Exploring Hybrid Course Design in Promoting Active Engagement in Extended Curriculum and Mainstream Contexts

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Abstract: The current COVID 19 pandemic has propelled evidently all courses in Universities to be taught using online technologies within a hybrid mode. There has been a cry from the academic environment on how to make student responsive and engaged in a very lonely online environment as opposed to face-to-face classrooms that are seen as engaging and responsive. This study seeks to investigate in both extended curriculum programme and mainstream programmes how hybrid courses are designed such that they can promote active engagements. This is of interest in these programmes because of the approach to curriculum design in extended curriculum programmes versus mainstream programmes. The research design is that of an interpretative paradigm within case study design using a qualitative research approach. The sample for the study is made up of three faculties extended curriculum programmes and mainstream courses in a traditional University in South Africa. The main reason behind selecting three faculties with extended curriculum and mainstream is to understand the difference in how engagements are designed in the hybrid models in extended curriculum versus mainstream. This is to further enhance hybrid engagement between these two programmes. In each of these three faculties, two courses were selected because of their engagement in online learning and hybrid learning initiatives, making a total number of six courses. Activity Theory was used to analyse the hybrid/blended learning environments and focus group interviews were analysed to identify conditions, which enable and constrain engagement in these hybrid environments. The study concludes that it is imperative that academic development supports and enhances the development and agency of academics in creating active and engaging hybrid or online environments in both extended curriculum and mainstream programmes.

Keywords. hybrid/blended learning, course design, active engagement, extended curriculum, foundation

1. Introduction
The current COVID 19 pandemic has propelled and made it mandatory for evidently all courses in Universities to be taught using online technologies. This has made it mandatory for many Universities to move to hybrid models of teaching and learning. This has put a high demand for online courses that provide student engagement. There has been a cry from the academic environment on how to make student responsive and engaged in a very lonely online environment as opposed to face-to-face classrooms that are seen as engaging and responsive. Some of the challenges revolved around technical and personal issues associated with online teaching and learning during COVID-19 like digital literacy skills, teaching with technology and integrating it with pedagogy, resource constraints, and e-course design etc. COVID -19 literature on the impact of the pandemic on teaching and learning cites non-participation of students and lack of engagement in online/ blended classes (Diningrat, 2020; Kulal and Nayak, 2020; and Noor et al 2020). Challenges revealed by most of the above studies ranged from “that limited bandwidth, connectivity, and security were the first significant barriers perceived by early childhood lecturers. Meanwhile, additional barriers are related to student lack of engagement and lack of feedback (Diningrat, 2020)”, then Kulal and Nayak 2020 also found that “teachers are facing difficulties in conducting online classes due to a lack of proper training and development for doing online classes. Technical issues are the major problem for the effectiveness of the online classes”. Other studies highlighted that “the issues and challenges confronted by school teachers in delivering online lessons via Google Classroom, Zoom, and Microsoft Teams such as high-cost Internet packages, uncooperative learners, low attendance of learners, teachers' technology confidence, limited availability of educational resources, lack of ICT knowledge, and poor network infrastructure (Noor et al. 2020)”. Whilst Johnson, Veletsianos, and Seaman, 2020 found that the “primary areas where faculty and administrators identified a need for assistance related to student support, greater access to online digital materials, and guidance for working from home”.

This study seeks to investigate how academics design their online courses such that they can promote active student engagements in their online classrooms. Benefits of online student engagement include student satisfaction, motivation to learn, reduces sense of isolation, and improved student performance in online courses. It is also argued that it increases student attention and focus and motivates them to engage in higher-level critical thinking (https://olj learning consortium.org). The cpet.tc. Columbia.edu speaks to three pillars of
student engagement: academic, intellectual and social-emotional- organically-supported in F2F learning, BUT, they must be explicitly pursued in remote/blended learning (cpet.tc.Columbia.edu)

Blended Learning spaces that use technology are a common phenomenon in Higher Education. The University where the present study was undertaken embarked on an Online and Hybrid Teaching and Learning project in the past two years. A number of studies have been done that look at Lecturers’ experiences on the use of technology within these Blended/Hybrid Learning spaces. Most of the studies that look at the phenomenon of engaging students in online environments are at primary and high school levels, very few studies have looked at the experiences of engaging students in an online environment in the Higher Education sector and, whether who supports and assists the Lecturers in the implementation of Blended Learning.

