Designing online learning environments in higher education: Building capacity of lecturers to design and facilitate blended e-pedagogy for mature students

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Abstract

Amidst the spread of COVID-19, higher education institutions (HEIs) in South Africa were compelled to offer academic programmes through online learning by utilising digital information and communication technologies (ICT) that were specifically designed to deliver content to mature students who used technology in their learning. This chapter focuses on the effective design of blended-learning environments and building the capacity of lecturers to design and facilitate interactive, blended e-pedagogy for mature students. We use the adapted ADDIE model to illustrate how lecturers can design and facilitate blended e-pedagogy for mature students. In fact, the COVID-19 crisis catapulted blended e-pedagogy to centre stage in higher education and created the need for: e-pedagogy training; the refining of e-tools; collaborative e-tools; and online assessment e-tools.

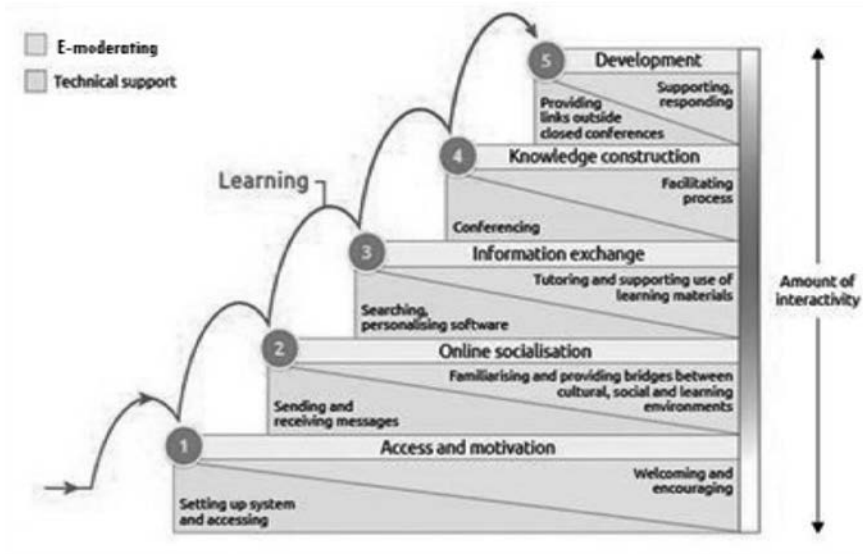
Introduction

Although the COVID-19 crisis impacted higher education institutions adversely, prior to the COVID-19 period, the University of the Western Cape (UWC) had made considerable strides in relation to the adoption of blended e-pedagogy and emerging technologies for teaching and learning. The adoption of blended e-pedagogies necessitates 'integrating e-pedagogy with existing styles of teaching, which must take into consideration pedagogical and technological features to form effective teaching and learning designs' (Alebaikan & Troudi 2010: 510). This focus on design prior to COVID-19 allowed UWC to continue fully online, enabling lecturers to utilise the ADDIE model, and the adaptation of the ADDIE model, to design their online environments and platforms to facilitate blended e-pedagogies for mature students. Hence, the purpose of this chapter is to focus on the effective design of blended-learning environments–e-pedagogy and present a framework for online course creation. The framework includes the five stages of the generic *Instructional Design (ADDIE)* model (Figure 1b), coinciding and linking with the stages deliberated by the work of Salmon (2004) regarding online teaching and learning (*e-moderation*). This framework guides the design of online environments, emphasising the provision of the critical first steps, 'familiarisation and socialisation', for e-tools and environments prior to the critical stages of achieving effective online communication and knowledge creation (Salmon 2004).

Figure 1a: Online course creation

Source: Stoltenkamp 2007

Figure 1b: ADDIE model linked with stages of e-moderation model



Source: Salmon 2004

The model enables us to engage with lecturers around the importance of introducing e-pedagogy into activities and recognising the value thereof. Thus, the model presents a *blended e-pedagogy training approach that is technology-based* and integrated with a face-to-face teaching approach within UWC's online learning system. To help lecturers improve the quality of online teaching and learning, HEIs need to facilitate e-pedagogy 'training sessions on the use of ICT', as well as provide 'teachers with the necessary tools and [allocate] them … more resources' so as to accelerate their 'efficiency in blended e-pedagogies' (Jackowicz & Sahin 2021: 277). During COVID-19, online learning has become a 'lifeline for all matters related to teaching and learning, … and can be adopted alongside a face-to-face learning mode as part of a blended learning setup' (Chaka 2020: 6). This teaching approach enables lecturers to manage and take ownership of their online experiences, and effectively engage with e-tools, in order to deliver on their core teaching and assessment activities. It should be noted that any course design based on a blended-learning approach 'which reduces the number of face-to-face lectures and makes learning more accessible, appears to fit into the needs of adult learners in terms of flexibility and time constraints' (Cocquyt, Zhu, Diep et al. 2019: 4).

However, the COVID-19 pandemic has created its own unique set of problems for mature students and lecturers alike, including access limitations in respect of online environments as well as a lack of technological skills. The structuring of activities, and the type of tasks and the assessment approaches, for the traditional classroom has inevitably become more demanding. Educators

increasingly employ emerging technologies, and, by adopting these technologies, pre-existing challenges are often exacerbated by pervasive and fundamental social factors, such as increasingly diverse student groups, multilingualism, rapidly changing post-study employment opportunities, unequal and deeply debilitating social contexts within which students have to study, and the shift from historically homogeneous higher education classrooms to a very diverse classroom along a complex cluster of intersecting dimensions. It would be erroneous to take for granted that educators will review and plan teaching and learning activities according to the demands of new technologies (Lim & Chai 2008). It is important, therefore, that academics at HEIs adopt e-pedagogy skills in order to respond to the advances of educational technology in supplementing traditional instruction. The development of learning communities for mature learners is dependent on the development of 'skills to assist them with their studies', and, where technology skills 'are less well developed, participation in group activities can also be of huge benefit' (Cornelius, Gordon & Ackland 2011: 388). Technology has become a vital component of education – unfortunately, without prior consideration or assessment of whether it necessarily augments learner-focused activities (Adams & Brindley 2007).

E-pedagogy concepts

As researchers, we contribute to the development of mature students, and to the online teaching agenda, by building the capacity of lecturers to design and facilitate blended e-pedagogy for such students, and enter into dialogue on how important it is for lecturers to grapple with threshold concepts, especially with the concept of e-pedagogy. In designing and facilitating blended e-pedagogy, lecturers should take cognisance that blended e-pedagogy 'goes beyond simply mixing … online and offline elements'. Rather it can be 'conceptualised and operationalised as a mix of structured and unstructured; asynchronous and synchronous; inside curriculum and out-of-curriculum; distance and in-person; [and] ICT-mediated and non-ICT mediated' design (Chan 2021: 3). A crucial distinction is made between e-pedagogy and e-tools in this chapter. When driving the use of emergent technologies for teaching and learning, a threshold concept within this effort is e-pedagogy that intersects with different approaches to teaching online. In most instances, e-pedagogy utilises digital ICT technologies that are specifically designed to deliver content to students who use technology in their learning. In educational practice, various definitions of e-pedagogy have been suggested. In the early stages of its formulation, e-pedagogy was defined as an e-learning pedagogy that emerges from online environments. In fact, lecturers engage with the concept of electronic teaching and learning known as electronic pedagogy (e-pedagogy) (Mehanna 2004). Dempster (2006: 1) broadly defines e-pedagogy 'as learning design that incorporates educational quality, values and effectiveness of teaching, learning and assessment activities supported by

technology'. Elliot (2008: 117) maintains that the 'traditional teaching methods' were applied to 'new learning environments', shifting them toward an e-pedagogy. Serdyukova and Serdyukov (2014: 5) refer to e-pedagogy as 'a comprehensive science which integrates all issues related to online education, starting with the theoretical foundations', such as connectivism, constructivism, cognitivism, and behaviourism. Sharma (2015: 2) defines e-pedagogy 'as learning that involves a web-based component, enabling collaboration and access to content that extends beyond the classroom'. More recently, e-pedagogy has been defined as:

> *a comprehensive science, which integrates all issues related to online education, starting with the theoretical foundations, and embracing higher education institutions, pedagogic systems, personal and professional development, principles of teaching and learning, instructional approaches and methods, knowledge construction in online learning, student and instructor's characteristics, educational technologies, course design and process planning (Serdyukova & Serdyukov 2014: 5).*

Based on these definitions Serdyukov (2015) offers a model for e-pedagogy that could support theory in respect of online learning. He suggests that 'e-pedagogy is balanced between classical education theory, psychology, sociology and technology'; that it 'is never static, but constantly evolving and transforming along with the new technologies and social processes, which requires its continuous modification'; and that, ultimately, 'the proof of its effectiveness is the students' learning outcomes' (Serdyukov 2015: 71). Currently, 'the use of information and communication technologies such as electronic media, educational technology, the internet, and computers in the teaching process is defined as e-learning'–e-pedagogy (Elçiçek & Erdemci 2021: 20).

