learning.

Check Your Progress

1. What are common issues in online learning environments?
   a. Low-quality content
   b. Lack of or minimal feedback about learners' submitted online work
   c. Understanding learner needs
   d. Electronic page-turning
   e. Giving learners opportunities to add to the course and contribute to one another's learning
   f. Increasing technological advances

2. The 'T' in TEC-VARIETY refers to the principle of understanding the learner's learning targets.
   a. True
   b. False

Check Your Progress

3. The autonomy and curiosity principles in the TEC-VARIETY framework are especially relevant to and based on which of the following theoretical ideas?

   a) Sociocultural
   b) Cognitivism
   c) Constructivism
   d) Behaviourism

4. How might educators use the TEC-VARIETY framework?

   a) As an instructional design model to design their online or blended learning courses.
   b) As an online teaching toolkit to consider ways to motivate and engage learners.
   c) As a guide to reflect on their practice.
   d) As a framework to consider the technological, pedagogical and learning elements in their teaching context.
   e) As part of an adaptive computerised system to personalise their students' learning.
   f) Guided by their imagination and willingness to try the different principles and activities.

Check Your Progress

5. In order to maximise their use of the TEC-VARIETY framework, educators can
   a) Consider their own teaching beliefs.
   b) Consider their teaching contexts.
   c) Consider the language that they are able to speak.
   d) Consider their comfort levels with using technology.
   e) Consider their learners' cultural backgrounds.
   f) Consider being thoughtful about integrating technology, their teaching and students' learning.

6. Behaviourist theoretical ideas on how humans learn is out-of-date and not part of the TEC-VARIETY framework.
   a) True
   b) False

7. Educators using the TEC-VARIETY framework will need to implement it systematically from the beginning principle (tone) until the last principle (yielding products).
   a) True
   b) False

Check Your Progress

8. Which of the following is not part of current trends in human learning and motivation research?

   a) Learning and motivation are dynamic and complex.
   b) Learning and motivation can be explained by a single theoretical perspective.
   c) Learning and motivation highlight the importance of internal factors such as a learner's drive over other factors.
   d) Social aspects of learning play a supportive role in a learner's drive and achievement.

9. How will you describe motivation?

   a) Learners studying to complete their online or blended course.
   b) Learners being purposeful in their actions and intents to work towards a desired goal.
   c) Learners being efficient in working towards a learning goal.
   d) Learners enjoying their learning by experimenting with different playful strategies in their course.

10. Motivational principles such as setting the tone, including variety and ensuring appropriate levels of tension in a course are best supported by which of the following theories?

   a) Sociocultural
   b) Cognitivism
   c) Constructivism
   d) Behaviourism

Check Your Progress

11. The zone of proximal development says that human learning involves information processing similar to computer processing that can address more complex forms of learning (thinking, memory, problem-solving, language, concept formation).

    a) True
    b) False

12. The tension principle in the TEC-VARIETY framework also includes ideas such as surprise, intrigue and unknowns.

    a) True
    b) False

Module 2

Supporting Online Learners and Educators

Learning Objectives

Upon completion of this unit, you are expected to be able to:

1. Understand the issues faced by online learners, namely online attrition
2. Define online attrition
3. Identify the three common areas and factors causing online learner attrition
4. Describe strategies for addressing attrition and supporting online learners
5. Summarise the common issues hindering educators from adopting online learning
6. Discuss the ten strategies for supporting educators in adopting online learning practice

Introduction

This second module recognises the importance of supporting the two main stakeholders involved in creating a motivationally engaging online learning course/programme: the online learners and online educators.

This first section introduces participants to challenges online learners frequently face and that have led to learner attrition, where learners drop out of online learning programmes. During the past two decades, online learning researchers and educators have raised concerns regarding issues in online pedagogy. Retaining learners has been touted as one of the key challenges in online learning programmes.

This section provides a brief overview of the theory, research and practice related to online attrition and retention. It synthesises the research on the key factors influencing a student's decision to leave or complete an online course or programme and the findings on strategies to address learner attrition.

This section discusses the common barriers and challenges faced by new or less experienced educators and trainers that hinder them from taking up online teaching and learning. Educator resistance and reluctance to adopt online teaching and learning are commonly observed for new/novice educators as they grapple with a myriad of new roles and responsibilities, ranging from technological, pedagogical and social to managerial.

Motivating and Supporting Online Learners

This section scopes the issues and offers strategies for supporting and bringing reluctant online educators onboard. Specifically, ten strategies to mitigate online educator reluctance and resistance are discussed. We will focus on the six stages in the online adoption cycle to identify the issue of online resistance. This will assist you in reflecting on your own ongoing professional learning journey in online learning adoption.

We would like to add a note for participants regarding the role of this module. Many of the ideas are relevant for schools, higher education and corporate administrators in terms of strategies they might like to consider to increase learner retention in online courses.

Introductory Video

Do you want to know who you are? Don't ask. Act! Action will delineate and define you.

– Thomas Jefferson

Watch Video: Supporting online learners and educators

Online Learning Platforms

Let's look at how online learning platforms are useful and explore the various options available.

How is It Useful?

Online and distance educators today can draw from varied and numerous choices when it comes to selecting from available communicative technological tools to enhance their teaching or training practices and support their students' learning.

What are the Learning Options Available?

Unlike traditional distance correspondence courses in the past, today's digital technology options and resources have expanded to include podcast lectures, mobile flashcards, expert blog posts, wiki-based multimedia course glossaries, YouTube video lectures and expert demonstrations, course announcements and reminders in Twitter, and other vast information networks contributed by people around the world (For example, Wikipedia).

How does It Help?

With these new means to foster learner interaction, collaboration, engagement and personal study, schools, universities and corporate training departments worldwide have embraced the culture and trends surrounding web-based distance learning.

Wide recognition and elevated status are now accorded to online courses and programmes in a range of academic disciplines, whether the learning was conducted entirely online or used different forms of blended learning to supplement current face-to-face programmes.

Need for Online Learning

The global Covid-19 pandemic has fuelled the growth and demand for online courses, as organisations, educational institutions, professionals and students turn to online programmes to sustain learning or meet professional needs and interests. Global online learning platforms such as Coursera and edX have reported huge increases in enrolments, with 189 million (Coursera, 2021) and 110 million (edX, 2021), respectively, in 2021.

How is Online Learning Helpful?

In 2021, the number of learners who had registered for the recent distance learning phenomena called massive open online courses Massive Open Online Courses (MOOC's) is estimated to be 220 million (Shah, 2021). MOOC's are revolutionising the role of higher education, professional development and executive education, as they offer free and open access to online courses without any constraints on class sizes (Sharples et al., 2015).

How is It Leading to Learner Attrition?

Despite having the means to communicate and interact online to sustain an array of educational, work and training purposes, many educators (and their learners) today are still at a loss about how to effectively tap into the affordances that online learning offers. This has led to learner attrition (dropout or withdrawal) and lack of learner retention.

Online Learner Attrition - Statistics

A report in early 2014 found that four in ten academic leaders in higher education settings in the United States felt it was more difficult to retain online learning students than face-to-face students (Allen and Seaman, 2014; Kolowich, 2014).

Non-completion Rate

Online learners are reported to have higher non-completion, withdrawal or drop-out rates (that is, attrition) compared to their peers in face-to-face campus-based courses (Park, 2007; Phipps and Merisotis, 2000).

The non-completion rate for these fully online students was estimated to be 10–15% higher than the rate among students in hybrid and face-to-face contexts (Xu and Jaggars, 2011).

A survey by Jaggars and Xu (2010) among two-year community college students found that students enrolled in purely online courses fared worse than their contemporaries who enrolled in hybrid and face-to-face courses on campus.

Drop-out Rate

Cellilo (n.d.) reported dropout figures amounting to 30% in online classes compared to the 10–15% dropout rates experienced in traditional classes. This trend is worse in the corporate world.

In the early years of web-based instruction, dropout rates in the online training world ranged dramatically, from about 10–20% (Frankola, 2001) to well over 50% and perhaps as high as 80% (Bonk, 2002; Flood, 2002).

Low-completion Rate

Issues of student retention and low student completion rates also persist with Massive Open Online Courses (MOOCs) (Khalil and Ebner, 2014; Kolowich, 2014). The average completion rate for MOOCs has been reported to be as low as 5% (Koller et al., 2013) to 15% (Jordan, 2015).

Understanding Online Learner Attrition

Online learner attrition (the number of students dropping out/withdrawing from a course or programme) or failure to retain (retention, the number of students following through a course or programme; also called “persisters”) is a highly distressing issue for institutions, administrators and educators all over the world. It has been cited as one of the greatest weaknesses in online education (Berge and Huang, 2004; Herbert, 2006; Jun, 2005).

Key factors contributing to attrition are a lack of student motivation (Bonk, 2002; Cocea, 2007), time conflicts (Hiltz and Goldman, 2005) and lack of interaction or support from the instructor (Carr, 2000; Hara and Kling, 2000).

Now, let’s see what Xu and Jaggars, Cocea, and Tyler-Smith have to add here.

Xu and Jaggars (2011)

In addition, the survey by Xu and Jaggars (2011) revealed reasons such as lack of both educator and peer support and interaction, a sense of isolation, time constraints, technical difficulties and a general lack of structure as common reasons for dropping out of online courses. Considerations about effective approaches to engage students in online courses is more urgent now than ever.

Cocea (2007) and Tyler-Smith (2006)

Issues such as access to education, learning outcomes, and the perceived value and credibility of online courses, programmes and qualifications all hang precariously on the extent to which institutions and organisations are capable of retaining their students (Cocea, 2007; Tyler-Smith, 2006).

Theories Explaining Online Learner Attrition

In this section, we briefly cover five models explaining the phenomenon of learner attrition:

- Vincent Tinto's model (Tinto, 1975)
- David Kember's model (Kember, 1989)
- Alfred Rovai's model (Rovai, 2003)
- Zane Berge and Yi-Ping Huang's model (Berge and Huang, 2004)
- JuSung Jun's model (Jun, 2005)

Click annexure 2 to learn more about the theories explaining online learner attrition.

This PDF offers an overview of the five models of learner attrition. Overall, these models highlight a range of individual, institutional and circumstantial factors that have an impact on a student's decision to persist in online distance education contexts. They point to the complex nature of online attrition and retention.

Factors Affecting Online Learner Attrition

For the most part, the reasons and explanations offered for learner attrition can be synthesised into three factors:

- Individual
- Course-related and
- Technological

Click annexure 3 to find out more about factors affecting online learner attrition.

Most factors affecting attrition in online courses are related to individual factors involving learners' assumptions, motivation, skills, background experiences and personal circumstances that impede their participation in online courses. These factors are also commonly cited in relation to the low completion rates in Massive Open Online Courses (MOOC's) (Khalil and Ebner, 2014).

Strategies for Addressing Learner Attrition

In addition to understanding the factors causing attrition, we reviewed the literature for strategies recommended by students, educators, practitioners and corporate trainers to address learner attrition. The table given in the PDF illustrates the common strategies cited to support online learner retention.

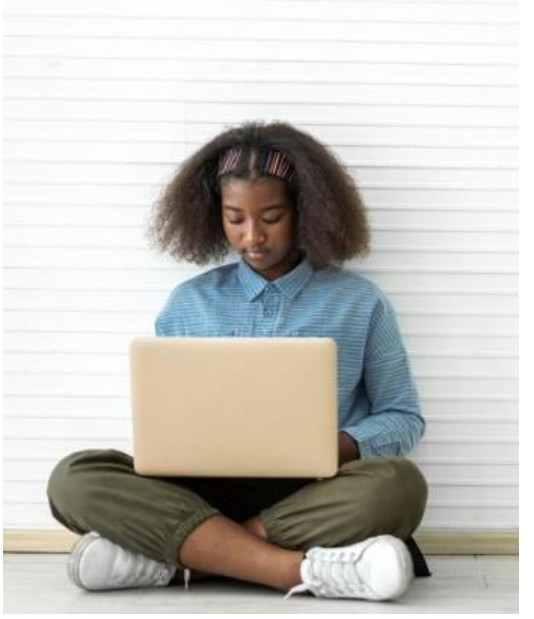
Table 2.2 is divided into two broad sections to illustrate strategies that can be adopted:

- Prior to enrolment in an online course or programme and
- Once a student has been admitted into an online study programme.

Under these two headings, the strategies are further organised according to those that can be addressed at the institutional, instructional (that is, pedagogical) and technological levels.

Click annexure 4 to learn more about the strategies for addressing learner attrition.

The bulk of the strategies to address online learner attrition fall into the instructional (pedagogical) category. This emphasises what most good educators already know across any effective teaching–learning or training context — that is, high interaction levels and support from educators (and peers), timely feedback, meaningful learning experiences, and active learning strategies all enhance learner engagement and, ultimately, retention.



Such guidelines raise the urgency for educators to understand the learner and the learning process, including the factors that facilitate students' motivation and internal drive to excel and those that inhibit or debilitate it.

The TEC-VARIETY framework addresses this by drawing from research into human learning, cognition and motivation. The next section turns our attention to the issue of supporting and motivating reluctant educators to engage in online learning.

Supporting Online Educators

Each year, educators working across all disciplines and in every sector of education and training are being asked to teach or collaborate with other educators online. But a seasoned face-to-face educator's first forays into web-based instruction can be extremely daunting, especially for those lacking sufficient training or self-confidence.

Reasons for Resistance to Teaching Online

Murphy's Law, "If anything can go wrong, it will," often comes into play, and so do frustrations, disappointments, and bouts of anxiety over teaching and learning events that did not proceed as planned. Below, we scope the common barriers and challenges causing resistance to teaching online.

Online Educators – Various Challenges

Much has been written on educator reluctance and resistance to adopting online learning. These can be summarised according to the challenges/barriers faced in the various educator roles and responsibilities usually identified in online teaching and learning contexts. They are as follows:

Technological

Challenges posed from a technological perspective:

- New software tools and features to learn
- Passwords to remember
- Prior technology frustrations
- Insufficient training opportunities

Social

Challenges posed from a social perspective:

- General lack of internal support and encouragement

Pedagogical

Challenges posed from a pedagogical perspective:

- Assessment difficulties
- Copyright issues

- Experiences with plagiarism
- Difficulty finding quality content and courses
- Assorted advice, learning aids, and guidelines must be developed for students
- Fears related to losing control over the classroom
- Heavy doses of scepticism
- Concerns about cheapening/degrading the quality of education
- Concerns about the inappropriateness of online delivery formats for the types of learners they currently teach
- Misconception that they must learn to teach all over again, because they perceive online learning to be a new environment — this assumption can lead to educators and trainers feeling a general lack of confidence and low self-esteem about teaching online

Managerial

Challenges posed from a managerial perspective:

- Lack of time
- Low-quality materials
- Lack of skills
- Workload, pay or financial incentives
- Concern about potentially high withdrawal rates
- Offence taken at being obliged to change to a new delivery format
- Educators who consider online learning another burden in their already time-strapped list of work-related responsibilities
- Resentment that significant resources are being diverted from more traditional educational formats to online platforms

To make matters worse, most educators and trainers have never experienced online learning as students. Nor have most ever seen best practices modelled for them by those who are more experienced with online instruction. Like most educators, they teach according to how they themselves were taught. They fear that the move to online learning will challenge some of their long-standing beliefs and assumptions about their practice.

Educator reluctance typically subsides once they become more familiar and comfortable with the new technology and platform. To identify when this is likely to happen, the next section considers the stages in online learning adoption.

Stages in Online Learning Adoption

Typically, educators undergo six stages in the online learning adoption cycle when confronted with or offered the opportunity to teach online. It locates educator resistance to online learning as typically occurring in Stage two. Educators can use this as a guide to locate where they are at in their online teaching journey and understand the characteristics of the different stages, so they can move forward to higher levels of adoption.

Stage 1 | **Awareness of Online Learning:**

Stage one, before any resistance can take root, educators must become aware of fully online and blended learning. This awareness marks stage one of the online learning adoption cycle.

Stage 2 | **Resistance to Online Learning:**

Once awareness about online learning increases, so too does resistance, as educators identify that some of their favourite pedagogical ideas and activities will no longer work, or not in the same way. In the process, tried and tested resources and approaches might have to be given up or, at the very least, significantly adjusted or modified. This represents stage two, resistance to online learning.

Stage 3 | **Understanding the Online Learning Possibilities:**

Stage three, understanding the online learning possibilities, occurs as educators become more accepting of the advantages of teaching with technology and have a greater understanding of the pedagogical possibilities.

Stage 4 | **Doing Online Learning:**

As they grow more confident, educators progress to stage four, doing online learning, and begin to experiment with online tools and activities in their own courses. This experimentation continues to grow and eventually evolves into complete online modules or even fully online courses. Today, many would argue that, as a society, we are fully immersed in stages three and four, which involve not just understanding the possibilities of online education but actually doing something interesting and engaging to boost learner motivation and retention.

Stage 5 | **Sharing Online Learning Resources and Activities:**

Stage five, sharing online learning resources and activities, is manifested when educators begin to share their online activities and resources with their colleagues and with people whom they might never physically meet. This can be through posting their best-practices resources in freely accessible online depositories or sharing with their professional learning communities. For many, this is a bold step, as they progress from the comfort zones of their walled classrooms to sharing their most sacred teaching practices in an online space.

At this point in the process, aspects of their teaching/training identities are fully on display for others — including complete strangers — to browse, adopt and comment upon.

Stage 6

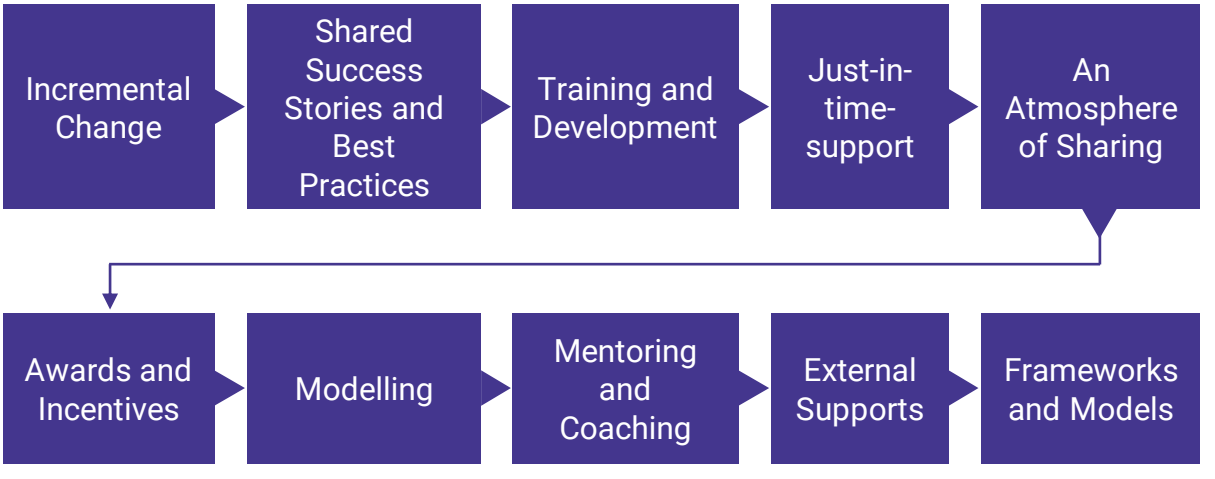
Advocating for Online Learning:

Those who go beyond stage five become advocates and perhaps even leading proponents for online and blended learning (stage six: advocating for online learning). They might inform or train colleagues and others about online learning, via webinars, conferences, and workshops. They might also write widely for online learning magazines and newsletters.

Overcoming Reluctance and Resistance

Today, there exists a multitude of ways to address educator and trainer hesitation and resistance related to online learning besides the use of our framework. Much has been written in terms of guidelines and best practices for online learning — for example, in corporate training environments (Hyder, 2002) as well as in higher education, on how to moderate discussions, create community, design blended learning environments, and assess learning outcomes (Garrison and Vaughan, 2008; Salmon, 2013).

Below, we synthesise ten strategies intended to assist, support and motivate those who are either new to online or blended learning or remain somewhat hesitant or reluctant to embrace the Web for their online courses, programmes and events.



Incremental Change

Change is always complex and difficult. We recommend that those who might be nervous or more hesitant start with small steps or minor course adaptations. A training programme could begin by having these individuals find online resources that they can later use. During training, they could select from an assortment of low-cost, low-risk, low-time strategies, such as those offered in the 100 strategies in the TEC-VARIETY framework. One or two well-placed low-risk, low-time, low-cost strategies may be the incentive for further exploration and integration into their online teaching repertoire.

Shared Success Stories and Best Practices

Another option is to show examples and best-practice strategies of what actually works.

1. Thousands of online learning examples and models can be found in books, newsletters, technical reports, e-mail messages and web portals.

2. Consider having these stories developed by peers and colleagues whom others respect and trust, instead of by vendors or external consultants.

3. Best practices and success stories are beneficial and can be shared through social networking and online professional learning communities.

Training and Development

Educators can start with a simple technology tool or resource that can be mastered and applied first rather than explaining the underlying instructional approach, philosophy or pedagogy.

These discussions can be beneficial subsequently, once others have seen the immediate benefits in their practice. Providing incentives for the completion of the training is also important (for example, a stipend, certificate, laptop, tablet and so on). With the continued rise in online teaching and learning, such training programmes are proliferating.

Strategies to Support and Motivate Online Educators

Just-In-Time Support

The support staff could be on call when needed for 1:1 help and advice. Technical support personnel and trainers should not dictate a single approach or instructional philosophy, but rather should listen to client needs and respond accordingly. Allow online educators to select the training topics that they are interested in, rather than pre-selecting the topics for them. Current trends and practices in online educator training and support have embraced situated online professional development (PD).

Such approaches target specific educator needs rather than sending the staff to attend one-off workshops and institutes. They allow educators to identify what they need in terms of external and internal assistance. Once identified, the appropriate support resources and activities are systematically supplied to help educators integrate web-based technologies and associated resources in a thoughtful manner.

