Exploring How Lecturers Have Designed Their Online Courses to Promote Active Engagement in Teaching and Learning Contexts

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The COVID-19 pandemic has made it mandatory for all university courses to be taught using online technologies. One of the major challenges experienced by Lecturers has been how to make students responsive and engaged in online environments as opposed to face-to-face classrooms. This study seeks to investigate how extended curriculum programme academics design their online extended curriculum courses such that they can promote active engagement in their online classrooms. The research design adopted for this study falls within the interpretative paradigm, embracing a qualitative research approach within a case study methodology. For data collection purposes, three courses and nine Lecturers, three from each faculty were selected for each of these faculties because of their engagement in online learning and hybrid learning initiatives, making nine courses. Two theoretical frameworks underpinned this study: the SAMR Model and the Technology integration matrix (TIM). The researchers argue that it is imperative that academic development supports and enhances the development and agency of academics in designing and creating active and engaging hybrid or online environments.

Keywords: hybrid/blended learning, course design, active engagement, academic development, higher education

INTRODUCTION

The last two years of the COVID-19 pandemic made it mandatory for all university courses to be taught online or through hybrid teaching and learning environments. The University of Fort Hare embarked on an online and hybrid teaching and learning project over the past 2 years. As a Traditional University that used more face-to-face and some level of blended learning, the move to a completely online and partly hybrid mode in some modules came with advantages and disadvantages. Some disadvantages included inadequate resources, lack of technological skills, connectivity issues, and many other factors. The pandemic did not fully allow Lecturers to prepare course designs for online or hybrid environments, which made it very challenging for most Lecturers to create engaging activities for students in online or hybrid teaching and

learning environments. This challenge of engaging students in online environments came through Lecturers complaining about the non-responsiveness of students in online environments. According to Rajabalee, Santally, & Rennie (2020), ensuring engagement is the most crucial component of quality online education. This perspective is also supported by Johnson et al. (2018) and Martin & Bolliger (2018). This resulted in the researchers wanting to understand how Lecturers design their online courses and classes to allow student engagement. The inability to design active, engaging environments could have been attributed to some Lecturers being new to these environments. Hence, this study investigates how Extended Curriculum programme Lecturers can design their online-extended curriculum courses to promote active engagement in their online classrooms.

This awareness of the problem highlighted above emanated from the researchers' work environment as academic developers, working to support Lecturers in integrating technology into teaching and learning. During the pandemic, one challenge has been a desire from the academic environment to make students responsive and engaged or active in online environments. This challenge led to the study's main aim: understanding how Lecturers in extended curriculum programmes promote active engagement within their online course design. The following research questions help unpack the above aim:

- How do Lecturers design their online/hybrid courses to promote active engagements?
- Why do Lecturers design their courses in the manner that they do to promote active engagement?

The rationale behind understanding this phenomenon is to inform the kind of support and capacitation needed to improve the course design to include active, engaging environments.

BACKGROUND CONTEXT

The study occurs in a higher education environment at the Traditional University of Fort Hare. Traditional Universities are distinguished from the other two categories of universities in the South African system through their offerings of more theoretically aligned qualifications. The University under study is based in a semi-urban environment in the Eastern Cape province of South Africa. Most of the Eastern Cape landscape is rural; hence, most of the University student body comes from these humble beginnings.

The study will focus on Extended Curriculum programmes, encompassing students from rural and semi-urban environments. The primary purpose of Extended Curriculum programmes is to improve the academic performance of students who are at risk due to their educational backgrounds. Foundation Provisioning was/is one of the strategies introduced to improve throughput and success rates in Higher Education Institutions (HEI). This means that the students who enroll in these programmes will do their studies over four years instead of three, allowing them more time to do their foundational courses in the first two years. A Fully Foundational course has a year which is fully preparatory for regular first-year level courses in the subject concerned.

FIGURE 1
EXTENDED CURRICULUM REPRESENTATION

The Extended Curriculum programme takes place over two years, which are fully preparatory for regular first-year level courses in the programme concerned. In these two years, the courses focus on basic concepts, content, and learning approaches that foster advanced learning. Extended Curriculum courses combine regular course material with substantial foundational material and are substantially longer than a pure regular course (….cite). Foundation Provisioning/Extended Curriculum programmes were/are one of the strategies introduced to improve access, throughput, and success rates in Higher Education Institutions

(HEI). The university under study offers two foundation provisioning models: the Extended Curriculum model and the Augmented/Augmenting course model.

Extended Curriculum Courses

- Blend regular course material alongside substantial foundational material and, as a result, are considerably longer in duration than pure regular courses.

Augmented /Augmenting Courses

- Encompasses all the material covered in a regular course and has a similar duration; however, it is taught separately.
- Incorporates substantial foundational material through additional formally timetabled contact times (usually double the regular course time).
- Offers modules, courses or any other additional curricular elements intended to equip underprepared learners with an academic foundation that will allow them to complete and acquire a higher education qualification successfully.
- Focuses specifically on basic concepts and content as well as approaches that encourage advanced learning.

