Strategic Management Through Digital Platforms for Remote Working in the Higher Education Industry During and After the COVID-19 Pandemic

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Abstract

Strategic management is a vital part of every industry; however, the COVID-19 crisis has further escalated the importance of strategic management and adaptability in the higher education industry. The convergence of digital, information and communication technologies coupled with lockdown measures imposed due to the COVID-19 pandemic has catalysed the adoption of digital platforms and technologies for online teaching and learning in higher education. This qualitative paper aims to examine the viewpoints of and challenges faced by students and lecturers pertaining to digital platforms and technologies in higher education during the COVID-19 pandemic. The research methodology encompasses the use of a networking approach; 80 interviews were conducted with 38 students and 42 university lecturers in Europe, Australia, North America, and Asia. The selection of a sample was undertaken by means of a gatekeeper strategy combined with convenience sampling, while the saturation point was used as a benchmark to reach a representative sample size. The results revealed that digital platforms and technologies facilitate a participative teaching style and improve the learning capabilities of students. The results further highlight the fact that break-out rooms, pre-class videos and creative learning activities promote higher levels of student attendance and engagement. Furthermore, the results demonstrate that, despite the significant development of digital technologies and information and communication technologies (ICTs), both lecturers and students prefer traditional face-to-face teaching because it offers greater emotional connectivity. Major challenges unearthed include poor connectivity, a higher incidence of depression, feelings of self-isolation and a lack of emotional engagement. Recommendations and implications for the higher education industry relating to remote learning are presented in the latter part of this paper.

DOI: 10.23762/FSO_VOL10_NO2_6

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Paper received: 4 January 2022 • Paper revised: 12 March 2022 • Paper accepted: 15 March 2022

Key words

Strategic management, digital learning platforms, e-learning opportunities, e-learning challenges, higher education industry.

Introduction

Academic literature concerning strategic management has argued that one of the essential roles of modern-day policymakers and executives is to formulate an effective strategy exhibiting incremental organisational development (Stukalina, 2014). The core concept of strategy formation is ensuring the proper alignment between an organisation and its environment (which is constantly changing) so that organisations can achieve their strategic goals (Griffin, 1990; Ayegba and Lin, 2020). Thus, the focus of strategic management remains on the survival and development of the organisation in the long run (Stoner, 1978; Stukalina, 2014). The COVID-19 pandemic and its attendant lockdown measures implemented globally have resulted in a swift reliance on digital platforms and technologies for remote working (Tan and Antonio, 2022; Mariani and Castaldo, 2020). The dramatic nature of this process also recalls two famous statements. The first is Charles Addams' statement that *"normal is an illusion. What is normal for the spider is chaos for the fly"* (Petersen, 2017). The second is the statement attributed to Megginson that *"it is not the strongest of the species that survives, nor the most intelligent, but the one most adaptable to change"* (Grimes, 2019). Indeed, Megginson's quote was inspired by Charles Darwin's 'theory of evolution', which was later termed by Spencer as the "survival of the fittest". It is an understatement to say that the COVID-19 pandemic has created what is popularly described as 'the new normal' in many sectors of the global economy, including the higher education industry. Whereas many sectors such as travel, tourism and hospitality have been massively negatively affected, the higher education industry was fortunate to find respite in the emergence and development of digital technologies and advanced information and communication technologies (ICTs) which enabled it to carry on and survive. Thus, after some initial hesitation, the higher education sector took advantage of the technological possibility of remote work to transit to an online digital teaching and learning environment for survival – a path taken by other organisations that were able to shift their operations online (Olson and Olson, 2000; Daniels et al., 2001). Judging by the lack of time for due diligence before the adoption and implementation of the pandemic-driven digital transformation, it is critical to understand the success or failure of such a substantial change from the point of view of stakeholders of the higher education industry (Florek-Paszkowska et al., 2022). Therefore, the study aims to examine the adoption of digital platforms and technologies in higher education during the COVID-19 pandemic through digitalised interactions between students and lecturers. Furthermore, it aims to evaluate digital teaching and learning styles as well as the challenges associated with the adoption of this new way of learning and pedagogy in higher education. Ultimately, the insight derived from this study will lead higher education management to strategise their possible moves going forward.

It is important to underline that prior to the COVID-19 pandemic, digital transformation in the higher education industry was an ongoing debate (Rof et al., 2020).