As a result, we are increasingly seeing online personnel benefit from support that is authentic, situated and targeted to their teaching needs. Such just-in-time approaches may also allow educators to experience for themselves what their novice students might be experiencing. Just-in-time 1:1 support can also make use of a combination of face-to-face assistance and online tutorial-based support that can be completed in a self-paced manner at the instructor's convenience.

An Atmosphere of Sharing

Fostering change in terms of technology integration and use will only come when there is an overall focused impetus for change. Such an atmosphere can definitely build up over time. For instance, the final five to ten minutes of a department meeting might be saved for a live presentation of an emerging technology or a discussion of ideas related to how educators are using web technology. Such sharing can also occur in annual events or awards for innovative use of technology in teaching.

How does Sharing Atmosphere Help in Online Learning?

Many universities also sponsor brownbag lunch sessions during which a visiting scholar, local expert or faculty member will present an interesting technology or online activity. Colloquia, videoconferences, webinars and other events can also be employed to cultivate this change in atmosphere.

Social networking tools like LinkedIn or Twitter can foster such sharing, as might the learning management system that an organisation is presently using. Ideally, the result will be a community of practice made up of those interested in online learning.

Awards and Incentives

Training programmes may include incentives such as special grants, travel funds, awards and technology. For example,

1. Those who are innovative might be the first in line for hardware or software upgrades and replacements.
2. Those who already are technology leaders can also receive technology awards if they provide a set number of hours of training to others in the programmes.

Other incentives could include assistance in writing grants for specific technology or for designing innovative pedagogy with technology, or for money for associated conference travel related to such innovations. The ultimate goal of these recognitions, of course, is the design of high-quality online learning courses and resources. These types of efforts are vital because a part of creating a community of online educators is supporting success and then celebrating such successes when it occurs.

Modelling

Educators modelling the use of innovative/useful practice to colleagues are highly valuable. Modelling also creates opportunities for discussion and interaction to occur around the topic or content area being shown, resulting in a sense of community among those who are interested in or already attempting the new ideas.

Mentoring and Coaching

When new educators, designers or trainers venture into an online environment or situation, it is vital that they have someone who can provide some form of support and cognitive apprenticeship. For instance, someone savvy with technology or knowledgeable about online teaching and learning could be asked to support one or more novice educators or designers.

> Such mentoring programmes can be successful from a technological standpoint as well as from the viewpoint of developing a sense of community.

In such situations, educators and staff members experienced with various educational technologies can serve as mentors for more novice and junior members, at times gaining incentives from their institutions for such efforts.

External Supports

Most of the preceding ideas relate to internal forms of support — that is within an organisation or institution. Given the expansiveness of the Web, some external supports can be provided, such as access to online teaching examples, certificate programmes for online teaching and online administration, and even master's degrees.

Other organisations and professional learning communities such as the EDUCAUSE Learning Initiative (in the USA) offer interesting educational conference events and discussions related to emerging learning technologies. Tapping into the wide array of online support for teaching online can be simple and extremely inexpensive today.

Frameworks and Models

The use of models, overviews and frameworks during training can offer educators a way forward to overcome reluctance about teaching online. Frameworks offer a means to reflect on what works and what is not working and provide a macro lens for any online teaching and learning situation.

Frameworks also most usefully reduce the apprehensions and angst that educators and administrators might feel related to teaching and learning in online environments. With such support, they can feel more secure in their understanding of how online learning can work and how they can make use of it to serve and extend their teaching goals.

Other Forms of Online Instructor Training and Support

These ten strategies are a synthesis of key ideas from the literature. There are many other possible forms of online instructor training and support. Popular extrinsic incentives include release time, royalties, extra pay, travel funds and technology upgrades. In terms of training and technology support, there could be online training and professional community support groups, small group workshops and discussions, help desks, corporate–university–school partnerships, needs analyses, interactive web-based training, online tutorials, online databases of exemplar projects, and many more.

Summary

This module has described the trends in the increasing adoption of online learning today and has discussed the challenges in supporting learners and educators.

Let's review the key learning points we covered along the way.

- A key concern in online learning is high online learner attrition. Attrition refers to learners dropping out of a course or programme, or not returning.
- Key theories explaining the issue of attrition were offered to give participants an understanding of the diverse factors contributing to it. We looked at the main reasons leading to attrition, as well as recommendations for enhancing online learner retention.
- Educators need to understand learner motivation and learning in order to address an assortment of issues in learner retention.
- This raises the need for addressing and supporting online educators who are hesitant, reluctant or resistant about teaching online. We summarised the various factors leading to such resistance.

- We then described the six stages of the online teaching adoption, to locate the issue of online educator resistance within the relevant stage and as a way for participants to identify their own online professional teaching journey for moving forward.
- Finally, ten recommended strategies covering a range of internal and external supports to motivate educators to consider and take up online teaching were offered.

Check Your Progress

1. Online learner attrition refers to the retention of learners in online learning contexts.

   a) True
   b) False

2. Which explanation for student attrition discusses a two-stage model comprising pre-admission and after-admission factors for online educators to be aware of? Choose the best option.

   a) Tinto's Model
   b) Kember's Model
   c) Jun's Model
   d) Rovai's Model

Check Your Progress

3. Who has developed a model on online learner attrition that is context-sensitive to allow flexible weightings to be allocated to each of the key variables related to individual and institutional factors as priorities for planning and implementing changes for the different stakeholders involved?

   a) Tinto
   b) Kember
   c) Berge and Huang
   d) Rovai

4. The factors contributing to learner attrition can be classified according to what factors?

   a) Technological, pedagogical and social
   b) Personal, course and pedagogical
   c) Institutional, course-related and technological
   d) Individual, course-related and technological

5. Strategies to address/minimise online learner attrition can be categorised into what factors?

   a) Technological, pedagogical and social
   b) Personal, course and pedagogical
   c) Institutional, instructional (pedagogical) and technological
   d) Individual, course-related and technological

Check Your Progress

6. It is important to support learners before they enrol in their online course, as well as once they are enrolled and get underway in their online course, to reduce attrition issues.

   a) True
   b) False

7. The majority of factors affecting learner attrition in online courses are connected to technological factors such as course-related technical issues, including the system used to deliver the online course.

   a) True
   b) False

8. Educator reluctance to teach online can be due to which of the following factors?

   a) Technological frustration
   b) Assumption they will need to learn how to teach all over again
   c) Assessment difficulties
   d) Student preference for learning online
   e) Workload issues

Check Your Progress

9. Match the stages in the online adoption cycle:

Stage One	Doing online learning
Stage Two	Advocacy
Stage Three	Awareness
Stage Four	Resistance
Stage Five	Sharing resources and activities
Stage Six	Understanding possibilities

10. Educator resistance to online learning typically occurs at which stage?

    a) Stage one
    b) Stage five
    c) Stage six
    d) Stage two

11. Strategies to help educators overcome their reluctance to teach online importantly need to be focused on addressing external supports (such as giving educators certificates or encouraging them to gain additional qualifications in online teaching).

    a) True
    b) False

Check Your Progress

12. One-off professional development and training workshops are highly recommended to support educator learning.

    a) True
    b) False

13. Which of the following has been recognised as one of the greatest weaknesses in online education?

    a) Attrition
    b) Persisters
    c) Retention
    d) Resisters

14. Which of the following are strategies to motivate educators who are new to online or blended learning or who remain reluctant/resistant to adopting online learning?

    a) Best practice and success story sharing
    b) Encouraging incremental changes
    c) Offering just-in-time support
    d) Providing useful frameworks for practice
    e) More experienced educators mentoring newer educators

Module 3

Principles of Tone, Encouragement and Curiosity (TEC)

Learning Objectives

Upon completion of this unit, you are expected to be able to:

1. Describe each of the first three motivational principles in the TEC-VARIETY framework — **tone, encouragement and curiosity**

2. Identify the ten different pedagogical strategies relevant for promoting each of these three motivational principles

Introduction

In this module, we turn our attention to the practical motivational pedagogical activities that can be incorporated into online courses. This module is intended to guide online educators to design into their courses more motivationally engaging learning activities for the learner.

It introduces educators to the first three motivational principles in the TEC-VARIETY framework: **Tone, Encouragement and Curiosity**

Tone	Tone covers the importance of laying social and emotional safety as the basis for important learning processes to occur, especially in the first few weeks of an online course.
Encouragement	Encouragement principle is the focus here as we consider the different ways educators can support online learners to take steps to begin sharing their ideas as well as obtaining and offering feedback online.
Curiosity	Here we turn our attention to the curiosity principle and the ways we can encourage learners to be curious and direct their learning interests to address gaps in their learning.

Module Overview

Watch the video to get a better understanding on engaging online learners through the principles of tone, encouragement and curiosity.

"*I never teach my pupils. I only attempt to provide the conditions in which they can learn.*"

– Albert Einstein

Watch Video: Overview of Module 3

Considerations for Educators

The ten activities to promote each motivational principle have been rated based on the following:

Risk

Time

Cost

Degree of learner-centredness

Duration

These ratings are subjective and based on our online experiences and backgrounds. Participants should be aware that each rating is dependent on many factors, including:

- The content area
- Degree of learner familiarity with the Internet
- Age of the learners

Note

What is considered high risk to one educator or trainer might be different for another educator.

For each principle, three activities are specifically selected for further description to represent:

A. A selection of activities on the low-to-high scale ratings of risk, time, cost, degree of learner centredness, and duration

B. Activities that make use of digital tools that are fairly accessible/inexpensive to educators

Educators might like to consider beginning to incorporate these more easily accessible activities in their practice (for example, low risk, low time, low cost) before trialling more risky teaching activities.

Learning with Activities

Participants can refer to the relevant chapters of our book for a full description of all activities, including relevant technology tools to use, skills required, variations/extensions to an activity, advice, and considerations for integrating each activity into their online learning context.

Incorporating a Pedagogical Activity

When incorporating a pedagogical activity in their online context, we recommend that educators also model the expected behaviours to their learners to encourage their participation. No matter how well-conceived the idea, if the educator is not modelling, the activity will not be successful.

Example

If eight nouns are asked for (see activity 5 in the ten pedagogical activities that promote tone/climate), educators should be creating their own list of eight and sharing it. Learners can then see that their educator/facilitator is a real human being with their own particular interests, strengths and experiences.

Consideration 1	There are overlaps within the ten principles of our framework. Many of the activities listed in this module for tone, for example, can with minor adaptations, also address other principles, such as encouragement, curiosity or autonomy, and so forth, either directly or indirectly.

No activity or idea is foolproof or guaranteed to work. Each requires careful planning. Educators need to readapt each activity according to their own situation or context, or the technology tools available to them. No strategy will work exactly the same way each time; it will depend on your teaching context and learners.	Consideration 2

Introduction to Tone or Climate

This section focuses on the first motivational principle in the TEC-VARIETY framework, "**tone**" or "**climate**". A few aspects of this principle are:

- Psychological safety
- Comfort
- Sense of belonging

When beginning to teach online, it is worthwhile considering the kind of tone or climate or atmosphere of the classroom one wishes to establish.

How an educator or facilitator welcomes learners into a course is crucial to the success of the class.

Tone or Climate

Humanistic psychology principles and learner-centred approaches encourage educators to begin with a focus on establishing a psychologically safe climate for learning.

What is the Need?	Establishing a welcoming environment allows learners to settle in and adjust to learning through the online platform. When people feel valued, respected and understood, they also feel safe to explore and free to continue to grow.
Educators, no matter the situation, can create climates that are learner-centred and invitational in nature. Such environments are filled with a sense of meaning, individualisation, belongingness and encouragement. There are challenges but also support to meet those challenges.	What is the Approach?

The initial sense of understanding or empathy expressed by an instructor can create strong bonds with students. These interpersonal connections can nurture student support early on, when some of them may feel lost or confused by the course structure and assigned tasks (Salmon, 2011).

Importance of Tone or Climate

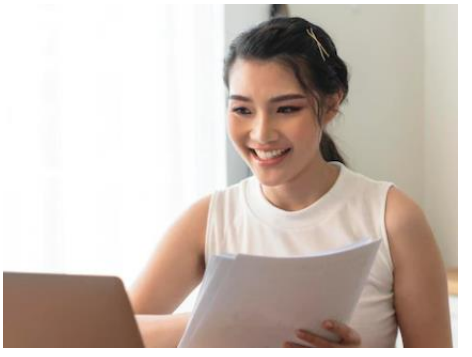
The first week of an online course is especially crucial for developing trust via educator actions, such as initiating early communication with students and developing a positive tone and social climate through activities.

Examples

- Social icebreakers set a positive tone to help learners and educators become acquainted with each other. This mutual knowledge can facilitate later small-group activities and the effective functioning of online teams.
- Opening social activities like scavenger hunts for online course resources can also help to familiarise learners with the content they will encounter in the course, as well as with the very tools they will need to effectively access that content.

Swift Trust

When used effectively in an online or blended course, these early class activities help overcome emotional, social or cultural discomfort and establish "**swift trust**" (Meyerson et al., 1996).



Definition of Swift Trust

It is a social glue that binds the online class participants together during the duration of the course to successfully complete its learning activities and goals.

Need to use Swift Trust

Feelings of trust, rapport and camaraderie are typically assumed to be quite difficult to establish in online courses compared to face-to-face courses, due to the separation of distance, space and time.

How to Achieve Swift Trust?

Online educators can shortcut this process by putting in place building blocks for establishing swift trust.

- Once established, that sense of trust is sustained through frequent and predictable communication and regular feedback from the educator.
- There are also opportunities to provide feedback to the instructor. Such a course is designed for high levels of interactivity and trust building.
- The activities highlighted in this principle emphasise the foundational social and emotional aspects of learning over the cognitive side. They are necessary to enhance the success of online courses. In addition, they provide the lasting course memories that members of the class fondly recall and tell others about.

Ten Pedagogical Activities to Promote Tone or Climate

The following figure provides an overview of the ten activities:

Tone or Climate: Activities

From the list of ten pedagogical activities promoting tone, the following three activities are selected to provide participants with brief practice examples. For more details, please refer to the full TEC-VARIETY book.

Example 1:
Personal Introduction

Example 2:
Two Truths and One Lie

Example 3:
Favourite Websites

Example 1: Personal Introduction

Introductions help “break the ice” on the first day of a class or training activity.

Educators can create a discussion thread for learners to make explicit introductions. They could structure the introduction activity by asking for specific items or characteristics of learner interest that can include their professional interests (for example, learning goals) and personal matters (for example, hobbies).

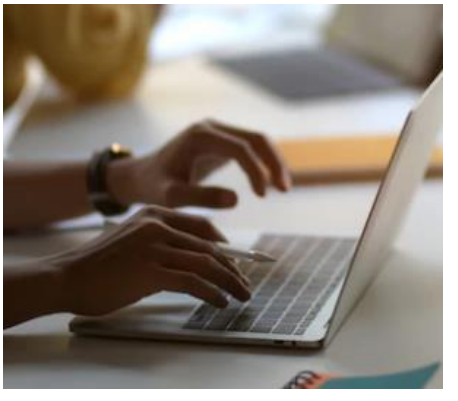
However, be sensitive to learner cultural issues when asking for these types of personal information. The personal introduction thread allows learners to socially share their knowledge and is a space they can revisit throughout the course, especially when they are matched with others for group activities.

The course lecturer ought to be the first to post their introduction and provide guidance on how much to post, or a number of peer learners ought to respond to model expectations for learners.

Skills learners learn	Course interactivity, feedback, social interaction, sharing, appreciation of multiple perspectives, course diversity, community building and mutual knowledge.
Key instructional considerations	• Risk index: Low • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1–2 weeks

Example 2: Two Truths and One Lie

In this activity, learners post two truths about themselves and one statement that is a lie for fellow learners to determine which information is a lie and which items are truthful by asking questions or exploring online information available on that learner's profile page on Facebook, LinkedIn or some other website.



Learners who guess the most correct answers could be given a bonus point or two or be recognised in some other way. This allows learners to share personal information that builds rapport and may be useful in later course activities.

Skills learners learn	Interactivity, dissonance, feelings of social presence and connectedness, mutual knowledge, community building and prompt feedback.
Key instructional considerations	• Risk index: Low to Medium • Time index: Low • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1 week

Example 3: Favourite Websites

Asking learners to share a few of their favourite websites can reveal their learning preferences and interests. This helps educators discover what students know and do not know. If the shared web resources are highly integral to understanding the course content, this activity can be a means to expand the available course materials for all learners as well.

Motivating and Supporting Online Learners

A key goal of this activity is motivating and retaining students through personal relevance, openness and building on what they already know.

Skills learners learn	Searching and filtering information, exploratory learning, analysis and evaluation, comparison and contrast, and feedback. Such an activity fosters 21st-century skills related to information search, selection, and critical analysis, while simultaneously empowering students with a personal voice and self-directed learning.

• Risk index: Low • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1–2 weeks	Key instructional considerations

Encouragement

Feedback is central to education and training systems because it serves as a means to let learners know whether their performances are meeting course or educator expectations.

Motivation is sustained and enhanced in the monitoring of progress toward that goal (Anderson, 2001).

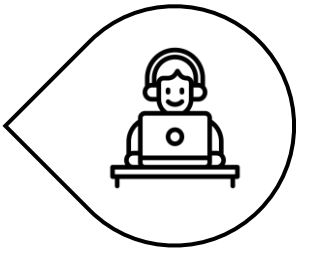
Support and feedback requirements in fully online and blended courses are different from face-to-face settings. Whereas grades on tests and other assignments are often the primary form of feedback in face-to-face courses, those in online courses appreciate feedback at more formative points in time (Dennen and Bonk, 2008).

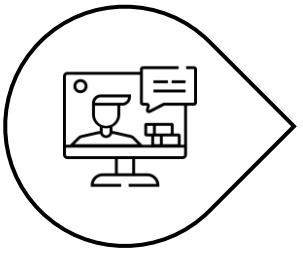
Need to Encourage the Online Learners

Online learners seek feedback and encouragement on nearly all the work they submit, unlike face-to-face learners. They may also need more direct forms of encouragement and praise. Reasons for this include the following:

Online learning might be a new experience for them. If so, then learners need reassurance that they are on the right path to success. Without some sense that they are doing well, they may lean towards dropping out of the course.

Educators (especially those new to online teaching) may fail to create a social presence in their online courses (Rourke et al., 1999). Feedback gives learners a feeling that someone is there who cares about their progress.





Online class activities may be predominantly text based (Lapadat, 2002). Unlike most face-to-face class discussions, there is a permanent record of online postings. It is not surprising, therefore, that there is an expectation for educators and peers to comment on any text that online learners produce; written feedback has been the norm since they first started to write.

What is the Need to Encourage the Online Learners?

Lack of feedback is considered one of the main reasons for withdrawing from an online course (Ertmer et al., 2007). Activities that provide explicit forms of feedback should lead to higher student course satisfaction and overall success.

Incorporation of Feedback

Feedback can be incorporated through four levels or types of feedback:

- Task- or product-related feedback, such as whether or not the student's work is correct
- Process feedback related to information on what the learner still needs to accomplish
- Self-regulation feedback
- Personal feedback directed at the learner (for example, "you are a great learner") (Hattie and Timperly, 2000)

The focus of educators' feedback and praise should be on areas that learners can control, such as their effort and strategy use, not on something deemed more static and highly difficult to change, such as intelligence (Pink, 2009).

In online courses, encouragement and feedback are often asynchronous in nature. Educators can make use of asynchronous technologies to make course announcements, and post comments and observations in discussion forums.

A range of technologies and strategies can help support online learners with timely and appropriate encouragement, feedback and overall responsiveness.

Prompt Feedback	Prompt feedback online is not particularly easy to achieve, given all the work students submit each week.

Educators might rely on peer feedback as well as that from other experts or practitioners, and even course alumni.	Peer and Expert Feedback

System Feedback	Feedback could also be built into the online system or resources.

Feedback can be in the form of students' self-assessment and self-reflection on their progress and performance.	Self-assessment

Ten Pedagogical Activities to Promote Encouragement

The following figure provides an overview of the ten activities:

Activity 11
Critical Friends

Activity 12
Student Polling and Voting

Activity 13
Online Suggestion Box

Activity 14
Minute and Muddiest Point Papers

Activity 15
Comments and Annotations

Activity 16
Screencasted Supports and Directions

Activity 17
Embedded Reviews and System-Scored Practice Tests

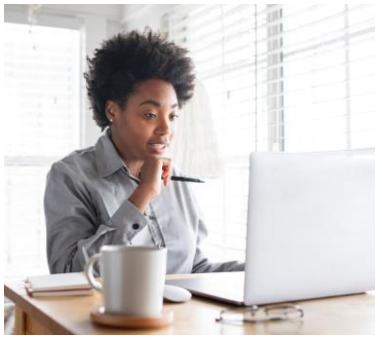
Activity 18
Asynchronous Expert Feedback and Mentoring

Activity 19
Synchronous and Mobile Mentoring

Activity 20
Learner-Self Interaction and Self-Feedback Forms

Encouragement: Activities

From the list of ten pedagogical activities promoting encouragement, the following three activities are selected to provide participants with brief practice examples.

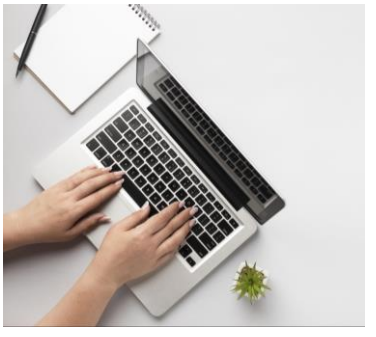


Example 1:

Critical Friends

Example 2:

Asynchronous Expert Feedback and Mentoring



Example 3:

Learner-Self Interaction and Self-Feedback Forms

Example 1: Critical Friends

"Critical friends" is a form of peers giving feedback to each other. The critical friend is a trusted person who asks provocative questions, supplies alternative points of view or data contrary to a particular perspective, submits a critique of someone's work as a friend and so on.

