

Adoption of New Pedagogies for Curriculum Delivery in the Post Covid-19

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Abstract

The purpose of this paper to advocate for embracing of new techniques of delivering lessons in institutions of higher learning. The advent of the global covid-19 pandemic has brought new challenges for the higher education space. The pandemic with its 'new normal' has challenged higher education institutions beyond just access to resources, however, with aspects of curriculum delivery. The 'new normal' has meant that curriculums need to be delivered online. Thus, many higher education institutions have had to involuntarily jump on the online teaching and learning bandwagon. The move to online teaching and learning for higher education institutions has resulted in several challenges as many higher education institutions have curriculums designed for traditional teaching (face-to-face) delivery. The challenges brought about by the Covid-19 pandemic and its "new normal" has shown that changes needs to happen to higher education curriculums to be able to overcome these challenges. Therefore, this paper recommends that post covid-19, face-to-face higher education institutions need to restructure their curriculums and adopt hybrid curriculums that incorporate online teaching and learning.

Introduction

The Covid-19 pandemic has raised serious challenges for the higher education community worldwide, mainly involving the immediate and unexpected demand for the previously traditional face-to-face curriculum to be presented online (Du Preez & Le Grange, 2020). The rushed migration of face-to-face teaching and learning to online platforms reminded us that life is dynamic and has evolved throughout history. What is 'normal' today may be deemed abnormal tomorrow; hence, the pandemic has culminated in a 'new normal' characterised by 'social distancing' and 'isolation' in society. The demands posed by the 'new normal' have forced Higher Education Institutions (HEIs) to adopt the urgent use of technology in teaching and learning. Consequently, instructors in HEIs need to make changes in their curricula to reflect the changing demands of society.

Many instructors in HEIs want to duplicate a face-to-face curriculum on online platforms (Blewett, 2016). This creates a mismatch between the curriculum offered and the mode of delivery. It is worth mentioning that an online curriculum, also called digitalized curriculum (Khoza & Mpungose, 2020), requires a pedagogical level of knowledge. The query that emerges is whether HEIs defined by conventional face-to-face teaching and learning methods have staff with such pedagogical knowledge to deliver a digitalized curriculum that suits an online mode of delivery. According to Blewett (2016), many HEIs need direction on incorporating technology into their existing curricula to establish new curricula models instead of simply undertaking to simulate face-to-face approaches within online spaces.

This paper will focus on the current higher education curriculum challenges amidst the Covid-19 pandemic. It suggests a curriculum reform for face-to-face institutions in adopting a hybrid curriculum by incorporating online teaching and learning strategies. Firstly, the curriculum is conceptualised to understand better what it entails and how it is being interpreted. Then follows a review of the nature of the curriculum in traditional HEIs and the challenges it faces, followed by a discussion on how technology can be helpful in traditional

HEIs. Lastly, examine the possibilities of modernising the curriculum for traditional HEIs and the challenges that could be encountered in introducing an online curriculum.

Conceptualization of Curriculum

Over the years, the conceptualization of curriculum has been vast, with many definitions and interpretations. The perception of the curriculum is to many aims and specific objectives that need to be achieved by students (Taba, 1962); a program of studies offered at a particular school for student participation (McBrien & Brandt, 1997); a written document describing the school's course program (Brady, 1995); planned learning experiences for students designed by the school (Tyler, 1957). Drawing from Tyler's (1949) conceptualization of the curriculum, Hassan (2013) summarized the curriculum into objectives, content, method, and evaluation. Hunkins and Ornstein (2018) affirm that the curriculum results from social activities designed for both present and emerging purposes. Regardless of how the curriculum is being interpreted and defined, it must match a particular mode of delivery.

The curriculum is essential to both the academic institutions and society's health and efficacy, either as subjects taught in these institutions or as experiences for students to acquire skills and competence required to participate in society. Therefore, the curriculum and its delivery mode have an impact on various stakeholders. Hunkins and Ornstein (2018) are of the view that curriculum should be regarded as a development process, a field of study, and as a subject matter that "identifies a philosophy; assesses student ability; considers possible methods of instruction; implements strategies; selects assessment devices; is continually adjusted" (p. 26). Although lecturers in HEIs might have the content knowledge for the different curricula they deliver, the current urgent migration from a traditional face-to-face curriculum to online platforms has exposed discrepancies between curriculum design and its mode of delivery. Therefore, the curriculum should not only be digitalized but should be constructively aligned to the online mode of delivery.