LITERATURE REVIEW

According to the literature, ensuring engagement is the most crucial component of quality online education (Rajabalee, Santally, & Rennie, 2020; Johnson et al., 2018; Martin & Bolliger, 2018). In the available empirical studies, scholars have noted that, regardless of online learning making education accessible to a larger number of persons whilst also offering flexibility and convenience (Kossen & Ooi, 2021), instructors of online and hybrid courses confront numerous challenges when designing engaging, effective, and meaningful learning experiences for learners (Shea, Joaquin, & Gorzycki, 2015; De Wet, 2014). Hence there is a growing body of knowledge concerning effective online and hybrid course design (Grushka-Cockayne, 2010; McGee & Reis, 2012; Marquis & Ghosh, 2017).

Renes & Strange (2011) examine technology in higher education, particularly its function in online and hybrid formats; the authors emphasised that when institutions implement hybrid-online learning programmes, instructors should make certain not to simply replicate what is done in traditional classrooms to ensure effectiveness and promote engagement. This is in line with Theodosiou & Corbin (2020). De Wet (2014) supported the previous findings, arguing that it is crucial that two separate components that cooperate in course delivery be taken into consideration: technical and instructional design. Content knowledge and pedagogical knowledge are essential for efficient instructional design. Effective technical-and-instructional collaboration supports course design (Renes & Strange, 2011; De Wet, 2014). Data obtained from student surveys, course activities, and instructor journals reveal that effective online-hybrid course design rests on establishing great levels of presence and significant planning (Shea et al., 2015; Marquis & Ghosh, 2017; Vaugn, 2007). A well-designed course will assist in cultivating a connection with the learners and thus positively influence learning and retention of the relevant course material (Renes & Strange, 2011).

Tshuma (2012), on using blended learning via Moodle in a Computer Skills training course at Rhodes University, emphasised the significance of having technology, pedagogy, and context in alignment when designing every ICT course. Tainsh (2016) also confirms that online courses designed using sound pedagogical principles, as provided by (Anderson & McCormick, 2005), can present a beneficial learning experience, promoting active engagement. The principles recommend that online course design be engaging and innovative, consistent, and coherent (Anderson & McCormick, 2005; Keramidas et al., 2007), correspond with the curriculum, be easy to access and utilise, be inclusive to learners, and incorporate formative and summative assessments (Tainsh, 2016). Leslie (2021), in redesigning an online undergraduate course, used adult learning principles alongside the trifecta of engagement framework developed by Moore (1989). The trifecta of learner engagement posits that students need to regularly

interact with their course curriculum content, peers, and instructor to fully engage in a course (Hew, 2016; Simon et al., 2021; Theodosiou & Corbin, 2020; Garrels & Zemliansky, 2022). As a result, the redesigned course proved more effective and engaging (Leslie, 2021).

Moreover, using Pittaway's Engagement Framework, findings from a deductive content analysis carried out of transcribed data revealed that, when it comes to the learners' ability to study and engage with the relevant technology, their computer literacy skills influenced their self-efficacy (Johnson et al., 2018). To encourage engagement, it is imperative that instructors also master the relevant software and hardware needed to teach in their online classrooms (Dykman & Davis, 2008; Renes & Strange, 2011). Furthermore, the Lecturers' consistent and swift social engagement, particularly their support for the learners (instructor accessibility), was also highlighted as part of the main findings; this result is consistent with (Hew, 2016; Theodosiou & Corbin, 2020; Nel & Wilkinson, 2008). Varied interactivity and prompt feedback are crucial for active engagement in blended courses (McGee & Reis, 2012; Garrels & Zemliansky, 2022; Hew, 2016). Additional factors, including power failures and access to the internet, were noted to hinder the students' engagement with online activities (Johnson et al., 2018). An adapted engagement framework was thus proposed to be considered in developing online programmes for students (Johnson et al., 2018).

Nortvig et al. (2018) reviewed relevant literature to ascertain which factors influence learner engagement, satisfaction, and learning outcomes in higher education hybrid and e-learning environments. The review includes 44 peer-reviewed articles and papers published between 2014 and 2017. Findings from the academic papers reviewed reveal that the factors that dominate are educator presence and accessibility in online settings, interactions between learners, instructors, and content, and designed connections between offline and online activities as well as between practice-related and campus-related activities (Nortvig et al., 2018). More precisely, across the studies, it is suggested that e-learning and blended courses be designed to foster coherence between offline and online activities, practice, and campus-related activities and between the learners, teachers, and content (Nortvig et al., 2018).