Students can be paired up as critical friends in many ways. Selection of critical friend teams might be according to personal or professional interests, prior experiences or backgrounds, age brackets, or year in the programme.

This technique is a means to keep students on track while fostering a highly interactive learning community.

Skills learners learn	Timely and extensive feedback, feelings of social presence and connectedness, socialising, sharing, student interaction, self-monitoring and planning.
• Risk index: Low to Medium • Time index: Medium to High, depending on support and structure • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: Throughout the course or as needed	Key instructional considerations

Example 2: Asynchronous Expert Feedback and Mentoring

There are many benefits when educators invite practitioners and real-world experts to offer feedback to online learners in their course. This strategy creates an authentic audience for learners' work, where the expert can help judge or rate projects and products such as the quality of case solutions, offer advice and insight about how particular topics and skills are actually applied in the real world, or even collaborate with students on projects or perhaps serve as a project adviser or mentor.

Such expert interactions in online courses help situate student learning in the real world, offer timely and thoughtful feedback and multiple perspectives, and enhance learner engagement.

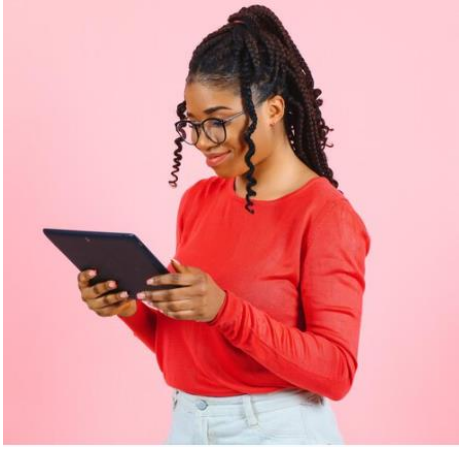
A key goal is the creation of a cognitive apprenticeship in which learners become budding novices within an established learning community.

Skills learners learn	Connecting content knowledge from books and lectures to the real world, the identification of key concepts and principles, timely and thoughtful feedback, an appreciation of multiple perspectives, and learner engagement.

• Risk index: Medium • Time index: Medium • Cost index: Low to Medium • Learner-centredness index: High • Duration of the learning activity: Weekly or as needed	Key instructional considerations

Example 3: Learner-Self Interaction and Self-Feedback Forms

Learner-self interaction refers to a learner's personal reflection on the learning-related content, the learning process, and their personal understanding. In learner-self interaction, the learner constantly rethinks and reframes their understanding of the content through inner dialogue about their ongoing learning process.



An online course can include self-check and reflection questions embedded at key points in the process, have checklists of skills and competencies for learners to respond to, or include reflection papers or activities through wikis or blogs or discussion threads, and so forth.

The key is for learners to take time out and think about their learning journey, so they can go on to develop self-regulated learning skills and become self-directed and independent learners.

Skills learners learn	Personal reflection, review concepts learned, concept attainment, comprehension and application skills, the development of self-regulatory and metacognition skills, and personal awareness and feedback.
Key instructional considerations	• Risk index: Low • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: As needed

Curiosity

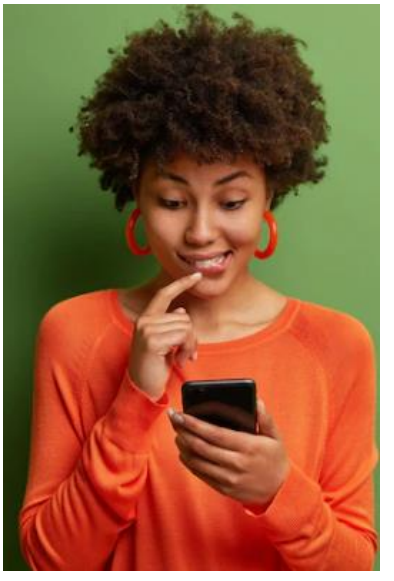
The first two principles of the TEC-VARIETY framework lay the groundwork for a high-quality course.

Principle #1: Tone or Climate	You want learners to feel comfortable in the online course or training experience.

You want to provide encouragement, feedback, and timely support for what they are learning.	Principle #2: Encouragement

While those first two principles are vital for learner motivation, the third component of the TEC-VARIETY framework **— Curiosity —** is essential for most courses and learning situations.

Research Studies on Curiosity



Curiosity is internal. It is not some external coercion tactic. There are no carrots and sticks. Instead, there is a felt discrepancy between the knowledge that a learner possesses and that which they need or desire for completing a task or gaining a new competency or skill. There might also be a sense of wonder or suspense about something not previously known. This sense of challenge to fill in the gaps creates an intrinsic need to push ahead and learn more in order to succeed at the task.

Curiosity arouses human interest in pursuing some intriguing piece of information or kernel of knowledge, and the Web is filled with interesting learning resources that can raise students' curiosity.

John Marshall Reeve (1996)

In his 1996 book, *Motivating Others: Nurturing Inner Motivational Resources*, John Marshall Reeve states, "Curiosity is a cognitively based emotion that occurs whenever a student perceives a gap in [their] knowledge" (p. 158). That sense of bewilderment or "gapness" drives the learner into finding out more information. There is something intriguing about the content — some unknown or missing piece of information that must be filled in.

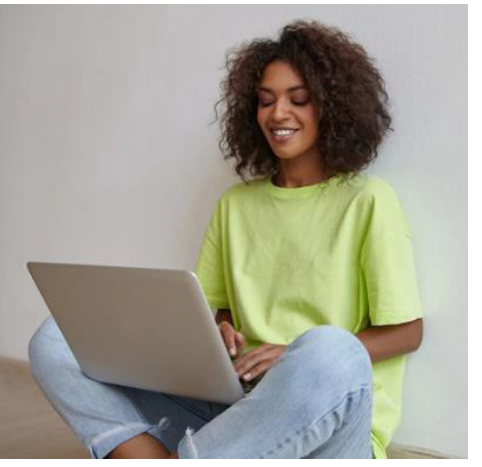
Steven Reiss (2004)

Curiosity need not mean enjoyment. Steven Reiss (2004) contends that notions of intrinsic enjoyment exaggerate the importance of pleasure in motivation. He rightfully points out that highly curious people desire knowledge so much that they will overcome challenges along the way, including a series of failures, extensive criticism, personal tension and many forms of frustration. Still, they march on to seek new information or some sense of learning accomplishment.

Others (1957, 1963, 1996)

The discrepancies between the new information and what learners already know must be modest, as learners perceive large discrepancies to be too challenging (Pintrich and Schunk, 1996). Significantly different information is too difficult to assimilate or accommodate within our existing mental structures (Piaget, 1963). When a person expects something to happen, but another event occurs, they enter a state of cognitive dissonance (Festinger, 1957). They may feel that their present state of knowledge is inadequate. At the same time, they know they have the capability to learn more and overcome it. Such situations raise their curiosity and wonder, so they explore their surrounding environment for the answer.

Technologies to Foster Curiosity



Web-based technologies can foster curiosity and a sense of surprise, intrigue and the unknown. For example, nearly everything that appears in the news each day can be used to spur dissonance and learner quests to know more. Any situation can arouse sadness, happiness or other emotions in students.

Example

A view into the day in the life of a scientist, writer or historian is now possible with:

- Video streams of the news
- Audio files from a podcast series
- Live feeds from Twitter
- Interviews posted to a blog

Live science can be streamed to learner mobile devices and desktops from anywhere in the world.

Ten Pedagogical Activities to Promote Curiosity

The following figure provides an overview of the ten activities:

Activity 21

Online Events in the News

Activity 22

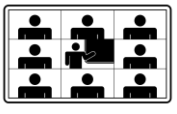
Live Science, Creative Expression, or Artistic Invention

Activity 23

Live Scientific Discovery or Invention

Activity 24

Just-in-time Syllabus



Activity 25

Just-in-time Teaching

Activity 26

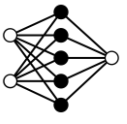
What's My Line Guest Games

Activity 27

A Day in the Life of a Scientist, Scholar or Celebrity

Activity 28

Cultural or Contextual Blogs and Resources



Activity 29

Extreme Learning

Activity 30

Quests and Probes on the Web

Example 1: Just-in-time Syllabus

A just-in-time syllabus (JITS) incorporates time-sensitive data from the real world as it occurred in online or blended courses. A course syllabus, designed as a shell with key themes outlined, can have additional content and applications added into the course, according to student interests as well as prevailing societal trends and conditions.

Educators can draw from current world events or news, such as an environmental oil spill, earthquakes or political revolution, and make use of online tools such as maps, interviews, video footage, news articles, interactive timelines, and live accounts for learners to complete particular course activities related to these events. The course could evolve, depending on news related to new research reports and innovations, news announcements, and so on.

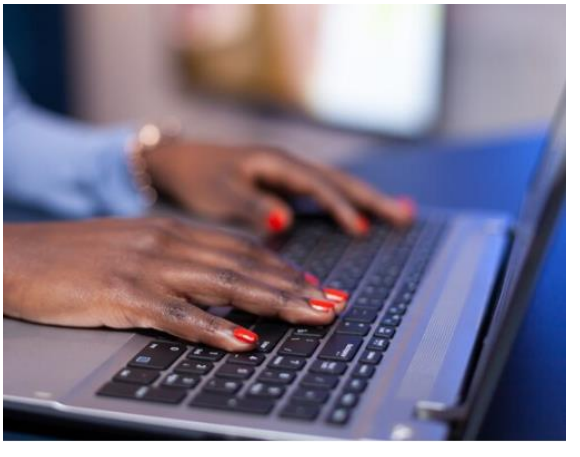
This technique provides the skeleton, shell or base knowledge extending to online information in the form of news, research reports, trends and opinions.

Skills learners learn	Analysis and evaluation skills, multitasking, linking new knowledge to current events in the news, learner curiosity in content, encoding the news information both verbally and visually, flexibility in thinking, and critical analysis of concept application.

• Risk index: High • Time index: High • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: Throughout the course or as needed	Key instructional considerations

Example 2: A Day in the Life of a Scientist, Scholar or Celebrity

Learners can be asked to identify and write a blog post, paper or discussion forum entry on an imaginary day in the life of an award-winning scientist, well-known scholar or celebrity in a particular field. Learners might be given a list of well-known people in a field to follow up, or they might brainstorm which leaders in a field to investigate, based on their prior experiences and readings to date in the course.



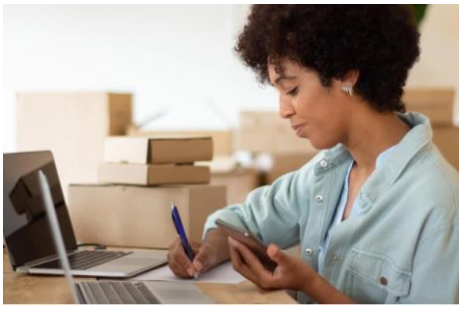
Educators might assign particular questions or issues for learners to respond to in their writing. Learners can then explore their famous person's homepages and blogs, subscribe to their Twitter feeds, watch their videos, or read their online news to write about the contributions of their chosen person as well as significant changes or evolutionary steps in their professional careers.

Educators can ask learners to write a final reflection paper relating their learning from this activity to specific topics and ideas in the course, including new concepts, theories and principles, and related fields of study.

Skills learners learn	Self-directed learning, motivation and engagement, appreciation for a topic or field, analysis skills, personalising learning, reflection, and analysis skills.
Key instructional considerations	• Risk index: Medium • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1–3 weeks

Example 3: Cultural or Contextual Blogs and Resources

This activity enables learners to make use of rich online content and connect with people around the world while learning about cultural and contextual events.



Educators can, for example, make use of blog postings of archaeologists discussing customs, artefacts, rituals, maps of different people groups; interactive online archaeology sites and art museums; online interactive sites to trace the development of different events; podcasts on interviews with experts; photo websites displaying different customs, rituals and historical sites; online museums of well-known statues, tools and books, and so on.

Learners could write to the original creator of the online content and ask for an update on their research, pose questions they have, or request additional information and insights on the significance of the content originally posted, and so forth. Students can write reflection papers on their findings.

Skills learners learn	Cultural curiosity, reflection, seeing multiple perspectives, and global understanding and appreciation. Central to this activity is to encourage learners to consider new perspectives beyond limited views from textbook authors, lecturers, and standard course resources.

• Risk index: Medium • Time index: Medium to High • Cost index: Low to High • Learner-centredness index: Medium • Duration of the learning activity: As needed	Key instructional considerations

Summary

This first practically oriented module on pedagogical activities that can be incorporated into online courses has been intended to guide online educators to design courses that are more motivating and supportive of learning.

Let's review the key learning points we covered along the way.

- It introduced educators to the first three motivational principles in the TEC-VARIETY framework: tone, encouragement and curiosity.
- Tone is crucial in the first week of a course, with its emphasis on creating a socio-emotionally safe and engaging online climate for learning.
- Encouragement emphasises the forms and types of feedback and reinforcement that can reassure learners and support them to move productively forward in the course.
- Fostering an optimum level of curiosity is needed for learners to progress towards obtaining new knowledge to address a gap in their current knowledge.
- Most of the pedagogical activities suggested to promote these three principles can be adapted to suit different online learning contexts. We encourage participants to do so to best meet their learners' needs.

Check Your Progress

1. What does the motivational principle “tone” or “climate” emphasise?
   a) Psychological safety and welcoming environments
   b) Fun and variety in the course activities
   c) The different strategies for giving and receiving feedback
   d) Strategies to support a variety of learning styles

2. What type of activities promote swift trust?
   a) Activities that support learner empowerment and curiosity
   b) Activities that establish a sense of togetherness during the course
   c) Activities that enable learners to create their own projects
   d) Activities that energise learners to want to find out more about a new topic

Check Your Progress

3. When you walk into a room full of strangers and are made to feel welcomed, respected and included, which motivational principle is demonstrated?

   a) Tone
   b) Encouragement
   c) Curiosity
   d) Intrigue

4. In the first few weeks of an online course, which motivational principle is crucial to consider?

   a) Tone
   b) Encouragement
   c) Curiosity
   d) Intrigue

5. It is not possible to establish feelings of trust, rapport and camaraderie in online courses.

   a) True
   b) False

6. As compared to learners in face-to-face classes, how much feedback online learners typically require?

   a) About the same amount of
   b) More
   c) Less
   d) No

Check Your Progress

7. Why is the encouragement principle important for learners in online or blended courses?

   a) Understanding how online learning works
   b) Reassurance that they are on the right path
   c) Expectation that their work will be responded to
   d) Creating a sense of curiosity and interest in the course work

8. What might be some ways for learners to give/receive feedback in online courses?

   a) Peer-to-peer feedback
   b) Experts outside of the course
   c) Alumni
   d) Social media

9. In order to promote learners' optimum level of curiosity, what is the amount of discrepancy between their current knowledge and the new information that they need to know?

   a) Modest
   b) Small
   c) Huge

10. Learners experience a state of cognitive dissonance when what they expect to happen does not occur.

    a) True
    b) False

Module 4

Principles of Variety, Autonomy and Relevance (VAR)

Learning Objectives

Upon completion of this unit, you are expected to be able to:

1. Describe the motivational principles of variety, autonomy, and relevance

2. Identify the ten different pedagogical strategies for promoting each of these three principles

Introduction

This is the fourth module where we will discuss practical motivating pedagogical activities that can be incorporated into online courses.

It focuses on the fourth to sixth motivational principles in the TEC-VARIETY framework: **Variety** (#4), **Autonomy** (#5), and **Relevance** (#6).

Variety

In this section, we begin by describing the **variety** principle and reasons for including variety in our practice. We will touch on key ideas important for promoting variety, such as creative flow and play. Web-based and digital tools, as well as pedagogical activities for fostering learning variety will also be covered.

Autonomy

This section explores the **autonomy** principle and why autonomy, including choice, control and flexibility, is important for offering learners a sense of purpose in their learning. We will consider potential web-based and digital technologies for supporting learner autonomy.

Relevance

Next, we will turn our attention to creating learning tasks that are personally **relevant** (the relevance principle) and meaningful for learners. This is usually achieved when learners can see the applicability of their learning in their personal and professional lives. Many potential web-based and digital tools and contexts exist for designing learning tasks relevant to learners' interests.

Introductory Video

The secret of happiness is variety, but the secret of variety, like the secret of all spices, is knowing when to use it.

– Daniel Gilbert

Watch Video: Overview of Module 4

Variety

The English poet William Cowper is known for this famous quote: “Variety’s the very spice of life, that gives it all its flavour” (Duckett, 2006). This statement accurately reflects principle #4. Variety is essential across educational settings.

What does The Term “Variety” Refer To?

In fact, it is crucial for any type of training or educational experience, no matter the age of the participants, their backgrounds, or the level of the course. The term “variety” refers to teachers making use of atypical, uncommon and unusual activities, resources and experiences (Brophy, 1998) to engage learners in learning.

What are The Considerations For Including Variety In Class?

In face-to-face class settings, this might include guest speakers, field trips and seeing unusual artefacts. When teaching online, considerations for including variety in class could mean almost anything, as there are diverse online tools and resources that can be used to generate a variety of learning activities and experiences.

Researchers' Studies on Variety

The variety principle also includes fun, fantasy and novelty in our online courses. Researchers have studied factors that lead learners to experience a heightened sense of engagement, a sense of being in a creative flow. In this state, learners become immersed in a task of interest, persevere through any challenges and remain positive when working through the potential ways of achieving or solving the task.

Csikszentmihalyi and Robinson (1990)	Mihaly Csikszentmihalyi developed the concept of "flow" to describe individuals' state of mind when they become lost in their work. Knowing this, educators can create conditions that are conducive to students' learning, creativity and well-being by promoting their state of flow (Csikszentmihalyi and Robinson, 1990). Incorporating elements of fun, fantasy and novelty are some ways to encourage the "flow" experience such that completing a learning task is no longer seen as difficult. However, the fun aspects of education are too often seen as frivolous and unrelated to the goals of mastering the assigned material.

Thomas and Brown (2011)	Teaching online and blended courses today offers educators and training coordinators more opportunities for changing the learning environment than ever experienced before. Researchers Thomas and Brown (2011) point out that successful participation in today's highly digital world requires extensive opportunities for play as well as sharing, messing around with ideas and simply hanging out with others. When learners work out creative solutions in their minds as a result of messing around with remixed film footage, alternatives in an intense game or information in an online database, they have the chance to create, generate and contribute knowledge, not just receive it.

Tools to Enhance Variety

Web-based and digital tools that can be used to enhance variety in the class can include online brainstorming in a discussion forum, wiki, chat or Twitter feed, using popular songs to learn history or science content in a unique and highly memorable way, accessing blogs and discussion boards, videoconferencing with guest experts and even engaging learners in fantasy or virtual worlds.

Variety: Ten Pedagogical Activities

The following figure provides an overview of the ten activities:

Activity 31

Online Séance or Roundtable

Activity 32

Virtual World Role Plays

Activity 33

Mobile and Social Networking Content Games and Apps

Activity 34

Educational Music Videos

Activity 35

Database Problems and Search Competitions

Activity 36

Task and Activity Randomiser

Activity 37

Time-constrained Presentations

Activity 38

Virtual Community Brainstorming

Activity 39

Extreme Teaching and Online Mentoring

Activity 40

Exploring Dynamic Web Content

Variety: Activities

From the list of ten pedagogical activities promoting variety, the following three activities are selected to provide participants with brief practice examples. For more details, please refer to the relevant chapter in the TEC-VARIETY book.

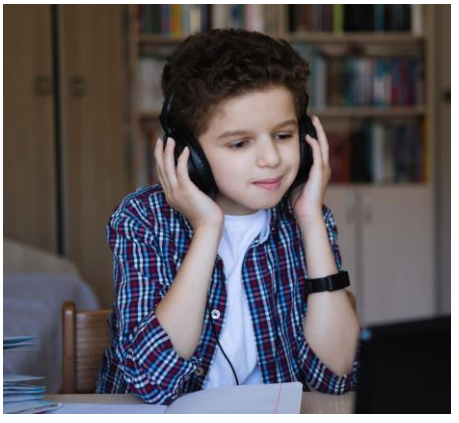
Example 1:
Educational Music Videos

Example 2:
Database Problems and Search Competitions

Example 3:
Virtual Community Brainstorming

Example 1: Educational Music Videos

One way to add some novelty, fun and variety to a course is to link the content to memorable and relevant resources in the form of poems, sonnets, songs, mottos, hymns, tales, stories and adventures. Such approaches are powerful and exciting, as humans more easily remember stories and anecdotes than facts (Driscoll, 2005).



For example, the “History for Music Lovers” channel on YouTube showcases videos based on popular songs from the past that have been rewritten and remixed to detail important moments or people in history. Similar websites can be found offering science music videos for understanding topics like DNA, the periodic table of elements and space junk (Rowe, 2009).

This type of activity is novel, fun and engaging, and it helps students learn factual knowledge as well as higher-order thinking skills.

Skills learners learn	Creative expression, design, planning and coordination skills, content review and linking course content to multimedia resources (For example, visuals, audio files and animations).
Key instructional considerations	• Risk index: High • Time index: High • Cost index: Low to High (low to watch, medium or high to develop) • Learner-centredness index: Medium • Duration of the learning activity: As needed

Example 2: Database Problems and Search Competitions

Asking learners to search the Web for new information can be turned into a fun activity. Information search competitions on online databases can support and test learners’ search skills or problem-solving abilities.

Educators could create an online scavenger hunt, but instead of testing student search and access skills for a wide variety of online contents and resources related to the course, such an activity would test student skills within just one web resource or tool, using online databases such as Wolfram Alpha and Worldmapper. Learners can search for factual answers in Wolfram Alpha, an innovative and comprehensive online answer engine for search queries on many topics. Worldmapper, on the other hand, allows users to access data on many topics and then display it on a map of the world.