2. **Background of the study**

The study takes place at a traditional university in South Africa. Traditional Universities are distinguished from the other two categories of Universities through their offerings of more theory-aligned qualifications. The University under study is based in a semi urban environment in the Eastern Cape Province of South Africa. The majority of the Eastern Cape landscape is rural; hence, most of the University’s student body comes from these humble beginnings.

The majority of the University’s mainstream students come from disadvantaged background, and computer facilities were not available in their schooling background in the majority of the schools. Mainstream students are student who qualify to get into University because they have passed their matric with a Degree entry. The second cohort of students admitted to our University are admitted into extended curriculum programmes (ECP). Extended Curriculum programmes are but one opportunity for the students from these communities and more other semi-urban environments are allowed access to the University. 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 enrol for these programmes will do their studies over four years instead of three years, allowing them more time to do their foundation courses in the 1st two years. Fully Foundational course.

![Figure 1: Representation of a three year extended curriculum](image)

Extended curriculum courses combine regular course material with substantial foundational material and are substantially longer in duration than a pure regular course. This includes offering of modules, courses or other curricular elements that are intended to equip underprepared students with academic foundations that will enable them to successfully complete a higher education qualification. Focuses particularly on basic concepts, content and learning approaches that foster advanced learning. Both categories, mainstream and extended curriculum first entry students come to University with a certain level of articulation gap. For example, the articulation gap ranges from; content and conceptual development, approaches to learning, academic language (Discourses) and affective factors (Scott et al, 2007). These are but some of the challenges the academic environment is faced with, adding to these is the level of digital skills and engagement with digital technologies that both students and staff struggle with.

In the University understudy online learning, sometimes referred to as e-Learning, and is used in a Blended Learning context. Online courses are delivered over the internet using a Learning Management System. The LMS used in this case study for the purpose of Blended Learning is called ‘Blackboard’ (BB). Blackboard provides an online space where there are varieties of tools, which can be used to enhance the teaching and learning environment. The rationale behind using Blackboard was that there was provision of training and technical support by the academic development team.
3. Literature review

The literature and theories on student engagement speak to the various types of course activities that the lecturer designs to promote content understanding and student engagement. The activities, which should be embedded in course design. They may be synchronous, asynchronous or a combination of the two. The literature also focuses on learner interactions, how students within digital courses through various online technologies such as discussion boards, blogs, wikis, journals, video-conferencing facilities, file sharing and reading materials engage with the course (Digital Teaching Learning Series). It is important that (digital) course design include all, if not most of these activities. In addition, it should be pedagogy, not digital tools that inform the choice of e-tools that should be used to promote student engagement.

There is vast literature in the past two years on different ways of engaging students in online environments but it mainly focuses on mainstream students, which means students who have been admitted through the normal university system (Prince, Felder & Brent 2020) speak to synchronous and asynchronous engagement strategies that establish and maintain physical and social presence early in the course then throughout the course. They further emphasize the importance of making sure that policies are explicit and clear about expectations, assignments and how extensively formative assessment will be carried out. This will eliminate resistance to active engagement and information being communicated early. At the same time, they suggest a gradual approach to engagement strategies (Prince, Felder & Brent 2020). Tomas, Lase, Field & Skamp, 2015 argue that direct instruction offers little support for engagement with the learning material or between peers (Tomas, Lase, Field & Skamp, 2015).

Green et al. also suggest some strategies for maximizing online student engagement and these include student-centered strategies, self-directed engagement with the learning material, which is supported through explicit scaffolding (Green et al. 2020). Appropriate use of media/ICTs and authentic/challenging assessment tasks embedded in the online modules and tutorials promote engagement (Tomas et al., 2015). Ngambi, Baguma, Nalubowa, 2020 suggest embedding You Tube videos on presentations as a way of creating interactive engaging presentations. Dixon et al, 2015 argue the importance of teachers’ “ability to integrate multifaceted learning goals into instructional planning and delivery in order to create effective online learning environments that may improve outcomes for students across settings and content areas” (Dixon, 2015 in McKeithan, G, Rivera, M. & Mann, L, Mann, L in McKeithan, G., Rivera, M. & Mann, L, Mann, L 2021). The types of online student interactions alluded to are between student-content; student- student; student-teacher- interactions; synchronous and asynchronous (Dixon, 2015 in McKeithan, G, Rivera, M. & Mann, L, Mann, L 2021).