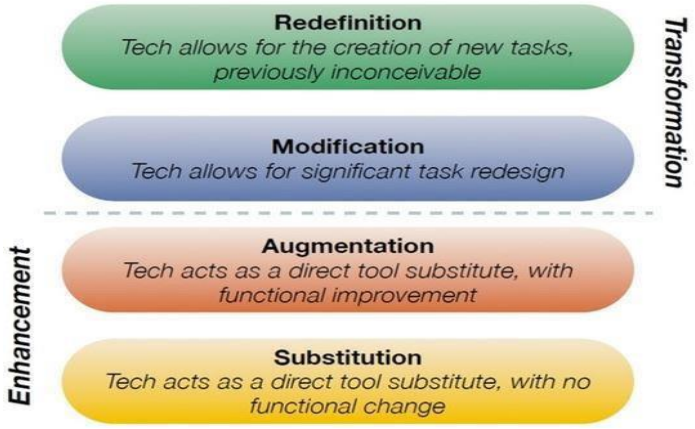
THEORETICAL FRAMEWORK

Two theoretical frameworks were used to analyse the hybrid/blended learning environments: the SAMR model and the Technology Integration Matrix (TIM). The SAMR model was used to understand the level of engagement, and the TIM was used to interpret the results from the Lecturers. This two-fold approach was used to explore potential tensions and inform the kind of academic learning design initiatives, needed to support academic teaching and learning.

The SAMR model below was introduced by Ruben Puentedura. SAMR stands for Substitution, Augmentation, Modification, and Redefinition. The first two levels (Substitution and Augmentation) apply when technology is used as an enhancement tool, and the last two (Modification and Redefinition) involve technology as a transformational tool. The SAMR Model is used to analyse hybrid/blended learning environments by examining the course design level in line with these SAMR Model dimensions.

SAMR Model

FIGURE 2
DR RUBEN PUENTEDURA (HTTP://WWW.HIPPASUS.COM): SAMR



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The four levels or dimensions are further explained here.

- **Substitution - Technology acts as a direct tool substitute with no functional change.** This is the lowest level of technology integration. Another word for substitution can be replacement. This is the very first stage of enhancing a lesson using technology. An example might be the Lecturer curating the curriculum for students using their LMS (Learning Management System), known as Blackboard, at our institution. The Lecturer could have worked hard at finding articles, reading lists, research links, and even YouTube videos on various topics. In essence, the web is being used as a substitution for what may have been a previous resource list given to students. According to Dr. Puentedura, the Lecturer is simply using the technology to replace a resource list that could be used in the library. Does substituting technology serve the learning target, or might it get in the way? Did the technology substitution assist in student engagement? The Lecturer must reflect on what might have been gained from the substitution.
- **Augmentation – Technology acts as a direct substitution tool for functional improvement.** At the augmentation level, learning moves one step up the ladder from Substitution. It is important to remember that this step is still at the enhancement level. At this stage, the technology has improved the learning experience by adding functionality that would not have been possible without it. Perhaps students are conducting research, and the Lecturer directs students to current news events, blogs, or interpretations of the research by various authors. Students have the opportunity to compare and contrast viewpoints, view up-to-date information that may not be in the library, or even have the opportunity to participate in the comment section of a blog. While the line between Substitution and Augmentation could be blurred, there is deeper learning because of the use of technology. There should be a step up in both student engagement and rigour. A Lecturer must reflect and recognise that technology has added to the learning experience. They must determine whether overall learning has been improved because of the integration of technology.
- **Modification – Technology allows for significant task redesign.** The use of technology at this level creates an opportunity to change the student's learning experience. Simultaneously, Modification allows the student to proceed up Bloom's Taxonomy. This next step demands more reflection and work from the facilitating Lecturer. Students may use advanced research

skills to find articles that provide contrasting viewpoints on different topics. Perhaps students compile their research collectively using a group in a bookmarking tool like Diigo. Students might use a Google Form to collect and analyse data. In this data collection method, students may be able to survey larger and more diverse populations while having a layer of tools to represent the data to an audience. A modification often gives students more of a voice, and the outcome may not be as prescribed. At the Modification level, a Lecturer must reflect on whether the technology allowed for some redesign that enhanced the project while still accomplishing the stated learning objectives. Multiple modifications may allow a lesson to advance to the next level through this stage.