Aligned to e-pedagogies are e-tools, which could refer to modes utilised to facilitate online teaching and online learning practices–e-pedagogy. Generally, an e-tool can be defined as a computer or web-based application intended to make a task easier, such as blogs, Twitter, wikis, podcasts, chat rooms, discussion forums, assessments, 'as well as various social utilities that help to [make] the whole learning process … [an] integral part of communication' (Stoltenkamp & Mapuva 2010: 209). Stoltenkamp and Mapuva (2010: 212) imply that 'in the education sector e-tools have been used to enhance communication, which[,] through globalization, [has made it] easy for interaction to be executed at a very fast rate'. Lecturers are encouraged not to use e-tools simply to enhance the course material but rather to use them for 'pedagogical–didactical justification of the implementation of e-tools – it cannot be limited to mere[ly] using the tool just because such a tool exists' (Vandewaetere 2008: 9.5). We highlight the effective use of e-tools for teaching, learning and assessment, and the quality assurance of online environments, in order to drive e-pedagogy in complex higher education environments, since a change in the use of technology by educators is dependent on a change in their pedagogical approach and the use of online tools (Lim & Chai 2008).

In addition, we highlight: the effective use of e-tools for specific discipline projects; structured and well-designed online environments which attempt to change perceptions and shape knowledge; the provision of spaces for feedback related to challenging concepts; the responsiveness to curriculum design and learner needs and learning styles; and being aware of changing identity shifts as learners have to think about the application of the unfamiliar concepts within their own projects. Lecturers are expected to focus on teaching effectively online, rather than focusing on a list of e-tools available and on which learning management system they prefer. This leads to a transformed way of thinking (Meyer & Land 2003) where lecturers deliberate on the design of an online environment for learning instead of dumping content online.

The use of technologies for teaching and learning has increased exponentially during the pandemic. Some lecturers across disciplines still feel that the notion of e-pedagogy does not relate to their specific discipline. How would we engage lecturers around the importance of introducing e-pedagogy into activities and recognising the value thereof? Kidd (2010: xvii) suggests that the most proficient way to design an online environment for mature learners is by ensuring that 'instructional designers, educators, trainers, and facilitators … pay particular attention to the design of instruction, modes of delivery, instructional and teaching practices, as well as the technologies employed to disseminate the learning to adults'. In addition, as lecturers in education for mature students, 'we are not only responsible for designing content and delivery but also for scaffolding meaningful social interaction and the development of transfer skills' (Roumell 2019: 21). In designing interactive online content, lecturers should pay particular attention to the technology they employ, because a change in the use of technology could suggest a shift in pedagogical approach.

Stages of instructional design (ADDIE)

The ADDIE model enables us to engage with lecturers about the importance of implementing e-pedagogical approaches. The ADDIE model includes five stages: analysis, design, development, implementation, and evaluation. These coincide with the stages deliberated by the work of Salmon (2004) regarding online teaching and learning, and, especially, in enabling students to become self-directed, independent learners, and to develop as knowledge builders through engagement with interactive online courses. Such stages include access, socialisation and familiarisation, information exchange, maintaining substantive communication, and development as a knowledge builder. We deliberate on a blended e-pedagogy training programme in alignment with the model, endeavour to ensure the successful implementation of well-designed and structured online courses, and seek to foster facilitation and enable an online community that is able to navigate and use e-tools effectively. It is essential that lecturers be trained 'to overcome the challenges of online

teaching that most of university instructors' face, and 'e-pedagogy workshops need to be offered to them' (Alebaikan & Troudi 2010: 511).

Stage 1: Analysis

This stage pertains to the online presence of lecturers that allows them to gain access to online platforms and support services available at their institution.

Access to information technology (IT) resources and training

Lecturers should have access to IT resources, to face-to-face and online, scheduled e-pedagogy training sessions, and to one-on-one consultations. They should be able to call on a professional IT support team and have access to dedicated online support. Salmon (2004: 31) noted that lecturers require 'information and technical support to get online, and strong motivation and encouragement to put in the necessary time and effort'. Thus, access to online information for staff and students should be prioritised. Strategies such as blended learning that can mitigate the risk of the effect of the pandemic on teaching and learning, should be in place. Mahaye (2020: 19) suggests that 'blended learning would enable learners [to] have access to online learning materials as well as [be] able to interact with each other and teachers or instructor[s]'. However, lecturers should take into consideration that 'students in rural areas are disadvantaged in terms of access to technology-based learning due to [the] economic conditions of rural areas' (Mahaye 2020: 19). It is the joint responsibility of the professional support team and the lecturers (in particular, those ultimately responsible for online modules/courses) to ensure that learners gain sufficient knowledge about ICT to be able to successfully navigate the e-tools. Moreover, professional 'support for adult learners is an important issue and is particularly important at the outset of a programme, where it is required to help develop a familiarity with the learning process as well as learning objectives' (Cornelius et al. 2011: 388).

While access to online resources is important in order to facilitate learning by mature learners, our society still has an insidious digital divide, and, in most instances, 'not everyone has reliable access to an Internet connection nor the digital literacy skills to engage in self-directed learning in a virtual environment. eLearning can further serve to disadvantage the most vulnerable groups in society' (Boeren, Roumell & Roessger 2020: 203). In these groups where there is such a digital divide because of the shift from face-to-face to online teaching and learning during the pandemic, this shift 'might further exacerbate educational inequalities, due to uneven access to information technology, devices, and connectivity' (Du Preez & Le Grange 2020: 99).

Currently, online learning for mature students continues to remain an important part of adult education at UWC. However, the task remains for UWC 'to learn how to provide a positive "social" environment using an electronic medium' for

mature learners (Cercone 2008: 152). It is no secret that 'technology will continue to change as new technologies are developed' and that 'instructors will need to adapt, change, and continue to learn about how this "electronic" environment can be used' (Cercone 2008: 152). Hence, it is vital that the responsible lecturers acknowledge the importance of e-pedagogy training, and integrate ICT training into their curriculum right from the start. HEIs need to recognise that it is imperative for lecturer training to take place before allowing them to teach online in order that they may be 'thoroughly prepared [as regards] online pedagogy and instructional methodology' (Serdyukov 2015: 67).

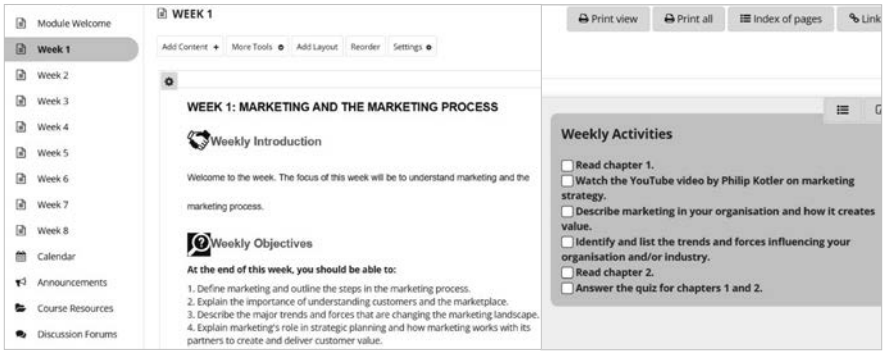
In education, when considering the use of technology to accommodate mature students' learning styles, 'distance learning programs require careful and deliberate instructional design steps' in which learning by these students 'should be supported efficiently and effectively with technology that is appropriate for the learners and learning' (James & Gardner 1995: 27). The existence of factors that contribute to the creation of a conducive environment has also been confirmed by America (2006: ii), who extensively explored the association between certain 'antecedent factors and the adoption of a specific technology', such as an e-learning system. America (2006: 80) further emphasised the need for training in order for users to recognise the usefulness of the system. Users who are cynical about the educational consequences of a particular technology can only make knowledgeable decisions through exposure to training and implementation (America 2006). Of paramount importance to students' performance has been the successful incorporation of ICT sessions into programmes, whereby the sessions are not viewed merely as ICT sessions, but rather as subject-matter sessions enabled by ICT. Furthermore, students who are exposed to ICT training during an orientation programme become familiar with the e-tools within a short time frame (Masters & Duffield 2004), thus enabling them to use those tools to benefit their learning. According to instructional designers, 'a good e-tool is easy to use, is time-saving and helps to reduce the amount of paper', and 'e-tools should support an interactive learning process and lead to a more efficient and simple communication' (Vandewaetere 2008: 9.6).

