


How Covid-19 taught teachers how to teach online– a case study at the Open University of Mauritius

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Highlights	Abstract
<ul style="list-style-type: none">• This paper marks the factors influencing the process of teaching online during the Covid-19 pandemic among teachers who had never used this method nor received any formal training, but yet, they managed.• It is also portrayed as a success story of what led to their resilience and why, such that it can be used as a story that encourages teachers that face difficulties in teaching online.	<p>Covid-19 marked the next year with unprecedented death tolls, millions of infected people, and the closure of almost all activities, including education. The UN 2020 report highlights that this pandemic has caused the largest disruption of education in history with a near-universal impact on learners and teachers around the world. A total lockdown was enforced in Mauritius from 19th March 2020. On the eve, the Open University of Mauritius academic staff got prepared to adopt online teaching without any time to train its 400 part-time tutors and time to think about tutor and learner coping challenges. Guidelines to conduct classes and access classes online were shared to teachers and learners respectively. The next day, the tutors were performing tasks in which most of them were not competent in. Along with teaching, they were pushed to learn different skills and methods to teach online and acquaint themselves with new tools. Yet, they did it and the syllabus coverage was not disrupted. This research was carried out with some of those part-time teachers, selected using purposive sampling from one particular programme. It adopts the narrative inquiry to gauge the driving forces that enabled teachers to teach under such circumstances, to be resilient, and to emerge as front-liners in education. The main findings indicate that it was a steep learning curve and daunting task leading to a sense of inadequacy as they successfully emerged to reach out to students and make a difference for them.</p>

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1. Introduction

When 2019 drew to its end, not many humans had imagined the devastation of their breed within the months to come. Covid-19 marked the next year with unprecedented death tolls, millions of infected people, and the closure of almost all activities. As researchers and academics worldwide are conducting a plethora of research to better understand the multipronged consequences of Covid-19, one such area is education. The pandemic has forced many educational institutions to shift to online teaching. The curriculum had to be completed; tutors and learners had to adopt online platforms to ensure that the semester is not disrupted. The concern required immediate attention and there was no time to evaluate institutions' and users' readiness. The Open University of Mauritius (OU), where the researcher is based, is an institution that

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offers courses through a blended mode, that is, students have access to the module content on the institution's Moodle platform. They are expected to self-study their manuals over the semester. For each module, they have a number of in-person face-to-face sessions that complement their self-study. This was, however, until Covid-19.

With Covid-19 hitting the island, the Prime Minister of Mauritius announced a total lockdown on 19th March 2020, and all our courses went fully online the next day. There was no time to think about how teachers and students will cope – time was limited and OU academics had to ensure that courses are not disrupted. As we were anticipating some bad news in the hours to come, on the eve we prepared ourselves to shift all face to face courses to online. But we had no time to train part-timers, which amounted to around 400. We prepared a guideline for teachers and students to enable them to understand the online teaching and learning modalities. Teachers were given a guideline on the eve about how to use Zoom for their online sessions. On Saturday 20th March 2020, these teachers were not only working alone at home, but they were working on tasks about which they might or might not feel competent. While they had to teach, they were also pushed to learn different skill sets and methods required for delivering instruction online and to use new platforms for teaching. For many, this was a steep learning curve and daunting task, leading to a sense of inadequacy as they attempted to reach out to students and make a difference for them. Yet, they did it, and this continued as we faced a second lockdown in 2021. It is therefore imperative to understand the driving forces which enabled those teachers to teach under such circumstances, to be resilient, and to persevere despite not being acknowledged as the front liners in education.

2. Literature Review

In 2019, many educational institutions had never imagined the effect a pandemic could bring – with Covid-19, there has been a resurgence in the way people behave by pushing them to re-engineer their traditional ways of doing things. The concept of change is embedded in all spheres of life, however, how prepared are we to see, accept, adopt, and succeed is dependent on many factors. With this pandemic, many educational institutions found themselves pushed to adopt new methods of teaching. These institutions have had to sidestep important strategic management functions such as assessing needs, designing, implementing and monitoring before finally adopting the online mode of teaching. The quasi-presence and use of information and communication technology (ICT) have undoubtedly had profound impacts across several areas. As such, online teaching and learning are not new concepts, but the prevalence is not the same across all educational institutions. ICT tools have thus been both facilitators and enablers of online teaching. Given that this shift implied a change in a process, the roles of leadership and employee readiness are crucial to implementing a change. This study focuses on the micro-perspective of how employees view and lived the change and what the role leadership plays. This study used content, context, and process factors of employees' reactions derived from Oreg et al. (2011) model of organizational change.