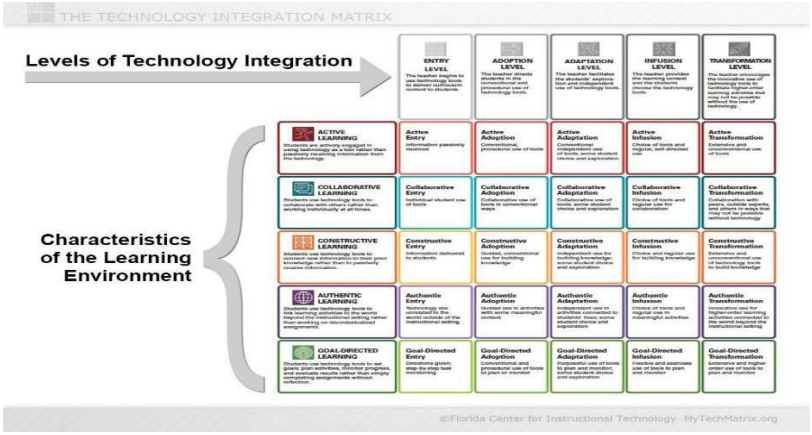
- **Redefinition - Technology allows for creating new tasks that were previously inconceivable.** This stage allows creativity for both the Lecturer and the student. It focuses on the employment of new tasks. While the Lecturer may initiate some of these, student voice and choice must also be employed. Perhaps students are curating and creating their own content to be used by other students. For example, students may create a story that could change into a picture book, a slide show, or a movie. The redesign was made possible because the blending of technology into the learning process eliminated the constraints and barriers of the physical classroom. Simultaneously, the technology might appear transparent to the learning process. Students become producers, creators, and innovators. They are beginning to own their own learning process. At this level, the Lecturer must reflect on whether the redesign still accomplished original standards while allowing engaged student-centred learning.

To foster online active learning engagement for students, the use of technology can amplify a learning experience. As Lecturers invite technology into the classroom, it has become evident that learners themselves go through formative steps as they become proficient in the blended approach. The work of Dr. Puentedura in developing the Substitution Augmentation Modification Redefinition (SAMR) Model provides a wonderful lens to look at this progression. Simultaneously, it must be remembered that all stages allow for interaction with technology and increased student engagement. Sometimes, a simple substitution is all that is needed and is most appropriate given the learning objective. As academics become familiar with the SAMR Model, they can evaluate their technology integration practice while striving for powerful learning experiences. While learning activities can be blurred between the steps of SAMR, it must be remembered that educators are working to progress. In many cases, the steps between Enhancement and Transformation can take time as educators practice, reflect, and learn. In the space below, you will find those important SAMR steps. Using this model, the study seeks to discover at which level the Lecturers are designing their courses and whether the course design promotes active engagement. This identification will further allow the researchers to determine if this course design is how and where it is because of the Lecturer's skills level in technological integration. To further examine this aspect, the study used the Technology Integration matrix to analyse and understand the reasons (enablers or constraints) for each Lecturer's level of Technology Integration in course design.

Technology Integration Matrix (TIM)

Developed by the Florida Center for Instructional Technology (FCIT) in 2005, the Technology Integration Matrix (TIM) is now in its third edition (2019). The TIM incorporates five interdependent characteristics of meaningful learning environments. Many Lecturers are already familiar with these pedagogical concepts embedded with the TIM—active, collaborative, constructive, authentic, and goal-directed learning.

FIGURE 3
ADOPTED FROM ROY WINKELMAN, 2020 TEACHING AND LEARNING WITH TECHNOLOGY, TECHNOLOGY INTEGRATION MODELS



These characteristics are associated with five levels of technology integration: entry, adoption, adaptation, infusion, and transformation. The figure below gives a detailed understanding of the five levels:

The Five (5) Levels of Technology Integration in Teaching

1. **Entry:** The teacher begins to use technological tools to deliver curriculum content to students.
2. **Adoption:** The teacher directs students in the conventional and procedural use of technological tools.
3. **Adaptation:** The teacher facilitates students in exploring and independently using technological tools.
4. **Infusion:** The teacher provides the learning context, and the students choose the technological tools they would use to achieve the desired learning outcome.
5. **Transformation:** The teacher encourages the innovative use of technological tools to facilitate higher-order learning activities that may not have been otherwise possible.

The analysis used the TIM Matrix to understand each Lecturer's technology integration skills and what enabled and/or constrained the resulting course design to a particular level of the SAMR model.

The rationale behind using these two theoretical frameworks, the SAMR Model and the Technology Integration Matrix (TIM), to analyse the hybrid/blended learning environments is two-fold. First, the SAMR Model was used to answer how Lecturers designed their courses, specifically to which level of the SAMR Model, and why the design is at said level. The TIM was then used to interpret the Lecturers' technology integration skills. This two-fold analysis allowed the authors to explore potential tensions and inform the kind of academic learning design initiatives needed for developmental support in teaching and learning.

RESEARCH DESIGN AND METHODOLOGY

This study seeks to investigate how extended curriculum programme academics design their online-extended curriculum courses such that they can promote active engagement in their online classrooms. The research design adopted for this study falls within the interpretative paradigm, embracing a qualitative research approach within a case study methodology that adopts sub-cases.