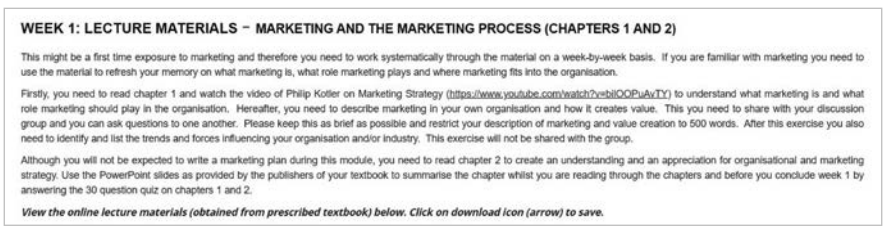
Showcase the design and structure of an online environment

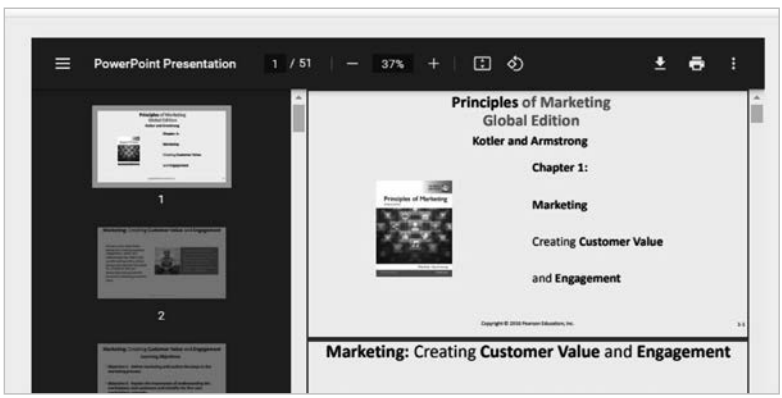
We showcase an example of a structured online environment that emphasises the importance of design, including how a course is structured into manageable units/topics, and provides the students with a course outline, weekly lectures and related course resources, including videos and presentations, past course resources, a course calendar and announcements. A self-directed learning space should also be made available where students can participate in tests and quizzes at their own pace and in their own time (within a specific time frame). To ensure epistemological access, lecturers require pedagogical and technical proficiency, and, 'if any degree of epistemological access is to be ensured during the Covid- 19 pandemic, then it cannot simply be via online

teaching/learning, but ought to be through an expanded notion of emergency remote teaching/learning' (Du Preez & Le Grange 2020: 100). Moreover, the design and structure of the online environment would involve different aspects of e-learning and, 'importantly, students should be actively involved in designing learning programmes through providing regular feedback on their experiences' (Du Preez & Le Grange 2020: 100). This period (pandemic) necessitates the advance of online environments and the 're-design and development in practical terms' by the 'phasing of blended learning pedagogy as a vehicle from the orthodox approach (traditional classroom) to a digital technology approach (digital classroom) to set the rising generation on a calculated [pathway] and direction …' (Mahaye 2020: 20).

Figure 2: Example of structured weekly lectures







Source: Marketing Management Module, EMD616, 2020 within iKamva

It should be noted that we did not start by mentioning a specific online platform or any specific e-tool. The focus was on structure – aligned to the selection of e-tools – for a specific purpose. Hence, we could showcase, as Cousin (2006: 4) highlights, a 'less-is-more' design approach, and the need for lecturers to make good decisions about what is critical in order for their students to 'grasp' the subject. We showcase the design and structure of an online environment and use the opportunity to draw the attention of lecturers to the outcome of the effective use of specific tools for their discipline-specific projects in respect of student learning (Middendorf & Pace 2004).

Develop an instructional strategy

In order to appropriately support learners who are expected to engage in online communication, and with online content and assessment, the professional support team and the lecturer should be equipped with the requisite analytical information and a clear motivation for the creation of an online course. At this stage, the lecturer is made aware of various instructional-design models, including non-linear and cyclical approaches. Furthermore, the lecturer is guided regarding the development of an instructional strategy that provides a detailed breakdown of the specific module/unit – specifically, the alignment of learning outcomes, assessment activities, teaching methodology, learning material and selected e-tools. Emphasis is also placed on the selection of e-tools and design that are in alignment with learning theories. In addition, 'instructors, instructional designers, and other professionals working in the design of online environments for adults must understand adult learning theory, especially in terms of its relationship to distance or online learning' (Cercone 2008: 139). One of the most notable learning theories for mature learners is Knowles' learning theory of andragogy (Knowles 1973). According to Knowles (1973), the learning theory for mature learners should demonstrate a unified model that 'can incorporate principles and technologies from various theories and still maintain its own integrity' (Knowles 1973: 102). Concepts in 'adult learning theories help faculties understand their lifelong learning students and in turn design more meaningful learning experiences for them' (Cercone 2008: 147).

Figure 3: Example of an instructional strategy

INSTRUCTIONAL STRATEGY/PLAN

The instructional strategy gives a detailed breakdown of each chapter /sub-units, listing learning outcomes and content and indicating the types of activities that will be included. Also indicate on your instructional strategy how your learners will be assessed.

Chapter	Sub-Unit	Chapter/Sub-unit Overview/Out-come	Learning Outcomes	Assessment Activities	Content	eTool/s
Introduction to Angles		Learners should be able to work at his/her own pace while interacting with various websites and watching videos. They should be able to suggest reasons why it is necessary to measure angles	Identify angles	Self-Assessment at the end of the video	Angles in our environment	Link to animated video with interactive exercises
Types of Angles	Angles and lines	Identify and compare angles. They should also be able to summarise the rules for the different types of angles by playing games and viewing videos	Identify Angles Draw and measure angles Distinguish between angles which are obtuse and reflex angles	Online Worksheet	Vertex, rays and lines. Naming angles	Uploaded video (Iwi-soft & A-tube catcher)
	Right Angles and Straight lines				90° and straight angles	
	Acute Angles				Angles less than 90°	Link to website; Alien Angle Games
	Obtuse Angles				Angles more than 90° nut less than 180°	*Photostory uploaded to summarise the chapter*
	Reflex Angles				Angles greater than 180° but less than 360°	
Parallel Lines and Transversals	Alternate Angles	Identify and compare angles. They should also be able to summarise the rules for the different types of angles	Identify and compare angles. Measure and classify angles.	MCQ's Online Worksheet *Possibly also an Assignment or participation in Discussion Forum*	Z angles – alternate angles.	Khan Academy Video uploaded (A-tube catcher)
	Corresponding Angles				F angles – Corresponding angles	Video uploaded MathsMaster A-tube Catcher
	Vertically Opposite Angles				Angles formed where two lines cross	
	Supplementary Angles				Angles on a straight line add up to 180°	*Link to interactive activities*
	Complementary Angles				Adjacent angles, angles that add up to 90°	

Source: Science Educator- B.ED. Honours: Computers in Education, 'Design an Instructional Event', Short Course, 2013 within iKamva

Figure 4: Instructional strategy and selection of e-tools in alignment with learning theories (PGDIP: Technical Vocational Training Programme online environment within iKamva) and CIECT online module used as Blueprint for Departmental demonstrations/meetings.

INSTRUCTIONAL STRATEGY/PLAN

Workshop: eTools for PG Dip TVET Programme

The instructional strategy gives a detailed breakdown of the module, *PG Dip: Technical Vocational Education & Training (TVET)*; and its related phases. Each phase includes learning outcomes, content, activities, reading material and selected eTools. The PG Dip TVET provide a postgraduate qualification tailored to the vocational and post-school teaching environment, for educators currently employed in the TVET college and post-school sector.

Purpose Statement

The purpose of this module is to highlight the importance of the application of eTools to support teaching-and-learning practices. The module also aims to demonstrate access from various modes of delivery, namely: Laptop, iPad, Tablet and mobile phone.

Learning Outcomes	Content	Activities	Reading Material	eTools
Create Manageable Learning Units (Lessons)				
The learner will be able to: ▪ Create an online structure ▪ Create sub-units ▪ Embed relevant components (images, text, documents, videos)	The learner will view template of possible online structure according to outline: ▪ TVET, the Economy and Society ▪ Theorists and Theories in TVET and Post-Schooling ○ Week 1: Theoretical Paradigms ▪ Introduction ▪	'Show-Tell-and-Do' Hands-on interactive training and participation	Stoltenkamp, J., Kabaka, M. & Braaf, N. (2014). Lessons Learnt: Support Interventions during a Blended Course for Teacher-Educators from Urban and Rural Settings. http://file.scirp.org/Html/7-6302132_47157.htm.	Make use of eTool: ▪ Lessons

T & L Tips

T&L Tip: Students should have an **active role in the learning process**. The online discussions may assist in this.

T&L Tip: Embedding video clips can assist students to **reinforce** their own learning. Hence, it links to both the **Constructivist and Cognitivist** theories of learning.

** **Constructivism:** the video assist with the **Zone of Proximal Development (ZPD)** focuses on the prior knowledge of students and links to new information provided.

** **Cognitivism:** the process of **assimilation and accommodation** may occur when students watch the video clips.

T&L Tip: Viewing external links to other resources can reinforce learning. A student can explore in their own time and connect their understanding with the knowledge they have attained already. Hence it focuses on assimilation and accommodation which links to Cognitivism.

T&L Tip: The Tests & Quizzes can be used by students to enhance self-directed learning in order for them to assess their own knowledge, understanding, skills and abilities.