The strategic importance of online education was not often viewed through the same prism by many scholars and experts. At that time, the prevailing inertia towards digital transformation in the higher education sector was described as tension, because the challenges of implementation required additional time to resolve (Nguyen, 2018). However, it does not mean that a business case was never raised (Zulfikar et al., 2018; Posselt et al., 2019). It was a matter of when rather than why, as digital transformation was seen as relevant and critical to the higher education industry (Bond et al., 2018). In other words, strategic management in the higher education sector incorporated the use of digital platforms for e-learning.

Under normal circumstances, the higher education industry would have opted for an incremental digital and technology transformation strategy akin to Edelman and Benning's (1999, 118) 'series of small-scale changes' approach. There is unanimity among all relevant stakeholders that the adoption of digital and technology platforms for teaching and learning in the higher education industry during the lockdown was rather dramatic, and such a move was naturally fraught with implementation challenges due to the limited time available for due diligence. It is therefore imperative to examine the state of the art in terms of the success or failure of implementation, and to examine the challenges associated with the adoption and implementation of an online learning strategy via digital and technological platforms. Intriguingly, there is a growing narrative among higher education industry stakeholders that some institutions are likely to consider blended teaching and learning following the series of lockdowns during the COVID-19 pandemic. This serves as additional justification for this study with the potential to inform the higher education pedagogy strategy in the post-COVID-19 pandemic era.

The rapid transformation of teaching and learning materials to conform with digital and technological platforms meant lecturers had to dramatically change their teaching and learning materials to be compatible with online delivery, assessment and learning support. Nevertheless, lecturers and students have had to adapt accordingly. However, the post-implementation question of whether the aforementioned digital transformation has been effective and successful remains unexplored. At present, there is little or no evidence at the national and/or global levels regarding the success or failure of the rather swift adoption of digital platforms and technologies for teaching and learning at tertiary level. The study set out to examine the global trends and aggregated outlook of online teaching and learning during COVID-19 lockdowns from the perspectives of lecturers and students in North America, Europe and Asia. Against this backdrop, the study was undertaken to address the following elementary – albeit highly relevant, critical, and timely – research questions:

1. What has been good or positive about the dramatic adoption and implementation of digital platforms and technologies for remote teaching and learning in the higher education industry?
2. What has been bad or negative about the dramatic adoption and implementation of digital platforms and technologies for remote teaching and learning in the higher education industry?
3. What are the challenges and obstacles associated with the implementation of digital platforms and technologies for remote teaching and learning in the higher education industry?

This manuscript aims to investigate the strategic management techniques employed within the higher education industry during and after the COVID-19 pandemic by using sophisticated digital platforms and technologies.

1. Literature review

1.1. Strategic management in the education sector

Intensive research has shown that strategic management models have improved the efficiency of the education sector (Lattore-Medina and Blanco-Enomienda, 2013; Sułkowski et al., 2019). This has enabled institutions to implement procedures and practices to improve the effectiveness of operations. Strategic management leads to fresh thought processes and offers practical dimensions to improve ongoing operations as well as future ones (Lattore-Medina and Blanco-Enomienda, 2013). However, there is still a debate about how long strategic management practices remain sustainable for before they become obsolete. Furthermore, pedagogical leadership appears to be the core of debate which could further enhance the room for innovative changes within the Higher Education (Bolivar and Moreno, 2006).

In the modern era, there is a general acceptance that basic tasks must be restructured because educational institutions attempt to resolve the disconnection between educators and students due to strict pedagogic (Lattore-Medina and Blanco-Enomienda, 2013). Policy reforms and structural changes required because of the dynamics and the pace of the environment. Such dynamism demands innovative and creative approaches, and such approaches are part of strategic management (Haque, 2021). The work of Pozner (2000) revealed that the reason why institutions are successful is that they acknowledge the transformation that results from integrating strategic management. It is further argued that strategic management is not always able to bring quality results, because only in-depth changes within the educational workplace setting yield optimal results (Lattore-Medina and Blanco-Enomienda, 2013). At present, the alignment of educational working practices with strategic objectives is proving to be a challenge especially fitting all in one (Lattore-Medina and Blanco-Econienda, 2013). Nonetheless, numerous aspects of the educational system are embraced by strategic management. Rendón (2009) found that strategic management has several elements that helps to improve the outlook of the education system and enables it to prosper in the right direction.