When it comes to acceptance of technology, the use of technology in teaching, and online teaching, the literature is flooded with theories that explain these concepts. For instance, the Technology Acceptance Model (Davis, 1986) has been widely used in studies that investigate e-learning and is the most used model in studies of users' acceptance of technologies (Cigdem & Topcu 2015). It is designed to measure the adoption of new technology and revolves around variables that measure perceived usefulness and ease of use as well as attitude towards the use of technology. As much as it has received critical acclaim and acceptance, it still has many limitations and the model has been further extended to include those variables that the original one does not address. The Covid-19 pandemic has further resulted in several studies around e-learning adoption issues in higher education during the pandemic (Almaiah et al., 2020; Vladova et al., 2021). One common aspect of these models is the demography and attitude of respondents when it comes to acceptance of technology.

Another important factor to thus understand how people face changes is their attitude. As put forward by Sokal et al (2020), understanding the nature of teachers' attitudes toward change (TATC) is essential to understanding their intentions to carry out desired behavior. One theory highly acclaimed in this field is the Theory of Planned Behaviour (Ajzen, 1985), and the following works that emerged as a response to this theory to explain people's behaviors, and attitudes when there is a change in a process. One example is the work of Vakola and Nikolaou (2005) who acknowledged patterns in a person's thoughts, feelings, and behaviors toward change in an organization. Kin and Kareem (2018) recognized three dimensions when defining attitudes toward change in teachers, and these are belief, cognitive and behavioral. These can be defined as intrinsic factors explaining people's behaviour while experiencing a change.

Nevertheless, there is a dearth of studies about the factors that enable teachers to use technology in teaching at a time when there is neither room to consider what drives acceptance and adoption. This research therefore also borrows from the concept of resilience to understand how people react when they are confronted with uncertainties and have to perform their duty under extenuating circumstances, and what drives them to sustain this attitude. The concept of resilience is derived from the disciplines of psychiatry and developmental psychology. Resilience is a psychological condition that entails a person's ability to handle stress, complication, and adversity (Hobfoll et al., 2003). Resilience is also a construct that has been operationalized in a variety of ways, but most definitions are based on two core concepts: adversity and positive adaptation. However, research about teacher resilience is a relatively recent area that provides an understanding of what enables teachers to persist in the face of challenges and offers a complementary perspective to studies of stress, burnout, and attrition (Beltman et al. 2011).

This leads to the work of Kin and Kareem (2018) who explained teachers' attitudes toward change and they argued that "cognitive responses to change are defined as teachers' beliefs about the significance and necessity for change, and the extent of how school change would benefit them personally and in the context of the organization. Affective responses to change are viewed as teachers' feelings about the change, particularly the feelings linked to satisfaction or anxiety about the change. Behavioral reaction to change refers to the actions for or against change i.e. the extent to which teachers would support or resist change." Very often, when people are confronted by the unknown, the response can be that of fright, flight, or fight. Resilience thus relates also to inner strength and action that supports action to overcome adversity. These aspects hence provide a direction in understanding how teachers teach under stressful conditions.

This study is therefore theoretically anchored on theories of organisational change, attitude and behaviour in technology acceptance and, finally, the concept of resilience to gauge how teachers navigated during the unprecedented situations and adversity following Covid-19 to successfully deliver their teaching.

3. Significance, applicability, and interest of this research

Education in the Mauritian public and private tertiary institutions have mostly been dominated by traditional and conventional face-to-face methods. When the island was hit by Covid-19, most of the universities had to freeze all their courses and students faced many uncertainties. The Open University of Mauritius (OU), on the other hand, uses the Open and Distance Learning approach and offers courses through the blended mode, which is a mix of synchronous and asynchronous. It was decided that in the event of a lockdown, which seemed to be coming imminently, teaching will shift to online with immediate effect. The academics and technical team had one day to choose the most convenient online platform and devise guidelines for tutors and students. As anticipated, the country was under lockdown the following day and OU did not freeze any course and shifted online immediately to continue the semester syllabus. Yet, how the tutors managed to successfully conduct their courses with the prevailing stressful conditions remains an untold story.

