

The COVID-19 Effect on Mauritian Higher Education

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Abstract

The outbreak of the COVID-19 pandemic was unexpected and has utterly revolutionised the education system. More fundamentally, COVID-19 is causing all higher education institutions (HEIs) to challenge the deep-rooted conception of how, when and where to deliver education and proving how yesterday's disruptors can become today's lifeguards. While many traditional or campus-based institutions once viewed online education as a threat or as valueless and of poor quality, it has come to their rescue. The impact has been transformative and dramatic as academics are forced to find workable, fast and effective solutions for online movement, remote teaching, and lifelong learning using digital platforms while at the same time, maintaining the same depth of engagement they had with students in a classroom setting. The rising popularity of online education has resulted in educational institutions having an extraordinary potential for long-term cost saving and the ease of scaling fuels ongoing investments in online education by all HEIs. During the pandemic, the online movement has made academics more adept at handling the technology and digital age devices for lifelong learning and can now help students learn virtually. This study investigates how academic staff at Mauritian HEIs are coping during the COVID-19 pandemic. The data was collected using online questionnaires distributed to academic staff of four HEIs. Results indicate that 85.7% of respondents adopted the contact-based mode prior to the pandemic, and 80% moved to the online mode during the pandemic and 57.1% assumed they would move to blended learning post the pandemic. The most

popular digital tools adopted by these academics, to support their online teaching and learning process during COVID-19 were Zoom (66.7%) and Google Tools (52.4%) The percentages clearly show that respondents used more than one digital tool. Email (65.2%) and WhatsApp (72.3%) were the most popularly adopted communication channels with and among students, during the pandemic. While there were no significant results in respect to challenges faced whilst working from home, the sudden shift caused increased levels of stress and anxiety stress for respondents.

Keywords: online education, digital learning, higher education, academic perceptions, transition, Mauritius

Background

COVID-19 is a new infectious virus, detected in December 2019 in Wuhan, China. World Health Organisation (WHO) declared the Coronavirus outbreak a Public Health Emergency of International Concern in January 2020 and a pandemic in March 2020. (WHO 2020) In the first instance, Asia was the centre of the initial outbreak of COVID-19 and spread in Europe and North America and other countries. (Johns Hopkins University 2021). US, India and Brazil have confirmed the highest number of cases of COVID-19, followed by France, Turkey, Russia and the UK. (BBC News 2021) As at 13 May 2021, it is reported that there were around 161,328,826 million confirmed cases of COVID-19, including 3,349,171 million deaths globally and 139,129,669 recovered (Worldometers 2021). The global trend at the beginning of Covid-19 pandemics and the impact on education are depicted in Table 1. Africa has recorded more than 4.6 million cases and more than 120,000 deaths. South Africa is worst affected with nearly 1.6 million cases on the continent. (BBC News 2021). From March 2020 to May 2021 (between two different waves), the island of Mauritius recorded 1,274 coronavirus cases with 17 deaths and 1130 recovered cases (Worldometers 2021). The Coronavirus crisis has affected nearly every sector of the global economy (The Economist 2020) and Blin (2020) suggesting that the pandemic is gaining momentum in Africa. Mauritius, although only a dot on the world map, has not been spared from this pandemic. The island was (at the time of the study) under national confinement since 20th March 2020 followed soon after by the imposition of a curfew on

24th March 2020. The impact on the country has been serious with notable effects. In Mauritius, the higher education institutions (HEIs) have shown dedication to supporting students during COVID-19, thus shaping the ‘new normal’ in education. The golden rule for any Mauritian university during the pandemic, was to continuously empower and transfer knowledge, but how so during a period marked by lockdowns and social distancing? Thus, the Mauritian HEIs have been continuously striving to educate students on how to use modern Information and Communication Technologies (ICT) to support their learning process during lockdown and travel bans. In some of the institutions, campus life is unlikely to return to normal but with the aid of technology, these institutions have almost instantly adapted in order to survive and meet students’ needs, despite facing many challenges in the distance learning environment.