1.2. Digital transformation in the Higher Education industry prior to the COVID-19 pandemic

Prior to the recent dramatic implementation of digital and technological platforms in higher education due to the COVID-19 pandemic, there was unanimity among researchers that higher education institutions ought to digitally transform to remain relevant (Zulfikar et al., 2018; Nguyen, 2018). A study by Rof et al. (2020) outlined three notable strands of research on the digital transformation in higher education (see: Bond et al., 2018; Kaplan and Haenlein, 2016; and Pucciarelli and Kaplan, 2016) comprising 1) its impact on staff and students through the closing of the digital gap; 2) the role of digital technology platforms in distance learning and executive education; and 3) the function of information and communication technology (ICT) in knowledge transfer.

Undoubtedly, the technological improvement in society in general has meant that the role of staff in higher education has indirectly been impacted because of the changes that have similarly been occasioned by technology pertaining to students' expectations regarding teaching, pedagogy and learning innovations (Nguyen, 2018). Therefore, there is evidence to the effect that the digital transformation discourse was well advanced in higher education institutions, but the question of how best to fully roll out a comprehensive digital transformation across the higher education industry was still unaddressed (Rymarczyk, 2020). Posselt et al.

(2019) described it as a stage where higher education was investigating how digital transformation would support the 'entrepreneurial higher education sector' of the future. However, with the onset of lockdown measures in early 2020 brought about by the COVID-19 pandemic, higher education institutions across the world responded quickly by moving all teaching and learning online using digital and technology platforms to continue to operate in the business of providing educational services. Based on the premise of the rapid deployment of digital and information commination technologies for remote teaching, learning and student support, the current study evaluated how successful the implementation of wholesale e-learning has been, and also assessed the challenges and recommended a way forward for digital transformation in the higher education sector following the COVID-19 pandemic.

This study also examined the digitalised interactions between lecturers and students while specifically examining their perceptions of academic content, existing teaching and learning styles, and the challenges associated with those styles. The conceptual underpinning of this study is concerned with teaching and learning during the crisis, while at the same time examining alternative teaching paradigms. It entails the challenges and issues relating to the present teaching methods, typically exploring the core reason for participation, functionality, and engagement.

The work of Chernogorova et al. (2021) further explored the idea that the pandemic has significantly affected the risk management activities related to the successful implementation of scientific projects. On the other hand, the work of Delibasic et al. (2021) found that individual behaviour during the COVID-19 crisis has significantly altered due to the uncontrollable situational factors arising from the external environment. Interestingly, a comparative analysis carried out by Khalid et al. (2021) demonstrated that students' intentions are affected by social influence, absorptive capacity, perceived autonomy, and facilitating conditions. Moreover, the findings of Muangmee et al. (2021) revealed that the behavioural intentions of students to use e-learning tools are positively affected to a larger extent by learning values and social distance. Nonetheless, a study by Ejdys (2021) showed that perceived usefulness plays a vital role in the formation of positive attitudes among students toward e-learning and the attainment of satisfaction and personal development. Shafait et al. (2021) found that there is a direct relationship between learning outcomes and students' academic efficacy. Learning orientation, learning outcomes, trust in teachers, and student academic efficacy are essential components. Furthermore, the work of Stuss et al. (2021) revealed that the competences of graduates of higher education business studies on the labour market are due to several factors, including communication, the ability to convey messages in a foreign language, technological competency, and practical exposure. Thus, all these assist students in terms of learning procedures.

1.3 Strategic approach – digital teaching and learning styles in the Higher Education sector during the COVID-19 pandemic

It is important to note that lecturers and students are required to make substantial efforts to finetune their respective teaching and learning styles to adapt to online learning via digital platforms. Although there is no certainty about the extent to which the future of learning and teaching has been altered by the COVID-19 pandemic, it is most likely that the budgetary lines of institutions would be affected (Kim, 2020). Anecdotal narratives indicate that institutions are facing challenges to accommodate lecturers as well as students in such crisis situations. Universities across the globe have been compelled to launch and operate live online classes for undergraduate and graduate courses due to the outbreak of

COVID-19 (Lei, 2020). This rational stance is to ensure normal teaching operations. Students at various institutions are facing challenges such as a lack of active academic involvement and engagement, technical obstacles, and self-isolation at home causing fewer opportunities for a collaborative learning environment (Bao, 2019; Bao and Zhang, 2012; Bao, 2020). On the other hand, lecturers are said to be grappling with low participation rates among students, difficulties in managing online classes, and low levels of engagement.