Although it is expected that tutors be ICT literate, there is a difference between literacy and the ability to teach online. The teachers in Downing and Dymet's (2013) study reported a lack of confidence and

competence regarding the required technological skills to teach online at the beginning of the transition to online teaching. This type of emotion is therefore believed to be a challenge, especially for those who have never been exposed to this setting. Covid-19 has been like a whirlwind for educators who have had to show immense resilience while balancing the unanticipated changes to their work and home lives. Students depend on their teachers, and in such situations, the teacher had to lead the show to ensure that students can gain the knowledge required. Such research is therefore eye-opening and serves as an example that resilience can indeed make possible what seems to be impossible. The significance of the narratives is twofold: contributing to the literature on resilience and inspiring teachers and educational institutions to persevere in times of uncertainty. This qualitative research also answers the question of what we learn from these rapid changes and adaptations in new forms of teaching during the early Covid-19 lockdown to devise measures in higher education in case of future potential public health crises.

4. Limitation

- a. This study was carried out among a particular university that has a different teaching approach and the findings derived cannot be generalized.
- b. The teachers concerned have been taken from a sample of university-specific pool who teach mostly social science subjects and their views are limited to experiences around such subjects.
- c. This is a cross-sectional study and the findings are based on the experiences during that specific point in time.

5. Aims and Objectives

In times of uncertainty and stress, the way one works is not the same as compared to a normal condition. When Mauritius went into lockdown for the first time, there were many uncertainties and most people found this new way of life problematic. How to buy food, how to get access to health facilities, what about the school, there were thousands of questions in the mind of everyone. Among these uncertainties, OU teachers were expected to immediately shift to online teaching. It was not the time to think about the learner's and tutor's preparedness, ability, and all other issues associated with this new mode of teaching and learning—the process had to continue. This study is aimed at understanding how OU teachers adapted to this new normal under abnormal conditions. The objectives on which this study stands are to: -

1. Examine the challenges teachers encountered to perform their job as online teachers.
2. Describe the internal and external factors enabling teachers to cope with online teaching.
3. Explore the emotions and attitudes associated with the different encounters which affected the teaching process.

6. Methodology

This research study has been defined by an interpretive paradigm and a narrative inquiry methodology. It unravels how the sudden Covid-19 outbreak led tutors working at OU to the forced adoption of online teaching, the different vulnerabilities they faced, and what factors contributed to their resilience. To discover reasons for observed patterns, especially the invisible or surprising ones, qualitative designs are needed (Busetto, L. et al, 2020). Therefore, guided by the philosophical assumptions of interpretivism, this study considered the teachers employed during the February 2020 semester to make sense of how they have experienced online teaching amid the pandemic subjectively. To gauge and analyze the factors that contributed to a sustained course delivery by tutors, the narrative inquiry is used. Narrative inquiry is a form of qualitative research in which the stories themselves become the raw data. Narratives provide insight into people's thoughts, emotions, and interpretations, thus an important way to make meaning from experience (Polkinghorne, 1988). The aim of narrative inquiry is therefore not to find one generalizable

truth but to ‘sing up many truths/narratives’ (Byrne-Armstrong 2001). The Interview method is used to gain insights into the person’s subjective experiences, opinions, and motivations – as opposed to facts or behaviors (Hak, T., 2007).

Once the research approach and method were finalized, the next step was to choose respondents. One aim of qualitative sampling is all variants of the objects of observation that are deemed relevant for the study have to be present in the sample. To meet this aim, purposive sampling was used and the selection criteria ensure that the sample consists of teachers with different demography, subject, and level taught, class sizes, ICT conversant, and previous exposure to online teaching/learning environments. As OU mostly offers social science courses, one particular program was selected – Social Work and five tutors were selected ensuring that they met the requirements for this research. The interview method was used which was guided by the Mishler model (1995), namely, the “imposing the story” method whereby the participants are given guidelines as to what should be covered in the story so that salient data is produced, by giving them the liberty to add their inner feelings. Participants thus unfolded their stories which were audio-taped with their consent. Once data was gathered, an analysis of the narrative was used to make sense of those data. While the narrative analysis relies on accounts that are analytically treated as whole units rather than fragmented into coded categories as evidenced in other qualitative approaches (Riessman, 2008), analysis of the narrative allows the researcher to make sense of the stories (narratives) of the participants. Given the scope and objectives of this research, an analysis of the data was carried out, allowing the researcher to come up with themes that emerged from these stories. Guided by what Riessman (2008) argues narrative analysts should, that is, ‘strive to preserve sequence and the wealth of detail contained in long sequences’, the content was analyzed not in fragmented parts, but as a whole, keeping the essence in the story. Based on the content and emotions driving the narratives, each story is resumed in one sentence.