T&L Tip: Case Study asignments usually require students to identify problems and issues in a scenario, to demonstrate their developing knowledge of theories, and to make decisions based on these in order to solve the problem or issue presented in the scenario

Source: XXX

tage 2: Design

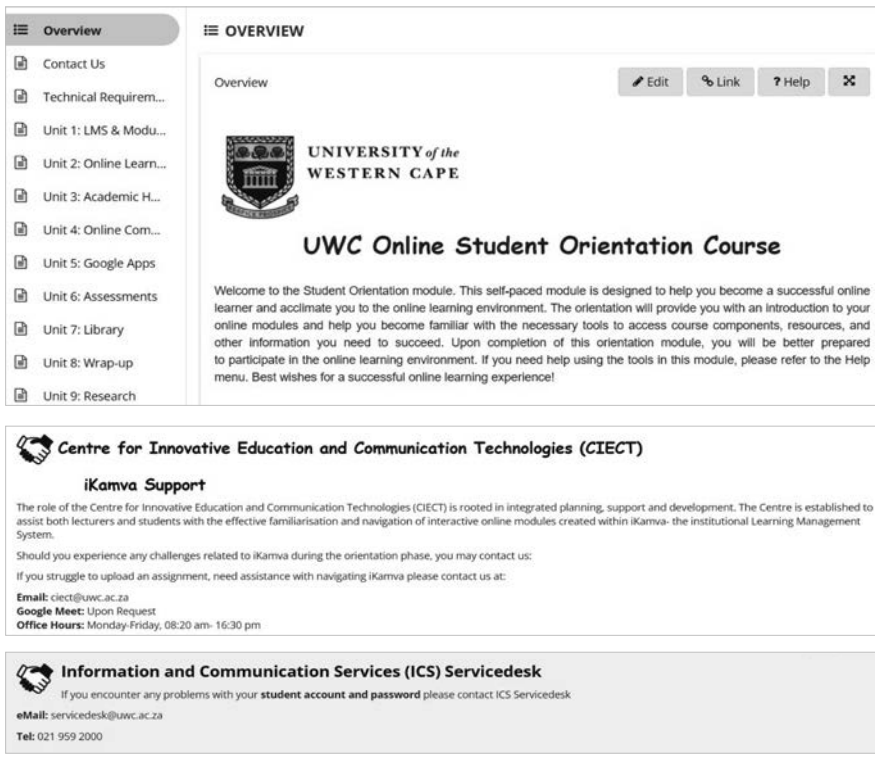
This stage gives clear instructions with regard to socialisation and familiarisation.

Create an orientation section to develop a sense of direction

Student orientation becomes a platform for exposing prospective (and current) students to the online environment that is now available to them. This practice is supported by pertinent literature regarding student orientation (Gottesman & Baer 2006; Laurillard 1993; Masters & Duffield 2004). Research has found that student orientation covers all aspects of university life – including how tuition is going to be dispensed to students (Gottesman & Baer 2006; Masters & Duffield 2004).

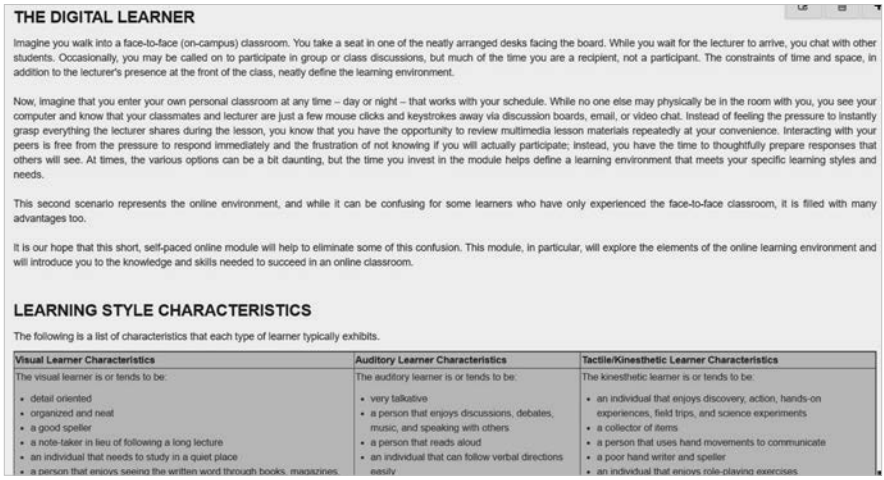
The lecturer/facilitator creates an orientation section at the start of the online course that enables learners to prepare for participation, and to become familiar with the specific services and e-tools and with one another, as they 'need to identify with each other, to develop a sense of direction online, and they need some guide to judgment and behaviour' (Salmon 2004: 35).

Figure 5: Orientation – prepare learners for participation and guide them to support services



Source: CIECT Student Orientation Module, ORI 001 within iKamva

Figure 6: Orientation – identify the 'learning style characteristics'



THE DIGITAL LEARNER

Imagine you walk into a face-to-face (on-campus) classroom. You take a seat in one of the neatly arranged desks facing the board. While you wait for the lecturer to arrive, you chat with other students. Occasionally, you may be called on to participate in group or class discussions, but much of the time you are a recipient, not a participant. The constraints of time and space, in addition to the lecturer's presence at the front of the class, neatly define the learning environment.

Now, imagine that you enter your own personal classroom at any time – day or night – that works with your schedule. While no one else may physically be in the room with you, you see your computer and know that your classmates and lecturer are just a few mouse clicks and keystrokes away via discussion boards, email, or video chat. Instead of feeling the pressure to instantly grasp everything the lecturer shares during the lesson, you know that you have the opportunity to review multimedia lesson materials repeatedly at your convenience. Interacting with your peers is free from the pressure to respond immediately and the frustration of not knowing if you will actually participate; instead, you have the time to thoughtfully prepare responses that others will see. At times, the various options can be a bit daunting, but the time you invest in the module helps define a learning environment that meets your specific learning styles and needs.

This second scenario represents the online environment, and while it can be confusing for some learners who have only experienced the face-to-face classroom, it is filled with many advantages too.

It is our hope that this short, self-paced online module will help to eliminate some of this confusion. This module, in particular, will explore the elements of the online learning environment and will introduce you to the knowledge and skills needed to succeed in an online classroom.

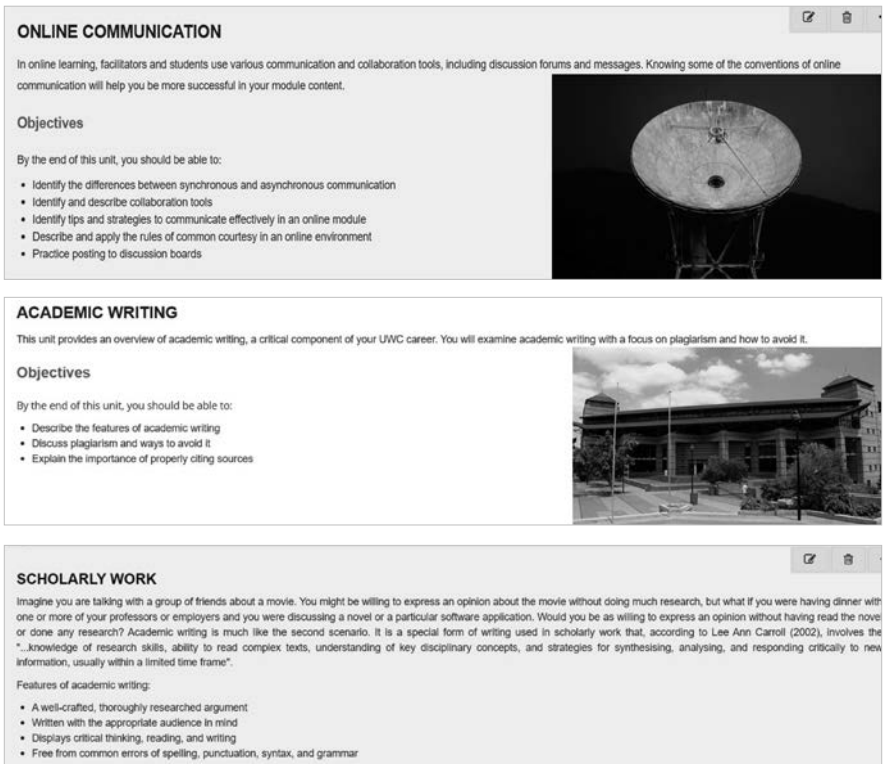
LEARNING STYLE CHARACTERISTICS

The following is a list of characteristics that each type of learner typically exhibits.

Visual Learner Characteristics	Auditory Learner Characteristics	Tactile/Kinesthetic Learner Characteristics
The visual learner is or tends to be:	The auditory learner is or tends to be:	The kinesthetic learner is or tends to be:
• detail oriented • organized and neat • a good speller • a note-taker in lieu of following a long lecture • an individual that needs to study in a quiet place • a person that enjoys seeing the written word through books, magazines	• very talkative • a person that enjoys discussions, debates, music, and speaking with others • a person that reads aloud • an individual that can follow verbal directions easily	• an individual that enjoys discovery, action, hands-on experiences, field trips, and science experiments • a collector of items • a person that uses hand movements to communicate • a poor hand writer and speller • an individual that enjoys role-playing exercises

Source: CIECT Student Orientation Module, ORI 001 within iKamva

Figure 7: Orientation – netiquette and 'academic honesty'



ONLINE COMMUNICATION

In online learning, facilitators and students use various communication and collaboration tools, including discussion forums and messages. Knowing some of the conventions of online communication will help you be more successful in your module content.

Objectives

By the end of this unit, you should be able to:

- Identify the differences between synchronous and asynchronous communication
- Identify and describe collaboration tools
- Identify tips and strategies to communicate effectively in an online module
- Describe and apply the rules of common courtesy in an online environment
- Practice posting to discussion boards

ACADEMIC WRITING

This unit provides an overview of academic writing, a critical component of your UWC career. You will examine academic writing with a focus on plagiarism and how to avoid it.

