

Transitioning to online teaching and learning: a discussion of barriers faced by educators and students in higher education during a global pandemic

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The Coronavirus pandemic and the resulting interruption of global education systems in more than 195 nations affected almost 1.8 billion students at all education levels. Strict measures including immediate lockdown and social- and self-distancing measures and policies were implemented. This sudden move has had a devastating and direct impact on schools, colleges and higher education institutions (HEIs), which led to closures (Huang et al. 2020), resulting in a 95% move from face-to-face teaching to online teaching and learning (Adnan & Anwar 2020). This paper highlights some of the early educational barriers resulting from the Covid-19 pandemic by exploring them through Schlossberg et al.'s (1984) transition theory of 'moving in', 'moving through' and 'moving out' of a situation, which is in this case the pandemic.

Keywords: transition theory, digital learning, online learning, face-to-face teaching, pandemic

Introduction

The Coronavirus (Covid-19) pandemic has contributed to numerous changes across the education sector, one of which is in how lessons will be delivered. Due to the pandemic, the first phase of the transition theory, 'moving in', saw most schools, colleges and universities being closed. From April 2020, numerous higher education institutions (HEIs) opted for digital and online methods for the remainder of the summer semester (Aristovnik et al. 2020). However, the progress of online learning relied on educational technologies, digital skills, and excellent internet connectivity in the learning environment, which is a challenge for many (Agormedah et al. 2020; Tejedor et al. 2020).

Moving to online teaching and learning was challenging through the lenses of hindsight and the transition theory, yet it provided an opportunity to learn, adapt and grow. This paper presents part of the transition theory that focuses on moving in, through and out (Schlossberg et al. 1995) as students and educators engage with online learning during the pandemic. The discussion begins with a brief discussion of the pandemic and its immediate effect and the 'moving in' phase of the theory, followed by the 'moving through' phase that highlights the barriers that have challenged both students and educators. The final phase, 'moving out', allows one to look forward and seek methods to move on. Schlossberg et al. (1995) added that the coping mechanisms of individuals are firmly dependent on the strengths and weaknesses of students and educators concerning the three areas of the transition process: 'moving in', 'moving through' and 'moving out' of the situation caused by

the pandemic. Figure 1 illustrates how the phases of the transition theory work, through an integrated model defined by Anderson et al. (2012).

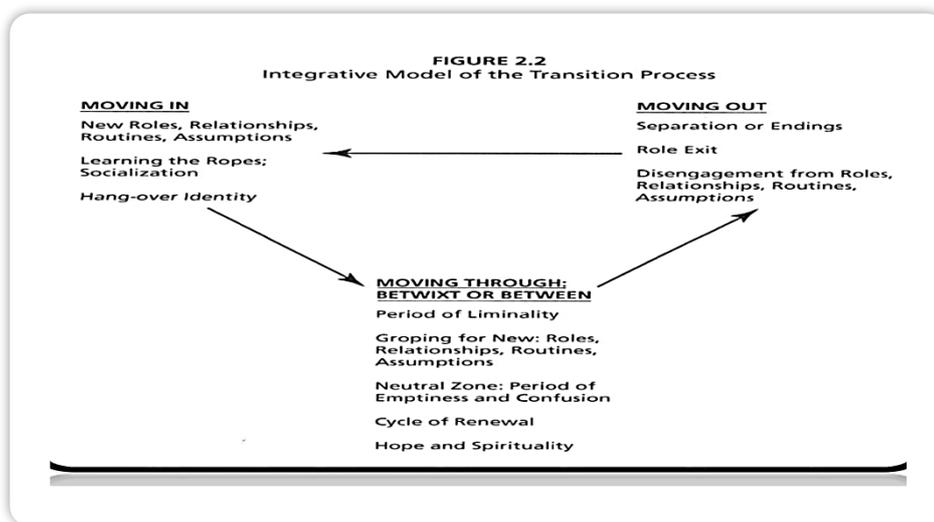


Figure 1: Integrative model of the transition process (Anderson et al. 2012, based on Schlossberg et al. 1984)

The transition theory, 'moving in' phase, supports continuous learning during this challenging time by helping students and educators adapt to their new learning environment. The notion of the transition theory is to offer and recognise the support needed and consider the anxieties caused by transition (Dalton 2009). In this case, the sudden move from the traditional form of teaching to online is deemed stressful for all participants. Online learning, in this instance, will be referred to and conceptualised as an overall method of teaching and learning with the assistance of technology and digital platforms (Agormedah et al. 2020). Online learning and teaching evolve from digital technologies and distance learning, enabling teaching and learning using the internet.