7. Findings and Discussion

When the closure of all schools and universities was announced due to the pandemic of Covid-19, and OU maintained that teaching will continue online, the majority of teachers were mostly anxious about how things would be. Fear of the unknown is something common across all domains of life. However, how one responds in the face of the unknown, coupled with adversities, is what ultimately drives that person to overcome all barriers and succeed. The stories revealed that for many of them, there has been the forced immersion into technology-enabled forms of learning. Al-Fudail and Mellar (2008) came up with the word “technostress” which describes the state of teachers who were required to use technology in their teaching but perceived neither internal nor external support to do so successfully, which these teachers felt at the very beginning. As the teachers had never been exposed to an online teaching environment, they were apprehensive and stressed.

Each of their five stories unveils how the teachers reacted to this new form of teaching and how they managed to survive this new venture. At that time, it was clear that they will be at the forefront to deliver courses, but how? As the scope of this paper does not allow the full story, some salient sentences are presented in Table 1 that emerged in their stories. The sentences have been coded to later resume the story in the form of a title that describes each story narrated. While people narrate a story about a lived event, the researcher can also gauge third emotions associated with their narratives. Therefore, lastly, the driving emotions and attitudes that the author could make out during the narratives are presented.

Table 1.

Coding and interpretation of data

Teacher	Salient sentences	Codes	Resuming the story	Driving Emotions
1	I was worried how to continue teaching through the internet, does it really work.	Anxiety Fear of the unknown	Together challenges can be overcome	Determination
	A thankful note goes to the staff of the University because they forwarded precise details	Institutional support		
	I had to learn how to create an account and share my screen and try means and ways to succeed.	Learning Perseverance		
	I knew I had to do my best for my students.	Intrinsic Motivation		
2	Can be stressful leading to physical ailments such as migraine and poor posture.	Worry for health	Accept and move on	Confidence
	Digital learning promotes higher flexibility as the same can be conducted from anywhere and this is the new normal.	Hope Acceptance		
	Technical issues can occur anytime and hence result in disruptive lectures.	Technical problems		
	Option of administering online quizzes to ensure participation of the class.	Engagement		
3	Not sure whether students were really here and following.	Isolation	Defeating challenges by diving deeper	Curiosity
	University believed in my competencies, so I had to do my best to deliver.	Intrinsic motivation		
	I had to take time to understand how Zoom works, acquaint myself and learn	Learning Unveiling own talents		
	Happy that my students managed to understand although the subject involved mostly numbers and this online teaching was not the best approach	Sense of fulfillment Navigate through uncertainty		
4	I was very worried, as I was not familiar with this whole environment.	Anxiety Fear of the unknown	Where there is a will there is a way	Accomplishment
	When I saw that most of my students joined my online session on the first day, I knew I had to be at my best to support them	Intrinsic motivation		
	I browsed a lot to learn how to teach online and this really helped me and even the university staff were always responsive to my queries and this encouraged me	Learning Institutional Support		

	Happy that almost all my students joined all the sessions	Feeling triumphed		
5	I know there is no other option and I had to adopt this new method of teaching despite my anxiety	Accepting the unknown	Complicated but possible with the required resources	Enthusiasm
	Sometimes I felt it is not working but I did not stop. I looked for other ways to make sure I deliver to my best	Active coping		
	I phoned my colleagues to see how they are doing and we discussed about best practices	Instrumental support		
	Staff at OU were always present to respond to queries, which made this difficult journey less difficult.	Institutional support		

Teachers are used to being in contact with their students but this pandemic caused a separation from their students as well as their colleagues, resulting in a sense of isolation. When the lockdown was announced, along with changing the nature of their work, teachers felt apprehensive how to manage the change – lockdown and online teaching. The sense of isolation and loneliness arising from this condition is known to cause teacher burnout. It can be deduced from the findings that although they were confronted with an unknown situation, the ability to persevere rests a lot on how they perceived that change and what they did to survive it. According to Maslach and Leiter (2016), burned-out people often feel exhausted and overwhelmed which reflects an uneasy relationship between people and their work. But when burnout is counteracted with engagement, exhaustion is replaced with enthusiasm, bitterness with compassion, and anxiety with efficacy. This is reflected in the findings, especially by the emotions that led to the positive attitude, that when confronted with uncertainty, people can indeed accept and adopt the change. Teachers recall the feeling of enthusiasm when the first online class was successful, pushing them to go for the next.