The terms 'cognitive styles' and 'learning styles' are sometimes used interchangeably. However, Allport (1937) had earlier indicated that cognitive style refers to the habitual and typical model by means of which individuals solve problems, perceive, think, and remember, while adopted learning style is a response to a learning situation (Riding and Cheema, 1991; Cassidy, 2004). On the other hand, Hartley (1998) states that 'cognitive styles are the ways in which different individuals characteristically approach different cognitive tasks while learning styles are the way in which individuals characteristically approach different learning tasks' (Cassidy, 2004, p. 421). In addition, Hartley (1998) argued that, depending on the various tasks, learners employ different strategies, which indicate that learning styles could be automatic while learning strategies are optional, depending on the situation. This study considers Keefe and Monks' (1986) "Learning Style Profile" (LSP) model, because it is the product of the extensive re-examination of various learning style models and therefore contains the most comprehensive attributes by focusing on cognitive skills, perceptual response to visual and auditory stimuli and study and instructional preferences (Cassady, 2004). Furthermore, following the strategy of Amir and Jelas (2010), the work of Grasha and Reichman (1974), which explains 'the behaviour and responses of the students to the social learning environment', is considered (see Amir and Jelas, 2010).

According to Pondelíková and Pecníková (2020), the focus of the present generation on technologies is well-known due to the evolution of information communication technology. For this reason, innovation in learning is paramount. Digital learning innovation is not only essential for teaching and learning, but also to enable higher education institutions to remain competitive. Similarly, special attention should be paid to the quality of content of online teaching material, because it is not only the learning platform and methods of learning that matter, but what is actually learnt (Pondelíková and Pecníková, 2020). According to Frunză (2014), teaching styles are employed by lecturers to create a learning atmosphere for students to understand difficult concepts. Bálintová (2009) argued that lecturers play an essential role in teaching; hence, the style of online teaching can motivate, engage, and inspire students to grasp knowledge. However, there is no conclusive evidence as to what the ideal learning and teaching style via digital platforms is.

Based on the literature, the following questions have been formulated:

Q1: What are the strategic challenges faced by lecturers on digital learning platforms after the outbreak of COVID-19?

Q2: What are the challenges faced by students in terms of e-learning during the pandemic?

Q3: What are the opportunities for students in terms of e-learning during the pandemic?

2. Methodology

This qualitative study falls in a socio-anthropological paradigm, and is thus focused on exploring the research phenomenon through an examination of the embedded hidden themes (Faizan et al., 2019). This study utilised a cross-sectional research design, and the data collection interviews were conducted within a six-month period (Sekaran and Bougie, 2012; Haque et al., 2018; Haque and Yamoah, 2021). According to Creswell (2013), the sample size in qualitative studies is determined through the saturation stage. The point of saturation in qualitative studies is the stage where no indifferent response occurs, while in comparative studies the saturation point emerges when the sample size is between 25 and 40 (Haque et al., 2018). According to Francis et al. (2010), an adequate sample size in qualitative research is a minimum of 10 respondents, followed by three repetitive responses. In this study, a total of 42 lecturers and 38 students from Australia, Europe, Asia, and North America participated. By combining networking and the purposive convenience sampling method, lecturers and students at different universities in the UK, Turkey, Pakistan, Australia, Slovakia, Lithuania, Poland, USA, and Canada were approached. Moreover, the gatekeeper approach was employed to reach out to the target audience by asking personnel at given institutions to circulate the voluntary participation call. The interview guide covered background questions, open-ended questions that initiated each topical area of the interview including lecturers and students' opinions of online teaching and learning, challenges associated with the transition and personal experiences and recommendations. The data was gathered by means of face-to-face Zoom meetings. The average time taken per interview was 22 minutes. The responses were handwritten, and codes were developed using the thematic analysis, which had previously been used by Haque et al. (2018).

Content and construct validity and reliability were attained by formulating questions from the existing literature. The content for open-ended interviews was semi-structured and fine-tuned after pilot testing to increase the validity and reliability of the research instrument. The themes and nodes were formed using Attride-Stirling's (2001) strategy employed for thematic analysis in qualitative studies. The research instruments and information sheets for participants were approved together with the research ethics form. The confidentiality and anonymity of the respondents were maintained throughout the study.