Objectives

By the end of this unit, you should be able to:

- Describe the features of academic writing
- Discuss plagiarism and ways to avoid it
- Explain the importance of properly citing sources

SCHOLARLY WORK

Imagine you are talking with a group of friends about a movie. You might be willing to express an opinion about the movie without doing much research, but what if you were having dinner with one or more of your professors or employers and you were discussing a novel or a particular software application. Would you be as willing to express an opinion without having read the novel or done any research? Academic writing is much like the second scenario. It is a special form of writing used in scholarly work that, according to Lee Ann Carroll (2002), involves the "...knowledge of research skills, ability to read complex texts, understanding of key disciplinary concepts, and strategies for synthesising, analysing, and responding critically to new information, usually within a limited time frame".

Features of academic writing:

- A well-crafted, thoroughly researched argument
- Written with the appropriate audience in mind
- Displays critical thinking, reading, and writing
- Free from common errors of spelling, punctuation, syntax, and grammar

Source: CIECT Student Orientation Module, ORI 001 within iKamva

For lecturers to design a suitable online environment for mature learners:

> *they [the lecturers] must be familiar with the way in which to design an online environment and understand the strengths as well as limitations that are inherent in this type of instructional medium, and balance that with information about how adults learn (Cercone 2008: 143).*

Introductory messages and 'personal' online spaces

In this regard, the learners are encouraged to post introductory messages in which they share something about themselves in a discussion forum. Online lecturers/facilitators design 'non-instructional strategies (e.g. greetings, exchange of personal information)' which encourage social relations (Henttonen & Blomqvist 2005, in Liu, Magjuka & Lee 2008: 843). Learners are also requested to upload their pictures and update their profiles in the 'personal space' within the online platform. The lecturers/facilitators are expected to model this behaviour by uploading their own pictures, as 'it is essential to create an atmosphere where the participants feel respected and able to gain respect for their views' (Salmon 2004: 36). The lecturers/facilitators are also encouraged to avoid using an academic tone at this stage, and to ensure that a private, personal online space is created where even demotivated students can be reached. Salmon (2004: 37) mentions that a good way to do this is through email, curbing 'flame and discomfort'.

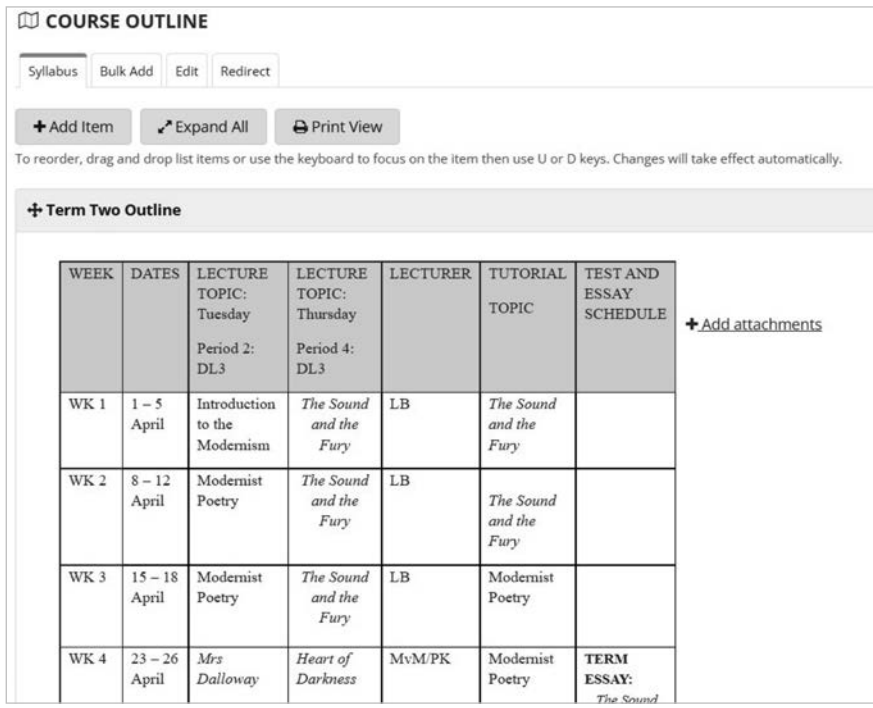
However, enabling the personal online space for students does not mean that each student needs to be taught individually. Rather, it entails managing teaching in order to allow it to fit in well, in diverse ways, with: (a) the personal characteristics of each individual; (b) the consideration of learning styles; and (c) becoming familiar with the student (Dettori 2008: 953). A mutually developed online module based on sound pedagogical principles should enable a student to gain an apt understanding of the e-tools concerned. This will help to enhance the success of online teaching, and will enable students to engage in constructive learning experiences as well as realise the benefits of e-tools (Lim & Chai 2008: 825; Sharma 2008: 952).

Course outlines, and clear instructions and objectives

We showcase how practical and tutorial schedules can be integrated. The schedule highlights the proposed practical activity, the resources that will be used (including digital media), and whether the learner is expected to engage in any activities before attending the practical laboratory session. These pre-lab activities are also structured within the online environment. Thus, learners have access to a structured 'one-stop shop', including a practical-schedule, pre-practical activities, and resources. This design concurs with the work of Salmon (2004: 39), who states that 'lecturers need to ensure that students are not linked to too many outside resources', since this could be confusing.

A course outline created in the early stages of the online course ensures successful navigation and structure. The facilitators and lecturers ensure that expectations, instructions and objectives for the online module are made clear from the start. Within the online course, the students are directed to specific dates linked to relevant information and clear instructions, as it is apparent that learners need clear instructions on what is expected of them when engaging in online activities (Masters & Duffield 2004).

Figure 8: Examples of integrated schedules



COURSE OUTLINE

Syllabus | Bulk Add | Edit | Redirect

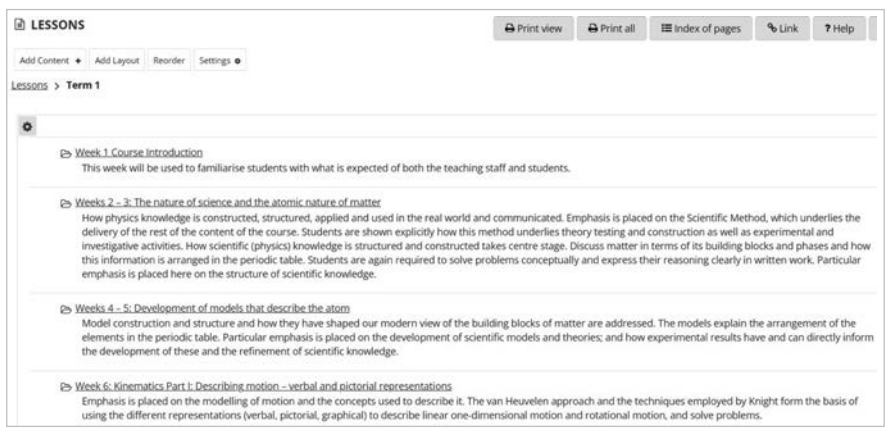
+ Add Item | Expand All | Print View

To reorder, drag and drop list items or use the keyboard to focus on the item then use U or D keys. Changes will take effect automatically.

+ Term Two Outline

WEEK	DATES	LECTURE TOPIC: Tuesday Period 2: DL3	LECTURE TOPIC: Thursday Period 4: DL3	LECTURER	TUTORIAL TOPIC	TEST AND ESSAY SCHEDULE
WK 1	1 – 5 April	Introduction to the Modernism	*The Sound and the Fury*	LB	*The Sound and the Fury*	
WK 2	8 – 12 April	Modernist Poetry	*The Sound and the Fury*	LB	*The Sound and the Fury*	
WK 3	15 – 18 April	Modernist Poetry	*The Sound and the Fury*	LB	Modernist Poetry	
WK 4	23 – 26 April	*Mrs Dalloway*	*Heart of Darkness*	MvM/PK	Modernist Poetry	**TERM ESSAY:** *The Sound*

+ Add attachments



LESSONS

Print view | Print all | Index of pages | Link | ? Help

Add Content | Add Layout | Reorder | Settings

Lessons > **Term 1**

Week 1 Course Introduction
This week will be used to familiarise students with what is expected of both the teaching staff and students.

Weeks 2 - 3: The nature of science and the atomic nature of matter
How physics knowledge is constructed, structured, applied and used in the real world and communicated. Emphasis is placed on the Scientific Method, which underlies the delivery of the rest of the content of the course. Students are shown explicitly how this method underlies theory testing and construction as well as experimental and investigative activities. How scientific (physics) knowledge is structured and constructed takes centre stage. Discuss matter in terms of its building blocks and phases and how this information is arranged in the periodic table. Students are again required to solve problems conceptually and express their reasoning clearly in written work. Particular emphasis is placed here on the structure of scientific knowledge.

Weeks 4 - 5: Development of models that describe the atom
Model construction and structure and how they have shaped our modern view of the building blocks of matter are addressed. The models explain the arrangement of the elements in the periodic table. Particular emphasis is placed on the development of scientific models and theories; and how experimental results have and can directly inform the development of these and the refinement of scientific knowledge.

Week 6: Kinematics Part I: Describing motion - verbal and pictorial representations
Emphasis is placed on the modelling of motion and the concepts used to describe it. The van Heuvelen approach and the techniques employed by Knight form the basis of using the different representations (verbal, pictorial, graphical) to describe linear one-dimensional motion and rotational motion, and solve problems.