The **study population comprises** three faculties' extended curriculum programmes Lecturers (Faculties of Management and Commerce, Social Science and Humanities, and Science & Agriculture) in a Traditional University in South Africa. Each Faculty denoted a case to be mindful of disciplinary differences. The main reason for selecting three faculties within the extended curriculum is to understand the difference in disciplinary engagements within hybrid models and to enhance extended curriculum

student engagement. We selected three courses in each of these three faculties for data selection purposes because of their engagement in online learning and hybrid learning initiatives, making nine courses.

Data Collection involved secondary data sources in the form of **outlines and learning guides** representing the curriculum in these ECP courses. Interpretations of data in the form of texts are unpacked using thematic analysis to identify key concepts/genres, contexts, and artefacts (pictures and materials) and capture relevant tensions aligned with the research question. Focus group interviews of Lecturers followed thematic analysis in the three selected cases.

Data Analysis involved exploring Lecturers' online courses and how they are designed to promote active engagement. The findings are presented as screenshots of course design elements that speak to active online engagements. Activities that promote active engagement were subsequently identified. Analysis of the level of engagement was done using the **SAMR model** to determine why this design for the Lecturers **Technology Integration Matrix (TIM)** was used. This meant the analysis takes a two-fold approach of looking at the Lecturer's technology integration skills using the TIM'S CHART and, via the SAMR Model, looking at the course design level in line with the model's dimensions (Substitution, Augmentation, Modification, and Augmentation).

Considerations were taken into account to comply with all ethical and legal issues. Data anonymity was ensured during the research as no participants' names were mentioned. The institution under study awarded the study ethical clearance with reference number CH001-22.

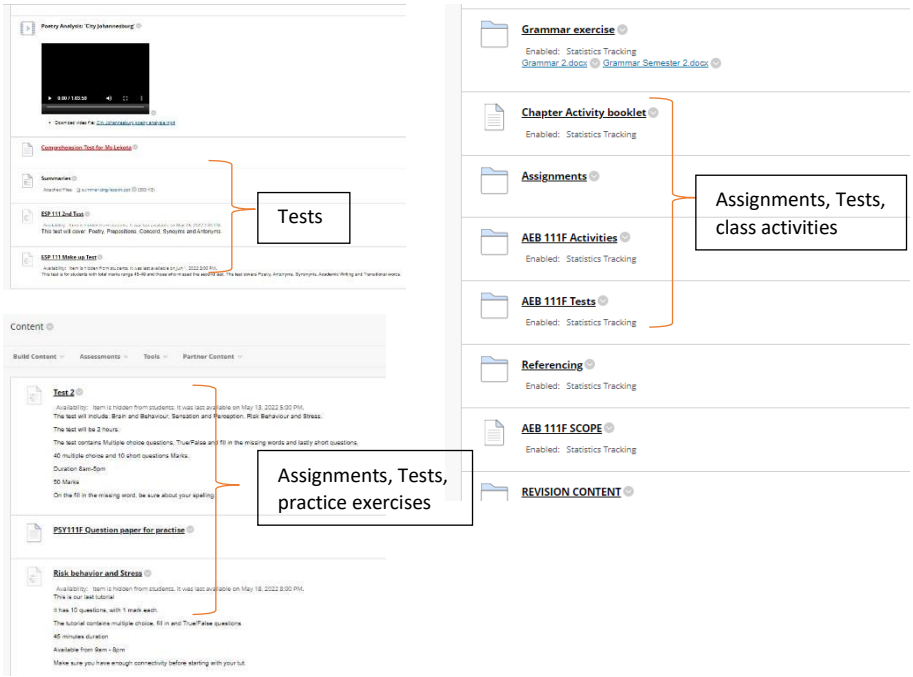
FINDINGS

The study's findings are outlined in line with the nine courses identified. These courses are grouped according to the faculties; the first group is Faculty A (Management and Commerce), and the second is Faculty B (Social Science and Humanities). The third group is Faculty C (Science and Agriculture). Below are the findings, analysis, and discussion of the Social Science and Humanities Faculty. The findings are screenshots of course design elements from the online courses under study. The analysis then examines each Lecturer's technology integration skills using the Matrix for the LEVELS OF TECHNOLOGY INTEGRATION. The SAMR Model is then used to examine the course design level in line with the model's dimensions (Substitution, Augmentation, Modification, and Augmentation). In response to the first research question, "How do Lecturers design their online/hybrid courses to promote active engagements?" the findings are presented below:

Findings for Case 1: Faculty of Social Science and Humanities

Courses 1, 2, & 3 - these are three courses offered by the Faculty of Social Science and Humanities to its first-year students and other Faculties' students. In studying the three courses, the findings identified course design elements that included active engagement elements, such as interactions between the student and Lecturer, student and student, and student and tutor, as shown in the screenshots below.