The global crisis is forcing HEIs around the world to confront long-standing challenges in higher education (HE). Teachers have a duty to educate students and to this end, several global initiatives by HEIs were adopted to sustain the teaching and learning process during this unique and unprecedented period. Digital learning, Open Educational Resources (OER) and online education has provided a way out for the education sector.

This urgent study into the understanding and experiences of academics and learners in the context of the COVID-19 pandemic is significant and unique. This pandemic has ironically facilitated the promulgation of webinars, online courses, online tutoring, e-assessment and has transformed the modes of learning in the education sector. Now, it is a reality that advances in technology have helped HEIs to further enhance the provision of open and distance learning (Appavoo *et al.* 2018).

Table 1: Global Trend of Covid-19 and Education Impact

Timeline Covid-19	Impact on Education
26 January 2020	China, first country, instituted measures to contain the Covid-19 outbreak. China extended spring festival holiday and became first to close all schools and universities.
4 March 2020	22 countries on 3 continents had enacted preventive measures. Temporary closure of schools and universities. 290.5M students were globally affected and supported with distance learning programmes.

5 March 2020	Around 233 M students affected, followed by 16.5 M in Japan and 14.5 M in Iran. This means that majority of students were affected.
10 March 2020	1 in 5 students worldwide staying away from school while another 1 in 4 was barred from HEIs.
13 March 2020	49 countries closed schools. By 16 March 20, this figure has increased to 73 countries.
19 March 2020	50% of students worldwide affected by school closures, corresponding in 102 countries and 850 M children and youth
20 March 2020	Over 70% of global students impacted by school closures, 124 countries (including Mauritius, 504 cases, 456 recovered, 10 deaths in the first wave)
27 March 2020	Nearly 90% of the world's student population was out of class.
29 March 2020	More than 1.5 billion students globally affected (representing 90%)
Mid-April 2020	Around 1,725 billion students affected across 192 countries (representing 99% world's student population)
30 September 2020	1.077 billion students affected (representing 61.6%), 72 countries re-opened schools and universities.
10 May 2021	More than 158 million confirmed cases and 3.2 million deaths across nearly 200 countries

Sources: UNESCO (2020), Covid-19 Educational Disruption and response World-wide statistics (2020); World Health Organisation (2020) WHO Coronavirus Diseases; Johns Hopkins University, National Public Health Agencies as at 10.05.21.

Study Aim

This immediate and dynamic change brought about by the COVID-19 crisis is unparalleled in the academic literature where academic staff were 'forced' to adapt to the digital age almost immediately, so as to ensure millions of students worldwide could continue with their studies (Ledeman 2020). Most HEIs had plans to strengthen their digital footprint in the next decade or so. With this

change, this paper looks at the perception of academics and the effects of the disruption from the Mauritian HE perspective with the following aim of

- understanding academics' preferences of technology to support online teaching and assessment;
- determining academics' experiences with the shift to a forced 'work from home' situation; and
- investigating the general impact of the pandemic on academics.

Literature Review

In Mauritius, due to the widespread of Coronavirus disease, both the school and university semester were disrupted. In a short time period, school teacher and academics had to move to online teaching by sitting in front of a computer screen and their students have to stay at home and take the courses through the internet. All universities' carefully crafted syllabi and years of curriculum content were suddenly shifted to fully online as dormitories closed, lectures discussions and even assessments were run through Zoom, Google and other online platforms (Lee 2020). Technology has its roles in the life of an academic. According to authors like Madhavaiah *et al.* (2013), technology has become very important in academia as it promotes communications and learning and appears to improve students' intelligence levels. Several authors such as Chen and Bonk (2008); Usluel and Mazman (2009); and Maro (2008) have identified various types of educational technologies which are being used in the education sector by academics. The acquaintance with the internet technologies is also a strong predictor of the acceptance of open distance learning (Liaw *et al.* 2008). The extensive use of various educational technology and modes of communication during lockdowns has been one of the most important decisions for HEIs and has influenced them in terms of, 'the methods used to deliver courses to students', the 'interaction between students and educators' and the facilities or support 'students gain access to learning content' (Wiid *et al.* 2015, p30). Hussain and Safdar (2008) described that technology allows academics to make maximum use of their time, coach students, identify students' problems and helps them with their academic activities. It has been observed that the use of systems for open distance education, student blogs, wiki groups, chats and instant messages on WhatsApp or other online tools