Johnson et al. 2018; Dykman & Davis (2008); 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 mostly to be noted in the COVID 19 academic environment, that most lecturers were forced to go online by the pandemic and the level of experience with digital tools was basic, let alone having to redesign courses. Leslie (2021) argues that a redesigned course is more effective and important for encouraging engagement.

Feedback is an important aspect of student engagement and can either stifle interaction in a course or lead to robust discussions amongst the students themselves and between the students and the lecturer. Giving feedback online can be achieved in several ways. Mamoon-Al-Bashir, Rezaul Kabir, Ismat Rahman (2016), list the following e-feedback strategies: e-mail for group and individual feedback, audio and video feedback (M3 players and podcasts), screencasts, and recycling written comments.

4. Research design and methodology

A research design is a plan that guides the researcher in the process of collecting, analysing and interpreting data. The research design is that of an interpretative paradigm within case study design using a qualitative research approach. Paradigms are defined as ways to understand phenomena (Bryman, 2001) and are differentiated by their ontological, epistemological and methodological assumptions. Further to this Babbie (2007) highlights the interpretive approach as committed to studying meaning in context. Such research explores “... socially meaningful interactions through looking at experiences in this case engagements in context, in order to arrive at understandings and interpretations of how the engagements are created and maintained within these virtual communities” (Neuman, 1997). This research is a case study aimed at understanding a contemporary phenomenon in a real life context (Yin, 2003). This case study employs
qualitative research methods. Qualitative case study methodology provides tools for researchers to study complex phenomena within their contexts (Baxter & Jack, 2008) and afford researchers opportunities to explore or describe a phenomenon in context using a variety of data sources. Yin, (2003) argues that one of the reasons one would use case study research is when “you want to cover contextual conditions because you believe they are relevant to the phenomenon under study” which is one of the reasons this study uses case study research.

The population for the study is made up of a sample of three faculties mainstream and extended curriculum programmes (Faculty of Management and Commerce, Social Science and Humanities, and Science & Agriculture) in a traditional University in South Africa. Selection was based on willingness, availability and a spread across each of the three faculties. The selection could be said to be purposive in nature, as it required that there be at least a representation in each faculty of both mainstream and extended curriculum programmes. While this was the intention, this did not quite work out in the end, as there was one faculty that was not represented because it did not offer an extended curriculum programme. The main reason behind selecting three faculties with both mainstream and extended curriculum is to understand the difference in these contexts disciplinary engagements within hybrid models and to further enhance student engagement in both programmes. In each of these three faculties, two courses were selected because of their engagement in online learning and hybrid learning initiatives, making a total number of six courses. Secondary data sources are used in the form of course outlines or learning guides and online course designs.

Analysis of data involves interpretation of data in the form of texts, unpacked using thematic analysis to identify key concepts/genre, context, artefacts (pictures and materials) and capture relevant tensions aligned with the research question. Ryan and Bernard (2000) describe coding as the heart and soul of whole text analysis. According to Silver et al., 2010 “many qualitative analyses involve organising data by way of conceptually or thematically coding them, and coding is the main aspect of managing the interpretations. These themes are further analysed using the Activity theory framework to gather were the tensions and contradictions are placed. The analysis offered a deeper insight into the institutional context and the expectations of the institution about online environments.

5. Theoretical framework

Cultural Historical Activity Theory (AT) is used in the study as a theoretical framework for this research. This theory forms the basis for the main analysis of exploring the course design and how it promotes active engagement in the online courses. The term Cultural Historical Activity Theory was invented by a Russian psychologist known as Lev Semenovich Vygotskii, in 1978. His works were later developed further by two of his students Leont’ev and Engeström. This study will use Leont’ev’s Activity Theory perspective, which is called the Second generation Activity Theory.