FIGURE 4
COURSES 1, 2, & 3 - OFFERED BY THE FACULTY OF SOCIAL SCIENCE AND HUMANITIES



Course 1 is an English course coded as ESP showcasing tests and tutorial groups, as visible in the course outline. Course 2 is an English business course coded as AEB showcasing assignments, tests and other classroom activities. All the activities in course 2 were visible in the learning guide. Course 3, a psychology course coded as PSY had activities that included assignments, tests, and practice questions/exercises, which were included in the learning guide.

In the above three courses, there is evidence of activities that promote active engagement within the course design tools used by Lecturers, which included assessment activities such as assignments and tests, tutorials, and reading skills activities. These were found to be designed in a more passive and individualist way. The interaction in the course design activities is more asynchronous between the student and Lecturer, who gives feedback.

This is what the Lecturers for the three courses had to say in focus group interviews in response to the second research question: *"Why do Lecturers design their courses in the manner that they do for promoting active engagements?"*.

Below are some excerpts from the focus group interview when participants were asked: "Why do you design your courses and classroom activities in the manner that you do?"

> *"This allows me to ask them questions to assess for their previous knowledge and understanding"…."I also bring in topics that they can relate with so they can participate."*
>
> *"Creating interactive content, through the use the whiteboard and WhatsApp."*
>
> *"I give them a topic or a question and give them two minutes to think about them and then allow them to answer. I then let others criticise and then also add my point of view; this allows them to engage in the class."*

"I teach using the LMS, which also allows me to give them illustrations. I have not tried other tools."

Analysis and Discussion of Case 1

The analysis aligns with the two theories for the Lecturers and their course environments. This course design of active engagement is more at the substitution level of the SAMR Model. Substitution is the mere replacement of what one would do in a traditional face-to-face classroom. This puts the Lecturer's level of designing engaging activities at an *Entry levy* in the Technology Integration Matrix. There is active engagement through the development of and response to assessment activities using a technological tool at the level of Substitution in the course. Again, this strategy represents replacing what one would do in a traditional face-to-face classroom.

The characteristics of the learning environment for engaging the learner include information that is passively received, individually used, and constructive and authentic to the outside world, and directions that are given systematically. Renes & Strange (2011), De Wet (2014), and Theodosiou & Corbin (2020) showed that replication of what is done in traditional classrooms does not ensure effectiveness and does not promote engagement.

Most of the responses from Lecturers focused on creating engaging activities during the class, and few highlighted why they designed their courses the way they did. A few spoke about creating actively engaging content or materials using the LMS and WhatsApp. From their responses, it is clear that the Lecturers understand what it means to promote active engagement, especially during their classes. This is very different when one looks at their online course design. There is very little active engagement at the level of transformation in the SAMR Model, as most of the activities made available online could be similarly presented in a face-to-face environment. Johnson et al. (2018), Dykman & Davis (2008), and Renes & Strange (2011) found that it is imperative that instructors also master the relevant software and hardware needed to teach in their online classrooms if they want to encourage engagement. This is an important finding as it means Lecturers do know what active engagement means but lack knowledge of how to design active engagement activities in online environments such that they are at the transformation level of the SAMR Model. This means that the Lecturers themselves are at the novice entry and adoption levels of Technology Integration.

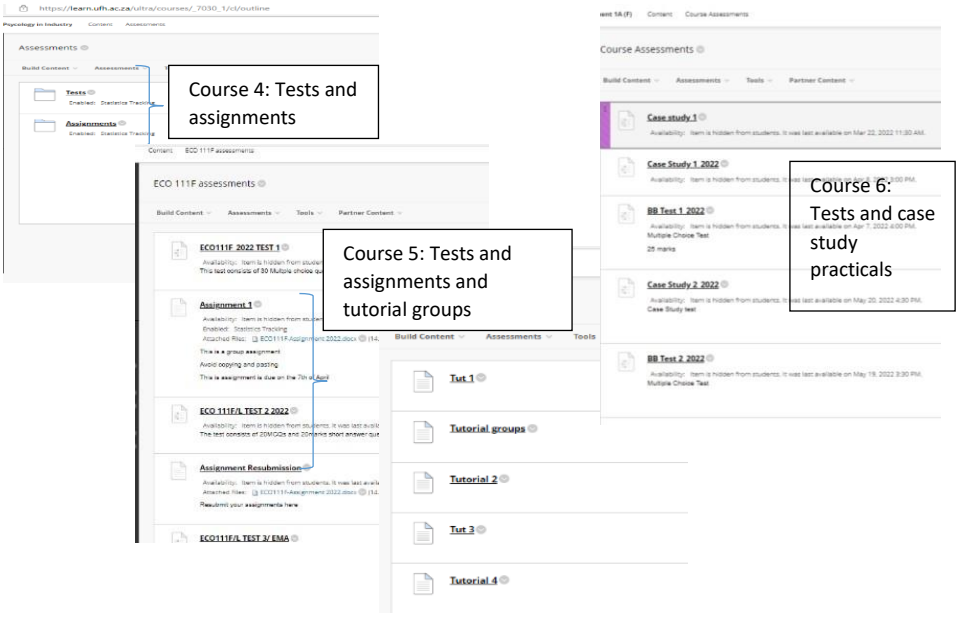
Findings for Case 2: Faculty of Management and Commerce

The next three course designs we examined come from the Faculty of Management and Commerce. **Courses 4, 5, & 6** are economics, industrial psychology and business management courses. These first-year courses contained educational content, assignments, tests, tutorial groups, and case study practicals. Below is a further outline of the results. The identified course design elements in the three courses that promote active engagement are case study practicals and tutorial groups using the discussion tool. There are also assessments in the form of assignments and tests.