Source: ENG 311 & PHY 151 within iKamva

Figure 9: Clear objectives at the start of the course

Source: Constitutional Law (COS 111), ENG 121) within iKamva

Stage 3: Development

This stage illustrates how to produce relevant online material by simulating information exchange.

Contribute to the perception that technology is valuable and practical

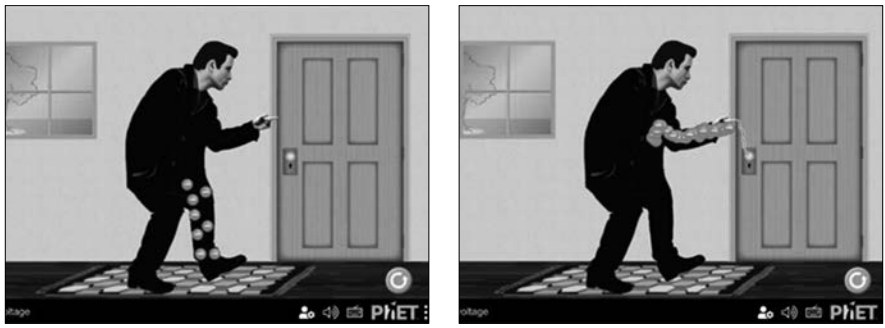
We proceed to showcase how an online structured environment can also cater for different learning styles. The effects of COVID-19 have 'greatly affected the styles in which students learn', and 'learning in a global pandemic has caused a change in the learning styles of students' – which have shifted to individualised e-learning styles (Mahama, Asante, Mensah et al. 2021: 178). Learning styles incorporated in this online structure were videos related to various challenging topics, including quantum and nuclear physics, which could be integrated into the structured online environment – named the Physics Animation Lab (see Figure 10). Online environments that cater for different learning styles have become prevalent at UWC. Therefore, the 'respect for individual differences and knowledge of learning-style idiosyncrasies will undoubtedly improve learning effectiveness if these ideas are incorporated into the instructional design' (James & Gardner 1995: 30). When creating online environments for mature learners, the links between the learning style of mature learners and the teaching style of lecturers have been identified as important contributors for lecturers to be aware of in preparing their teaching material (Cartney 2000). Furthermore, we encourage the lecturers to attend training sessions related to the design of an online environment so that they become familiar and 'feel at ease and competent with the use of technology [in order to] contribute to the perception that technology is valuable and practical [for their discipline]' (Stoltenkamp 2013: 52). Faculty members who develop course material 'with an online component', and who have an 'awareness that adults may value options, variety, and self-directedness in their learning opportunities can help guide effective instructional design that will attract and retain adult learners' (Ausburn 2004: 334).

We also proceed to showcase the integration of a Physics Experimental Laboratory. At this stage, we highlight that it is not necessary for us to recreate sound educational material. This particular Physics Experimental Laboratory has been created by an educational organisation and shared with the public. In addition, we emphasise how learning can be fun, for example one of the animated physics videos, namely 'John Travoltage', can assist a learner to grasp a concept such as static electricity.

Figure 10: Integration of videos and animation to cater for different learning styles (an example of an integrated Physics Experimental Laboratory

Source: https://phet.colorado.edu/)) (Physics module setup on UWC eLearning platform, 2012

Figure 11: 'John Travoltage' simulation – static electricity



Source: https://phet.colorado.edu/en/simulations/john-travoltage) (Physics module setup on UWC eLearning platform, 2012)

Hence, lecturers are made aware that a focus on e-pedagogy increases the responsiveness to curriculum design in relation to student needs and learning styles, as well as student choices in the use of such technology (Dusick 1998; Reznich 1997; Spotts 1999; Peluchette & Rust 2005, in Stoltenkamp 2013). In designing the curriculum (open, blended-learning environments) for mature learners, the different learning theories need to be considered, such as the andragogy, constructivism and socio-constructivism theories, motivation theory, self-determination theory, and self-directed learning theory. In addition, the technology-acceptance models and technological-affordance concepts can also be considered, and 'to cover these perspectives in a concise but expandable framework will be worthwhile to guide online blended learning designs' (Diep, Zhu, Cocquyt et al. 2019: 232). Furthermore, in designing the curriculum, lecturers need to pay particular attention to mature learners' different learning styles, as well as the learning styles of students with disabilities. It is generally recognised that 'interactive pedagogical approaches could affect students' individual learning style and enhance a reflective learning style in adult learners' (Li, Aldosari & Park 2021: 1). As regards students with disabilities, it must be taken into consideration when designing the curriculum in relation to student needs and learning styles, that learners with disabilities have certain challenges. These 'limitations pose challenges in selecting the most suitable teaching approaches', which 'creates a situation that requires [the] right combination of multiple possible alternatives', but 'an outstanding educator using his [or her] experience and perception solves this problem' (Thapliyal, Ahuja, Shankar et al. 2021: 6).

Relevant online content, and design of digital media aligned to learning outcomes

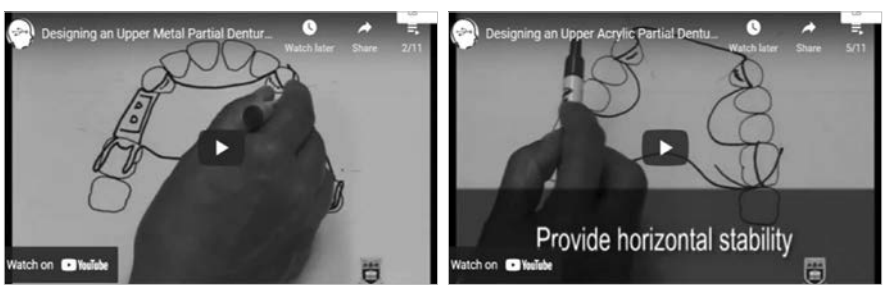
The production of relevant online content is equally important in the use of e-tools. When designing online content, 'the pedagogical model, which focuses primarily on subject content area, is certainly less effective with adults who are

more oriented to tasks and problem solving' (Sendall, Shaw, Round et al. 2010: 83). In addition, online content that is 'presented outside of their most effective learning style can create challenges'; therefore, 'course designers must use various facets of pedagogy to create effective online environments' (Gilpin 2010: 269). It is not sufficient to equip learners with technical skills, for they also need the skills to use the e-tools effectively (Mkhize 2005). There is a link between the use of e-tools and the relevancy of, and familiarity with, the online learning material, as well as the level of competencies and skills of the learners needed to actively engage the e-tools (Mkhize 2005).

The challenge created by COVID-19 perpetuated the need to find ways to embed formative assessments in the new, blended-learning environment. It is thus important that the lecturer create an online course with relevant content linked to communication and assessment e-tools, in addition to digital media, before the actual online engagement takes place. It must be highlighted that digital media (such as screencasts, photographs [stills], audio [podcasts], video [vodcasts], and digital stories) should be effectively used to enhance and reinforce interactive online course content, and to support effective institutional marketing. These can be further supplemented with content from, or links to, other social-networking sites and groups.

However, digital media should be carefully designed to support the learning outcomes. During the current pandemic with the rapidly increasing online environment and online courses, 'even for those with limited digital skills, the development of courses designed for [adult training programs] is necessary' (Andone, Vasiu, Mihaescu et al. 2021: 1). Thus, the online module/course that is mutually designed by the professional support team and lecturers is organised into manageable chunks, thereby ensuring that the students do not have to scroll through large amounts of text – which could be demotivating. The online content is also appropriately linked to other relevant online resources, especially as learners will look to the facilitators to 'provide direction through the mass of messages and encouragement to start using the most relevant content material' (Salmon 2004: 39).

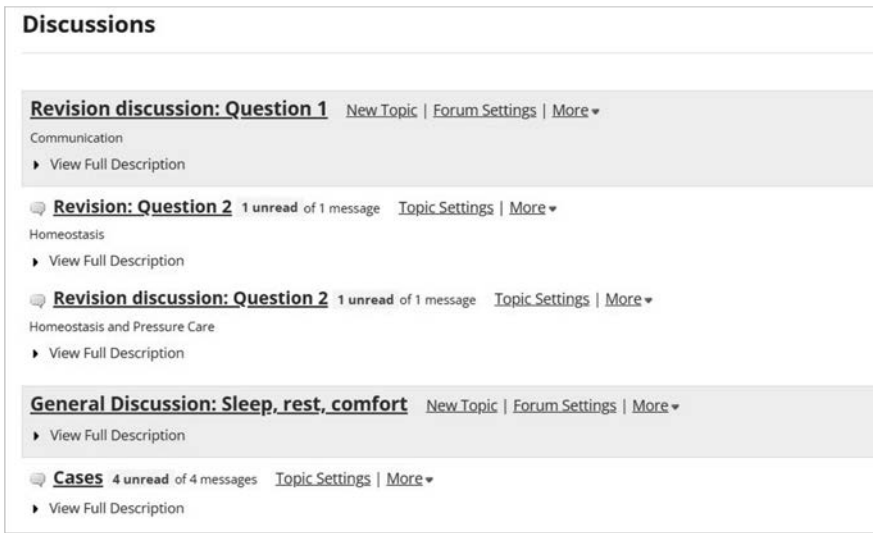
Figure 12: Digital media used in alignment with outcomes



Source: Dentistry online module setup on eTeaching UWC eLearning platform, 2012

The use of collaborative e-tools, such as discussion forums, work groups, wikis and blogs, is encouraged during e-pedagogy training. According to Stoltenkamp and Mapuva (2010: 210), collaborative e-tools are 'technologies that enable threaded discussion groups, chat rooms, synchronous meeting tools', and other collaborative software that is adopted in e-pedagogical environments. The learners are reminded that the asynchronous (accessed at any time and anywhere) discussion tool will enable them to communicate at their own pace, but within a particular time frame set by the lecturer. The learners are also taught how to communicate in a threaded discussion that depicts an evolving argument. Most learners must be made aware that they need to continue with an open thread, instead of opening a new thread. Research indicates that, in non-traditional education, 'online presence can sometimes be felt by the participants as much more intimate than physical presence', and, in most instances, 'attending a face-to-face lecture may only involve one-way communication whereas an in-depth discourse using a text-based discussion forum can be very interactive' (Liang & Chen 2012: 1332).