3. Findings and Discussion

3.1. Demographic information

The demographic information received from the respondents is given in the first section. Out of a total of 42 respondents, there was an equal split in terms of gender thanks to the use of a purposive sampling technique. Similarly, the students were also equally split in terms of gender. Hence, we achieved 50% participation in terms of the gender quota overall. Moreover, both the lecturers and the students were from the Business faculty. On average, the majority of the lecturers had over seven years of experience, while the students were mostly in their fourth semester (Table 1).

Table 1. Demographic information

	Faculty					Students			
Gender	Male			Female		Male		Female	
	50%			50%		50%		50%	
Age (in years)	20-29	30-39	40-49	50-59	60 or above	18-25	26-35	36-45	46 or above
	2%	18%	23%	45%	22%	39%	43%	17%	1%
Experience (in years)	1-3	4-6	7-10	11-14	15 or above	1st year	2nd year	3rd year	Final year
	9%	22%	36%	5%	28%	19%	27%	21%	33%

Source: own elaboration

3.2. Thematic analysis and discussions

The results of the content analysis to generate themes were generated by analysing the data on all respondents from the nine countries as a global sample to gauge lecturers and students' views and opinions of teaching and learning via digital and technological platforms that was dramatically rolled out due to the COVID-19 pandemic. In general, lecturers' views and opinions centred around the common themes of '*handwork for digital transformation*' as a response to lockdown measures to meet the needs of their students. On the other hand, students' responses converged around four themes, namely, *'functional online provision', 'suitable teaching and learning tools for learning', 'online sessions barely worked, and e-books and other learning material were accessible*'. In a nutshell, online learning intervention via digital and communication platforms was deemed functional but not desirable by students. Comparing the emerging themes from both faculty and student stakeholders, a picture of complementarity of viewpoints seems to emerge around the suggestion that significant handwork was undertaken by lecturers to provide an e-learning environment deemed functional by their respective students.

Regarding challenges associated with the dramatic shift to online teaching that was supported by digital and technological platforms, the results of the analysis based on the interviews with lecturers portray themes such as: *'connectivity challenges*', *'engagement deficiency', 'manifest dynamic teaching style' and 'personal interaction vacuum*'. Some of the common narratives from the lecturers interviewed are presented in Table 2.

Table 2. Common narratives on the challenges of digital transformation due to COVID-19 by lecturers

"Lack of connectivity". "Students do not turn their webcams on".
"Often students are elsewhere and pretend to be in class."
"My teaching method has altered completely. I have never received such mixed feedback as I received this semester."
"I like interactive sessions. I like to be physically present in class so that I can observe students and explain things to them. I am not very fond of technology, so it is giving me a tough time."
"It is less participative. Some students are not active at all. Really difficult to engage them."

Source: own elaboration

On the other hand, results based on data from students revealed the following themes: *'internet connectivity challenges'*, *'understanding difficulties'*, *'engagement challenges'*, *'peer learning and support deficit'* and *'accentuated learning stress'*. Examples of some of the common narratives by students on the challenges of digital transformation due to COVID-19 are presented in Table 3.

Table 3. Common narratives on the challenges of online learning via digital platforms due to COVID-19 by students

"Difficult to understand some concepts, I am struggling to keep up with the pace."
"Poor internet connection is one of the biggest challenges. Due to distortion, I am not able to follow everything and therefore my grades have suffered."
"I do not feel very connected to the lecturer and my coursemates. Like sometimes I start online but instead I am distracted by other online stuff. And I find myself doing everything except studying."
"Online classes are more stressful. The teaching environment is lacking. Especially if the lecturer only posts videos and expect us to understand everything. We are not experts in technology."
"It is depressing to sit and study alone."

Source: own elaboration

In the area of teaching strategies and readiness to adapt to digital and technological transformations of study materials because of the decision to move exclusively to online teaching, the analysis of the viewpoints of lecturers revealed themes such as: *'dramatic change'*, *'encyclopaedic endeavour'*, and *'adaptability essentials'*. Some examples of the narratives from lecturers that confirm these themes are presented in Table 4.