Educators could prompt students' knowledge by asking five to ten questions on a topic for them to quickly look up or award bonus points for the first student with the correct answer.

Skills learners learn	Information access, search, evaluating the credibility of sources, comparison and contrast and communication skills.
Key instructional considerations	• Risk index: Low to Medium • Time index: Low • Cost index: Low • Learner-centredness index: Medium • Duration of the learning activity: As needed

Example 3: Virtual Community Brainstorming

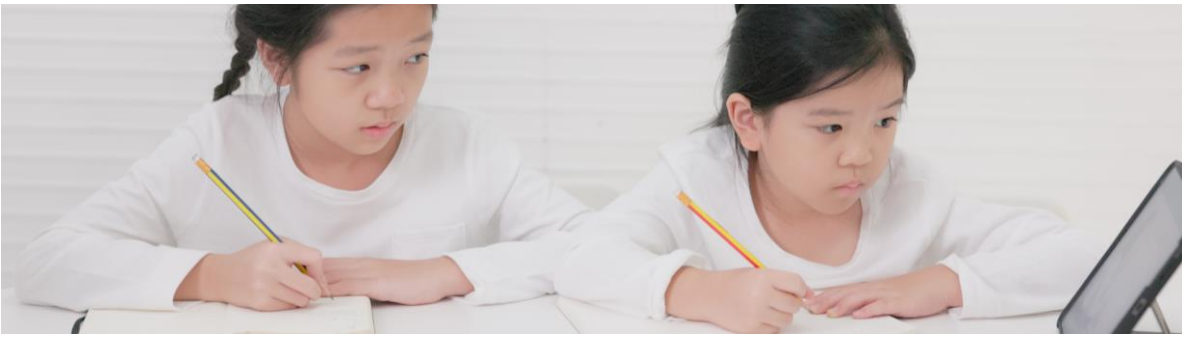
Brainstorming and idea-generation activities are useful for learners to get started on a topic. They can be asked to respond to a comment, question, goal or event using a tool like Padlet or Google Jamboard.

Learners can make use of ideas that are generated; however, they are not allowed to evaluate or rank them. Working in this type of environment, they can say what is on their minds without having to back up their claims, demonstrate the practicality of an idea or be concerned about fellow learners' opinions of them. There is less pressure to perform and fewer embarrassments. Such an open approach frees up mental energy.

Learners can make their suggestions to a course wiki or within a live chat session window or post to their class discussion forum or a class Twitter account to which fellow students have subscribed. Alternatively, they can post a question, issue or comment in video format on Flipgrid for others to respond to.

Skills learners learn	Excitement and enthusiasm for learning, fun and suspense, creative expression, class diversity, student voice and engagement.
Key instructional considerations	• Risk index: Medium • Time index: Low to Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: As needed

Teaching Variety Through Web



Much variety is possible with the Web. As a result, it is truly an adventure to teach as well as learn online. Variety is the core or focal point of the TEC-VARIETY model. What is considered variety today, however, quickly becomes commonplace tomorrow; it is a constantly moving target. And if online lecturers repeatedly select particular tasks, learners may no longer consider that activity as novel or engaging as it once was. Considering the generation of learners brought up in the age of the Internet, principle #4 might be one that they appreciate more than most.

Learner Autonomy

The next principle of the framework emphasises the learner aspect of the teaching and learning context, that is learner autonomy. As we have stated with the first principle of TEC-VARIETY, learners should have the freedom to learn. Choice, control, flexibility and opportunities are part of that fifth principle. And these are often the very principles that many educators argue are the key advantages of online learning. No matter the delivery mechanism, a learning environment filled with autonomy and ample choice is central to learning success today.

Autonomy

Previous principles in TEC-VARIETY addressed the course climate and feedback variables as well as how to generate curiosity, variety, fun and fantasy. Those aspects of motivation, though seemingly learner-centred, are actually often under the control of the instructor. The fifth principle focuses on learner choice and autonomy.

How Does the Principle of Autonomy Help Learners?

Offering learners choice tends to be outside the direct control of the educator or curriculum developers. However, opportunities to choose and to act on their learning choices can have a powerful influence on learner satisfaction and performance (Pink, 2009). The autonomy principle recognises that learners need opportunities and extensive freedom to learn and, ultimately, express themselves.

Research Studies on Autonomy

Allowing learners more autonomy enhances their intrinsic motivation and gives them a sense of control and purpose in their learning situation (Stipek, 1998), instead of them feeling controlled or manipulated by someone else. Such purposeful striving toward some action or goal is at the heart of self-directed learning; there is an inner will or determination to succeed. Daniel Pink (2009) argues that this internal drive system is focused on getting better at something that matters or is personally meaningful.

Deci and Ryan (2008)	Work by researchers Edward Deci and Richard Ryan on self-determination theory shows there are innate psychological needs that all humans have, including basic desires for competence, autonomy and relatedness (Deci & Ryan, 2008). Deci and Ryan argue that environments or social contexts that support these needs foster intrinsic motivation and persistence toward goals. When such basic needs are disregarded, there is less intrinsic motivation. There are substantial benefits to be gained from autonomous regulation as compared to more controlled regulation. From this perspective, educators should create an environment that respects student agendas, provides extensive choices and options, and offers activities that are highly relevant to student interests.

Bonk et al (2000)	Learners entering our classes have their own set of personal goals and beliefs. By embedding opportunities for choice and personal exploration in an online course, learners can feel in charge and in control of their learning environment (Bonk et al., 2000).

Maehr (1984)	With choice, flexibility and autonomy, learners tend to make a personal investment in the course (Maehr, 1984). They want opportunities to learn, not restrictions from it.

Technologies to Promote Autonomy

The web-based and digital technologies used to promote autonomy might be as simple as a sign-up page on the Web, a set of open educational resource portals to explore, a discussion forum with multiple tracks or themes to select from, selecting podcasts or blogs to participate in and even joining in virtual world meetings.

How Do These Technological Strategies Help?

These strategies shift the balance of power in the teaching-learning equation towards learners. Educators being risk-takers in supporting such shifts allow students opportunities to teach or mentor others in the course as well as generate knowledge for the next class.

Autonomy: Ten Pedagogical Activities

The activities listed in the fifth principle offer opportunities for learner autonomy and choice. Giving students a choice on their assignments and activities builds commitment and encourages learning.

These activities involve increasing degrees of choice and freedom to learn, from selecting a resource to showcase for a particular week (For example, activity 41) to opening up the course to enable collaborations with others across the world (For example, activity 50).

The following figure provides an overview of the ten activities:

Activity 41

Cool Resource Provider

Activity 42

Technology Tool Demonstrator

Activity 43

Starter-Wrapper Technique

Activity 44

Shot Gun Questioning

Activity 45

Hot Seat Questioning

Activity 46

Open Exploration Weeks

Activity 47

Open Educational Resources Explorations

Activity 48

Pick and Choose Options

Activity 49

Open Syllabus Course Portal with Options

Activity 50

Open Teaching and MOOCs

Autonomy: Activities

Example 1:

Starter-Wrapper Technique

Example 2:

Shot Gun Questioning

Example 3:

Open Educational Resources Explorations

Example 1: Starter–Wrapper Technique

The “Starter-Wrapper” task (Bonk et al., 2002) invites students to sign up to either (a) lead a discussion forum or (b) summarise the end of a discussion on the assigned book chapters, articles, videos and other resources for any week that interests them. The starter assumes some of the teacher roles, such as being the discussion facilitator or moderator, and will need to read ahead, summarise the week’s content and post a few questions to get the discussion started. Once replies are posted, they read the comments and highlight controversial, interesting or important issues and themes.

At the end of the week, the discussion “wrapper” summarises the discussion that took place, including any themes, debates and remaining open issues. The educator acts as a second moderator and wrapper to point out any student misconceptions or errors, areas that they forgot to mention or where they did not go into enough detail.

This activity promotes class interactions, focuses on learner interactions and provides a structure for their discussion (Hara et al., 2000).

Skills learners learn	Choice and control, engagement, feedback, comprehension skills and overall skill internalisation.
Key instructional considerations	• Risk index: Medium • Time index: High • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: Throughout the course or as needed

Example 2: Shot Gun Questioning

In this activity, the course lecturer posts a series of questions or issues to discuss and debate each week. Learners have the option to decide which ones to respond to (For example, select three to four to respond to out of ten issues or key questions each week within three or four of those discussions).

Alternatively, there could be one or just a few discussion forums; however, each one contains questions on a common theme or target area (For example, art periods in an art history class, work settings in a business management class or ages of clients in an occupational therapy course). At the end of the course, learners could select ten of the key discussion forums that they contributed to during the semester and write a reflection paper on their learning within those discussions.

They could also be asked to reflect on fellow students' misconceptions and any interconnections between different discussion threads.

Skills learners learn	Choice and engagement, flexibility, feedback, comprehension skills, linking content to student interests and overall skill internalization.

• Risk index: Medium • Time index: High • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: Weekly or as needed	Key instructional considerations

Example 3: Open Educational Resources Explorations

Educators can set up a task to allow each learner to explore a list of course resources related to the week's topic.

Learners review and report back on a set number of resources based on questions or criteria that they must address, or they locate certain data, summarise what they have found and link the website content to one or more concepts discussed in the course. They may be asked to present their findings in a discussion forum or demonstrate the websites they have found and offer suggestions for improvement. A wide array of open educational resources exists today for different disciplines. This activity shifts the locus of control from the educator to the learner; the educator becomes an online concierge and curator of course content.

Alternatively, learners could be asked to find open educational resources to explore for the week and then share the resources found in class.

Skills learners learn	Student autonomy and choice, student exploration, addressing student interests and individual differences, depth of learning, developing expertise in a particular issue or topic and extending course resources.

• Risk index: Medium • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1–2 weeks or as needed	Key instructional considerations

Giving Choices and Options

Online learners will respond in highly positive ways to the choices and options offered in their courses if they are supported with clear and direct explanations. Openness, options, flexibility and choice are what differentiate online teaching and learning from other formats. Educators embracing learner autonomy empower learners to learn and to make personal decisions about their learning present and future.

This section addressed the fifth principle of the TEC-VARIETY framework. We now turn to the second half of the framework: the relevance principle. In building on ideas related to learner autonomy, the sixth principle addresses the relevance and meaningfulness of the learning situation — a key component of any motivational approach or theory related to self-directed or self-determined learning. When learners find meaning in tasks, they strive to complete them.

Relevance

Principle #6 of the TEC-VARIETY framework relates to the importance of making the learning task relevant and meaningful. Lack of relevance in educational tasks and assessments is one of the key reasons for learner dropout or disengagement from the learning process. Without relevance and its associates — meaningfulness, authentic learning and personally interesting content and tasks — learners will tune out of the course.

Merrill (2002)

Learner motivation increases when the learning activity includes some sense of solving real-world problems or engaging in authentic tasks of some type (Merrill, 2002).

Kim (2009)

Kim (2009) found that when online courses offered more interaction and authenticity, often in the form of simulations and animations, the study participants perceived them to be more motivational.

Kim and Frick (2011)

The more students believe that the learning goals are personally relevant, the more likely it is that they will achieve the course learning goals and objectives (Kim & Frick, 2011).

Keller (1983)

When learners can incorporate the new knowledge of a course into their personal or professional lives, they will be more motivated to master that material (Keller, 1983).

Williams (1992) and Singer et al (2000)

A common learning activity to encourage relevance is the use of real-world cases and scenarios (Williams, 1992), including problem-based tasks that are meaningful (Singer et al., 2000).

Blumenfeld et al. (1991)

Learners are drawn to activities they believe are meaningful, authentic and relevant (Blumenfeld et al., 1991).

Jan Herrington, Tom Reeves and Ron Oliver (2010)

Creating authentic and personally relevant tasks is often not easy. In their book 'A Guide to Authentic e-Learning', Jan Herrington, Tom Reeves and Ron Oliver (2010) recommend that a high degree of physical reality is not that important compared to the creation of an effective and engaging online learning environment.

Four Ways to Promote Authenticity and Relevance

Let us now look at what researchers had to add about the four ways to promote authenticity and relevance.

Herrington et al (2010)

Herrington et al. (2010) recommends four ways to promote authenticity and relevance:

- An authentic context that reflects the type of knowledge or skills used in the real world
- An authentic task
- Resources and guidelines provided to enrich or supplement the task that are meaningful for the learners to reflect upon and use
- Levels and types of learning support, such as interactive timelines, knowledge maps, guidelines and templates, for learners to produce high-quality products, along with feedback mechanisms in the course. Other examples include teacher interventions, peer interaction and opportunities for reflection and discussion.

Reeves (2006)

Related to relevance is another motivation-related component: “interest.” When learners develop an interest in something, their motivation tends to be more enduring (Reeves, 2006).

Hidi (1990)

Learners interested in a topic will devote more cognitive resources and attention to the task at hand, which in turn will determine overall comprehension and later recall (Hidi, 1990).

Pintrich and DeGroot (1990)

If learners are interested in the topic or task, they will make a consistent personal investment in it. There will be deeper processing of the content, with elaboration and organisational strategies, instead of simple reliance on surface-level forms of repetition and rehearsal of content in their heads (Pintrich & DeGroot, 1990). Over time, learners refine their skills and develop their own unique set of expertise.

Technologies to Promote Relevance

Web-based and digital technologies that can promote relevance include synchronous meetings with experts from around the world, expert podcasts or interviews with historians or local experts to generate authentic and relevant content, virtual microscopes, online maps, survey reports, voting records and news reports for any course or topic. Such resources can be used to create contextually rich cases and scenarios that foster deep reflection and extended discussions (Williams, 1992).

Relevance: Ten Pedagogical Activities

The following figure provides an overview of the ten activities:

Activity 51

Multimedia Case Vignettes and Decision-Making

Activity 52

Job Connection and Strategic Planning Papers

Activity 53

Wiki Editing Projects (including Wikipedia)

Activity 54

Language Learning Conversations and Mentoring

Activity 55

Online Current News Feeds and Streaming Data

Activity 56

Cross-Cultural Web Conferencing and Interactions

Activity 57

Instructor Online Video Demos

Activity 58

Video Study Guides, Tutorials and Microlectures

Activity 59

Pubcasts and Researcher Interviews

Activity 60

Oral History or Situational Research

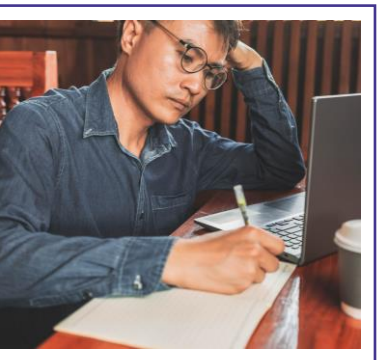
Relevance: Activities

Example 1:

Job Connection and Strategic Planning Papers

Example 2:

Cross-Cultural Web Conferencing and Interactions



Example 3:

Pubcasts and Researcher Interviews

Example 1: Job Connection and Strategic Planning Papers

A job connection or application paper requires learners to think about how one or more course concepts could be applied in their particular job setting. Learners who may have previously thought that a course's content is not relevant to their current work/professional life may become excited about being able to connect the content and apply it to their work life.

Educators can provide some examples of job connection or application papers from previous semesters and post their evaluation criteria and grading rubric for the strategic planning papers (For example, conducting an action research project or writing a technical report for a particular organisation).

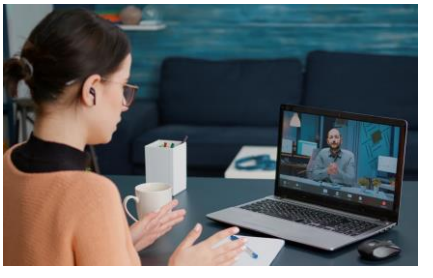
Learners will need to obtain approval for their initial idea from the course lecturer and their work supervisor before commencing. Their paper will need to be guided by evaluation criteria and rubric.

Skills learners learn	Student choice, resource exploration and selection, sharing, presentation and communication skills and learner interaction and feedback.

• Risk index: Low • Time index: Medium to High • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1–2 weeks during the semester (if a brief paper); 4–5 weeks (if a final project or strategic planning document)	Key instructional considerations

Example 2: Cross-Cultural Web Conferencing and Interactions

Interactive videoconferencing technology and simple laptop webcams today allow learners to cross-culturally connect with experts, speakers and learners from other parts of the world. Such an activity can be a singular event or part of a series of meetings.



Learners can be asked to participate in collaborative projects with other learners across different classes or locations and share the final results during a videoconferencing session.

Learners in cross-cultural teams could also jointly write books or proposals, create online news shows, or peer critique each other's work.

Such opportunities allow learners to develop increased global awareness and understand the life experiences, struggles and daily life patterns of those living in vastly different environments (Lee & Hutton, 2007).

Skills learners learn	An appreciation of multiple perspectives and diversity, interpersonal and intercultural skills, global and cultural awareness, critical thinking, feedback, interactivity, creative expression, student autonomy, exploration, knowledge construction and negotiation, student participatory learning, and active learning.

• Risk index: Medium to High • Time index: Medium • Cost index: Low to High (depending on the system selected) • Learner-centredness index: High • Duration of the learning activity: 1 week or session, as needed	Key instructional considerations

Example 3: Pubcasts and Researcher Interviews

One strategy to help students connect with the research that they are reading is to search for a podcast or video interview of a researcher or scholar about their new findings or book.

A video connected to or embedded within a research article is called a "pubcast" (Fink & Bourne, 2007). Using pubcasts available in SciVee (a science-related video-sharing website) or journals with videos, such as the Journal of Visualized Experiments (JoVE), scientists and even ordinary people can see the experiments of researchers around the world instead of just reading about them.

The pubcast can be enhanced when there is a video time code or an index that educators can use to select snippets of the author's interview that relate to certain sections of the published article. Educators can ask learners to write reflection papers or discuss how their learning was enhanced by the additional video content.

Alternatively, the researcher in a pubcast can be invited into the course for class discussions.

Skills learners learn	Richer connections to course content (encoding both text and visual cues), enhanced course interactivity, excitement and enthusiasm for learning, and sense of research applicability.

• Risk index: Medium • Time index: Medium to High (depending on the type and format of existing resources and how easy they are to locate) • Cost index: Low to High (once again, depending on the resources available) • Learner-centredness index: Medium to High • Duration of the learning activity: 1–2 weeks	Key instructional considerations

Establishing Relevance

Establishing relevance in course content is similar to finding relevance in life. Without felt relevance, learners will just be passing time in a course. Both the context and the task should be as authentic as possible (Herrington et al., 2010). Authentic content can come not only from web resources and technologies but from human experts, who can be invited into the class, or interviews conducted with historians or local experts.

Web technologies today make many learning opportunities that are relevant to learners possible, from connecting with outside experts to creating real-world scenarios.

Focus on the Need to Interact and Engage with Other Learners

From a focus on relevance in learning, we widen our focus next to include the need to interact and engage with other learners; these constitute the seventh and eighth principles in TEC-VARIETY. Interactivity includes collaboration, team-based learning, and community building, while engagement includes sustained effort, involvement and excitement related to learning tasks or activities.

Summary

This module has described the second set of three motivational principles in the TEC-VARIETY framework: variety, autonomy and relevance.

Let's review the key learning points we covered along the way.

- Variety refers to educators making use of atypical, uncommon and unusual activities, resources and experiences. Variety is needed to maintain learner alertness and interest.

- The variety principle also includes fun, fantasy and novelty. Important ideas are part of this principle, such as educators creating environments that will enhance learners' creative flow to sustain their interest and engagement in learning, as well as the idea of play to enable learners to express and generate their ideas in a myriad of ways.

- The autonomy principle focuses on giving learners choice, control, flexibility and multiple opportunities for deciding their learning pathways. Educators creating environments that offer high levels of autonomy for learners can enhance learners' intrinsic motivation and give them a sense of control and purpose in their learning situation.

- The relevance principle emphasises how learning tasks that are personally relevant and meaningful to learners can enhance their intrinsic motivation and personal investment in the task. This occurs when learners can see the relevance of their learning to their personal and professional lives.
- Creating relevant and meaningful learning tasks requires that the context and task be authentic and typically achieved through real-world problems, simulations and scenarios.
- Today's web technologies make many opportunities possible for creating environments that speak to the principles of variety, autonomy and relevance.

Check Your Progress

1. Which of the following motivational principles describes the situation when educators make use of uncommon or unusual activities, resources and experiences to engage learners?
   a) Tone
   b) Encouragement
   c) Variety
   d) Anatomy

2. What happens when individuals experience a state of flow?
   a) They become engrossed in an activity.
   b) They look for different ways to overcome a challenge.
   c) They persevere through an activity.
   d) They appreciate being able to give feedback to their peers.

Check Your Progress

3. Learning through play is important as it allows learners to use their creativity and imagination in digital learning environments to create new products and knowledge.

   a) True
   b) False

4. Why is it important to offer learners choices in their learning? Select all that apply.

   a) This increases learner satisfaction with the learning process and outcomes.
   b) This allows learners the freedom to express their learning.
   c) This offers educators more options to develop new teaching strategies to engage learners.
   d) Learners can be more purposeful in their learning and have more control over what they would like to learn.