Figure 13: Learners contribute their own views via discussion forums



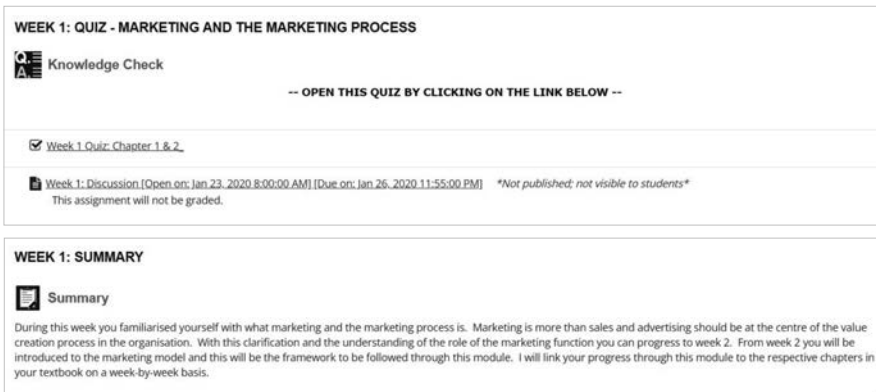
Source: NRS 161 module within iKamva

Lecturers are also encouraged to keep their postings concise, constructive and clear. According to researchers, 'adults need to self-reflect on the learning process and be given support for transformational learning'; therefore, lecturers must provide a space to deliberate on their processes of online teaching and learning – on how to manage this in their online environment (Cercone 2008: 159). Thus, the lecturers/facilitators pose questions as the starting point of a discussion topic, which promotes the exploration of a topic and the development of critical-thinking skills. The facilitator's instructions should always be clear, and the

facilitator should advise students to limit their postings to approximately 200 words, otherwise other students and the lecturers will not be able to cope. Experience suggests that it takes some time for students to realise that they may contribute their own views and share resources via the discussion tool. The lecturer/facilitator should 'celebrate, give value to, and acknowledge contributions to discussion processes and knowledge sharing by participants, and give credibility, authenticity and verification of information offered' (Salmon 2004: 40). Learners are also made aware by the lecturer/facilitator that online discussions and other collaborative online tasks are often intense, and that they need to engage in some research to explore the related discussion topics so that they can engage in a meaningful discussion. This encourages learners to become independent learners, and, in addition, it instils a culture of commitment to the preparatory course activities (e.g. pre-reading activities).

Learners are also made aware at this stage that the lecturer will eventually transfer some responsibility to them. According to Knowles (1973: 71), 'the learning process [for non-traditional learners] is related to and makes use of the experiences of learners – the teacher helps the students to exploit their own experiences as resources for learning through the use of such techniques as discussions'. Students are often requested to summarise a discussion thread, for example by pulling all the main ideas of a thread together and posting this to the group. It is at this time that the training facilitator and lecturer demonstrate how to summarise a discussion and present a model summary, all of which helps to model the learning behaviour of the student. In this way, the lecturer/facilitator initially assumes the leadership, whereafter the students take over the leadership role. This approach is in line with that of Iahad and Dafoulas (2004), who believe that the student-focused approach is established by the need for diverse and new learning techniques for lecturers and students who are not situated in the same geographical space.

Figure 14: Learners can be afforded the opportunity to summarise topics – the lecturer hands over responsibility



Source: Marketing Management Module, EMD616, 2020 within iKamva)

Stage 4: Implementation

This stage demonstrates how to use the online course/project in a real-life context – this is related to substantive discussion towards knowledge construction.

In the implementation of an online course, the lecturer should play an active role. The lecturer is expected to determine the pace and the learning behaviour that is demonstrated in the online classroom. In implementing online courses for mature learners in particular, 'a critical distinction among various learners' is needed, that is, one which takes into consideration that lessons targeted at mature learners 'seem to favour group or collaborative activities with a healthy dose of experiential learning materials as instructional resources' (Tomei 2007: 31). Thus, during the e-pedagogy training sessions, the facilitator/lecturer will be engaged in activities in which visibility and contribution to an online discussion thread or a work group activity can be demonstrated. Consequently, the lecturer/facilitator is able to organise and manage the collaborative e-tools (e.g. the discussion forum and work groups) into topics, subtopics and tasks before the actual rollout of the online module/course. Collaborative e-tools are resourceful 'technological innovations leading to cloud-based collaborative learning, such as blogs, wikis, social media', and tools that 'offer communication and collaboration opportunities in the online environment' (Serdyukov & Serdyukova 2015: 91).

Individual accountability and responsibilities in group work are also very significant in the implementation of online tasks and projects. An ideal e-pedagogy training situation would entail facilitators having time to assign roles in the group activities to the lecturers (e.g. summariser, moderator, and initiator), as well as making use of peer evaluation, where one group evaluates another group's work according to the agreed-upon criteria. Learners and lecturers should feel accountable to the group or particular assignment. Hence, online educators should caution against organising groups subjugated by 'internal styles'. If this cannot be avoided, it would be best to mediate techniques which promote team participation and individual accountability, such as rubrics and peer-reviewed tasks (Liu et al. 2008: 842).

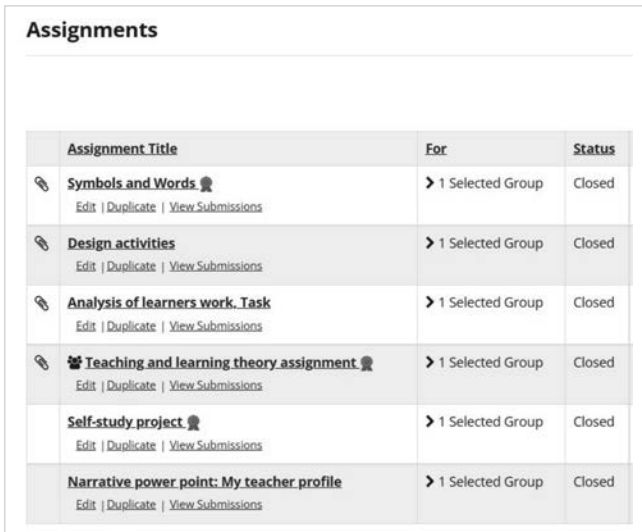
The development of clear group outcomes that promote collaboration and individual responsibility is another important factor in the implementation of online activities/projects. The lecturer/facilitator should provide the group leaders and student groups with clear expectations and deadlines. To enable the enhancement of team responsibility, Liu et al. (2008) suggest the need for a holistic view of the design of group work in terms of: (a) team arrangements; (b) processes; (c) strategies for increasing the degree of trust; and (iv) training students in the collaborative techniques for finding solutions to conflict. Fischer, Kollar, Mandl et al. (2007) state that effective collaborative learning is a commendable target but is difficult to accomplish, and that, if the learners are not adequately guided, the essence of it would never be achieved.

Feedback is yet another factor responsible for the successful implementation of online activities. When addressing various aspects and skills, the lecturer/facilitator makes the students aware that they will receive feedback in the online environment, for instance about content, presentation, writing, communication, teamwork and research. The ultimate objective is to develop the abilities of the learners to embark on self-assessment and evaluation of their own contributions as a result of constructive contributions from the lecturer and the programme. In an online environment, it is important that the facilitator and the learners give feedback on a regular basis.

This calls for thorough planning and progress tracking in a personalised learning environment, which will enable students to become more responsive, develop a positive attitude, and develop cognitive skills. Moreover, it should develop the students' individual strengths and strive to improve those areas in which they are still in need of further development (Dettori 2008).

Peer-to-peer feedback is encouraged, as the learners are urged to give constructive criticism about one another's contributions. Learners are assisted in giving and receiving constructive criticism. Good etiquette and rules for participation are also necessary if these activities are to be successful. Furthermore, it should be made clear to students that they will experience challenges – including, perhaps, their own possible slips into repressive ways. However, the classroom should be seen as a safe space for engaging in these activities in order to prepare them for the different online environments in which they are expected to work (Francis & Hemson, 2007).

Figure 15: Learners engage in substantive discussion and reflection through assessments



Source: TMM 301 module within iKamva

Stage 5: Evaluation – determining both the adequacy of the instruction and development as knowledge builders

This stage deals with evaluation, that is, determining both the adequacy of the instruction and development as knowledge builders.