Table 4. Strategic approach to being compatible with digital and technological platforms and adaptive agility of lecturers due to COVID-19 lockdown measures

"I have been forced to change my teaching strategies. I was not ready but there is not much we can do."
"The strategies changed too quickly. We were not ready for this sudden change. If it keeps going this way, one day technology will replace us."
"I am open to changes. There is no certainty, so I accepted it and am willing to go the extra mile."
"The style is now more a mix-and-match to accommodate the needs of students and class requirements."
"I was expecting it, yeah, and I did what the management asked me to do."
"Authority should still be maintained but I am learning to be more adaptive and participative in my teaching methods."
"For me, it was never a problem but what surprised me the most was the students' inability to cope with the technology. They are only good at smartphones but when it comes to learning tools and innovativeness they have been disappointing."

Source: own elaboration

The analysis of students' viewpoints of their learning styles and capabilities as a response to e-learning due to COVID-19 lockdown measures highlighted themes such as *'transformational learning styles' and 'adaptability as a core capability';* common narratives exemplifying these themes are presented in Table 5.

Table 5. Learning styles and capabilities for e-learning due to COVID-19 lockdown measures

"My learning style completely changed. I really had to work harder to ensure I could sit and study. Sitting in front of the PC for too long and studying was a huge ask but slowly and gradually I adapted to it."
"My learning style was modified. I will not say it completely changed but yes, I modified my strategies to learn things."
"Sure, my learning style was very much relaxed before but with the pandemic, I have been kept on my toes much more. I read regularly and I think it has made me a much more responsible person".

Source: own elaboration

In terms of changing the pre-COVID-19 learning styles as a way of making course delivery compatible with the newly adopted digital and technological platforms for online teaching and learning, the results of the content analysis reveal the following themes on the part of lecturers: *'adapt or quit', 'too quick for comfort', 'phobia of technology replacement of workforce', 'primed for change', 'expected and executed' and 'revelatory learner technological limitations.'* Examples of narratives reflecting these themes are presented in Table 6.

Table 6. Narratives pertaining to strategic management according to lecturers

"I have been forced to change my teaching strategies. I was not ready but there is not much we can do."
"The strategies changed too quickly. We were not ready for this sudden change. If it keeps going this way, one day technology will replace us."
"I am open to changes. There is no certainty, so I accepted it and am willing to go the extra mile."
"I was expecting it, yeah, and I did what the management asked me to do."
"For me, it was never a problem but what surprised me the most was the students' inability to cope with the technology. They are only good at smartphones but when it comes to learning tools and innovativeness they have been disappointing."

Source: Own elaboration

It was very interesting to observe that the overarching collective view of students regarding online learning styles and preferences could best be summed up by the embedded theme '*flexible nuisance*'. It was clear that students had a strong affinity for traditional face-to-face learning, to the extent that it appears to have clouded their appreciation of the online learning innovations introduced as part of the lockdown measures. Examples of the narratives supporting such an embedded theme that confirmed a strong desire for traditional face-to-face on-campus learning from the responses analysed are presented in Table 7.

Table 7. Narratives on students' online learning styles and preferences

"I enjoyed on-campus classes because I was more emotionally connected to lecturers. There was a more collaborative learning environment."
"The only advantage is I am relaxed. No hustle to reach campus on time. My transportation costs are lower but I miss on-campus learning. I was more connected to my fellow students."
"I am much more flexible in my learning style now. At times, there are depressing thoughts but like other things, I cannot do much about it."
"I miss on-campus class. It was fun learning on campus. Any issue and I would knock on the professor's door to ask for assistance."

Source: own elaboration

Undoubtedly, traditional face-to-face on--campus teaching in the higher education sector has given way to online teaching, using digital and technological platforms such as Blackboard Collaborate, Zoom and Teams as a response to lockdown measures (Lau et al., 2020) instituted by many higher education institutions across the globe. Therefore, more dynamic, innovative, and adaptive teaching and learning styles supported by digital technologies and information and communication technologies (ICTs) that are compatible with remote communication and interaction have emerged (Olson and Olson, 2000) and influenced the experiences of lecturers and students in Europe, Asia and North America.

To sum up the experiences of lecturers and students regarding the shift towards teaching online due to COVID-19 pandemic lockdown measures, the study uncovered storylines as provided below:

[A] Based on the embedded themes of lecturers: *"It has been a hardworking dramatic encyclopaedic endeavour to digital transformation that was challenged by an engagement deficiency and personal interaction vacuum, and as such required a manifest dynamic teaching style and adaptability to success. The process of changing learning styles was not an option but a quick mandatory process that uncovered the least expected issue of learners' technological limitations*." This above statement was crafted from 13 themes emanating from the analysis of the data from the interview with lecturers, namely: *1) 'handwork for digital transformation' 2) 'engagement deficiency' 3) 'manifest dynamic teaching style' 4) 'personal interaction vacuum' 5) 'dramatic change' 6) 'encyclopaedic endeavour' 7) 'adaptability essentials' 8) 'adapt or quit' 9) 'too quick for comfort' 10) 'phobia of technology replacement of the workforce' 11) 'primed for change', 12) 'expected and executed' and 13) 'revelatory learner technological limitations'*.