Activity Theory theorizes that when individuals engage and interact with their environment, production of tools results (Roth & Lee, 2007). Activity Theory offers a lens through which researchers can analyse human activity systems. It focuses on the interaction of human activity and consciousness within its relevant environmental context (Jonassen, Peck, & Wilson 1999). The second generation activity theory was developed by Leont’ev, one of Vygoskii students. He broadened the Activity theory concept and triangle by adding the concepts of rules, division of labour and community. The Leont’ev perspective was that all three components of the Activity system are inseparable; these components should be studied in relation to each other and their context.

Our three units of analysis: the interacting activity systems are identified as the three faculty's courses understudy. We have three activity system which are our the main unit of analysis which are made up of tools, which can be anything from a computer, to software (LMS), a mobile phone and clicker, used by the subject (which is the individual or student) to achieve an objective (object/outcome) which is what the Lecturer intended to achieve with the student engagement activities. Using the Activity theory Framework above, the study will analyse each of the faculty course designs for mainstream and extended curriculum, comparing what tools where used as mediating artefacts to enable student engagements in the courses understudy.

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6. Findings

The findings for the study are representative of three faculties and six courses from faculty mainstream and extended curriculum programmes. Therefore, in each faculty, we have one mainstream course and one extended curriculum course. The results will be presented in line with the Activity theory framework dimensions, which are incorporating snap shorts/screen shorts of evidence in course design from the different courses.

6.1 Findings for faculty one

The results below display two courses from the Faculty of Social Science and Humanities.

**Course 6.1A-Extended Curriculum.** The first course analysed below in an English for academic purpose course. The first identifiable engagement activity in the course are tutorial exercise that should be conducted by the Tutor for the students. We are well aware that in most of the tutorial sessions there is a lot of active engagement and collaboration between students, with the assistance of the Tutor. The second identifiable engagement activity in course 6.1A is an assessment test, as the assessment are now conducted using the Blackboard assessment tool. Because the engagement in an assessment task is the student’s response to the assessment and the lecturer feedback, this is more asynchronous and does not allow for much interaction.

The screen shots for the course below clearly showcases a possible engagement with students on the different types of tutorial activities outside of the online course. There is no clear indication of which online tool the tutor and students use to engage with the tasks. The researcher does acknowledge that the classes and tutorial sessions did take place online where most active interaction could have taken place. There is not much on the summative assessments, but this can be seen as limiting, as it is more towards Lecturer’s and Students, but little evidence of student-to-student engagement. When one observes the online course design, the course content and materials for tasks/activities are seen as more of a replacement of the traditional ways of engagement, as there is no much change or redesign of the assessment activities. Through the screen shots below, it is identifiable that both the content and tutorial activities are in the format of files that have been uploaded to the LMS.
Figure 3: Course 6.1A online course and learning guide screenshots

The screenshot above showcase the tutorials and assessment activities incorporated in the course design. Below is the course 6.1A activity system, displaying the mediating artefacts, which are Tutorials and Assessments upload in the LMS, for the subjects, who are students. The object, which is the outcome, is for the students to participate in the tutorials in order to get a better understanding of the course content and to submit the assignments for feedback. Rules and division of labour are clearly spelt out in the course outline as per one of the screenshots above, but these are limited or only apply to the students. Rules and division of labour should be clearly spelt out for both the student and the Lecturer so that there are no tensions and contradictions. This will enable both students and lecturers to be aware of their roles and responsibilities. Both student and lecturers community encompasses the department staff, faculty staff and ICT department for matters to do with computer technical and network issues.

To achieve active engagement the online course must not just contain assessment and tasks that students can engage in outside of the LMS tools. There should be online activities that are visible within the online course design, like online discussion forums and collaborative activities that students in groups can participate in. In the above course none of such activities are visible in the online course. It is clear that in this course there was no redesign of the online course as advocated for by Leslie 2021, who argues that a redesigned course is more effective and important for encouraging engagement. This means for the Lecturer to achieve the outcome of
evident participation an active engagement of students in the online course, the design should integrate these tutorial activities within the online course.