have become grafted onto traditional systems used at universities (Ketterl *et al.* 2009). During this COVID-19 pandemic, many universities around the world have resorted to the use of technology and have adopted open distance learning. However, the COVID-19 effects on Mauritian HEIs have been highlighted as follows:

- All HEIs were in lockdown, causing various, sudden physical and social disconnection between the student and the university (including resources such as the library), the student and the teacher, students and other students.
- HEIs were severely hit by COVID-19, resulting in the loss of foreign students.
- HEIs have adopted new educational protocols in a very short period of time in order to sustain Teaching and Learning (T&L) for existing students. Therefore, academics have changed their teaching and assessment strategies.
- Academics and support staff had no option except to immediately adopt teleworking, where possible;
- HEIs have relied fully on technology and on the internet during lockdown in order to run all courses online.
- HEIs have moved to online learning, this immediate shift has entailed a radical change in the business model, with the potential for a broader customer base but lower fees (*Economist* 2020);
- Some HEIs have postponed examinations while others have changed to a more flexible mode of assessment by the move to virtual examinations and the postponement of intakes.
- The domestic student applications are likely to remain steady in the short term, but campus life will not completely return to normal. HEIs are under pressure to offer value-for-money with regards to courses and student support.
- A change in educational culture, shifting to the ‘new normal’ in the education system has been seen.
- The lack of social interaction between students and academics during confinement has led to demotivation.
- There is more opportunity to recourse to open educational resources, Massive Open Online Courses (MOOCs) and free online platforms.

- The HEIs will in all likelihood adopt the use of blended learning post COVID-19
- This shift has exposed universities to more external competition, with only prestigious institutions likely to capture a large market share of students.

Although the Massachusetts Institute of Technology (MIT) in Cambridge has been offering courses online for free since 2002, most actively teaching academics were unprepared for online teaching and had to devise ways of quickly moving their materials online when the pandemic hit (Witze 2020). Eady and Lockyer (2013) stated that academics have the opportunity to design learning experiences which are meaningful with the help of technology. By using technology appropriately, academics are able to design learning experiences that will be beneficial to students. On the other hand, Jhuree (2005) supports the previous authors by stating that technology creates a motivating learning setting in which students have the opportunity to be engaged with the course content, therefore making the students more interested in learning. This is the case as technology enables the course content to be more challenging but easier and motivating for academics, especially during the COVID-19 pandemic. Although it was time consuming and challenging, the academics were obliged to cope and take charge of the T&L process across all universities. Course content can include several types of media – such as images or even games and this creates the interaction between the student and the course content, especially in the context of an open learning environment (Courville 2011). Therefore, technology shifts the educational process from being passive to active and interactive. During the global emergency, this has been a ‘blessing in disguise’ for both the academics and students.

The choice of an effective educational technological infrastructure by academics is essential in bridging the distance between the learner, the university and the provided learning material, and to embed social synergy within the learning environment, thus making learners more interactive and not just passive recipients of information (Filippidi *et al.* 2010). Technology also allows for the creation of an online platform where students can discuss topics either among themselves or with their teachers and therefore work collectively.

The major characteristic that metamorphosises the conventional learning environments to the Open and Distance Learning (ODL) systems is

‘the degree of technology usage’ and this has transferred the control, trust and duty of the learning process to learners, providing them the chance to learn anywhere, anytime. This paradigm ‘shift of control of the learning process to learners seems to positively influence their learning effectiveness’ (Chou & Liu 2005:69).