[B] A summary from the opinions, responses, and narratives of students, summed up, is best described as follows: "*Online teaching and learning has been a functional and transformative yet undesirable experience, replete with less engagement, stressful – an absolute flexible unavoidable nuisance*." The above statement was crafted based on the following nine themes drawn from the analysis of students' interview data: 1) *'functional online provision' 2) 'suitable teaching and learning tools for learning' 3) 'online sessions barely worked' 4) 'eBooks and other learning material were accessible' 5) 'engagement challenges' 6) 'peer learning and support deficit' 7) 'accentuated learning stress' 8) transformational learning styles' 9) 'adaptability as a core capability' and 'flexible nuisance'*.

It is obvious that the current crises have spurred the shift to online teaching and learning via digital and technological platforms which support flexible and adaptive teaching and learning styles. This transformation has compelled higher education faculties and students to move from their comfort zone of face-to-face teaching and learning styles to survive and thrive during the uncertain environment precipitated by the lockdown measures on a global scale. A large number of faculties have confirmed a dramatic shift from traditional instructor-led classroom activities to online teaching and learning which integrates technology and digital media, which aligns well with the work of Pondelíková and Pecníková (2020).

Furthermore, as expected with every dramatic adoption of organisational change in general (Mosadeghrad and Ansarian, 2014) and digital and technological transformation in higher education (Chan et al., 2017; Liesa-Orús et al., 2020), this study confirmed several challenges associated with the transition to online teaching and learning and the delivery thereof. The challenges uncovered on dramatic transition with limited or reduced involvement in decision making and engagement. Despite the efforts made to teach online using digital and technological platforms and the transportation cost savings due to reduced travel to and from campus, there is ample evidence to suggest that lecturers prefer traditional instructor-led classroom activities to online teaching and learning. This study supports the notion that teachers find it challenging to motivate students to participate actively. Haque (2021) stated that no one wants to be the host of a ghost session, which therefore indicates that there should be more interactive sessions during the pandemic.

Conversely, students have equally had to change their learning styles and capabilities. Although the change was unexpected, they have willingly embraced online learning as a matter of necessity, but not as a desirable teaching and learning environment in the long term. It is important to underline that students generally appreciate savings made on the cost of transport to and from campus and the flexibility offered by online learning via digital platforms and technologies.

There is unanimity among lecturers and students that on-campus traditional instructor-led classroom activities are much preferred to online teaching as they offer greater emotional connectivity and personal engagement and tutor and peer interactions. However, students acknowledged that technical obstacles, self-isolation at home, a lack of active academic involvement and engagement have led to lower participation in the collaborative learning environment. These are factors that have been shown to influence active participation in earlier studies (Bao 2019, 2020; Bao and Zhang, 2012). The emerging impact of the dramatic change in teaching and learning and the corresponding response of students confirms the assertion of Amir and Jelas (2010) that blended innovation in teaching style affects the behaviour and responses of students to a large extent.

For practical purposes, the emerging themes clearly point to the need for a practical creative toolkit (as part of strategic management) by lecturers to facilitate and improve students' online learning. The toolkit ought to emphasise the accentuated need for interactivity and in-class discussions. Other important facets should encourage break-out rooms on Zoom and other learning platforms, as students confirmed they are more willing to turn on their cameras in break-out rooms. Additionally, the toolkit must also emphasise sharing videos as pre-class content for prior watching to promote effective in-session discussion.

Conclusions

The embedded themes revealed through the analysis of lecturers' responses, views and narratives were: 1) 'handwork for digital

transformation' 2) 'engagement deficiency' 3) 'manifest dynamic teaching style' 4) 'personal interaction vacuum' 5) 'dramatic change' 6) 'encyclopaedic endeavour' 7) 'adaptability essentials' 8) 'adapt or quit' 9) 'too quick for comfort' 10) 'phobia of technology replacement of the workforce' 11) 'primed for change', 12) 'expected and executed' and 13) 'revelatory issue of learner technological limitations'.