Based on the work by Khoza (2018), Khoza and Mpungose (2020) have defined a digitalized curriculum as "a plan for and/or a plan of teaching, learning, and research, driven by specific hardware, software, and theories/pedagogies" (p. 2). This definition suggests that an online curriculum is not an after-thought but a well-structured plan of action or experiences that are carried out with specific tools, models, teaching and learning theories, and related assessment activities. Hodges and colleagues (2020) distinguish online curriculum from emergency remote teaching that is presently dominating most HEIs in the presence of Covid-19. They contend that emergency remote teaching is a temporary solution directed at delivering a face-to-face curriculum on online platforms due to crises, and as such, it cannot be of high quality. Rapanta et al. (2020) indicate that the efficacy of online teaching and learning is judged by the characteristics of the learning activities designed for students and integrates social and cognitive aspects, organized facilitation, and flexible assessment.

Reflection on the current higher education curriculum status quo

The higher education space has been challenged with a great curriculum crisis since the global Covid-19 pandemic. Many institutions, notably those that relied on the traditional mode of curriculum delivery prior to the pandemic, have experienced significant challenges by the urgent move from the face-to-face method of curriculum delivery to an online mode of delivery (Madiope & Mendy, 2021). For instance, students enrolled in such academic institutions were unprepared for such a drastic move (Mhlanga & Moloi, 2020), leaving many out in the cold with no means of engaging in the curriculum. Significantly, affected students were from underprivileged backgrounds who lacked resources such as convenient devices, data, and reliable connectivity due to poor geographic locales (Mhlanga & Moloi, 2020). This has generated multiple stressors that consequently disturbed the psychological health of these students (Naidoo & Cartwright, 2020). Similarly, staff in these institutions have experienced several challenges in delivering online teaching due to poor infrastructure and lack of online teaching support (Mhlanga & Moloi, 2020). Moreover, the offered curriculum has not been adequately designed to fit the online mode of delivery (Hodges et al., 2020). In contrast, many privatized HEIs did not encounter a massive curriculum shift from face-to-face to online platforms, as most of them were already acquainted with the online teaching and learning spaces, shaped by their aspirations to be internationalized institutions of higher education (Chernikova & Varonis, 2016; Kirk et al., 2018).

Alismail and McGuire (2015) view that the curriculum needs not be isolated from the real world, thus there is a need for curriculums provide a deep understanding of the subject and the ability to exercise that understanding to the complex real-world problems students will ultimately encounter. The global pandemic has made HEIs more conscious of the conspicuous, that the curriculum is long overdue for a redesign and transformation (Watermeyer et al., 2021). A sustainable curriculum design needs to ensure that it responds to societal and human capital needs from a policy level. It is indisputable that the current curriculum in higher education has somewhat failed to react to the continual changes of these needs (Fadel, 2015), hence the many challenges that it is presently facing.

The various policy level approaches that need to be recognized when redesigning higher education curriculum should include problem-based learning approaches, learner-centered approaches and life-situations design. Amadio, Operti and Tedesco (2014) have pointed out a great need for higher education curriculum designers to realize that the curriculum has evolved. They advocate that the designing process must mirror the changes by going beyond the conventional, technical, academic, and academic pedagogical contexts. Hence, curriculum delivery models and modes must likewise advance beyond traditional face-to-face approaches and be receptive to transformation by integrating online technologies.

Challenges in higher education curriculum design

Higher education curriculum still tends to look more to the past than to the future, mainly because of its association with traditional notions of teaching and learning, thus taking little account of the constantly changing groups of students and the diversification of their learning (Amadio, Operti, Tedesco, 2014). Understanding the social foundations of curriculum design is fundamental for both policymakers and implementers who are instructors, and as such, social foundations have considerable influences on the education system and many curriculum decisions that must be made (Ornstein & Hunkins, 2018).

Curricularists who identify with postmodernism oppose the notion that there is no precise, specific way to design curricula. They assert that curriculum development is not a closed system but is open and comparable to a communal conversation that involves the interaction of various stakeholders within the political, economic, social, moral, and artistic sectors, ultimately seeing schools as an extension of the society, and students being capable of shaping culture (Kirk et al., 2018). However, many postmodernists see the current curricula views as overly controlling and designed to perpetuate the existing social order and inequalities (Chernikova & Varonis, 2016).