As students and educators navigated their way through the first weeks of teaching, there were a few barriers that emerged almost immediately. The rapid move away from face-to-face teaching meant that teaching staff had to provide lessons quickly and creatively for the learning and development continuation. However, some HEIs were not equipped for this transition (OECD 2020). The notion of online learning pre-pandemic was considered as a supplement to face-to-face learning. Online learning was used as an addition to face-to-face learning in blended teaching models to support students' learning (Alhazbi 2016; Godlewska et al. 2019; Lomer & Anthony-Okeke 2019). However, the pandemic has provided teaching and learning opportunities for other interactions for both students and teachers due to exclusive online teaching. As a result, universities had to abide by their government's guidance to move all teaching and learning opportunities online, except in circumstances where learning could not be completed in this manner, for example, in a laboratory and/or for those who hybrid to dual delivery when possible. In those exceptional cases, social distancing was maintained, with fewer students in the workspace.

Moving through the pandemic

Moving to online teaching and learning is not an easy decision, nor is it simple to navigate and manage. It is complex and requires expert direction to ensure that those delivering the information are comfortable and confident. Early in the pandemic, the initial feeling of many teachers and academics was one of trepidation at the thought of moving to online teaching. This demanded highly effective teaching and learning strategies that were introduced and shared across numerous sectors. This offered suitable delivery methods, creating and capturing value in the education sector (Comanet al. 2020; Dhawan 2020).

Teaching and learning engagement in higher education has been an enormous challenge as well. During the pandemic, many universities began the academic year through online teaching, capitalising on the pre-Covid knowledge of what had worked, both with online and face-to-face teaching (Carey 2020; Dhawan 2020), whether synchronous or asynchronous. HEIs faced many challenges during the lockdown period, which created the necessity to implement dual teaching and learning delivery. Hence, the hybrid that emerged was the dual delivery process of teaching and learning. Online learning systems and information technologies are vital in higher education teaching and learning. According to Isaias et al. (2020), HEIs should invest in more online devices and systems to provide new and innovative teaching and learning methods.

Technology is a significant component of learning and teaching in the 21st century. The internet has played an essential role in the continuation of higher education despite Covid-19, and has made teaching and learning accessible from home. During the pandemic, educators expressed an interest in online learning to make learning resources more accessible and transform students' learning, especially in higher education (Aristovnik et al. 2020; Tejedor et al. 2020). There were numerous options for continuous learning, including tools or platforms such as Microsoft Teams, Google Classroom and Zoom. Tejedor et al. (2020) realised that the extensive, yet now inclusive, addition of technology in teaching and learning has made teaching pedagogies more flexible and creative, which has enhanced learning. Moreover, technology is a part of the virtual learning space that supports cooperative learning and distance learning (Isaias et al. 2020).

Moving fully online or adopting a dual delivery hybrid model can change students' perceptions and attitudes towards learning. Previous studies concluded that online teaching is beneficial to students because of student-centeredness, flexibility and asynchronous and synchronous learning (Adnan & Anwar 2020; Dhawan 2020). This teaching model allows for simultaneous distribution of resources among students, despite the group size. Additionally, students have more control over the time they spend learning and when they choose to engage with online learning. In addition, online learning content can be adapted according to the students' needs (Suresh et al. 2018).

For educators, online and dual delivery (when possible) have both advantages and disadvantages. The advantages include encouraging creativity and innovation, using this opportunity to push boundaries and exploring new ways to enhance the learning environment (Egbu 2020). Such pedagogies involve the flipped classroom, which involves self-study through technology, and a more refined version of the blended learning environment (ABLE), where students are at the heart of learning. Berger & Wild (2016) identified the flipped classroom model, which reverses traditional teaching (lecture to homework) to a model that encapsulates online engagement. They argue that combining face-to-face and online engagement develops their critical reasoning skills and raises their academic standard, which differs from the traditional teaching method. In this pandemic, the idea of creating a blended environment using synchronous and asynchronous learning gives students more choice in terms of how they prefer to engage with their learning (Chaka 2020).