Changing identity shifts as lecturers think about application within their own disciplines

The evaluation phase vis-à-vis the learner:

> *ensures that instructional objectives have been met and a process of continuous improvement is in place to continually update and revise the lesson based on learner feedback that may take on a variety of forms such as online tests that provide immediate reinforcement to the learner (Tomei 2007: 31).*

At this stage, a practical session should be set up with lecturers during which they are expected to bring along their discipline-specific projects (online environments) and align them to the appropriate choice of e-tools for mature learners' purposes. The lecturers were exposed at the start to the use of various e-tools, and now they are expected to think about their application within their own environments. It should be noted that this evaluation stage could present itself as a liminal stage, whereby some lecturers may hold on to their old perceptions that a session regarding e-pedagogy and its relation to design and the effective use of e-tools, is more aligned to specific disciplines. This liminal stage is critical, as lecturers have to grapple with mindset changes and may become anxious because they are expected to start thinking about application. This liminal state, according to Cousin (2006: 4-5) should be viewed as a strong attempt to remind us that 'learning is both affective and cognitive and that it involves identity shifts which can entail troublesome, unsafe journeys'.

During this liminal stage, it is important that the lecturers are further guided in the appropriate selection of e-tools and their pedagogical value. Thus, during this practical evaluation session, as lecturers are in the process of mastering the threshold concept of e-pedagogy in relation to their discipline, there is a need to revisit authentic examples (conceptual knowledge) related to teaching online. This session, as Cousin (2006) states, can bring the lecturers to a level of focusing on their teaching. It should be noted when teaching mature learners that 'adult learners have a desire for action (praxis) related to their real-life context that will provide them with new experiences to reflect upon', and that 'their teaching and learning experiences must be enriched with several practical ideas for implementation in their everyday working place' (Phillips, Karatza & Tzikopoulos 2010: 190).

Reflect on an ideal experience

It is at this stage that the lecturer/facilitator reflects on the ideal online experience, and that learners gain confidence and can develop themselves as 'knowledge builders'. Lieb (1991, in Cercone 2008: 145) affirms that 'self-reflection is important for the adult learner' and that 'the instructor should provide a space for the learner in an online course that permits carefully guided reflection about his or her performance' academically. The lecturers and professional support team also reflect on an ideal scaffolding experience, whereby training support and assistance were delivered at critical times – and later removed – until the learners could cope on their own. Mature learners can indeed be assigned the responsibility of leading and moderating a discussion forum. In this regard, how groups have collaboratively researched a topic and presented it to the class, can be discussed. Ideally, as Salmon (2004: 48) concurs, it is at this stage where lecturers and students 'are essentially using a constructivist approach to learning', and where 'challenge and argument will foster deeper thinking and reflection'.

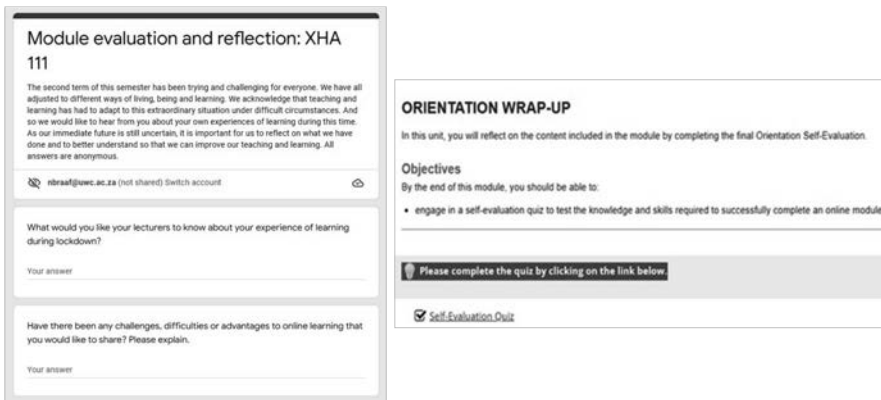
It is also during this stage that the benefits of the online assessment e-tools (such as assignments, essays, worksheets and multiple-choice questions) and other e-tools that could be used – both as communication and assessment tools (e.g. wikis, blogs and discussion forums) – are highlighted for the lecturers. Lecturers must 'plan, identify and implement assessment strategies and methods appropriate to the new blended learning environment', which 'includes an understanding of the affordance of a variety of technology tools so that the quality and effectiveness of learning will be ensured to move learners to be independent and self-regulated' (Chan 2021: 3). Prior to lockdown, the traditional method of assessments was in-class assessments with face-to-face exchanges between students and lecturers/invigilators. However, with the onset of COVID-19, the conventional way of conducting assessments was less feasible, which compelled HEIs to investigate different methods to assess students via online, asynchronous assessment approaches. The reason for this shift was due to the 'new normal', and it 'is difficult to conduct synchronous examinations face to face because they are complex and require significant infrastructural development' (Gupta, Jankie, Pancholi et al. 2020: 3). Researchers note that 'assessment in a synchronous environment is conducted in real time and can be face to face or online, whereas asynchronous environment interaction does not take place in real time [and] can be via virtual or any other mode' (Gupta et al. 2020: 3). Lim and Chai (2008) believe that tests and examinations have a great impact on students' career paths and that the fact that educators are apprehensive about learners' marks is justifiable. In addition, the sociocultural conditions that educators work in are more significant than the pedagogical issues; thus 'it may be easier to shift the assessment system to create a ripple effect on teachers' pedagogical beliefs and classroom practices than to challenge teachers to change their beliefs and practices' (Lim & Chai 2008: 825). There is a need for regular assessment and more effective feedback. Online assessment e-tools used for testing, examinations and evaluations 'are among the basic elements of education programs, [and]

have undergone remarkable changes through emergency remote teaching', induced by COVID-19. '[D]uring this process, many tools[,] including synchronous and asynchronous tests, assignments and portfolio tasks[,] were utilized to conduct enriched measurement and evaluation practices' (Yakar 2021: 374).

Integrate course evaluation

We proceed to showcase an example of the integration of a course-evaluation questionnaire. The focus is not on the e-tool but rather on e-pedagogy. In this case, it is noted that lecturers should provide a space for students to give feedback regarding various facets of a course (online), specifically regarding challenging concepts, and, in turn, should provide students with constructive feedback. The learners should be alerted about the course-evaluation results, as results can further assist the lecturers by discovering, together with the students, the threshold concepts that they need to master. By assisting lecturers with this discovery (as they have to deal with an increasing number of learners), they begin to create environments which '[allow] for richer and more complex insights into aspects of the subjects [learners] are studying' (Cousin 2006: 5).

Figure 16: An example of an integrated, online course-evaluation questionnaire



Source: (XHA 111 module within iKamva)

Concluding remarks

We have provided a framework that enables lecturers to grapple with the concept of e-pedagogy and the effective use of e-tools for teaching, learning and assessment. We have raised some essential themes for lecturers to consider regarding effective design of online environments for the delivery of theory, practice and assessment, and the affordances of online teaching/learning in the context of the pandemic. To this end, the present chapter recommends that

lecturers need to be cognisant of the fact that 'it is inevitable that advanced technology will increasingly play a role in higher education', but underscores 'that it should be used to advance rather than encumber social and cognitive justice' (Du Preez & Le Grange 2020: 101). Furthermore, by focusing on the design of the online environment, we emphasise how important it is for lecturers to understand non-traditional learning theories and to be 'able to change and accept change in a dynamic learning environment' (Cercone 2008: 151).

In the light of this, we confirm that the impact of the 'crisis' forced lecturers to consider redesigning online courses and to redefine them for mature learners' teaching and learning experiences. We also reveal that there needs to be a continued focus on readiness for blended-learning practices, but, even more so, a readiness for emergency remote teaching and learning practices. Thus, the crisis generated new considerations concerning preparedness, as we saw an increasing demand for support, through consultations and training, by lecturers for instructional design and professional team assistance. In addition, the crisis generated the need for a professional support structure that forms part of a seamless continuum in digital literacy and online course design for lecturers.

This chapter gives new insights into two praxes. Firstly, it identified that, regardless of lecturers' levels of skills, there was a need for further improving ICT skills, such as the editing of PDF files and the creation of different multimedia-file formats. Secondly, lecturers needed some level of e-pedagogical knowledge, and therefore the crisis demanded an increase in communication skills, as well as content creation, various learning styles, e-tools, and a focus on e-pedagogy around assessment. The focus on effective design concurs with research indicating that online environments can provide the opportunity for mature learners to become 'co-creators of the curriculum where they contribute to the class in a manner than transforms the instructor's role to one of a facilitator' (Moskal, Dziuban & Hartman 2009: 63). There is a need for further research on the increasing demand for understanding: how the crisis propelled the focus on e-pedagogy around assessment to the forefront; professional support readiness for emergency, remote online content creation; and how to create innovative ICT educational environments in response to the crisis. This focus compels the need for readiness of lecturers to identify challenges around design principles when implementing e-pedagogy to support non-traditional learning.

'If adult education is to fulfil both educational and societal goals, adult learners' needs should be the first to be addressed' (Diep et al. 2019: 246).

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The images are retrieved from: (a) Dr Stoltenkamp's E-pedagogy Roadshow Online Modules; (b) CIECT's Student Orientation Module; and (c) examples from various modules

The CIECT team collaborates with lecturers in order to design and develop online environments and instructional strategies

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