Curriculum comes in many forms, planned and unplanned, formal and informal, but there seems to be more emphasis on one type of curriculum. Hence, Ornstein & Hunkins (2018), when taking into account the diverse forms and styles of curricula, state that "the current emphasis on 'testing' as a way of confirming if the curriculum has archived its objective, has made curriculum to be narrow and bland" (p. 27). Additionally, Amadio, Operti & Tedesco (2014) argue that curriculum designers need to ask questions about the type of students the curriculum is designed for, the principles that should guide curriculum design, the content of the curriculum, and the strategies employed for translating the intended curriculum into practical and meaningful learning.

Curriculum design is a complex activity both conceptually and in its implementation. Many curriculum designers overlook how social intelligence is essential for curriculum. Similarly, the neglect of philosophical, social, and political questions leads to designing a curriculum with limited rationales. On its own, curriculum design is challenging. Not many academics are willing to engage in such activity, precisely when it has to be designed to support an effective online mode of delivery because this process involves managing curriculum gaps, alignment of standards and the importance of collaboration.

In planning a curriculum, one needs to consider the prevailing curriculum trends in the 21st century, encompassing but not limited to self-directed learning; home-schooling; multidisciplinary/thematic approach; alternative assessment; ethnic diversity; gender equity; geographic stereotyping; students with special needs; Inclusion of sexual minorities; gifted students; senior citizens and service-learning; national standards; increased parental involvement and control; global education; cooperative learning; improved and expanded use of technology (Ornstein & Hunkins, 2018; Rapanta et al., 2020). Considering these trends is paramount in designing a curriculum, whether face-to-face curriculum or online curriculum, as they

facilitate in identifying our prospective students and how they prefer to learn. It is worth considering that the curriculum extends beyond what takes place in the classroom and includes experiences outside the classroom. Henson (2015) believes that curriculum design qualities should consist of scope, sequence, continuity and articulation. Curriculum scope refers to the breadth of the curriculum at any level or at any given time; curriculum sequence is concerned with the order of topics over time; curriculum continuity refers to the smoothness or the absence of disruptions in the curriculum over time; and curriculum articulation refers to the smooth flow of the curriculum in both dimensions, vertical and horizontal and balance, a curriculum with a balance between the arts and sciences or between college prep subjects and vocational subjects (Henson, 2015).

An efficient and effective curriculum design reflects its construction, considering; the reflection of philosophical, educational, and curriculum assumptions following the goals of the institution, the needs and aspirations of the students, the various design components, sketching out the different design components to be implemented, cross-checking the selected design components against the institution's mission, and lastly benchmarking the curriculum designed with those of other institutions (Ornstein & Hunkins, 2018).

Incorporating the use of technology as a mode of curriculum delivery for face-to-face institutions of higher learning

The current diverse groups of students, changing times, and learning technologies in higher education have placed great scrutiny on the traditional face-to-face curriculum delivery models. These HEIs now need to conform to modern technological times by considering and taking up systematic changes that can put enormous strain on their infrastructure. Thus, many HEIs need to take to heart the call for designing and delivering (the mode thereof) curriculum relevant for modern times and probably even the future (Gosper & Ifenthaler's, 2014). Undeniably, globalisation and technology have a substantial and distinct influence over higher education curriculum or curriculum as a whole. It is due to globalisation that people around the world have been able to exchange goods, services, and ideas more effectively, which has undoubtedly altered the way people live and work, translating to a global understanding that stimulated the demand for technology in all aspects of life including the "flipped" classrooms, digital literacy skills and online learning (Ornstein, Francis & Hunkins, 2018). As a result, students connect to the Internet using smart devices to access a lecture, a test, and even a group task. However, some students, specifically those in HEIs that depend on the face-to-face mode of curriculum delivery, find it challenging to have to access academic work online as it is asserted that they perceive the online world as one where they go for socialisation and entertainment (Rapanta et al., 2020).

As the world is progressing further into digitisation, so are the students and society at large, where students and society are wired for distraction and instant gratification, and technology is promising to do that for them (Nortvig, Petersen & Hattesen, 2018). Thus, there is a great need for a new and innovative curriculum, blending pedagogies and technologies to suit their circumstances (Gosper & Ifenthaler, 2014). Youngsters are reported to thrive on instant gratification, and if the best medium for instant gratification is the Internet, why not integrate the Internet into their learning and teaching? Teachers need to employ innovative strategies and modern learning technologies that help integrate cognitive and social skills with content knowledge and increase student participation in the learning environment to promote these future skills (Alismail & McGuire, 2015). The integration of online technologies in teaching and learning can support different skills such as problem-solving, critical thinking, collaborative learning, and cognitive learning skills, which have the potential to allow a student to obtain a deeper understanding of the subject and try to solve complex problems in the real world (Alismail & McGuire, 2015).