The screenshots below represent the practical sessions and tutorial groups, which allowed for student-to-student interaction and tutor-to-student interaction. There are also assessments through assignments and tests that allow for resubmission after feedback from the Lecturer.

The courses include many opportunities for collaboration and engagement with course content. Identified in course design are activities that include many opportunities to promote active engagement, including assessments in the form of assignments and case study practicals with interactive videos & discussion forums. The screenshots below illustrate active engagement activities in the course design in the form of assignments, tutorial groups, interactive videos, and discussion forums. In addition, there are identified interactions between the student and Lecturer, student and student, and student and tutor.

FIGURE 5
COURSES 4, 5, & 6 OFFERED BY THE FACULTY OF MANAGEMENT AND COMMERCE



This is what the Lecturers for the three courses had to say in focus group interviews in response to the second research question: *"Why do Lecturers design their courses in the manner that they do for promoting active engagements?"*.

> *"When I start a session I ask the students their understanding of the topic, then give them a chance to write comments and questions on the chat,"*
>
> *"In my classes it is important for students to read before each session, this gives them a chance ask questions in class."*
>
> *"Using discussion forums on Blackboard and chat box during sessions allows my students to engage."*

Again, these responses depict how Lecturers have a better understanding of active engagement in their classes than their online course designs indicate, as only two Lecturers responded in accordance with the question raised.

Analysis and Discussion of Case 2

In these courses, the Lecturers' course design falls in between Augmentation and Modification somewhat, as there is an allowance for more active engagement activities that could take place in the tutorial groups. However, there are also assessments and assignments that allow for student-to-Lecturer engagement, categorised as Augmentation.

The promotion of active engagement in course design falls in between the Augmentation and modification levels of SAMR because there is an allowance for more active engagement activities that could take place in the tutorial groups, between the tutors and students, and the student and other students. This aspect is illustrated by a Lecturer that has reached the level of Adaptation in the Technology Integration framework.

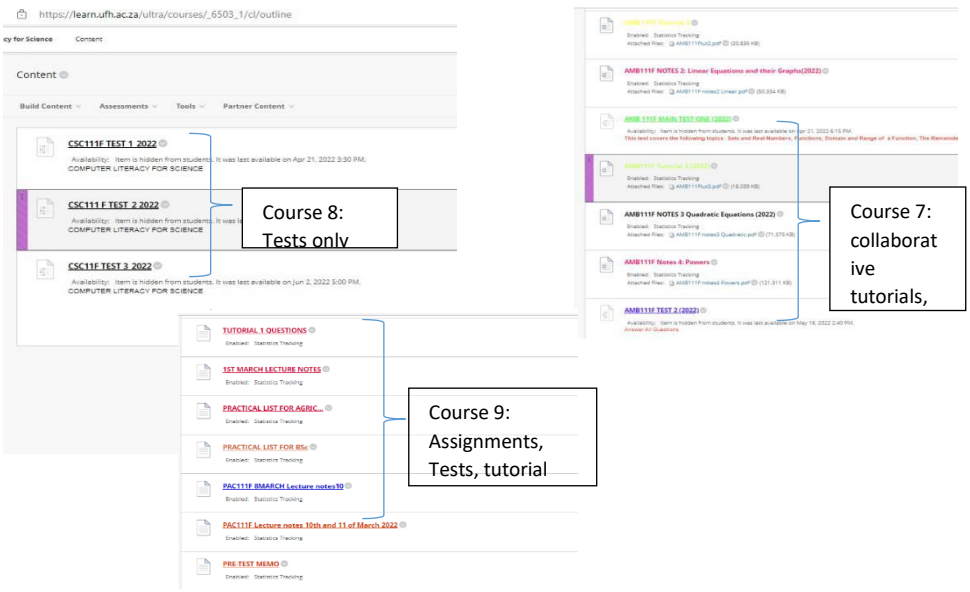
Shea et al. (2015), Marquis & Ghosh (2017), and Vaugn (2007) revealed that effective online-hybrid course design rests on establishing high levels of presence and significant planning. Renes & Strange (2011)

also indicated that a well-designed course would assist in cultivating a connection with the learners, positively influencing learning and retention of the relevant course material. Renes & Strange (2011) also indicated that a well-designed course would assist in cultivating a connection with the learners and positively influenced learning and retention of the relevant course material.