Groff (2013) also mentioned that technology creates the concept of an online learning environment where students can study from any part of the world. There is the opportunity for students to have access to several learning materials on the internet even if they are not physically present in classes. This is supported by Jung (2008) who states that with the increased use of technology, the quality of education is improved and students are able to learn at times and in places that suit them, thus decreasing the gap of reaching students in remote and underdeveloped areas. . Hussain and Safdar (2008) asserted that technology allows academics to make maximum use of their time, coach students, identify problems of students and help them with their academic activities. Some subjects are more difficult to understand and through the use of technology that can be used to create a virtual setting, academics can identify the weaknesses of the students from their feedback. During the crisis season, Academics have customised their teaching methods to ensure students understand content better than in traditional classrooms. Furthermore, Grinager (2006) explains that technology can assist academics as part of their own professional development, and therefore improve their teaching. COVID-19 acts as a spur to blended learning and most of the conventional institutions have become open to the idea of moving at least some of their teaching online. According to Grinager (2006), during online teaching, teachers can have more time to work with a small group of students or being also available to cater for individual attention. The teachers can even customise their teaching method to make students understand better than in traditional classrooms.

Theoretical Background

The Self-Determination Theory (SDT) relates to motivation in the process of teaching and learning. The SDT depicts a significant difference between two motivational issues in the context of the continual running of HEIs despite the lockdown: *why* versus *what for*. In this context, *what* is the purpose of HEIs’ activity during confinement? And *why* do they want to achieve this goal? *What*

are the reasons for trying to achieve this goal? (Lens *et al.* 2008). Furthermore, SDT encompasses three human needs; *autonomy* (e.g. by providing students with choices in their content, activities or demonstrations of learning), *competence* (the need to demonstrate a level of mastery in an area and being recognised for a specific expertise) and *relatedness* (the need for caring relationships with others which is fundamental in the social constructivist setting) (Deci & Ryan 2008; Deci *et al.* 1994). Many factors contribute to the satisfaction of these needs, but the most important is the academics' style of engaging students in the open and online education environment. This study looks at the extent to which academics are motivated to shift into this new mode of working from home (teleworking) and is based on the SDT framework which demonstrates a deep understanding of the attitude of individuals towards motivation (Gagné & Deci 2005).

Methodology

The focus of this study was on academics in HE in Mauritius. An online questionnaire was developed to gather primary data. The questionnaire was disseminated through direct email invitation to academic staff from within the universities/institutions by the directors of each institution. The methodology adopted a mixed-method approach gathering both qualitative and quantitative data. Quantitative data focused on usage and adoption of technology for teaching, and assessment, prior to and during the pandemic. For the purpose of this paper, only the quantitative findings will be presented. The qualitative data will be discussed in a subsequent paper. A total of 37 questions were asked with 11 on demographic data and 16 requiring a rating on a scale. Data collection was open for a period of four weeks during lockdown. The online survey took approximately 15 minutes to complete and was anonymous. The final sample was 21 academics across four Mauritian HEIs (no academics participated from the 5th Mauritian HEI which was selected for the study). While the results are valid, the researchers are cognisant that these results cannot be projected onto a population since the sample size is too small.

Data were analysed using the statistical package, SPSS v 25. Tests used in the analysis include Frequencies were represented in tables or graphs; Chi-square goodness-of-fit-test – a univariate test, used on a categorical variable to test whether any of the response options are selected significantly

more/less often than the others; Fisher’s exact test – to see whether a significant relationship exists between two variables represented in a cross-tabulation; Binomial test – tests whether a significant proportion of respondents select one of a possible two responses; Wilcoxon signed ranks test – tests whether a mean rating score is significantly different from the central score of ‘3’ on a 5-point Likert scale. The current research forms part of a broader study on the impact of the COVID-19 pandemic on academics at HEIs. Ethics approval was received from the University of KwaZulu-Natal, South Africa as per Protocol Reference Number HSSREC/00001284/2020. Participating Mauritian HEIs provided gatekeeper consent permitting the researchers to distribute the questionnaire to their academic staff.