Course 6.1B- Mainstream is the second course analysed in the Faculty of Social Science and Humanities. This course in mainstream is also an English course also offered to first year students in this faculty and other faculties. When identifying the key engagement activities in this course, the notable engagement with students is through group discussion forums that are posted on the LMS, but the discussion themselves take place through WhatsApp. There is also engagement through tutorial groups and assessment activities like assignments and tests.

The screenshots below show how the course design is and some of the visible activities that students have to do, as outlined in the course-learning guide. As much as there is not much consideration for online course design principles, but there is much allowance given to engaging activities for the students. Considering that, this is the only course with a discussion forum, which extends to WhatsApp, is a good enhancement for the course and for the students.

Figure 4: Course 6.1B online course and learning guide screenshots

Below is the course 6.1B activity system, displaying the identified mediating artefacts, which are tutorial group and discussion forums, WhatsApp, assignments, and tests available in the LMS, for the subjects, who are students. These discussions take place asynchronous and Prince, Felder & Brent 2020 who advocate that synchronous and asynchronous engagement strategies that establish and maintain physical and social presence early in the course are preferred and should continue throughout the course, argues this mode of discussion. The object, which is the outcome, is for the students to participate in the small group discussions, tutorials in order to get a better understanding of the course content and to submit the assignments and tests for feedback. Rules and division of labour are clearly spelt out in the learning as per one of the screenshots above of the learning guide, and these are there for both the lecture and students. Rules and division of labour should be clearly spelt out for both the student and the Lecturer so that there are no tensions and contradictions. This will enable both students and lecturers to be aware of their roles and responsibilities. Both student and lecturers community encompasses the department staff, faculty staff and ICT department for matters to do with computer technical and network issues. In the literature review Dixson et al, 2015 argue the importance of teachers’ “ability to integrate multifaceted learning goals into instructional planning and delivery in order to create effective online learning environments that may improve outcomes for students across settings and content areas”
6.2 Findings for faculty two

The next faculty understudy is the faculty of management and commerce as showcased below. The next two course designs results we looked at where both from the economics department. One was Economics for the first years extended curriculum and the second course is for first year students in the mainstream economics course. Below is a further outline of the results.

Course 6.2A- Extended Curriculum: This is an economics course for first year students in extended curriculum. After having studied the online course design and the learning guide, the following activities were visible and identifiable; small group tutorial sessions, group assignments and tests.

Figure 5: Course 6.2A online course and learning guide screenshots

In this activity system (course 6.2A ), the mediating artefacts showcased below are inclusive of small group tutorial sessions, group assignments and tests uploaded in the LMS, for the subjects, who are students. The
object, which is the outcome, is for the students to participate and interact in the small tutorials groups in order to get a better understanding of the course content and to submit the collaborative group assignments for feedback to achieve the outcome. This allow for further active engagement between the students. Rules and division of labour are clearly spelt out in the learning guide as per one of the screenshots above, for both the lecturer and the students. This may limit any tensions and contradictions. This will enable both students and lecturers to be aware of their roles and responsibilities. Both student and lecturers community encompasses the department staff, faculty staff and ICT department for matters to do with computer technical and network issues.

Since there are clear, roles and responsibility stated in this community, the students and students, lecturer and students as well and tutor and students will be enabled to carry on well with their tasks. The lecturer course design is still at the level of replacement or substituting face to face through uploading content and activities and tests in the LMS but there in some enhancement through the collaborative assignment which is done online by the students using the collaborate tool within their course.

Course 6.2B-Mainstream: This is an economics course for first year students in mainstream. In the online course design and the learning guide, the following activities were visible and identifiable; video tutorials, small group tutorial sessions, individual assignment and tests.

Figure 6: Course 6.2B online course and learning guide screenshots
In this activity system (course 6.2B), the mediating artefacts showcased below are inclusive of video tutorials, small group tutorial sessions, an individual assignment and tests uploaded in the LMS, for the subjects, who
are students. The object, which is the outcome, is for the students to participate and interact with the video tutorials and participate in the small tutorials groups in order to get a better understanding of the course content and to submit the individual assignment for feedback to achieve the outcome. In this course, a new item/tool was not there in other courses the video tutorials for further active engagement between the students. Ngambi, Baguma, Nalubowa, 2020 as a way of creating interactive engaging presentations, suggested embedding YouTube videos. This suggests the course design is on the right path. Rules and division of labour are clearly spelt out in the learning guide as per one of the screenshots above, for both the lecturer and the students limiting any tensions and contradictions that may arise due to misunderstanding of roles and responsibilities. Both student and lecturers community encompasses the department staff, faculty staff and ICT department for matters to do with computer technical and network issues.