Many traditional face-to-face HEIs have been compelled to join the online teaching and learning wave due to the Covid-19 pandemic. However, that was done with limited knowledge. These traditional HEIs need to understand that for online learning to be effective and not just efficient; it means more than just undertaking to replicate offline approaches within online spaces, that there is more to online teaching and learning than teaching from the comfort of their homes or offices (Blewett, 2016). Ornstein & Hunkins (2018) highlight that the teacher is the dominant figure in the classroom in traditional face-to-face curriculum delivery models, making all decisions pertaining to instructional activities. This results in a neutral emotional tone, where the students' only duty is to listen to the teacher, answer the teacher, write answers to questions and take tests and quizzes, rarely learning anything. Two-thirds of college administrators rate online courses'

learning outcomes equal to or better than those in face-to-face courses (Henson, 2015); hence, there is a need for a well-designed online curriculum that matches its mode of delivery.

Theoretical framework for online teaching and learning

Studenete and Ellis (2020) explain that using technology to support student communities and engagement is a matter of bringing the online education environment in line with other online experiences that students are familiar with and use daily. Thus, Graham, Henrie, and Gibbons (2013) emphasise instructional methods that integrate technology needs, to take cognisance of a three-part analysis that is, they need to explore what exists and attempts to define, describe and categorise it; they need to explain why it happens and looks for causality and correlation and work with variables and relationships, and they need to design and describes interventions for achieving targeted outcomes and operational principles (Graham, Henrie, and Gibbons, 2013). Whether teaching and learning occur face-to-face or online, learning theories help us understand how people learn (Picciano, 2017).

Social constructivism learning theory (Vygotsky, 1978) and the online collaborative learning (OCL) model for curriculum reform. Social constructivism learning theory explains teaching and learning as complex interactive social phenomena between teachers and students. The approach emphasises that knowledge exists interpersonal and intrapersonal in a socio-cultural context, and learners create their knowledge by deriving meaning from their lived experiences (Kay & Kibble, 2012). This theory supports scaffolding by a more knowledgeable someone who guides learners in the zone of proximal development (Schunk, 2012). The online collaborative learning model echoes what instructional methods of teaching need to be considered (Graham, Henrie & Gibbons, 2013). Harasim (2012) explains online collaborative learning as an online teaching and learning model that focuses on internet facilities to provide learning environments that foster collaboration and knowledge building. The model also promotes learning that focuses on collaborative learning, knowledge building, and Internet usage to restructure formal, non-formal and informal education for the knowledge age.

The learning theories and model mentioned above remind us that methods of instruction are not only about learning content or skill but also support students socially and emotionally. Thus, teachers and facilitators must notice that they do not create learning experiences, whether in face-to-face institutions or online, but they provide opportunities for potential experiences. In contrast, the actual experiences only occur and develop when teachers enable and allow students to learn in a social context. Hence, there is a need for the curriculums to take into cognisance the fact that curriculum goes beyond the classroom and taps into the socioeconomic and environmental settings of the students, as pointed out by the social constructivism learning theory and the online collaborative learning model.

Pros of adopting new teaching methods in post-Covid-19 higher education

Institutions of higher learning have been battling to navigate the global trends in higher education i.e. globalisation, new managerialism, marketization, internationalisation, and massification. Massification is responsible for inadequate resource allocation to the curriculum as teachers and facilitators end up spending more time in administrative work (Adetiba, 2019). As such, online curriculum design and delivery could ensure that the crowds of students are taken care of without leaving anyone behind. Therefore, embracing an online curriculum can generate an environment where higher education institutions can provide a comprehensive curriculum that embodies all aspects of life and responds to the ever-changing societal and human needs.

Teaching and learning in the 21st century have shifted and more so with the Covid-19 pandemic, meaning curriculum design in the 21st century must be on par with the changing times. Higher learning institutions need to progress towards life-situations curriculum design as it emphasises activities that sustain and enhance life, maintain the individual's social and political relations, and improve leisure, tasks, and feelings (Rapanta *et al.*, 2020). Moreover, the strength of life-situations curriculum design focuses on problem-solving procedures and the ability to use students' past and present experiences in analysing the fundamental aspects of living (Ornstein & Hunkins, 2018). This curriculum design approach is reinforced by the social constructivism theory and the online collaborative learning model.