5. What does self-determination theory emphasise?

   a) Learners need to be in control and decide their own learning pathways
   b) Educators need to create learning environments to support learners' basic psychological needs, such as autonomy, competence and relatedness
   c) Learners need learning experiences that are fun and meaningful to increase their satisfaction

Check Your Progress

6. When learners are given choices, flexibility and autonomy, they become personally invested in the course.

   a) True
   b) False

7. What might be some strategies to promote relevance in an online course? Select all that apply.

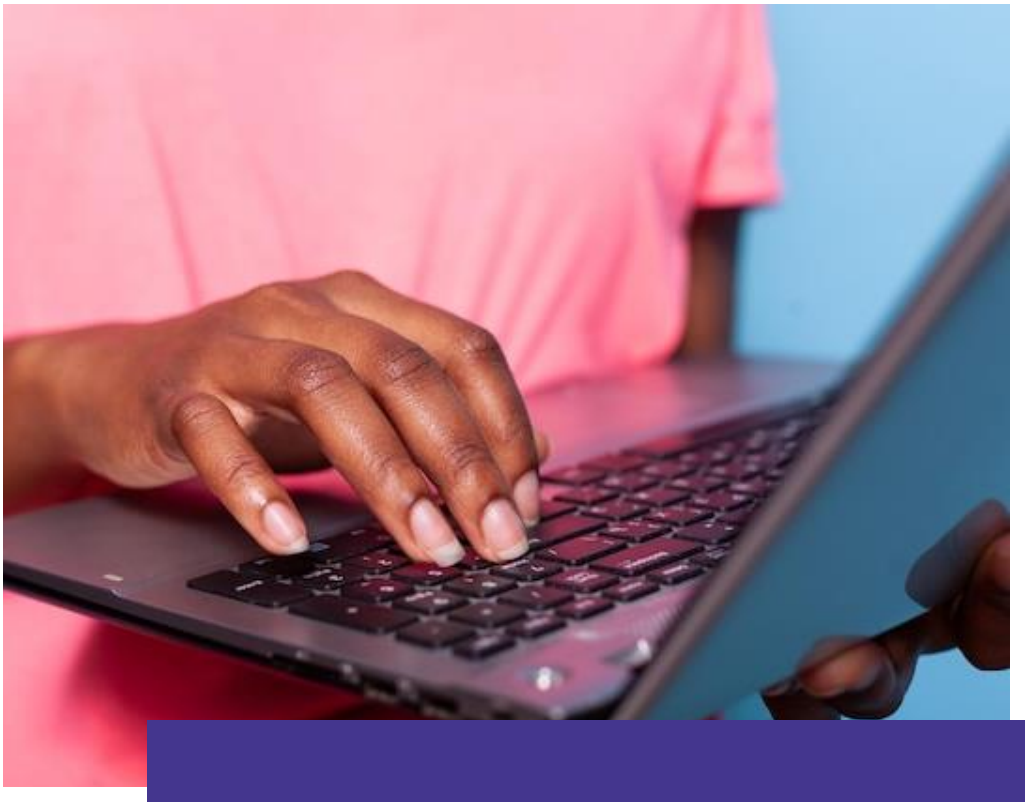
   a) Using textbooks
   b) Using scenarios
   c) Incorporating real-life problems
   d) Using simulations

8. When the course's learning goals are relevant and meaningful to learners, they are more likely to achieve the course learning goals and objectives.

   a) True
   b) False

9. How can relevance be characterised by learners?

   a) By being given the opportunity to explore and take control of their learning pathways
   b) By being able to apply the new knowledge from the course to their personal and professional lives
   c) By having a variety of learning activities to choose from suited to their learning goals



Module 5

Principles of Interactivity and Engagement (IE)

Learning Objectives

Upon completion of this module, you are expected to be able to:

1. Describe the motivational principles – **interactivity** and **engagement**
2. Identify the ten different pedagogical strategies for promoting interactivity and engagement

Introduction

In this module, we focus on the seventh and eighth principles of the TEC-VARIETY framework: **interactivity** and **engagement**.

Interactivity Principle

We first introduce the **interactivity** principle (#7), providing reasons why it's important, the different kinds of interactions possible in online learning, some theoretical ideas underpinning the **interactivity** principle (with reference to Module 1 on the theories we covered there), the web-based and digital tools possible and the pedagogical activities for fostering learner interactivity.

Engagement Principle

Next, we discuss the **engagement** principle (#8) and expand on the reasons for it as well as the web-based and digitally supported pedagogical activities possible for promoting this principle.

Both of these principles are related in the sense that they are intended for learners to take a more active role in the learning process in ways that can lead to more transformational learning approaches — a clear break from passive forms of didactic teaching and learning approaches in the online context.

Interactivity	In interactivity, we focus on learner–peer interactions and learners interacting with other people when learning via the Web.

In the engagement principle, we focus on pedagogical activities based on learner–system interactions and learners interacting with web content or web-based tools.	Engagement

Module Overview

Watch the video to get a better understanding on engaging online learners through the principles of interactivity and other methods of engagements.

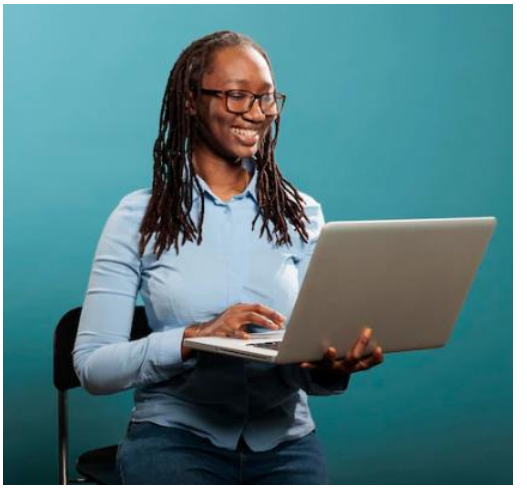
"People enjoy the interaction on the Internet, and the feeling of belonging to a group that does something interesting: that's how some software projects are born."

– Linus Torvalds

Watch Video: Module Overview

Interactivity

Many educators new to online learning ask whether it is possible to foster deep and meaningful learning interactions in online courses. Although online learning offers more flexibility than face-to-face learning, they worry or assume that important interactions taken for granted in face-to-face learning contexts are no longer available in online teaching.



Willis (1993)

The separation of time and physical place between learners, their peers and educators are commonly cited as the disadvantages of teaching and learning online (Willis, 1993).

Veletsianos (2020)

They assume that web technology is impersonal, “cold” and impassive. Such assumptions, however, are one-sided and tend to be based solely on the modality of the Web (Veletsianos, 2020).

Research Studies on Interactivity

The physical distance shifts what was previously a high-fidelity and synchronous learning event under the tutelage of an expert instructor into one that requires self-directed learning skills and heavy doses of perseverance and grit.

Interactivity, however, comes in many formats and ways.

Moore (1989)

Moore's (1989) foundational research in distance education proposed three key types of interactivity:

1. Learner interaction with content or the subject of study
2. Learner interaction with an educator or other experts
3. Learner interaction with other learners

Tony Bates' (1991. 1995) research findings argue that for effective distance learning it is essential to know the importance of:

1. High-quality forms of interaction with the learning materials
2. Other learners
3. The course lecturer

Tony Bates (1991. 1995)

Moreno and Mayer (2007)

Interaction can involve dialogue about the educator's questions and answers; control over the pace; order and timing of content; purposeful searching for and selection of additional information; manipulation of the content or presentation in some way; and the selection of and navigation through different pieces of content (Moreno & Mayer, 2007).

The dilemma for online course designers is to find ways to reduce extraneous cognitive load on learners while increasing interactivity in ways that are supportive of their learning (Maddrell, 2008).

Maddrell (2008)

Khoo's Research on Interactivity

Khoo's (2010) research revealed that when interactions are highly intellectual as well as social and emotional in nature, there are more opportunities for a productive learning community to form online. All three forms of interaction — intellectual, social and emotional — are crucial to the success of an online class.

Khoo and Forret (2010, 2011)

Khoo and her colleagues (Khoo & Forret, 2011; Khoo et al., 2010) found that in courses where peers extensively asked each other questions, elaborated on issues and generally provided high levels of feedback, not too surprisingly, learners exhibited deeper reflection and discussion than those in courses that did not use these techniques. Khoo and her team also discovered a need for emotional support. The forms of such support include addressing one another by name, asking about each other's welfare and sharing a joke or other humour in online activities.

Khoo & Cowie (2005, 2011)

Online interaction is therefore complex and multifaceted. There is no one size that fits all. Online lecturers need to provide guidelines for interactions as well as carefully monitor the resulting class interactions and discussions (Khoo, 2005; Khoo & Cowie, 2011).

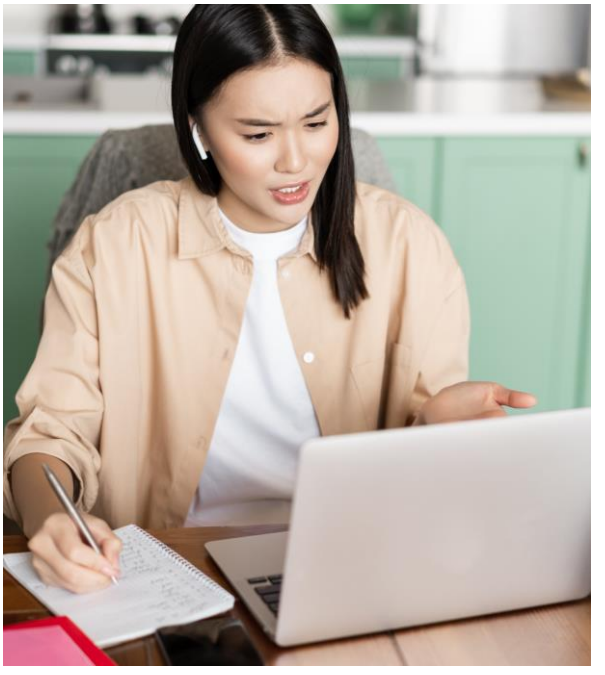
Technologies to Support Interactivity

Web-based and digital technologies that can support learner interactivity include:

1. Tools for synchronous and asynchronous collaborative brainstorming
2. Sharing of ideas, and writing, such as PBworks, Google Docs or Meeting Words; online concept maps, glossaries, timelines and hypermedia-based forms of representation
3. Collaborative question-and-answer sessions such as Piazza
4. Online video sharing and interactive tools such as Flipgrid and Vialogues
5. Many other video conferencing tools, including Zoom, Skype, Google Hangouts, Adobe Connect and so forth

The forms and instances of interactivity and collaboration, however, will vary by course level and the age or maturity of the students. Such key components of distance learning courses will also depend on the nature of the learning materials or contents, the educational philosophy of the educators, course designers and the technology systems and tools available in the course (Moore & Kearsley, 1996).

Ten Pedagogical Activities to Promote Interactivity



The figure in the next screen illustrates the ten activities to promote principle #7. The activities can have a local classroom interactive focus or work towards more complex and global interactions with peers across the world. Educators keen to try more global collaborative approaches will need to set aside time to plan well, negotiate the details, learning outcomes and grading criteria with learners, and reflect on the outcomes. Some adaptations may be needed to suit different learning contexts and learner needs.

The following figure provides an overview of the ten activities:

Activity 61

Scholar, Scientist or Innovator Role Play

Activity 62

Interactive Learner Questioning and Discussion

Activity 63

Jigsaw the Online Content

Activity 64

Flipping the Class

Activity 65

Product Brainstorming and Co-creation

Activity 66

Collaborative Mind Mapping and Idea Visualisation

Activity 67

Collaborative Video Annotations

Activity 68

Video Discussion and Questioning

Activity 69

Word Cloud Interactions

Activity 70

Backchannel Conference and Course Participation

Interactivity: Activities

From the list of ten pedagogical activities promoting interactivity, the following three activities are selected to provide participants with brief practice examples.

Example 1:

Scholar, Scientist or Innovator Role Play

Example 2:

Product Brainstorming and Co-creation

Example 3:

Word Cloud Interactions

Example 1: Scholar, Scientist or Innovator Role Play

Online role play is possible in almost any field and can be used in many different ways by assigning learners or asking them to choose roles according to the type of:

- Occupation (for example, real estate agent, teacher, corporate executive, politician, and so on)
- Personality type (for example, optimist, pessimist, sage, comic, slacker, leader, coach, and so forth)
- Online activity or role (summariser, starter, devil's advocate, questioner, and so forth)
- Level of thinking and questioning (such as knowledge or basic facts, comprehension, synthesis, evaluation or judgement)
- Types of commenting expected

This learning task can enhance learners' perspective and levels of thinking (Sugar & Bonk, 1998).

Educators can make use of the "scholarly role play" technique, where learners assume the role/voice of someone whose articles, books or newspaper articles they have read about in the course or have discussed, watched, explored or referenced in class.

Alternatively, they can engage in a "scientific role play" to assume the personas of leading scientists and engineers making particular breakthroughs or coming up with one or more inventions (for example, Caroline Herschel, Nikola Tesla, Ada Lovelace, Guglielmo Marconi, Marie Curie, Alexander Bell, and Mary Anning).

They will have to research the assigned person and their invention or innovation and post their online responses and interaction with peers from that specific role or point of view.

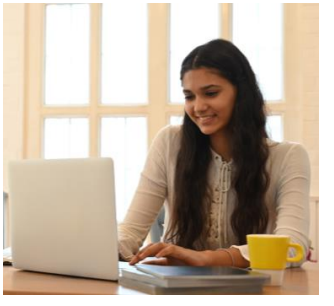
Learners can write reflection papers or complete a summary assignment and/or have group debriefings regarding the role play to reinforce and extend their learning.

Skills learners learn	Creative imagination, spontaneity, application of skills learned, appreciation of other viewpoints, discovery and exploratory learning, problem solving, and flexible application of learned concepts and principles. Scholarly and scientific role play offers learners an appreciation for new ideas and perspectives.

• Risk index: High • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1–2 weeks	Key instructional considerations

Example 2: Product Brainstorming and Co-creation

Brainstorming ideas for products that learners can collaborate on (for example, podcast shows, mobile applications, video documentaries, multimedia glossaries, video tutorials etc.) allows learners to make use of their rich prior experiences to contribute to a class project.



Learners can co-create knowledge not only within a class but with peers around the world (Lindsay & Davis, 2013) through, for example, virtual teams of students who contribute to an expanding knowledge base on a topic, or pairs of students from two different universities acting as a team to solve case problems or situations.

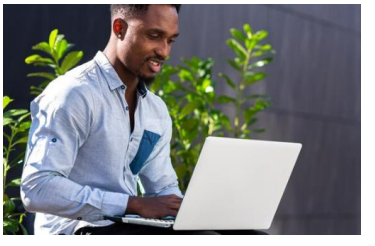
Many collaborative technologies on the Web exist today for learners to jointly create, share and negotiate knowledge — from tools for joint document and database creation, like Google Docs, to tools for brainstorming ideas, like Meeting Words; or learners can monitor projects or contribute resources in a wiki. Educators can give feedback to learners on their projects and consider different outlets to disseminate their work.

Educators can also celebrate learners' work at the end of the semester by showcasing their work, one-day institutes and summits to present projects in a conference-style format, video recordings of presentations, certificates of achievement, award ceremonies, and/or retrospective roundtables and panel discussions (Lindsay & Davis, 2013).

Skills learners learn	Creative expression and insight, knowledge construction and negotiation, the appreciation of multiple perspectives, student-generated or participatory learning, collaboration, interaction, the application of course concepts and ideas, problem-based learning, and decision making.

• Risk index: High • Time index: High • Cost index: Low to High (depending on resources required) • Learner-centredness index: High • Duration of the learning activity: 2–5 weeks, typically at or near the end of the course	Key instructional considerations

Example 3: Word Cloud Interactions



Visual representation of learning content in the form of a word cloud can help learners visualise word frequency in a dataset or document (Lindsay & Davis, 2013).

The importance of each word may be represented by the shape of the word cloud in addition to the style and size of the font, the colour, and the word's position in the cloud. In addition, a word cloud can highlight key themes and common vocabulary used in the course or some section of it.

Word clouds can be generated by the course lecturer or by learners using mostly freely available social networking tools and systems for word clouds, including TagCrowd, ToCloud, Tagxedo, and Worditout (Hammad, 2012); ABCya Word Clouds for younger learners (Gorman, 2010), or even WordSift, which has a unique link to a visual thesaurus for each word featured. The words represented in the cloud that are not familiar to the learners can be looked up prior to fully participating in the course, or used to introduce new and important terms prior to a class assignment.

Learners can be asked to generate a word cloud from one key document assigned in the course or from a related document they have found and read for the course. They can write a short reflection paper on their learning from this task and include at least ten of the words listed in their word cloud.

Skills learners learn	Visual representation of knowledge (especially for learners with visual learning preferences), discriminating concepts, comparison and contrast skills, spontaneity, reflection, synthesis and summary skills, and evaluation.

• Risk index: Low • Time index: Low • Cost index: Low • Learner-centredness index: Medium • Duration of the learning activity: 1–2 weeks	Key instructional considerations

Highlights of the Interactivity Principle

In this section, we discussed the various forms of online interactions possible and attended to interactions between learners and other people.

The important thing is to focus on learners' ideas. Have learners generate, discuss, negotiate and share new knowledge.

Emergence of Web 2.0

It offers even more opportunities for active and participatory learning. Tools for interactive commenting, rating, ranking, discussion and sharing now dominate the Web. As educators and learning facilitators, we can no longer train individuals for a solitary existence in the work world; teamwork, communities of practice, and mentoring and coaching programmes are pervasive in educational institutions as well as corporate, government and military settings.

We continue to emphasise the importance of learner interactions in the next section on Engagement. However, we turn our focus to the different types of learner–content and learner–technology system interactions possible today.

As with the interactivity principle, the goal is learner involvement in the learning process as opposed to mere reception of knowledge. When learners are excited, engaged and involved, they will exert extensive effort. As this occurs, they will often discover their personal interests in learning and be willing to invest effort in pursuing their learning goals.

Engagement

In this section, the **engagement** principle (#8), which also includes effort, involvement and personal investment in learning, is the focus. In Modules 1 and 2, we have covered the fact that motivated learners are deeply engaged in the learning process. They are committed to learning and work hard to complete assignments at the highest possible level of quality.

Research on student engagement indicates that learners who make an investment of extra effort in the learning process will see positive results (Kuh, 2009). When it comes to student achievement, involvement in the learning process matters.

But What is Engagement? How Do We Know When it is Occurring?

John Marshall Reeve (1996) explains that engagement comprises the intensity and emotional quality of a learner's involvement in a school-related task or activity. Engagement is seen in the learner's sustained behavioural involvement and overall positive effect or emotion in a task.

Disengaged Learners

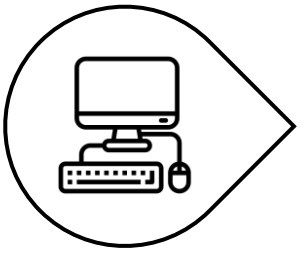
Disengaged learners lack commitment to the learning situation and often see no value in learning. As a result, they often withdraw or rebel. At the extreme, their career aspirations are lowered, and they have a negative attitude toward the course or learning as a whole.

- There is minimal or no effort, limited learning involvement or investment, and no tenacity or perseverance.
- Their excitement or interest for learning is absent.

Although the pedagogical activities in the earlier modules of this course contain opportunities for learner engagement and involvement in the learning process, this particular section focuses primarily on learner–content forms of engagement.

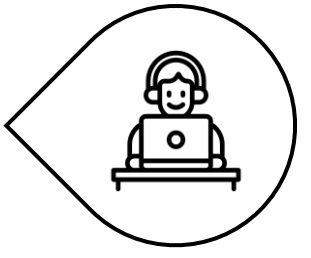
Technologies to Enhance Learner Engagement

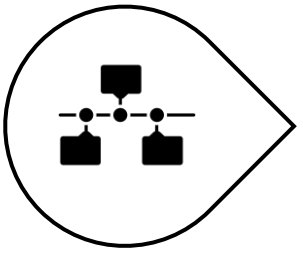
Many web-based and digital technologies exist today that can be used to enhance learner engagement.



Such technologies include elements that the learner can interact with, such as an animation sequence, a novel timeline, a class multimedia glossary, or an interactive map.

Learners may make decisions about artefacts found in a timeline. When they move up or down the timeline, additional data, interactive images, or other embedded media elements can appear.

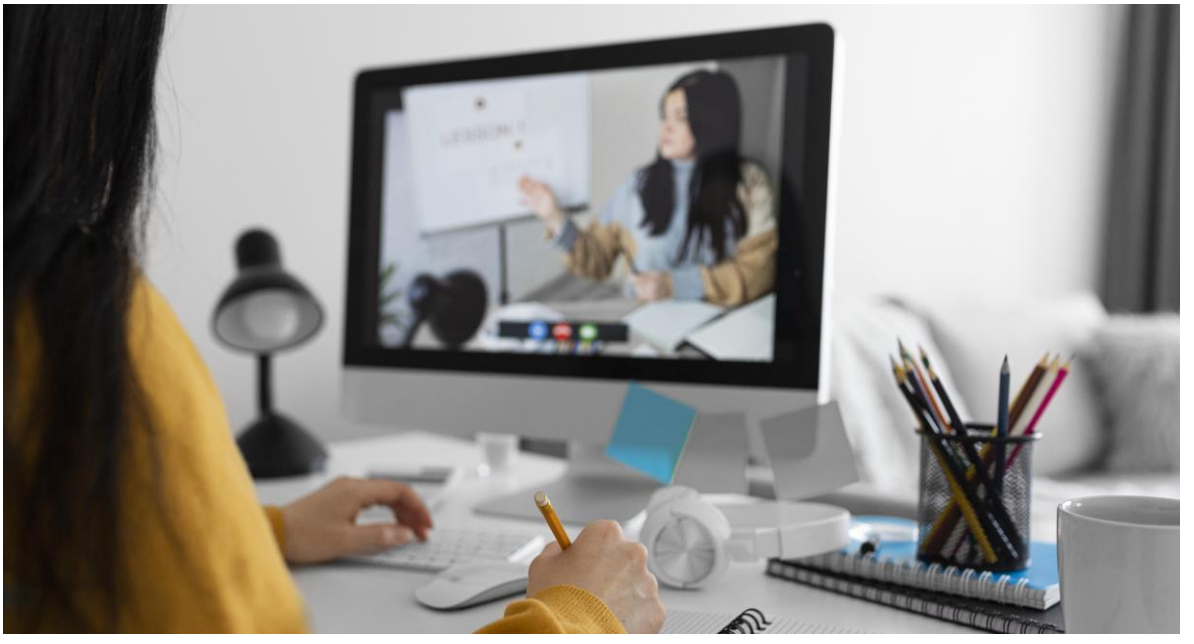




In some online timelines and databases, learner decisions and selections are immediately represented visually.