However, online and dual learning have negative consequences as well. These include increased workload for teaching staff in creating an active and engaging space for learning. This increased workload is somewhat explicitly underestimated, considering the capabilities of both students and teachers. During the pandemic, all these elements had been considered by senior management and had to be reconsidered, and ways explored to ensure the viability of online lesson delivery.

In most HEIs, including those in a study from selected universities in the United States and South Africa, online or dual learning has provided a platform to expand and develop new modalities for teaching (Chaka 2020). This has created a more sustainable culture towards further engagement with online learning with confidence (Martin 2020). Findings from The Research Institute of America, as reported by Gutierrez (2016), found that with adequate and appropriate technological resources, students retain 26–62% more material when they learn through the digital platforms compared to 9–11% when they learn in the classroom. Students require 40–60% less time to learn while engaging in an online platform because they learn at their own pace and have the space to reread if necessary and revisit, skip or accelerate when necessary (Martin 2020).

The Covid-19 pandemic has interrupted face-to-face teaching to a certain extent, especially in higher education. The process has enabled us to explore opportunities to enhance critical thinking, resilience and digital proficiency to achieve a more effective educational mode (Dhawan 2020). For HEIs, this could be the new normal.

Barriers for students and educators engaging with online delivery

When considering online learning barriers, several aspects of teaching and learning must be considered from two perspectives: those of the teacher and the student. Underpinning this discussion, the definition of 'barrier' will be based on that of Schoepp (2005), who defined it as

'anything that contributes to difficulties or challenges in making progress to achieve an objective. In this instance, the barrier is moving from face-to-face teaching and learning to online teaching and learning as students and teachers transition into and out of the move from face-to-face to online teaching during the pandemic.

In most cases, Pelgrum (2001) and Assareh and Bidokht (2011) found, there was limited or no experience with online teaching and learning. Before the pandemic, several writers identified barriers to online learning that some students experience (Pelgrum 2001; Schoepp 2005). The barriers to moving online, which have been discussed in these earlier works, highlighted access to hardware and technological and pedagogical engagement, which directly impacted both teaching staff and students. They concluded that specific barriers must be overcome for online learning to be beneficial through additional technical support, employment of new pedagogical technologies and improvement in the knowledge and skills of the teaching staff. This was more recognisable in preparing resources to support students and engaging with the various online applications and selected platforms associated with teaching and learning (Quadri et al. 2017). This has led to barriers that challenged the continuous education of students during the pandemic because online learning was not a priority for all institutions at the same level.

To support universities with the transition from face-to-face teaching and learning to online teaching and learning, the Organization for Economic Co-operation and Development (OECD) identified some of the challenges and barriers that universities and policy-makers have faced by outlining points to consider while supporting students with the move to online learning (OECD 2020). They noted that this transition and subsequent engagement might not be a natural progression for teachers and students. To tackle this, they recommended three points to consider while designing new teaching materials. The first was that there should be a balance between digital and screen-free activities. The second was that lectures should be balanced with increased screen-free activities to reduce the possibility of increased mental and physical health issues among students. The third was that there was a need to be mindful that not all students have the necessary devices to support online learning (Dhwan 2020). For example, some students might have only a smartphone instead of a laptop.

The pandemic has created barriers in teaching for both teachers and students. Pre-pandemic studies, which explored online learning, highlighted several barriers while moving towards online pedagogy. Balanskat et al. (2006) and Assareh & Bidokht (2011) argued that one must consider the curriculum, school resources, quality of online training and assessment for online learners. It is essential to recognise that the curriculum designed for face-to-face teaching has a different focus than that of online teaching, which is why the resources need to be different for both. Therefore, changes in organisation and structural focus are essential.

Hadijah and Shalawati (2017) and Bingimlas (2009) have also contributed to the debate about the barriers and challenges to online learning. They argued that generally teachers are unprepared or unwilling to adapt their practices due to a deficit in knowledge and experience (Scrimshaw 2004; Bingimlas 2009;). They suggested that inadequate time allotted to preparing new teaching materials (Scrimshaw 2004), a lack of appropriate textbooks, of confidence (Scrimshaw 2004; Balanskat et al. 2006; Bingimlas 2009) and of information technology (IT) competence is making the transition difficult (Hew & Brush 2007). However, once this issue is recognised and addressed, there is an opportunity to embed strategies to increase motivation and confidence in students' learning through teachers' attitudes. Teachers' attitudes towards the shift in teaching and learning can impact the motivation and confidence of their students during the pandemic (Chaka 2020).