Additionally, the content analysis output of students' responses, views and narratives portrayed the following themes: 1) 'functional online provision' 2) 'suitable teaching and learning tools for learning' 3) 'online sessions barely worked' 4) 'e-books and other learning material were accessible' 5) 'engagement challenges' 6) 'peer learning and support deficit' 7) 'accentuated learning stress' 8) 'transformational learning styles' 9) 'adaptability as core capability' and 'flexible nuisance'.

Digital transformation proved to be a useful strategic management approach for survival and thriving in challenging times. Unearthing salient embedded themes from lecturers and students' narratives, the research revealed that in times of crises and emergencies at the national or global level, higher education institutions are required to embrace a flexible approach to survive, thus reflecting the significance of long-term strategic planning and being responsive to the need of the time. Such a need amply informs a recommendation for higher education institutions to take their cue to create awareness among lecturers and students at the earliest possibility (for example at new lecturers and students' inductions) that, even following the COVID-19 pandemic, there is still a possibility of other forms of disruption that may require dramatic adaptation. It is likely that lecturers and students who are aware of such a possibility may be better prepared for such an eventuality if and when it does in fact occur. This awareness could be analogous to how aircraft passengers are taken through emergency procedures after take-off in preparedness for any emergency on board the flight. Indeed, adaptability in order to survive and thrive in a complex and uncertain environment requires higher education managers to conscientise staff, generally including lecturers and students, about the risks and uncertainties inherent in the educational environment.

The study also demonstrates major challenges associated with the shift to online learning including connectivity issues, lower student engagement and active participation, 'ghost students' syndrome, reduced emotional connection, higher self-isolation and increased stress and depression. It is highly recommended that higher education stakeholders invest in researching lecturers and students' wellbeing in the post-COVID-19 pandemic period so that the entire higher education industry is better prepared for any such future occurrences. The research also found an overwhelming preference for traditional face-to-face on-campus teaching in the higher education sector, despite the express appreciation of a functional online alternative as a response to the lockdown measures due to the COVID-19 pandemic.

Strategic Implications and Recommendations

- We conclude that strategic management practices should be incorporated, and those practices should include training sessions for the relevant parties, so they are well prepared for such situations. Adaptive-responsive practical exercises should be developed by providing simulation so that lecturers and students are more open to embracing drastic changes. This strategic move could help the institutions to attain long-term sustainability.
- We also draw on this insight to recommend that higher education mangers and policymakers should further explore the frontiers of blended learning to design a new innovative approach. This strategic approach shall be considered to take

advantage of the best of both worlds – traditional face-to-face on-campus teaching and online delivery – via digital and technological communications respectively.

- It is also recommended, as part of strategic management, that learning activities in classes (in person as well as on campus) should have higher levels of engagement. Role plays (applied drama), collaboration vs. competition challenges between teams, visual storytelling from images, elevator pitches (short advertisements lasting 30 seconds) and similar activities should be more frequently used. Through this strategic move, institutions can sustain higher levels of involvement and participation among students.
- We recommend that learning activities should be more interactive, and discussion forums rather than traditional lectures should be encouraged. As a part of strategic management, institutions should revise its operations by ensuring that lecturers develop exciting and interactive activities.
- Lecturers should design their activities that encourage students to use their webcams so that there are no 'ghost students' in the classes.
- Students should not only rely on the traditional knowledge from the literature but be open to being creative in terms of their learning styles.

The 'new normal' in the education sector has engendered changes in teaching and learning styles for the survival of the higher education sector in the face of COVID-19 pandemic lockdown measures. It is therefore further recommended that teaching and learning toolkits should be more interactive so as to harness participative learning and continually pursue the transformation of digital and information technological platforms to improve the knowledge and skills of both lecturers and students.

Limitations and future research

This study, though timely and critical, is limited in terms of the number of responses collected from a global perspective. Thus, the interview data was not sufficient to facilitate a comparative content analysis across the three regions or country-specific cases. Despite the timeliness of the study, the relatively small number interviews from a global perspective limits the generalisability of the findings across specific countries or regions. Present research considered the global outlook based on the opinions of lecturers and students of online teaching and learning during lockdown is critical, but future research could take advantage of a larger sample size to explore in greater detail the issues interlinked with the teaching and learning styles.

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