However, there is no particular “engagement” technology and no engagement guarantee. It is not the technology itself that determines learner engagement, but rather how that technology is used.

Ten Pedagogical Activities to Promote Engagement



There are ten pedagogical activities, along with the other earlier activities in previous modules, that go far beyond the mere reception of knowledge. They require learners to do something with the learning content — that is, interact with the content in ways that require them to play with ideas, make predictions about them, and generally want to know more. Such hands-on learning tasks might augment or expand online content as well as transform it.

The following figure provides an overview of the ten activities:

Activity 71

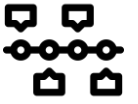
Interactive Maps and Databases

Activity 72

Interactive Multimedia Glossaries

Activity 73

Talking Dictionaries and Language Translation



Activity 74

Interactive Timeline

Activity 75

Exploring Animations, Simulations and Pop-Up Media

Activity 76

Virtual Tools and Scientific Instruments

Activity 77

Microblogging Course Discussions

Activity 78

Online Subject-Specific Picture Galleries

Activity 79

Interactive Online Exhibits

Activity 80

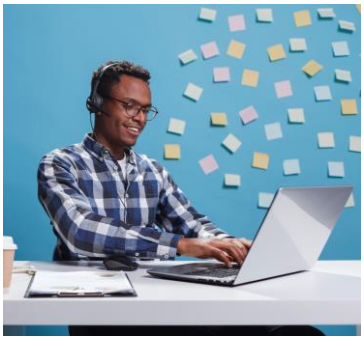
Three-Level Questioning

Engagement: Activities

From the list of ten pedagogical activities promoting engagement, the following three activities are selected to provide participants with brief practice examples.

Example 1:
Interactive Timeline

Example 2:
Microblogging Course Discussions



Example 3:
Interactive Online Exhibits

Example 1: Interactive Timeline

Web-based interactive timelines provide learners with a guided context for key historical events, unique information, and something that is familiar or intriguing to them in which they can explore and learn.

Educators can search for and use timelines related to their field, such as the website Histography, which has a wide array of timelines for different subjects (for example, literature, music, art), events and activities (for example, wars, politics, inventions, discoveries) and so on. Journeys along interactive timelines are supplemented by images, audio clips, pop-up text, and other interactive content.

Learners can be asked to find a timeline that relates to their course projects or use one or more timelines in any oral presentation assignments.

Educators can have learners create a timeline, either individually or as a group, of a particular topic, person, time period, or event. A gallery of timelines can be created at the end of each semester to showcase learners' work as well as expand the potential audience for it.

Skills learners learn	Interactivity, intrigue, system feedback, visual discrimination skills, data analysis, comparison and contrast, visual thinking, inquiry, self-directed learning and resource exploration, and application of what was learned. Timelines give learners a sense of wholeness or a macro lens for a particular field or topic within a field.

• Risk index: Medium • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: Every week or as needed	Key instructional considerations

Example 2: Microblogging Course Discussions

Microblogging using social media platforms such as Twitter is used in educational settings to enhance the classroom dynamics, offer prompt feedback, increase learner time on task, and build closer relationships between learners, peers and the course teacher (Junco et al., 2010). Each tweet is typically limited to 140-character posts.

When using Twitter, educators assume a more active and participatory role and encourage learners to be more engaged. Twitter can be used to extend class discussions about assigned readings, remind learners about course assessments, provide a low-stress way for learners to ask questions, support learners to co-ordinate projects, gather class opinions and vote on different polling questions, and so forth.

We know of colleagues who have involved their learners in using Twitter for regular course reflections, responding to fellow learners' tweets, sharing an online resource with each tweet, and so forth (Junco et al., 2010; Wright, 2011).

Skills learners learn	Prompt feedback, peer-to-peer as well as student–instructor interaction, reflection, learner involvement, multiple levels of information processing, responsiveness, resource sharing, and community building.

• Risk index: Medium • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: All semester or as needed	Key instructional considerations

Example 3: Interactive Online Exhibits

Learners are typically engaged when they can manipulate objects/artefacts that they are learning about or experience them in different ways, such as through virtual art or museums. Educators in art, literature, history, world cultures, and many other topics can explore websites such as Google Arts & Culture. the National Gallery in London, the Art Gallery of New South Wales, the Museum of Modern Art (MoMA) in New York, the Hong Kong Heritage Museum, the Tokyo National Museum, and so on.

Other examples of virtual tours that can be conducted for disciplines such as archaeology and anthropology include the Smithsonian National Museum of Natural History, or even the Virtual Zooarchaeology of the Arctic Project (an online, interactive, virtual museum of animal bones from the North American Arctic as well as Greenland) (Monaghan, 2011).

Educators can use such online exhibits to supplement course readings and/or ask learners to write reviews of an exhibit and reflect on how such principles are used in real life. Teams of students can also be asked to create a rubric for evaluating the interactive online exhibit and reflect on the collaboration process as well as the resulting rubric.

Skills learners learn	Interactivity, student autonomy and choice, reflection, visual discrimination skills, multimedia learning, data analysis, evaluation, comparison and contrast, visual thinking, inquiry, self-directed learning and resource exploration, and identification of key concepts.

• Risk index: Medium • Time index: Medium • Cost index: Low • Learner-centredness index: Medium • Duration of the learning activity: Any amount of time, as needed	Key instructional considerations

Highlights of the Engagement Principle

The forms of engagement discussed in this section mainly address learner–content engagement. When learners are interested, involved and engaged in the learning process, their personal investment and effort are increased as well. This will go a long way towards addressing the retention issue we discussed in Module 2 and can result in higher completion rates.

Implications of Digital Technologies and Web-based Tools

With the rise of more sophisticated digital technologies and web-based tools that are becoming more easily accessible to educators, we can expect to see the possibilities for many unique ways of learner engagement and involvement in the online and blended learning contexts.

For this module, you can combine the learner-learner interactivity activities and the learner-content examples where relevant to enhance learner interactivity and engagement.

Learning Situations

Although interactivity and engagement are important motivational principles, educators can also take advantage of learning situations that promote a sense of controversy, conflict and bewilderment.

Such situations require learners to look for additional information when they realise they do not have all the knowledge or skills, or they need to clarify a misunderstood concept to enhance their learning.

Note

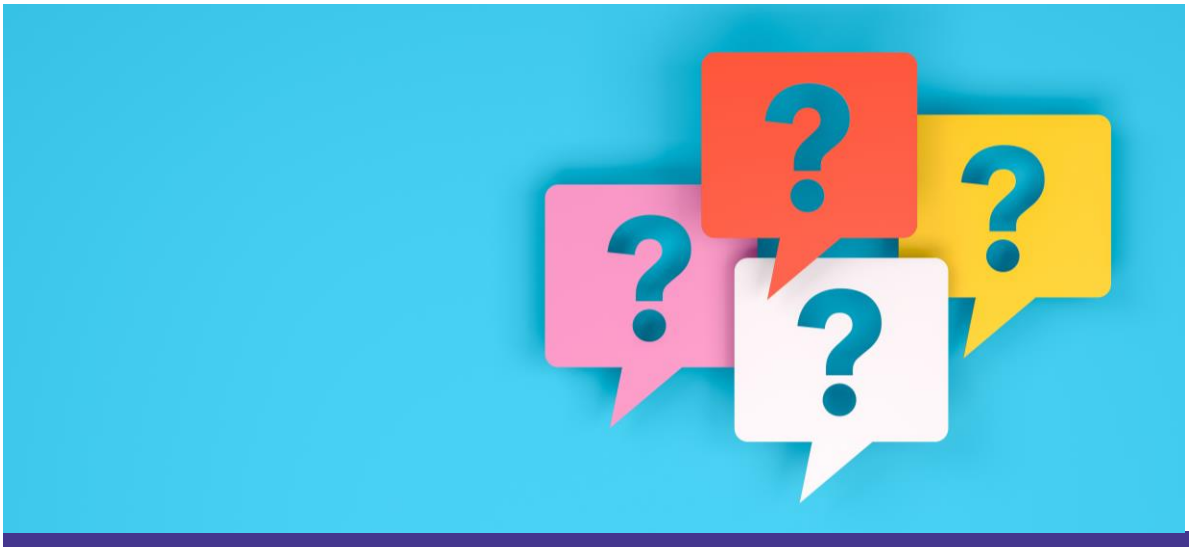
We visit these ideas on how to foster a sense of conflict and competition in Module 6 through the **tension** principle.

Summary

In this module, we delved into the seventh and eight principles of the TEC-VARIETY framework — interactivity and engagement.

Let's review the key learning points we covered along the way.

- Both principles offer educators ideas and ways to promote more active learning processes and outcomes.
- Both are complex concepts, involving the different forms and ways learner interactivity can take and the different variables involved in characterising engagement, going beyond merely considering student login data to a learning management system or the number of postings students make to the discussion forum.
- With more sophisticated web-based and digital technologies, many possibilities exist for educators to enhance learner interactivity and engagement.
- Various pedagogical activities described in this module will offer some starting points and ideas to help you get started.



Check Your Progress

1. According to Moore (1989), what form can distance learning interactions take?
   a) Learner–learner interactions
   b) Learner–content interactions
   c) Learner–technology system interactions
   d) Learner–educator interactions

2. When forming online learning communities, educators need to consider which kinds of interactions?
   a) Interactions that promote emotional safety
   b) Interactions that promote social engagement
   c) Interactions that promote cognitive involvement
   d) Interactions that promote the creation of learning products

Check Your Progress

3. What do course designers need to do when designing for interactivity in online learning contexts?
   a) Find ways to enhance learner curiosity
   b) Find ways to reduce unnecessary cognitive load on learners
   c) Find ways to increase meaningful learning interactions
   d) Find ways to set up the course to develop online learning communities

4. Online learning interaction is complex and multifaceted.
   a) True
   b) False

5. What does engagement, as defined by Reeve (1996), consists of?
   a) Learner's emotional quality
   b) Learner's cognitive ability
   c) Learner's quality of learning outcomes
   d) Learner's taking initiative for their learning

6. How do we know that learners are engaged?
   a) Through their behaviour
   b) Through their emotions
   c) Through their intellect
   d) Through their personality

Module 6

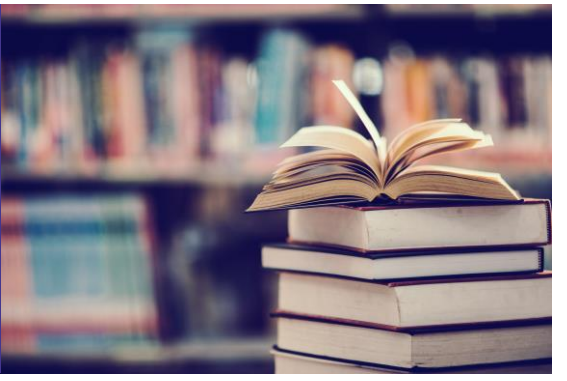
Principles of Tension and Yielding Products (TY)

Learning Objectives

Upon completion of this module, you are expected to be able to:

1. Describe the motivational principles of tension and yielding products
2. Identify the ten different pedagogical strategies for promoting tension and yielding products to address common online learning issues

Introduction



In this module, we will cover the last two motivational principles in the TEC-VARIETY framework: tension (#9) and yielding products (#10).

Tension

The tension principle explains how learners can benefit from learning situations where tension, controversies and challenges exist. Such situations require learners to seek out new information, negotiate perspectives and come to joint resolutions of issues. They force learners to move out of their comfort zone to consider new and multiple perspectives and collaborate to arrive at a shared or joint understanding to solve an issue or challenge. In doing so, they end up better understanding themselves and others.

Yielding products

We elaborate on the principle of the yielding products - and the many learning benefits that arise when learners are supported to pursue their learning interests and goals. Here we will encounter the different types and nature of goals and describe those that are productive for learning. Next, we discuss how educators might support learners in forming productive goals to drive their own learning and subsequently generate a learning outcome/product to share with an authentic audience.

The pedagogical activities suggested for both principles are similar to those proposed in earlier chapters.

For example, debates, role plays and structured controversies rely on text, video, digital images and other online resources mentioned earlier. However, a key consideration for educators will be how to structure their online and blended courses for intense discussions, debates and challenges using web-based and digital technologies they are already comfortable with.

Introductory Video

"The ultimate measure of a man is not where he stands in moments of comfort and conveniences, but where he stands at times of challenge and controversy."

– Martin Luther King Jr.

Watch Video: Engaging online learners through the principles of tension and yielding products

Tension

In this section, we discuss principle #9 in the TEC-VARIETY framework — tension — which includes ideas such as challenge, dissonance and controversy.

Terms such as “tension,” “controversy,” “dissonance” and “conflict” tend to have negative connotations in education settings, and many educators try to avoid creating situations that will cause learners to experience them to avoid uneasiness or discomfort in their class.

Note

Researchers David and Roger Johnson point out that educators are often extremely apprehensive about creating a climate of controversy or intellectual conflict because it can lead to undesirable outcomes, such as anger, explicit hostility, feelings of distrust among students, damaged relationships, and outright rejection (Johnson & Johnson, 2009).

However, when used appropriately and where relevant, the tension principle can offer advantages in learning. We experience internal conflict or mental tension when encountering situations that force us to examine what we think we know and other new ideas/perspectives we may not have considered before.

Piaget's Theory of Cognitive Development

Note

Psychologist Jean Piaget's (1969) theory of cognitive development refers to this as being in a state of disequilibrium. Experiencing disequilibrium is often uncomfortable, and people tend to find ways to quickly achieve a state of equilibrium again by either:

Modifying their existing mental schema on ideas, assumptions or ways of doing things (in other terms, accommodating or fitting in the new information)

Taking in new information to fit into current mental schemas (assimilating the new knowledge, ideas or experiences with existing/previously learned information to make sense of them)

Tips for the Educators to Build in Challenges

Educators should be aware that there are many ways to build in challenge, dissonance, conflict and mental tension.

1. To challenge students, educators might individualise assignments, offer enrichment or supplemental activities, design open-ended tasks that allow learners to be creative, embed opportunities for learner exploration of content, and give learners some choice in their assignments (Stipek, 1998).

2. To foster conflict or dissonance, educators might consider using unusual or exotic elements of a problem, note exceptions to general rules, or point out unexpected, paradoxical or incongruous aspects of the data or information (Brophy, 1998).

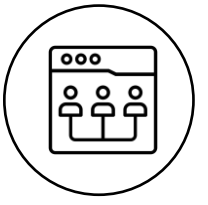
3. It is the discomfort or cognitive dissonance from such inconsistencies that educators can draw upon to support learners in seeking additional information (Festinger, 1957).

Technologies to Foster Learner Tension

Various web-based and digital technologies can be used to foster learner tension, curiosity and conflict resolution.

Online radio, e-mail, simulations and games, website portals, blogs, and instant chat can all play a role.

Social networking technologies such as Twitter, Flickr, Facebook and Meetup are being used to connect people for educational purposes as well as to address various social, economic or political situations.



Others have used argument maps or debate tools to foster debate and interaction.

Such tools help learners to specify and visualise their reasoning processes about a topic or issue. Concept maps and mind maps can similarly be used.

Tension: Ten Pedagogical Activities

A focus on the tension principle involves encouraging learners to move out of their comfort zones. This will not always be easy to accomplish. A key consideration is for educators to consider how to structure their fully online courses and blended courses for intense discussions, debates, role plays and challenges using the web-based and digital technologies they are already comfortable with.

They can also stay attuned to recent news and cultural events and continue to think about how these can be incorporated into class discussions of critical issues to encourage learner interest in finding out more during the course.

The following figure provides an overview of the ten activities:

Activity 81

Debating Controversial Online News, Blogs and Other Media

Activity 82

Structured Controversy

Activity 83

Structured Role Debates (example, Court Forums)

Activity 84

Online Study Group Challenges

Activity 85

Timed Disclosures and Issue Voting

Activity 86

Argument and Debate Mapping

Activity 87

Challenge-Based Videoconferencing (example, World Affairs Challenges)

Activity 88

Digital Media Competitions

Activity 89

"Best of" Nominations (example, Quotes)

Activity 90

Online Games, Puzzles and Quizzes

From the list of ten pedagogical activities promoting interactivity, the following three activities are selected to provide participants with brief practice examples.

Example 1:
Structured Controversy

Example 2:
Argument and Debate Mapping

Example 3:
Online Games, Puzzles and Quizzes

Example 1: Structured Controversy

Constructive forms of controversy, when effectively planned, can foster rich teaching situations for learners to find additional knowledge, organise content and ideas, prepare their positions, and search for new experiences or information to resolve an uncertainty or dilemma (Zainuddin & Moore, 2003).

In a structured controversy activity, pairs or groups of learners are presented with a controversial issue or dilemma of some type and are required to research their particular advocacy position. After a set amount of time, the groups switch roles and research the other side of the issue before coming together to prepare a joint consensus report on the issue.

Learners should realise that in such a structured debate format, unlike a traditional debate situation, the ultimate goal is not to win but to achieve some form of consensus and compromise position through actively listening and remaining open to alternative points of view.

The educator can act as a moderator to check for understanding of the different viewpoints and clarify points made.

Outside experts or practitioners might be asked to assist each team or offer perspectives on viewpoints, possibly providing timely resources, ideas or insights for a debate topic to deepen the debate as well as apprentice learners into a field of study.

Skills learners learn	Seeing multiple sides to an issue, intellectual inquiry, building intellectual arguments, synthesising various information sources, critically analysing a problem, rebutting another's challenges, seeking reasoned judgments, teamwork, comparison and contrast, data analysis, backing up claims, listening skills and communication.

• Risk index: Medium • Time index: Medium • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1-2 weeks or as needed	Key instructional considerations

Example 2: Argument and Debate Mapping

Argument and debate mapping tools such as DebateGraph allow users to explicate their reasoning and to list the pros and cons of different problem solutions or resolution paths as well as

- evidence
- relationships between variables
- assumptions
- opinions
- questions
- solutions

Such online tools organise students' thoughts and ideas, make explicit their thinking and illustrate the relationships between two or more ideas.

With these external representations, learners can better comprehend the strength of their arguments as well as their knowledge growth over time. Learners can make use of argument and debate maps in presentations, debates and reflections.

Educators can assess learners' maps for their depth and breadth, causal connections and reasoning, relationships drawn, logic, originality, accuracy, support provided and overall structure.

Skills learners learn	Interactivity, the visualisation of ideas, dual coding of content, logic, chains of reasoning, causal relationships, comparison and contrast, data analysis, evaluation of data provided, appreciation of other points of view, argument formation and rebuttals, backing up claims and self-directed learning and resource exploration.

• Risk index: High • Time index: Medium • Cost index: Low to High (depends on system used) • Learner-centredness index: High • Duration of the learning activity: 2–3 weeks	Key instructional considerations

Example 3: Online Games, Puzzles and Quizzes

Online and mobile games offer challenges, interesting stories, feedback on performance, and tangible incentives and rewards to make learning fun and rewarding (Lauby, 2012; Miller, 2012).

Quizzes, flashcards, practice questions and other interactive online tools can test students' learning while they're playing the game.

Educational games on mobile applications can be used to prepare learners for exams and quizzes through simple crossword puzzles, word searches, mazes, hangman and jeopardy games.

Educators can use or create these games online or even ask learners to design a game. The person or team building the best game design could be awarded bonus points or an option to replace a course assignment.

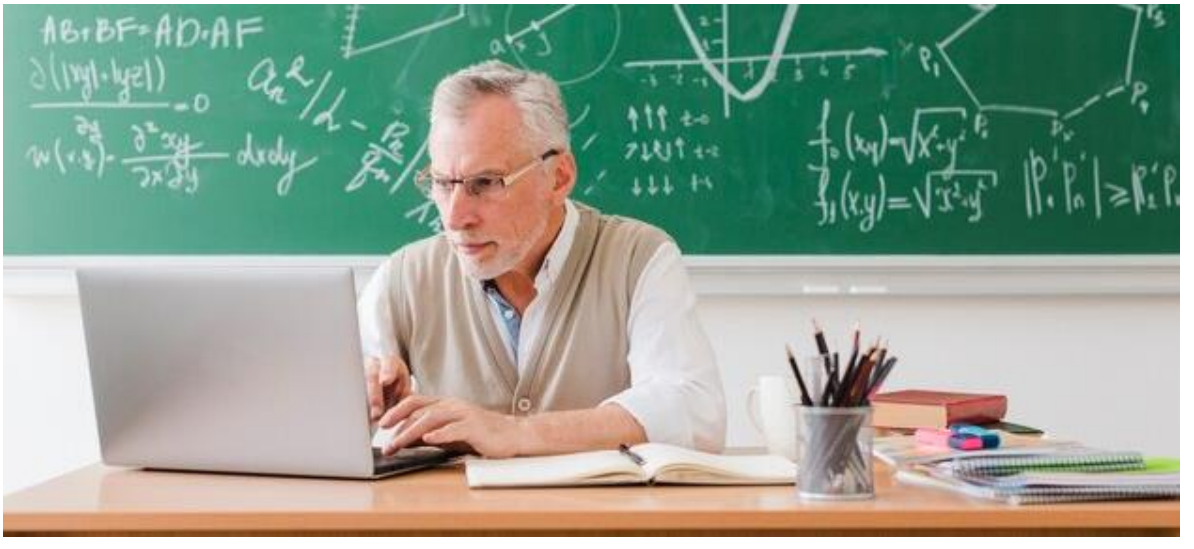
Learners get to rehearse much of the course content across the entire semester from this one exercise.