Findings for Case 3: Faculty of Science and Agriculture

Courses 7, 8, & 9: the last Faculty to examine is that of Science and Agriculture. In this Faculty, we looked at the maths, chemistry and introduction to computers courses. Course 7 is a mathematics course coded as AMB, showcasing tests and collaborative tutorial groups; these are visible in the course outline. The course is offered to students in other Faculty programmes, such as Management and Commerce. The most identifiable engagement opportunities are through collaborative tutorials. Students interact and engage with tutors and other peers in the tutorial groups by practising and working on practical exercises. There are also individual practice tests that students are given as opportunities to practice, where they get automatic responses to their answers. Course 8 is an introduction to computers course coded as CSC showcasing tests only. All activities are visible in the learning guide. Course 9 is a chemistry course coded as PAC showcasing assignments, tests, tutorial discussions, and practicals; all these activities are outlined in the learning guide. It is important that these assessment tasks and activities appear in the learning guide to ensure that the Lecturer did not come up with these planned assessment activities aligned with the outcomes of the course.

FIGURE 6
COURSES 7, 8, & 9: FROM THE FACULTY OF SCIENCE AND AGRICULTURE



This is what the Lecturers for the three courses had to say in focus group interviews when responding to the second research question, *"Why do Lecturers design their courses in the manner that they do for promoting active engagements?"*.

> *"I also give the discussion questions, when sometimes I want them to apply or share their knowledge about a topic."*

> *"I brainstorm with the students before I start the lecture to enhance their understanding of the topic or concepts. And during the lecture I ask questions intermittently to test their understanding and pick students randomly."*

"In my course outline I have included a percentage which contributes towards class participation. This merely means I give them marks for participation."

Given the above responses, the Lecturers are mindful of student participation in their classes and about creating opportunities for engaging activities and participation. However, the question remains as to how these engaging activities are integrated into the course design.

Analysis and Discussion of Case 3

The interpretation aligns with the two theories for the Lecturers and the course environment. These courses represent the levels of Augmentation and Modification in the SAMR Model, as the technology in the course design is more of an expansion of what one would necessarily do in a face-to-face environment as students are engaging in a more conventional and procedural use of tools. This places the Lecturers' level of Technology Integration in the Matrix at two levels, Adoption and Adaptation, due to their design of active engagement activities which allows for collaboration.

In summary, all the selected courses showcase a specific level in promoting active engagement in their course design. Differentiation is shown by the level at which the active engagement activities are designed or constructed. Some are a mere replacement for what one/the Lecturer would do in a face-to-face classroom. Some are located at the Modification level, which shows some redesign of tasks for the online environment. This depicts the different levels of the Lecturers' Technology Integration skills outlined and identified using the Technology Integration Matrix. Hence the table below summarises course design in relation to the SAMR Level and in alignment with the Lecturer's Technology Integration skills.

FIGURE 7
SUMMARY OF THE LEVEL OF LECTURES TECHNOLOGY INTEGRATION IN THE DIFFERENT COURSES

	SAMR				
	Enhancement			Transformation	
	Substitution	Augmentation		Modification	Re-definition
	Level of the Lecturer TECHNOLOGY INTEGRATION SKILLS				
LEVELS OF ENGAGEMENT	ENTRY	ADOPTION	ADAPTATION	INFUSION	TRANSFORMATION
Active	Course1/6/8	Course 4/7	Course 2/5	Course 3/9	
Collaborative	Course1/6/8	Course 4/7	Course 2/5	Course3/9	
Constructive	Course1/6/8	Course 4/7	Course 2/5	Course 3/9	
Authentic	Course1/6/8	Course 4/7	Course 2/5	Course 3/9	
Goal-Directed	Course1/6/8	Course 4/7	Course 2/5	Course 3/9	

CONCLUSION AND RECOMMENDATION

Understanding that the COVID-19 pandemic happened and made it mandatory to move to online and hybrid modes of teaching, the main aim of the study was to understand how extended curriculum programme academics design their online-extended curriculum courses such that they can promote active engagement in their online classrooms. The study found that academics design actively engaging activities to promote engagement in their course design. However, the depth of the course design depends on each Lecturer's Technology Integration skills. It was also notable that the course design elements reflect the different levels of the SAMR Model, which again indicated the Lecturer's skill level in integrating technology in their teaching and learning practices. All this was executed to explore potential tensions and inform the kind of academic learning design initiatives, pedagogy, and engagement needed for academic

and developmental support in teaching and learning. The researchers argue that it is imperative that academic development supports and enhances the development and agency of academics in designing and creating active and engaging hybrid or online environments. However, lecturers still need capacitation and developmental support to do this.

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