6.3 Findings for faculty three

The last faculty to look at is the faculty of Science and Agriculture. In this faculty, we looked at the maths and introduction to computers course. Course 6.3A: Extended Curriculum is a mathematics course, the most identifiable engagement opportunities is through collaborative tutorials groups and practical tests.

Figure 7: Course 6.3A online course and learning guide screenshots
Activity system (course 6.3A), the mediating artefacts showcased below are inclusive of collaborative tutorials and practicals, which are needed in a course like maths, an individual assignment and tests uploaded in the LMS, for the subjects, who are students. The object, which is the outcome, is for the students to participate and interact in the tutorials and submit the individual assignment and tests for feedback to achieve the outcome. Rules and division of labour are not there and the learning guide is not made available in the online course. Both student and lecturers community encompasses the department staff, faculty staff and ICT department for matters to do with computer technical and network issues.

Course 6.3B: Mainstream- This course is an introduction to computers course that is taught to first year students in the faculty. Below are screenshots representative of the online course design. These are followed by an activity theory analysis of the activities in the course that allow for active engagement.

Figure 8: Course 6.3B course and learning guide screenshots

Activity system (course 6.3B), the mediating artefacts showcased below are inclusive of collaborative practicals, which are needed in a course like computers, an individual assignment and tests uploaded in the LMS, for the subjects, who are students. The object, which is the outcome, is for the students to participate and interact in the practicals and submit the individual assignment and tests for feedback to achieve the outcome. Rules and division of labour are also not there and the learning guide is not made available in the online course. Both student and lecturers community encompasses the department staff, faculty staff and ICT department for matters to do with computer technical and network issues.
All the above courses have no course design or instructional design principles applied. It is evident that in all the courses the lecturers need capacity building in designing engaging online courses. Some of the courses under study were available prior the COVID19 pandemic, which means these are additional to the COVID 19 courses suggesting a need for more academic support to enhance the skills of lecturers in designing pedagogically sound online environments. As much as two of the six courses analysed where mainly evident that there has been some thinking and change in the course design as the course were inclusive of reading materials, content in the course which embedded some activities that the students needed to do. Other courses were more indicative of what would have been done in a face-to-face environment. Others have enhance their module by including one or two of active engagement. Another noticeable missing component in all the learning guides are the rules of engagement between the tutors and students.

Rules and division of labour are clearly stated for the students and the lecturer but are clearly not there for the tutor in the online course and in the learning guide. Of the six courses analysed, it was evident that there had not been much change in the course design. The courses included mainly reading materials and content which was indicative of what would have been done in a face-to-face environment.

7. Conclusion and recommendation

The literature and theories on student engagement speak to the importance of planning and designing a variety of teaching - learning activities that promote and enhance student learning in face-to-face, online or hybrid contexts. Designing these activities should be part and parcel of course design, not as an add-on, and should be guided by the principle of student-centeredness (Green et al. 2020). The focus should be more on what the student does than on what the lecturer does (Biggs, 2011). Only one course in the Faculty of Management and Commence prioritised student engagement activities while others enhanced their modules by including one or two of active engagement tasks. It is evident from the results of the study that a lot still needs to be done to get lecturers to create engaging activities for their students.

The study concludes that it is imperative that academic development supports and enhances the development and agency of academics in creating active and engaging hybrid or online environments. It is evident from the results of the study that is still a lot that need to be done to get Lecturers to create very engagements activities for student. Staff development programmes that promote the lecturer’s online, physical, and social presence (Prince, Felder & Brent 2020) would go a long way in motivating students and enabling them to achieve the desired outcome. The limitation of the study is that it focused on three faculties in one traditional university. Further research on student engagement in a variety of contexts is needed in order to understand lecturer’s training needs and provide the necessary support.
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