Skills learners learn	Personal feedback, content review, challenge, skill evaluation, information retrieval, discrimination, insight, entertainment and suspense.

• Risk index: High • Time index: Medium • Cost index: Low to High (depending on tools used) • Learner-centredness index: Medium • Duration of the learning activity: 1-2 weeks or as needed	Key instructional considerations

Benefits of Creating Tension

Including a bit of tension or conflict can lead to learners increasing their effort because they want to know more. As learners begin to understand how ideas of “difference” are constructed, they simultaneously better understand themselves and others. For example, learners in remote or rural settings can engage with those who live in the city or even in other parts of the world.



The next motivational principle, yielding products, asks educators to consider motivating learners by focusing on their goals, particularly those that yield some type of learning product. People generally are goal-driven and need a vision or target to work toward. In fully online and blended learning environments, such goals are particularly vital because they help maintain learner focus when there is no one in the immediate environment to structure and provide feedback on student learning.

Yielding Products

In this section, we focus on the final motivational principle, yielding products (#10). This principle is related to similar ideas such as being goal-driven, having a purposeful vision and taking ownership over one's learning, which is relevant when learners work towards creating their own learning products/outcomes.

Nineteenth-century Scottish-born writer and historian Thomas Carlyle proclaimed, "A man without a goal is like a ship without a rudder." In line with this adage, it is important that learners are empowered to identify and achieve their personal vision for learning. Creating their own learning products involves learners in a sense of purpose and vision as well as ultimate ownership of what they have produced. In a word, they are goal-driven. Goal completion and yielding products serve as the basis of many popular views in education today.

When educators involve learners in forms of learning based on products, projects, cases or problems, they provide incentives for learners to achieve more out of their learning.

Learners are driven to complete some type of high-quality, tangible product for others to see, share, use, comment upon or remix. That reuse and remixing of the final product abide by John Dewey's hypothesis that "arriving at one goal is the starting point to another."

Performance-related Goals and Learning-related Goals: Difference

However, not all goals are the same in nature and quality. Researchers differentiate between “performance-related goals,” which often involve doing better than other learners in the class or winning approval from someone, and “learning-related goals” focused on a learner’s mastery of a task. The motivator behind performance goals is often extrinsic in nature, whereas learning goals tend to come from within the learner (Pintrich & Schunk, 1996). This differentiation between performance-related and learning-related goals is critically important.

Learning-related

Learning-oriented learners are more likely to see links between their efforts and their results, work to reduce distractions, and display higher levels of persistence compared to performance-oriented students.

Individuals with performance-oriented goals who have limited self-confidence will select rather easy tasks to complete, while those with learning-oriented goals might reach for the more challenging learning task without much hesitation.

Performance-related

Note

One of the intentions of the TEC-VARIETY framework is to nudge learners toward increasingly challenging but still attainable tasks.

Research Studies on Yielding Products

According to Sir Ken Robinson (Robinson & Aronica, 2013), it is vital for educators to help learners find the element or situation that arouses their deep interest or passion. They can do this through:

1. Offering learners alternative choices in their course projects
2. Providing examples of prior course success stories (educators might bring in former students to the class to discuss their accomplishments or share student testimonials that they have already collected)
3. Helping learners to periodically evaluate their progress toward their goals and decide whether a change in their strategic approach is needed (Pintrich & Schunk, 1996)

Supporting Learner Success

Note

To help learners be successful in this product-intensive world, learners also need the following qualities:

The ability to delay gratification by envisioning what the final product might look like and to intensely work toward that envisioned result.

Grit to overcome the critics whom they may encounter along the way toward producing their product. Grit includes such factors as perseverance, hardiness, resilience, ambition, commitment and flow. The critics and resistance that learners may face can be external (from other people) or internal (from themselves). Such doubts, if unaddressed, can hinder learners from reaching their learning goals or even more challenging goals.

Online Activities to Yield Products

Numerous online activities can yield valuable course products. They might include:

a short documentary video posted to YouTube	a new entry in Wikipedia	a video song parody (Korey, 2009)	a unique mobile application
a chapter in a wikibook	an innovative game	an insightful speech perhaps in the form of a podcast	screencasts and multimedia glossaries

Learners may create infographics about emerging trends or areas of personal interest. Yet others may post online books or book reviews and then engage in online discussions of them with their peers and even those outside of the course. As the potential for their work to be seen by an authentic audience expands, learners will find a growing sense of purpose or meaning in their course work. Once posted or shared, their work can be reused, remixed and enhanced by present and future students (Ferlazzo, 2013).

Note

Many of the ideas presented in this section for yielding course products are not entirely new. The opportunities for innovative course projects and products today, however, are definitely more pervasive, accessible and expected.

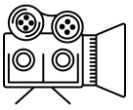
Yielding Products: Ten Pedagogical Activities

The activities of this section will push learners out of their comfort zone, forcing them to synthesise new learning competencies and insights into some type of unique project, scheme, venture, design, invention or innovation. It is the doing part of the task that is important. Each person in a group or on a team will find a purpose from the activity's embedded goals and influence potential audiences on the Web — be they onlookers, lurkers or browsers — when the products are publicly shared. Accordingly, these activities are not easy. They typically take much planning, deliberation and persistence, from initial design to task completion. When completed, however, there ought to be recognition and celebration of learners' achievements.

The following figure provides an overview of the ten activities:

Activity 91

Cartoon and Animated Movie Productions



Activity 92

Student Documentaries

Activity 93

Course Video Summaries and Movie Festivals

Activity 94

Book Trailers

Activity 95

Online Book Reviews

Activity 96

Content Databases and Learning Portals

Activity 97

Oral History Interviews

Activity 98

Grammar Check, Peer Check

Activity 99

Recording Accomplishments (example, I Done It)

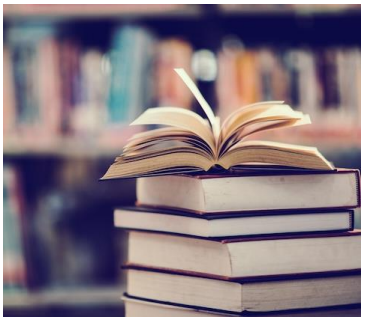
Activity 100

Poster Sessions and Gallery Tours

From the list of ten pedagogical activities promoting interactivity, the following three activities are selected to provide participants with brief practice examples.

Example 1:

Cartoon and Animated Movie Productions



Example 2:

Book Trailers

Example 3:

Oral History Interviews

Example 1: Cartoon and Animated Movie Productions

Some of the more interesting tools for learners to express their creativity in the form of humour, multimodal expression, interaction and story development are sites for designing their own animated movies or cartoons. Many animation and cartoon creation sites are now easily accessible to educators and learners.

Learners can manipulate the facial expressions, body movements and voice of an avatar or animated character, customise the scenes (that is, background images, setting, colour, etc.), add dialogue and even record audio tracks — and then lay all those items out in a timeline that is easy to navigate.

Cartoons and animated movies are ideal for depicting political and civic debates, historical events, science fiction scenarios, product marketing techniques and job interviewing skills (Parry, 2011).

Learners can be involved in creating the criteria to vote for the best animations, such as the Most Creative Design or Animation Sequence, Best Line, Best Screenwriting and Most Outstanding Animated Movie of the Semester.

Skills learners learn	Spontaneity, role play, visual communication, interactivity, creativity, expression, originality, risk taking and design and artistic skills. These activities also promote a sense of participatory learning as well as content review, deeper and richer understanding of course content and logical sequencing of content.

• Risk index: Medium • Time index: High • Cost index: Low • Learner-centredness index: High • Duration of the learning activity: 1-3 weeks or as needed	Key instructional considerations

Example 2: Book Trailers

Creating a book trailer is similar to making a movie trailer. It is both a learning experience and a means to encourage learners to engage with and synthesise the contents of a book.

Assigning groups of learners for the book trailer will allow them to use their expertise and experience through taking on roles such as

- director
- scriptwriter
- storyboarder
- video editor

Educators can show examples of online book trailers. They will need to be clear about the task requirements and offer support about technology resources and media elements (for example, pictures, music and so forth).

Students' completed video book trailers can be compiled into a gallery of video trailers to be used as resources for the course.

Skills learners learn	Creative thinking includes insight, spontaneity, creative expression, design and artistic skills, originality, risk-taking, and visual communication. It also entails aspects of participatory learning, logical sequencing of the content and a deeper and richer understanding of course content.

• Risk index: High • Time index: High • Cost index: Low to High (depending on the technology employed) • Learner-centredness index: High • Duration of the learning activity: 2-4 weeks	Key instructional considerations

Example 3: Oral History Interviews

Oral histories are a method of collecting historical information with the goal of adding to present historical records (Regents of the University of California, 2015). Requiring learners to collect one or more oral histories is a unique means to inspire and help them better connect with course content, especially in sociology, history, education, music or qualitative research methodology courses. Educators can refer to practical advice from websites such as the Oral History Society in the United Kingdom, the University of California at Berkeley's Regional Oral History Office or other relevant oral history websites to provide the necessary resources and examples of oral histories.

Learners can be asked to write reflection papers, reports, interview summaries or other papers based on the oral histories that they have collected.

Skills learners learn	Information filtering, synthesising various information sources, appreciating multiple points of view and diversity, extending course connections, listening skills, deeper and richer understanding of course content and various inquiry skills.

• Risk index: High • Time index: High • Cost index: Low to High (depending on the actual technologies and resources available and used) • Learner-centredness index: High • Duration of the learning activity: 2-5 weeks at the end of the term	Key instructional considerations

Summary

In this module, we described the last two motivational principles in the TEC-VARIETY framework: tension and yielding products.

Let's review the key learning points we covered along the way.

- Some of the activities described in earlier modules can also be applied to fostering these two principles, depending on the focus and intention of the course lecturer.
    - They are aimed at moving learners out of their comfort zone to consider and experience new ways of thinking and working/doing.
    - They also enable learners to express their ideas and learning outcomes in quite creative and novel ways.
- In the tension principle, we discussed how situations that give rise to tension, controversies and challenges can benefit learners when these are used appropriately and where relevant.
- People tend to progress towards achieving a sense of equilibrium when confronted with new situations or ideas they have not encountered or thought of before.
    - They will also seek out new information and negotiate perspectives to come to joint resolutions of issues in social learning settings.

    - As a result, they can end up better understanding themselves and appreciating others' viewpoints as part of their learning and growth.
- The yielding products principle (also covering ideas related to goal-driven, purposeful vision and ownership) highlights the different kinds of goals and how productive learning goals can provide the drive and impetus towards achieving higher-quality outcomes.
- Educators can undertake various steps towards supporting learners to identify their learning goals and work towards creating learning products that can be shared with audiences of various backgrounds.
- Such outcomes help learners believe their efforts are worthwhile and feel a sense of pride in their learning achievements.

Check Your Progress

1. According to Piaget's theory of cognitive development, which of the following conditions are caused by a state of disequilibrium among people?
   a) Reconsider and modify their existing mental schema
   b) Consider the new information and fit it into their current mental schema
   c) Consider fun and playful ideas that can be applied to their learning situation
   d) Feel safe and reassured in their ideas, assumptions and ways of doing things

2. The tension principle is based on the idea that disequilibrium drives the learning process.
   a) True
   b) False

Check Your Progress

3. For learners, what is a key benefit of being exposed to differences in ideas?
   a) They learn to control their emotions
   b) They learn to stand their ground, no matter what
   c) They develop a higher tolerance for ambiguity
   d) They better understand themselves and others

4. Which of the following activities are supportive of the tension principle?
   a) Debates
   b) Role plays
   c) Controversial issues
   d) Competitions

5. Which of the following types of goals is based on extrinsic factors and focused on outcomes such as grades or competency in a particular skill?
   a) Performance-related goals
   b) Learning-related goals

Check Your Progress

6. The learning benefits of learners creating their learning product of interest to share with others include which of the following?
   a) Pushing learners out of their comfort zone to find a purpose/meaning in their coursework
   b) Enabling learners to creatively express their learning ideas
   c) Synthesising new learning skills and ideas into some type of unique output
   d) Learning social skills as they work through conflict and negotiate ideas

Pause and Reflect

Tension principle:

Think back to the times in which you were tense or felt a state of dissonance and then sought additional information. Then list the factors that nudged you to want to learn more. What were they? How might you take advantage of such forms of dissonance in your fully online and blended courses?

Yielding products principle:

Can you think of something you created in the past that you were proud of? What interested you in getting started with that project? Who or what helped you along the way? How might you encourage your learners to create products that are based on their learning interests and will have an impact or potential impact on their family, community or local neighbourhood?

Overall Course Summary

In these past six modules, we have detailed the theoretical underpinnings of the TEC-VARIETY framework, described each of the ten principles and listed 100 ways for educators to motivate and create more meaningful learning experiences for online learners in this digital age.

- For each principle, we have provided an overview of three different and accessible activities as possible ways forward for educators to consider in their practice.
- Each activity has been rated according to risk, time, cost, learner-centredness and duration.
- All ten principles and 100 activities for motivating and retaining online learners are summarised in the table below.
- This table is intended to help educators to rethink their online learning approaches and pedagogical possibilities for their online learning courses and programmes.

Click annexure 5 to Table 6.1 for a summary of the principles and their activities.

Important Pointers for Educators

Some final pointers for educators are:

Activity Selection

Be aware that any activity selected for teaching online will undoubtedly address more than one aspect of TEC-VARIETY. In general, the first two components of the framework, tone and encouragement, are required in almost every properly designed online task and activity. No one motivational principle is central to the success of such projects; each component plays a role.

Task Selection

Each task selected must be appropriate for learners and the content area. Be careful about using an activity just because it sounds cool or novel. We do encourage risk-taking and experimentation with new technologies and instructional approaches, but this needs to be balanced with thoughtful integration of pedagogy, technology and learning. There are issues of technology familiarity, timeliness, cognitive complexity, content adaptability, quality, assessment and plagiarism to deal with.

Thoughtful Integration

The thoughtful integration of one or two ideas based on TEC-VARIETY will better serve learners than randomly selecting ten ideas meant to target each of the principles of the framework.

Consider the online class and learners as unique. No single online class is the same. An activity that works once may not the next time it is used. Every teaching or training event is different on some level. Each cohort includes learners who have varied online learning experiences and expectations. Consequently, educators will need to continue to reflect on their teaching/facilitation strategies and communicate with their colleagues and learners to keep improving.

Consider Uniqueness

Learning Context

Consider the online teaching context and select tasks that are the most appropriate for learners and particular subject matter areas. As educators, we can only nurture the conditions that give rise to successful online learning by making the best pedagogical decisions possible. The activities suggested in this course are intended to support these efforts.

Before you Take the Test

"Twenty years from now, you will be more disappointed by the things you didn't do than by the ones you did. So throw off the bowlines. Sail away from the safe harbour. Catch the trade winds in your sails. Explore. Dream."

— Mark Twain

Congratulations on reaching the end of Motivating and Supporting Online Learners.

We began this short course with the intention that by the end of it, participants' knowledge, understanding and skills in the following areas would be enhanced by:

- Creating engaging online teaching and learning environments
- Increasing online learners' motivation to learn more effectively in their nuanced online contexts

We hope we have supported you to achieve these goals through our TEC-VARIETY framework. Much is possible today with current, new and evolving web-based and digital technologies that offer rich opportunities and learning resources for educators to draw from.

In this short course, we have expanded on the underpinnings and principles of the TEC-VARIETY framework to guide educators, trainers and instructional designers in creating more motivationally effective and engaging learning experiences for their online and blended course learners. When thoughtfully and strategically adopted, the framework can enhance student motivation, thereby resulting in greater levels of performance, satisfaction and retention and an overall zest for learning.

We encourage you to refer to our free e-book for further details on activities we have not covered in this course and for further elaborations on ways TEC-VARIETY can be implemented. Due to limits of space and coverage, we were not able to go into details. However, we hope this course has provided you with a taste of what is possible in online teaching and learning practice. We also will be delighted if we have stimulated your thinking on ideas for your online and blended courses or even your face-to-face classes.

Thanks for joining us on this journey into TEC-VARIETY. We hope you will try out some of the ideas from this course and continue to experiment and trial new and different ways in your courses. You may even come up with something new altogether and share them with your colleagues. We, Elaine Khoo and Curt Bonk wish you the very best in your online teaching and learning adventures.

Thank you.

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For details on an introduction to the TEC-VARIETY framework, see: Chapter One – Introducing TEC-VARIETY.

For details on the Four Theoretical Perspectives, see: Chapter Three – Online Motivation from Four Perspectives.

For further details on the TEC-VARIETY framework, see the three training videos produced for teachers in Botswana:

- Bonk, C. J. (2020, December 9). Curt Bonk video #1 for Botswana teachers: Education 20/20. https://youtu.be/50EW3gWRzxI (45 minutes).
- Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://youtu.be/F12QLayANkM (50 minutes).
- Bonk, C. J. (2020, December 9). Curt Bonk video #3 for Botswana teachers: The R2D2 Model. https://youtu.be/RO6imKusycQ (39 minutes).

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Module 2

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://youtu.be/F12QLayANkM (50 minutes).

For details about online learner attrition and retention, see: Chapter Two – Online Learning Attrition and Retention.

For details on supporting online educators, see: Chapter Fourteen – Supporting and Motivating Instructors.

Module 3

Tone

For details on the tone/climate principle, see: Chapter 4 – Principle #1 Tone/Climate (includes psychological safety, comfort, and sense of belonging).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting the tone/climate principle:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=524&end=811&autoplay=1 (4 mins and 47 sec)

Attributions

Encouragement

For details on the encouragement principle, see: Chapter Five – Principle #2 Encouragement (includes feedback, responsiveness, praise and supports).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting encouragement:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=792&end=981&autoplay=1 (3 mins 9 sec).

Curiosity

For details on the curiosity principle, see: Chapter Six – Principle #3 Curiosity (includes surprise, intrigue and unknowns).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting curiosity:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=981&end=1161&autoplay=1 (3 mins).

Weblink

Twitter: https://twitter.com

Attributions

Module 4

Variety

For details on the variety principle, see: Chapter Seven – Principle #4 Variety (includes novelty, fun and fantasy).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting variety:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=1160&end=1330&autoplay=1 (2 mins 50 sec).

Autonomy

For details on the autonomy principle, see: Chapter Eight – Principle #5 Autonomy (includes choice, control, flexibility and opportunities).Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting autonomy:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=1331&end=1695&autoplay=1 (6 mins 4 sec).

Attributions

Relevance

For details on the relevance principle, see: Chapter Nine – Principle #6 Relevance (includes meaningful, authentic and interesting).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting relevance:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=1694&end=1990&autoplay=1 (4 mins 56 sec).

Weblinks

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History for Music Lovers channel on YouTube: https://www.youtube.com/channel/UCAiABuhVSMZJMqyv4Ur5XqA

Journal of Visualized Experiments (JoVE): https://www.jove.com/

Padlet: https://padlet.com/

SciVee (a science-related video-sharing website): https://www.scivee.tv/

Twitter: https://twitter.com

Wolfram Alpha: https://www.wolframalpha.com/

Worldmapper: https://worldmapper.org/

Attributions

Module 5

Interactivity

For details on the interactivity principle, see: Chapter Ten – Principle #7 Interactivity (includes collaborative, team-based and community).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting interaction:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=1988&end=2285&autoplay=1 (4 mins 57 sec).

Engagement

For details on the engagement principle, see: Chapter Eleven – Principle #8 Engagement (includes effort, involvement and investment).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting engagement:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=2279&end=2556&autoplay=1 (4 mins 37 sec).

Attributions

Weblinks

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Adobe Connect: https://www.adobe.com/nz/products/adobeconnect.html

Art Gallery of New South Wales: https://www.artgallery.nsw.gov.au/

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Google Hangouts: https://hangouts.google.com/

Histography: http://histography.io/

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Museum of Modern Art (MoMA), in New York: https://www.moma.org/

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Pbworks: https://www.pbworks.com/

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Attributions

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TagCrowd: https://tagcrowd.com/

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Virtual Zooarchaeology of the Arctic Project: https://vzap.iri.isu.edu/

Worditout: https://worditout.com/

WordSift: https://wordsift.org/

Zoom: https://zoom.us/

Module 6

Tension

For details on the tension principle, see: Chapter Twelve – Principle #9 Tension (includes challenge, dissonance and controversy).

Attributions

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting the tension principle:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=2533&end=2678&autoplay=1 (2 mins 25 sec).

Yielding Products

For details on the yielding products principle, see: Chapter Thirteen – Principle #10 Yielding Products (includes goal driven, purposeful vision, and ownership).

Also see Curt Bonk's video clip on examples of Web-based tools and pedagogical activities for supporting the yielding products principle:

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=2681&end=2810&autoplay=1 (2 mins 9 sec).

Summary

For an overall summary on using the TEC-VARIETY framework, see: Chapter Fifteen – Recapping TEC-VARIETY.

Also see Curt Bonk's video clip on overall summary of the TEC-VARIETY framework:

Attributions

Bonk, C. J. (2020, December 9). Curt Bonk video #2 for Botswana teachers: The TEC-VARIETY framework. https://www.youtube.com/embed/F12QLayANkM?&start=2820&end=2969&autoplay=1 (2 min 26 sec).