According to Berger (2020), people who do not believe in the reasons for the new behaviour or are suspicious of them are more likely to resist them. Similarly, Fredrickson (2004) observes that a subset of positive emotions promotes the discovery of novel actions and social bonds, which serve to build individuals' personal resources concluding that positive emotions fuel psychological resilience. This is further evidenced in the work of Fredrickson's broaden-and-build theory of positive emotions which contributes to the conceptual basis for understanding the resilient qualities of teachers who are doing a job that is itself emotional by nature. Key personal attributes that built resilience included altruistic motives and a strong intrinsic motivation for teaching. These teachers were driven by their duty toward their teaching vocation, which also needs compassion. As put forward by Nieto (2003), teaching is an intellectual endeavor that involves love, anger and depression, and hope and possibility, which is further consistent with the literature that emotions can help in the face of adversity. Stories of those teachers revealed that they were conscious of the syllabus coverage and the anxiety of their students. So, they saw this new form of teaching as a means to self-educate themselves on how to teach online, instead of treating it as a barrier.

Martin et al (2017) reported that faculty support has been identified as a key indicator of quality online learning and has been identified as a critical factor for successful online learning (Daniel & Uvalic-Trumbic, 2013). This is further evidenced in the teacher's story where they acknowledge that the support that they have received from the institution has been vital to supporting the challenging task they had.

8. Summary of main findings

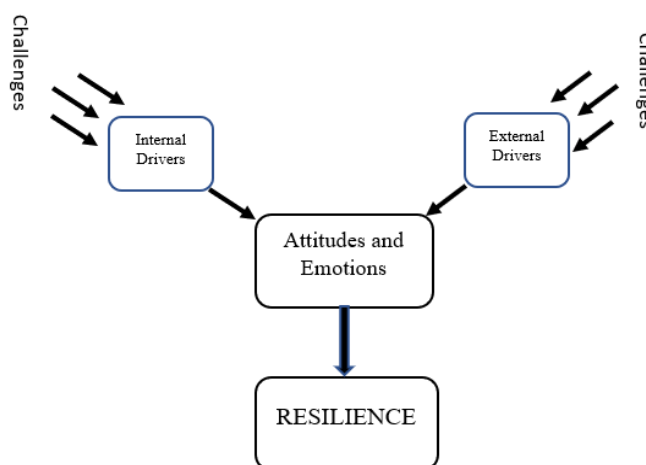
The main findings are summarised in the table below: -

Table 2.

Main findings

Challenges	Anxiety, Fear, Health worries, Isolation, Technical issues
Internal drivers	Learning, Perseverance, Intrinsic Motivation, Hope, Acceptance, Engagement, Intrinsic motivation, Learning, unveiling own talents, Sense of fulfilment, navigate through uncertainty, Institutional, Support, Feeling triumphed, Active coping
External drivers	Support from staff, Quality support, Institutional support
Emotions and Attitudes	Determination, Confidence, Curiosity, Accomplishment, Enthusiasm

Using these findings, a comprehensive resilience framework is proposed: -



9. Recommendations and Conclusion

When an institution transitions from face-to-face to online teaching, it is the teachers who are at the forefront of that change. When a change occurs abruptly and pushes employees towards the unknown, internal and external mechanisms help to counter resistance and promote acceptance. In this study, resilience is shown to emerge as a concept that facilitates a change amidst an abnormal condition. Resilience is a psychological concept encompassing several dimensions such as overcoming diseases (Denz-Penhey and Murdoch, 2008), nursing duties (Polk, 1997), and positive adolescence (Haase, 2004) among others. All related research shows that it is achieved both through internal and external sources.

As put forward by McAllister and McKinnon (2009) in their research about resiliency in the health sector, resilient clinicians ‘could be encouraged to share lessons from their experiences for the benefit of the future workforce through dialogical activities such as shared storytelling at seminars and conferences and through publications’, this research paves the way to encourage researchers to showcase success stories of teachers at institutional, national, and international level so that these insights can serve as internal drivers to build positive attitude during uncertainties, which can in turn build resilience in teaching.

Therefore, it is important to provide opportunities that give individuals access to both environmental and personal resources that develop their resilience in meaningful ways. This can take the form of workshops with teachers that target to build resiliency through: -

1. Identity search in the context of uncertainties and leadership skills that are required to develop and allow identities to evaluate in the wake of adversities.
2. Coaching by role models who can prompt teachers to their capacity to cope and develop critical and creative thinking.
3. Sharing insights from both students and academics who show resilience so that these can be discussed, reflected, and practiced.

As a concluding note, across nations front-liners (emergency-area staff including those in the health and national security), were thanked for the job they did, this paper is a tribute to all the teachers who are working relentlessly to produce these very front-liners.

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