The swift move to online teaching and learning for HEIs has been greeted with many challenges, especially so from traditional face-to-face institutions. With that, there is a need for traditional face-to-face institutions to integrate online curricula in their institutional curriculum framework to allow students the flexibility to choose, i.e. a student can choose to enrol for a face-to-face module or an online module, these choices will enable the curriculum to borrow from both social constructivism and online collaborative learning.

The higher education landscape will never be the same after the pandemic has passed. Considering this fact, adoption of a hybrid curriculum for traditional HEIs by incorporating the concept of flipped learning is paramount. During flipped learning, the components of learning and instruction are “flipped” in that what used to occur in the form of face-to-face lectures is now learned at home, through videos; and what was previously considered homework is now done in the classroom during the time that was formerly taken up by traditional lectures (Henson, 2015; Hughes, 2020). Flipped learning opens up class time for peer discussions and allows instructors and tutors to provide scaffolding by aiding students with their projects, exercises, or problem that require to be solved.

To incorporate students’ experiences as part of the curriculum, we propose the practice of reflective journaling. A reflective journal is a standard learning tool employed to stimulate and assess reflective learning. It is widely utilised in health science studies, especially nursing (Miller, 2017), and in pre-service teacher education studies (Cengiz & Karatas, 2015), where it is primarily used to enhance practice. Reflective journals have been proven to improve critical thinking skills (Cengiz & Karatas, 2015) and essay writing skills (Hashemi & Mirzaei, 2015). Using online platforms for teaching and learning means that online assessments have to advance beyond requiring memorisation of content and need students to make deep connections of concepts and apply them in the real world.

Lastly, we recommend using learning management systems such as Blackboard, Canvas and Moodle for peer group discussions. In traditional institutions, these online platforms are used explicitly for uploading content to be downloaded by students (Blewett, 2016). Covid-19 has pushed the creative use of these systems, such as delivering live online classes (Madiopé & Mendy, 2021).

Possible challenges that could be faced in implementing the proposed curriculum design

The importance of the proposed curriculum reforms is that they allow for integrating formal/informal curriculum and planned/unplanned curriculum. Furthermore, they emphasise that curriculum design must not be in isolation but must also consider the societal and human ever-changing needs. People are resistant to change, and any change that seems to threaten their level of authority is unwelcome. Thus, resistance to change is a potential challenge that should be anticipated when implementing the new proposed curriculum changes (Khoza & Mpungose, 2020). For instance, some academics believe that an online curriculum is not personal like a face-to-face curriculum and isolates students from their peers (Saeed, 2020).

Several authors have highlighted the emergence of the digital divide made conspicuous by the global pandemic (Van Schalkwyk, 2021) and discussing the increasing differences along socioeconomic lines. Solutions have to be found in institutions of higher learning to surmount these socioeconomic gaps in access to quality education between the upper-income and middle-income classes.

One challenge for adopting an online curriculum in most traditional face-to-face institutions is the lack of infrastructure and online support for both the teaching staff and students. Therefore, HEIs must invest in online technology centers that will offer support for online teaching and learning. Investing in such resources will allow staff to focus on delivering the curriculum efficiently (Khoza & Mpungose, 2020). Furthermore, with institutional support, staff have to be trained to confidently navigate the online learning space and possess adequate pedagogical knowledge, making the delivery of online teaching and learning at traditionally face-to-face HEIs much easier.

Conclusion

Face-to-face higher learning institutions are confronted with a momentous challenge in the aftermath of the Covid-19 pandemic, particularly concerning the curriculum. However, in fear of losing out on an academic year, many academics have embraced the concept of online learning without obtaining proper online teaching training. The lecturers' inability to integrate the face-to-face curriculum into the online teaching and learning setup exposed the discrepancy between curriculum design and delivery. This generated a demand

for traditional HEIs to review their curricula for post-Covid-19 teaching and learning. Furthermore, the pandemic created an opportunity for institutions to modernize curricula that regard the dynamic needs of society. It is recommended that traditional face-to-face HEIs should embrace a hybrid curriculum by integrating online learning practice into conventional methods, thereby allowing students the flexibility of learning in dynamic environments. Such a curriculum is postulated to enhance teaching and learning in traditional HEIs that experience massification of students with limited resources and tend to neglect the life aspect part of the curriculum by solely focusing on the taught curriculum due to the pressure experienced by teaching academics. In post-Covid-19 higher education landscapes, the hybrid curriculum design and delivery in traditional HEIs has the potential to provide space for a comprehensive curriculum that takes advantage of all aspects of life and responds to the ever-changing societal and human needs.

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