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Oral History Society, in the United Kingdom: https://www.ohs.org.uk/

Twitter: https://twitter.com

University of California, Berkeley's Regional Oral History Office (ROHO): https://www.lib.berkeley.edu/libraries/bancroft-library/oral-history-center

Wikibooks: https://www.wikibooks.org/

Wikipedia: https://en.wikipedia.org/wiki/Main_Page

YouTube: https://www.youtube.com/

Annexure

Annexure 1

100+ activities for TEC-VARIETY

Source: Bonk & Khoo (2014)

Tone/Climate

1. Personal introductions
2. Video introductions
3. Goals and expectations
4. Personal commitments
5. Eight nouns
6. Two truths and one lie
7. Accomplishment hunts
8. Course fan pages
9. Favorite websites
10. Online cafés

Encouragement

11. Critical friends
12. Student polling and voting
13. Online suggestion box
14. Minute and muddiest point papers
15. Comments and annotations
16. Screencasts supports and directions

17. Embedded reviews and system scored practice tests
18. Asynchronous expert feedback and mentoring
19. Synchronous and mobile mentoring
20. Learner-self-interaction and self-feedback forms

Curiosity

21. Online events in the news
22. Live science, creative expression, or artistic invention
23. Live scientific discovery or invention
24. Just-in-time syllabus
25. Just-in-time teaching
26. What's my line guest games
27. A day in the life of a scientist, scholar, or celebrity
28. Cultural or contextual blogs and resources
29. Extreme learning
30. Quests and probes on the web

Variety

31. Online séance or roundtable
32. Virtual world role plays
33. Mobile and social networking content games and apps
34. Educational music videos
35. Database problems and search competitions
36. Task and activity randomizer
37. Time-constrained presentations
38. Virtual community brainstorming
39. Extreme teaching and online mentoring
40. Exploring dynamic web content

Autonomy

41. Cool resource provider
42. Technology tool demonstrator
43. Starter-wrapper technique
44. Shot gun questioning
45. Hot seat questioning
46. Open exploration weeks
47. Open educational resources explorations
48. Pick and choose options
49. Open syllabus course portal with options
50. Open teaching and MOOCs

Relevance

51. Multimedia case vignettes and decision making
52. Job connection and strategic planning papers
53. Wiki editing projects (including Wikipedia)
54. Language learning conversations and mentoring
55. Online current news feeds and streaming data
56. Cross-cultural web conferencing and interactions
57. Instructor online video demos
58. Video study guides, tutorials, and microlectures
59. Pubcasts and researcher interviews
60. Oral history or situational research

Interactive

61. Scholar, scientist, or innovator role play
62. Interactive learner questioning and discussion

63. Jigsaw the online content
64. Flipping the class
65. Product brainstorming and co-creation
66. Collaborative mindmapping and idea visualization
67. Collaborative video annotations
68. Video discussion and questioning
69. Word cloud interactions
70. Backchannel conference and course participation

Engagement

71. Interactive maps and databases
72. Interactive multimedia glossaries
73. Talking dictionaries and lang. translation
74. Interactive timelines
75. Exploring animations, simulations, and pop-up media
76. Virtual tools and scientific instruments
77. Microblogging course discussions
78. Online subject-specific picture galleries
79. Interactive online exhibits (e.g., art and bones)
80. Three-level questioning

Tension

81. Debating controversial online news, blogs, and other media
82. Structured controversy
83. Structured role debates (e.g., court forums)
84. Online study group challenges
85. Timed disclosures and issue voting

86. Argument and debate mapping
87. Challenge-based video conferencing (e.g., world affairs challenges)
88. Digital media competitions
89. “Best of” nominations (e.g., quotes)
90. Online games, puzzles, and quizzes

Yielding Products

91. Cartoon and animated movie productions
92. Student documentaries
93. Course video summaries and movie festivals
94. Book trailers
95. Online book reviews
96. Content databases and learning portals
97. Oral history interviews
98. Grammar check, peer check
99. Recording accomplishments (e.g., I done it)
100. Poster sessions and gallery tours

Go Back

Annexure 2

Theories Explaining Online Learner Attrition

Tinto (1975)

- One of the earliest models of learner attrition and retention.
- Tinto found that the likelihood of a student choosing to persist or discontinue formal study is based on the degree to which they are able to integrate into the academic system of the institution.
- This involves their:
  1. Intellectual development, as typically exhibited by grade performance/learner portfolios and
  2. Social interaction system, comprising the course lectures guest experts, and peers.
- The combination of academic and social integration factors was revolutionary for that time.

Kember (1989)

- Kember expanded on Tinto's model and included the unique characteristics of distance education learners (e.g., mature adults studying part-time, juggling family and work responsibilities)
- Kember's model considers: learner characteristics, learner goal commitment (intrinsically versus extrinsically motivated), the academic environment, and the social/work environment. Cost/benefit analyses also play a role in retention in this model.
- These elements need to be integrated and often change during the learner's academic career.
- Learners weigh together all these factors when deciding whether to complete or drop out of a course/programme.

Rovai (2003)

- Rovai's composite model to explain student dropout consist of two stages:
  - First stage: Considers two key factors prior to learner's admission to the course:
    - Learner characteristics (e.g., age, gender) and
    - Learner skills (e.g., computer literacy, reading and writing ability).
  - Second stage: Considers two factors after admission into the course:
    - External factors (e.g., finances, time constraints, work commitments) and
    - Internal factors (e.g., academic integration, social integration, self-esteem).
- Rovai's two-stage model helps administrators, educators and learners identify and address factors likely to finder their learning progress.

Berge and Huang (2004)

- Berge and Huang developed a dynamic and context-sensitive model.
- They incorporated three variables:
  1. Personal variables (e.g., demographic, prior educational experiences);
  2. Institutional variables (e.g., bureaucratic variables, academic variables, social variables) and
  3. Circumstantial variables (e.g., social interaction) in their model.
- Importantly, their model is flexible in allowing different weightings to be allocated to each of the key variables as priorities for planning and implementing changes for the different stakeholders (e.g., learners, educators, and administrators).
- The model allows for timely interventions to be quickly put in place to enhance retention.

Jun (2005)

- Jun conceptualized a holistic model of five general areas covering most of the causes of online learner attrition.
- These five areas are:
  1. Individual background,
  2. Motivation,
  3. Academic integration,
  4. Social integration, and
  5. Technological issues.
- The model concretises the range of individual, institutional, and circumstantial (external) factors affecting a learner's decision to persist with online learning.

Go Back

Annexure 3

A Survey of Factors Affecting Online Learner Attrition

Individual Factors

(Learner circumstances, learning skills, coping skills)

1. Lack of self-management skills.
2. Underprepared for challenges in distance learning or perceive distance learning coursesto be easy.
3. First-year online students are especially affected by:
   a. lack of self-directed learning strategies
   b. poor time management skills
   c. poor independent learning skills
4. Lack of time, or time conflicts between family or work commitments.
5. Financial strain.
6. Low language literacy ability (reading and writing).
7. Learning difficulty.
8. Impact of previous educational encounters.
9. Low level of motivation (insufficient self-motivation, inadequate self-directed learningskill).
10. Low commitment to study.
11. Poor incentives to learn.
12. Lack of social/family support.
13. Low computer literacy skills (slow typing skills, difficulty using the Course ManagementSystem, or CMS).
14. Lack of confidence with using computers (lack of computer literacy).

Course-Related Factors

(Course design and communication factors, faculty responsiveness, peer interaction, learning preference)

1. Lack of course structure.
2. Incompetent instructor.
3. Availability of academic support; approachability of staff; access and friendliness ofadministrative system and staff; general lack of support.
4. Ease of content.
5. Lack of interaction between students and between students and instructor.
6. Isolation, lack of a sense of belonging in an academic community.
7. Lack of learner choice/learning preference.
8. Lack of personal and immediate feedback on coursework.

Technological Factors

(Course-related technical issues, systems and design)

1. Limited training available; no help or support systems.
2. Technical difficulties, including access, slowness, password problems, navigational issues, etc.
3. Poorly designed courses (i.e., suitability of programme design, content, delivery, assessment strategies).
4. Must download software client to run.
5. System favors those with technology backgrounds or programming (i.e., HTML) skills.
6. Using complex, unfamiliar or new technology.

Go Back

Annexure 4

A Survey of Strategies to Address Online Student Attrition

Source: Bonk & Khoo (2014)

Institutional

Prior to Admission

1. Providing learner orientation to distance learning (induction into online course/pre-course training or online tutorial/pre-enrolment advice).
2. Implement policies in support of ongoing high-quality online courses and programs;develop a culture that says online learning is as important as classroom learning.
3. Offer short courses rather than long ones.
4. Select qualified online instructors.
5. Provide training for those who support online learners (general staff).
6. Provide pedagogical and instructor training prior to teaching first online course.
7. Provide student advice about the choices they have to make in their programs of studyand future career goals (to establish expectations about distance learning and toprovide a road map to completion and achievement of personal goals).
8. Post all course syllabi, coursework, assignments, and learning outcomes on the Web forprospective students to gauge the workload prior to signing up for a course.

After Admission (during period of study)

1. Assign “learning guides” especially for first-time online learners as liaison betweenstudents and other available resources.
2. Provide online access to a variety of student support (e.g., academic advisement, social,personal, technical) services (where possible, available on a 24/7 basis and not justlimited to normal working hours).
3. Hold managers accountable for corporate trainee access to and completion of onlinetraining courses.
4. Provide formal rewards and recognitions for trainee completion of online courses.
5. Keep online class size small.
6. Provide faculty support services.

Instructional (Pedagogical)

Prior to Admission

1. Train instructional designers and lecturers in the pedagogy of online teaching.
2. Improve online tutoring/academic services.
3. Personalise learning content by referring to learner profiles.
4. Put in place supplemental tutoring services.
5. Initiate contact with students via phone calls.

After Admission (during period of study)

1. Adjust the suitability and level of content to learner needs; include graded activities that start learners with simpler tasks to gain confidence from early course success, then lead them to more challenging endeavours.
2. Simplify or limit course content navigation options to prevent cognitive overload; make graphics easy and simple to understand.

3. Use active learning and learner-centred strategies.
4. Improve the learning process to include more interactions and foster collegiality; emphasise the importance of teacher presence in the class.
5. Have proactive contact; pace and prompt learners; track learner performance to ensure that they do not fall by the wayside.
6. Begin courses with icebreakers.
7. Set high expectations for student success.
8. Post your own introduction and encourage student introductory posts as well.
9. Assign online students peer mentors.
10. Set clear course expectations.
11. Make classes fun, interesting, and rewarding.
12. Make classes relevant for learners—"What's in it for me?"
13. Provide timely feedback and encourage feedback from learners.
14. Incorporate a variety of synchronous and asynchronous instruction to reinforce the learning of new material or assignments.
15. Give encouragement and praise; applaud when students do well.
16. Provide flexible, convenient scheduling, and frequent instructor contact.
17. Have additional activities and extra-credit assignments for fun and creative touches.
18. Require learner commitment and participation in the course.
19. Provide timely intervention for learners.
20. Facilitate informal online chats to build relationships.
21. Align pedagogical goals with teaching activities and appropriate assessment strategies so that students understand the big picture in the course.
22. Provide prompt and reliable responses to student queries.

23. Use group-based projects to develop a learning community.
24. Build in activities that empower students to become lifelong learners.

Technological

Prior to Admission

1. Improve technical infrastructure and design; ensure technology is robust and working.
2. Enhance online support services (technical support) for instructors and students.
3. Embed personalised support or help systems.

Go Back

Annexure 5

TEC-VARIETY Principles and Pedagogical Activities

Principle: Tone/Climate

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
1. Personal introductions	Low	Medium	Low	High	1 to 2 weeks
2. Video introductions	Medium	Medium to high	Medium	Low to medium	1 to 2 weeks
3. Goals and expectations	Medium	Low	Low	High	1 week
4. Personal Commitments	Medium	Low	Low	High	1 week
5. Eight nouns	Low	Medium	Low	High	1 to 2 weeks
6. Two truths and one lie	Low to medium	Low	Low	High	1 week
7. Accomplishment hunts	Low	Medium	Low	High	1 to 2 weeks
8. Course Fan Pages	Medium	Medium	Low	High	1 to 2 weeks (or possibly ongoing)
9. Favourite Websites	Low	Medium	Low	High	1–2 weeks
10. Online Cafés	Low to Medium	Medium	Low	High	Weekly or as needed

Principle: Encouragement

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
11. Critical Friends	Low to Medium	Medium to High	Low	High	Throughout the course or as needed
12. Student Polling and Voting	Medium	Medium	Low to High	High	As needed
13. Online Suggestion Box	Medium	Low	Low	High	Throughout the course or as needed
14. Minute and Muddiest Point Papers	Medium	Medium to High	Low	High	As needed
15. Comments and Annotations	Medium	Medium	Low	High	As needed, depending on assignment
16. Screencast Supports and Directions	Low	Medium to High	Low to High	Medium	As needed
17. Embedded Reviews and System Scored Practice Tests	Low	Medium to High	Low	Medium	As needed
18. Asynchronous Expert Feedback and Mentoring	Medium	Medium	Low to Medium	High	Weekly or as needed
19. Synchronous and Mobile Mentoring	Medium to High	Medium	Low to High	High	Weekly or as needed
20. Learner Self-Interaction and Self Feedback Forms	Low	Medium	Low	High	As needed

Principle: Curiosity

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
21. Online Events in the News	Medium	Medium	Low	High	Throughout the course or as needed
22. Live Science, Creative Expression, or Artistic Invention	Medium	Medium	Low	Medium	1–2 weeks
23. Live Scientific Discovery or Invention	Medium	Medium	Low	Medium	1–2 weeks
24. Just-in-Time Syllabus	High	High	Low	High	Throughout the course or as needed
25. Just-in-Time Teaching	High	High	Low	High	Throughout the course or as needed
26. What's My Line Guest Games	Low to Medium	Low to Medium	Low	Medium	As needed
27. A Day in the Life of a Scientist, Scholar, or Celebrity	Medium	Medium	Low	High	1–3 weeks
28. Cultural or Contextual Blogs and Resources	Medium	Medium to High	Low to High	Medium	As needed
29. Extreme Learning	High	Medium to High	Low to Medium	Medium	1–4 weeks
30. Quests and Probes on the Web	Medium	Medium	Low	High	As needed

Principle: Variety

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
31. Online Séance or Roundtable	High	Medium	Low	High	1–2 weeks
32. Virtual World Role Plays	High	Medium to High	Low	High	2–4 weeks
33. Mobile and Social Networking Content Games and Apps	Medium to High	Medium to High	Low	High	2–4 weeks or as needed
34. Educational Music Videos	High	High	Low to High	Medium	As needed
35. Database Problems and Search Competitions	Low to Medium	Low	Low	Medium	As needed
36. Task and Activity Randomizer	Medium	Low to Medium	Low	Medium	As needed
37. Time-Constrained Presentations	Medium	Medium	Low	High	As needed
38. Virtual Community Brainstorming	Medium	Low to Medium	Low	High	As needed
39. Extreme Teaching and Online Mentoring	High	Medium to High	Low to Medium	High	As needed
40. Exploring Dynamic Web Content	Medium	Medium	Low	High	1 week or as needed

Principle: Autonomy

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
41. Cool Resource Provider	Medium	Medium	Low	High	Throughout the course or as needed
42. Technology Tool Demonstrator	Medium	Medium	Low	High	Throughout the course or as needed
43. Starter–Wrapper Technique	Medium	High	Low	High	Throughout the course or as needed
44. Shot Gun Questioning	Medium	High	Low	High	Weekly or as needed
45. Hot Seat Questioning	Medium	High	Low	High	Weekly or as needed
46. Open Exploration Weeks	Medium	Medium	Low	High	1 or 2 weeks as needed
47. Open Educational Resources Explorations	Medium	Medium	Low	High	1–2 weeks or as needed
48. Pick and Choose Options	Medium	High	Low	High	As needed
49. Open Syllabus Course Portal with Options	High	High	Low	High	Every week
50. Open Teaching and MOOCs	High	High	Low to High	High	Every week

Principle: Relevance

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
51. Multimedia Case Vignettes and Decision Making	Medium	Medium to High	Medium to High	Medium	1–4 weeks or throughout the course, as needed
52. Job Connection and Strategic Planning Papers	Low	Medium to High	Low	High	1–2 weeks or 4–5 weeks
53. Wiki Editing Projects (including Wikipedia)	Medium	High	Low	High	Throughout the course or as needed
54. Language Learning Conversations and Mentoring	Medium	High	Low	High	Weekly or as needed
55. Online Current News Feeds and Streaming Data	Medium	Medium	Low	High	Throughout the course or as needed
56. Cross-Cultural Web Conferencing and Interactions	Medium to High	Medium	Low to High	High	1 week or session, as needed
57. Instructor Online Video Demonstrations	Medium	Low to Medium	Low	Medium	Anytime, as needed
58. Video Study Guides, Tutorials, and Microlectures	Low	Medium	Low	Medium	Anytime, as needed
59. Pubcasts and Researcher Interviews	Medium	Medium to High	Low to High	Medium to High	1–2 weeks
60. Oral History or Situational Research	High	High	Low to High	High	3–5 weeks at the end of the term

Principle: Interactive

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
61. Scholar, Scientist, or Innovator Role Play	High	Medium	Low	High	1–2 weeks
62. Interactive Learner Questioning and Discussion	Medium	High	Low	High	Every week
63. Jigsaw the Online Content	Medium	High	Low	High	2–4 weeks or as needed
64. Flipping the Class	High	High	Medium	High	Every week or as needed
65. Product Brainstorming and Cocreation	High	High	Low to High	High	2–5 weeks at/near the end of the course
66. Collaborative Mind Mapping and Idea Visualisation	Medium	High	Low	High	2–4 weeks
67. Collaborative Video Annotations	High	Medium	Low	High	Anytime, as needed
68. Video Discussion and Questioning	Medium	Medium	Low	Medium	Anytime, as needed
69. Word Cloud Interactions	Low	Low	Low	Medium	1–2 weeks
70. Backchannel Conference and Course Participation	High	High	Low	High	3–5 weeks at the end of the semester

Principle: Engagement

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
71. Interactive Maps and Databases	Low	Medium	Low	Medium	1–2 weeks
72. Interactive Multimedia Glossaries	Medium	Medium	Low to High	High	As needed
73. Talking Dictionaries and Language Translation	Medium	Medium	Low	High	Every week or as needed
74. Interactive Timelines	Medium	Medium	Low	High	Every week or as needed
75. Exploring Animations, Simulations, and Pop-Up Media	Medium	Medium	Low to High	High	1–2 weeks or as needed
76. Virtual Tools and Scientific Instruments	Low	Medium	Medium	High	1–2 weeks or as needed
77. Microblogging Course Discussions	Medium	Medium	Low	High	All semester or as needed
78. Online Subject- Specific Picture Galleries	Low	Medium	Low	Medium	Anytime as needed
79. Interactive Online Exhibits (e.g., Art and Bones)	Medium	Medium	Low	Medium	Anytime as needed
80. Three-Level Questioning	Low	Medium	Low	Medium	1–2 weeks or as needed

Principle: Tension

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
81. Debating Controversial Online News, Blogs, and Other Media	Medium	Medium	Low	High	1–2 weeks or as needed
82. Structured Controversy	Medium	Medium	Low	High	1–2 weeks or as needed
83. Structured Role Debates (e.g., Court Forums)	High	Medium	Low to High	High	1–2 weeks or as needed
84. Online Study Group Challenges	Medium	Medium	Low	High	Every week or as needed
85. Timed Disclosures and Issue Voting	Medium	Medium	Low	High	1 week or as needed
86. Argument and Debate Mapping	High	Medium	Low to High	High	2–3 weeks
87. Challenge-Based Video Conferencing (e.g., World Affairs Challenges)	High	High	Low	High	All semester or as needed
88. Digital Media Competitions	High	High	Low to High	High	3–4 weeks or during entire course
89. “Best of” Nominations (e.g., Quotes)	Medium	Medium	Low	High	Anytime, as needed
90. Online Games, Puzzles, and Quizzes	High	Medium	Low to High	Medium	1–2 weeks or as needed

Principle: Yielding Products

Learning Activity	Risk	Time	Cost	Learner Centredness	Duration of Activity
91. Cartoon and Animated Movie Productions	Medium	High	Low	High	1–3 weeks or as needed
92. Student Documentaries	High	High	Low to High	High	2–4 weeks
93. Course Video Summaries and Movie Festivals	High	High	Low to High	High	2–4 weeks
94. Book Trailers	High	High	Low to High	High	2–4 weeks
95. Online Book Reviews	Medium	Medium	Low	High	1–2 weeks
96. Content Databases and Learning Portals	Medium	Medium	Low to Medium	High	2–4 weeks or as needed
97. Oral History Interviews	High	High	Low to High	High	2–5 weeks at the end of the term
98. Grammar Check, Peer Check	Medium	Medium	Low to Medium	High	2–4 weeks or as needed
99. Recording Accomplishments (e.g., I Done It)	Medium	Medium	Low to Medium	High	Semester long
100. Poster Sessions and Gallery Tours	Medium	High	Low to Medium	High	1–2 weeks

Go Back

Answers to Check Your Progress

Module 1

1 (a, b, d), 2 (b), 3 (b), 4 (b, c, d, f), 5 (a, b, d, e, f), 6 (b), 7 (b), 8 (b), 9 (b), 10(a, c), 11 (b), 12 (b)

Module 2

1 (b), 2 (d), 3 (c), 4 (d), 5 (c), 6 (a), 7 (b), 8 (a, b, c, e),

9

Stage One	Awareness
Stage Two	Resistance
Stage Three	Understanding possibilities
Stage Four	Doing online learning
Stage Five	Sharing resources and activities
Stage Six	Advocacy

10 (d), 11 (b), 12 (b), 13 (a), 14 (a, b, c, d, e)

Module 3

1 (a), 2 (b), 3 (a), 4 (a), 5 (b), 6 (b), 7 (a, b, c), 8(a, b, c), 9 (a), 10 (a)

Module 4

1 (c), 2 (a, b, c), 3 (a), 4 (a, b, d), 5 (b), 6 (a), 7 (b, c, d), 8 (a), 9 (b)

Answers to Check Your Progress

Module 5

1 (a, b, d), 2 (a, b, c), 3 (b, c), 4 (a), 5 (a, c), 6 (a, b)

Module 6

1 (a, b), 2 (a), 3 (d), 4 (a, b, c, d), 5 (a), 6 (a, b, c)

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