To support this shift in teaching and learning, it is paramount to explore the barriers students face while moving from traditional learning to online learning during the pandemic. Some writers have pointed out that many students were not equipped for the move because they had inadequate IT skills and a lack of access to technological infrastructure or adequate internet connections (Bingimlas 2009; Assareth & Bidokht 2011). This deficit can be a significant barrier, as it can demotivate students, cause isolation and reduce social interaction with their peers or teachers (Yusuf & Banawi 2013).

One of the main barriers students had to face as they navigated the pandemic was the digital divide (Adnan & Anwar 2020). The move to online learning has exacerbated pre-existing education inequalities by minimising opportunities for the most vulnerable students, those without access to technology, to engage with their learning. In regions with limited internet connectivity, some governments have utilised more traditional distance learning techniques. These include a combination of educational television and radio programming and the distribution of print materials (Martin 2020; Zhong 2020).

Adnan & Anwar (2020) highlighted that online learning is successful in most developed countries. They argue that students with adequate access to technology contribute approximately 81–86% of the learning experience online in one form or another. In comparison, in less developed countries, approximately 49% of student learning is attributed to online engagement. This disparity is significantly related to the digital divide. Those students, educators and parents who are less fortunate have infrequent access to essential household services like electricity, limited access to technology infrastructure, and low levels of digital literacy (Martin 2020). Understanding and supporting students and academics involves understanding and addressing these barriers moving through the pandemic.

Dhawan (2020), who supports this new learning opportunity, argues that online learning is beneficial for students in terms of student-centeredness, increased flexibility and improved interaction. Additionally, this teaching method can offer advantages such as lesson delivery to a large group of students and adaptation of content to student needs (Suresh et al. 2018; Adnan & Anwar 2020; Marinoni et al. 2020).

However, while there were concerns before and during the pandemic, the sudden shift has presented the opportunity to address, if not all, then most of the concerns. This does not mean that these barriers do not still exist. However, they are now more transparent, and measures such as additional training, support, upgraded technology and IT support are being put in place to address such barriers (Adnan & Anwar 2020).

Tejedor et al. (2020) realised that the extensive use of technology in learning and teaching changed teaching pedagogies from traditional approaches to the most flexible method utilising technology. Technology affects virtual learning, cooperative learning, distance learning, mobile learning and learning through machines, taking away human engagement. However, it has its advantages. In most HEIs, the move to distance learning has been the opportunity to expand the flexible learning modalities, thus setting the stage for a sustained move towards more online learning in the future (Chaka 2020; Martin 2020). The option should be considered on the experiences with the widespread usage of the technology to ensure that continuity of learning during the pandemic includes the most vulnerable students. For those who have good access to technology, there is evidence that digital learning can be very effective in numerous ways.

Conclusion

Moving 'in', 'through' and 'out' of the pandemic requires reconsidering traditional teaching methods and embracing online learning pedagogy as a feasible alternative, albeit with adequate and appropriate resources. No one knows when the pandemic may end, online learning is promoted as a valuable learning medium. This paper discussed the barriers and explored the advantages and disadvantages of the transition to online teaching and learning that emerged during the global pandemic. While the pandemic has put forth numerous challenges, it has provided an opportunity for schools, universities and other educational institutions to rethink teaching and learning. While these barriers present challenges to both students and educators, there is a chance to experiment and envision new education models and teaching and assessment methods in creative and new ways.

Additionally, there is an opportunity to evaluate how students performed before and during the pandemic and appreciate learning in different spaces, allowing time for close introspection and

understanding how technology can support teaching, learning and engagement, allowing more agency and autonomous learning (OEDD 2020). Moreover, the pandemic offers an opportunity to empower teachers and students to explore technology and how online teaching pedagogies can support and encourage learning. It has enabled educators to recognise the need for further research into technology use and has pushed everyone to explore varying solutions to support students (Mark & Semaan 2008).

As we 'move out' of the pandemic or begin to live with it, there is an imminent need for more investigation. Areas of interest include educators' and students' voices, their experiences of this sudden shift in teaching and learning mediums and the challenges they faced during the transition process, moving from a traditional way of teaching to online learning.

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