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Discussion of Findings

A total of 21 valid responses were received in this study from both public and private Mauritian HEIs. The demographic distribution of the respondents is summarised in Table 2.

Table 2: Summary of Respondents’ Demographics

<i>Variable/ Categories</i>	<i>Frequency (Percent)</i>	<i>Variable/ Categories</i>	<i>Frequency (Percent)</i>
Age (years)		Experience (years)	
20–30	3 (14.3%)	1 – 5	8 (38.1%)
31–40	11 (52.4%)	6 – 10	5 (23.8%)
41–50	4 (19.0%)	11 – 15	4 (19.0%)
51–60	2 (9.5%)	16+	4 (19.0%)
>60	1 (4.8%)	Institution Type	
Gender		Private	4 (19.0%)
Female	10 (47.6%)	Public	17 (81.0%)

Male	11 (52.4%)	Academic Role	
Qualification		Lecturer	16 (76.2%)
Undergraduate degree	1 (4.8%)	Senior lecturer	3 (14.3%)
Postgraduate degree	20 (95.2%)	Associate professor	2 (9.5%)
		Tenure	
		Permanent	20 (95.2%)
		Contract	1 (4.8%)

The respondents were spread ‘equally’ across male/female and the majority of them (52.4%) were aged 31–40 years. Almost all respondents (95.2%) held a postgraduate degree. Lecturers (76.2%) held the highest participation rate, with 38% of the respondents having more than 10 years of experience in academics. The majority (95.2%) held permanent tenure.

To understand the effect that the COVID-19 pandemic has had on the primary teaching method adopted by these academics, the next question focused on the three dominant teaching types: fully contact-based (face-to-face), fully online learning (no face-to-face) and the hybrid, blended learning.

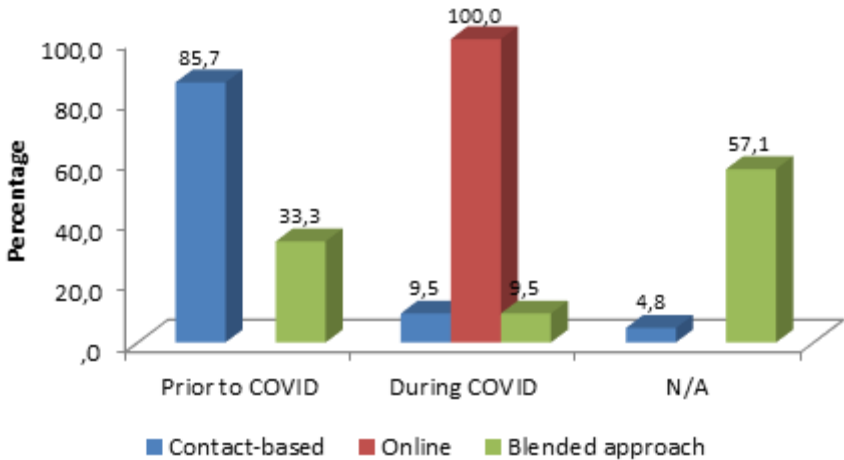


Figure 1: Primary Teaching Method

As illustrated in Figure 1, there was a clear shift from face-to-face learning (85.7%) and blended learning (33.3%) prior to the COVID-19 pandemic, to online learning (100%) during the pandemic. There was also a notable non-adoption of blended learning (57.1%) during the pandemic. None of the respondents indicated usage of online learning prior to the pandemic.

Results from Fisher’s exact test did not reveal any significant relationship between the type of institution and the use of any particular approach of teaching either prior to or during the pandemic (Blended – $p=.273$; Contact-based- $p=1.000$).

To ascertain the Mauritian academics’ proficiency in adopting technology to support online teaching and online assessment, respondents were asked to rate their proficiency in adopting technology tools using the scale from 1 = poor to 5 = excellent. A Wilcoxon signed ranks test was applied to test if the average proficiency rating was significantly different from the central rating of ‘3’.

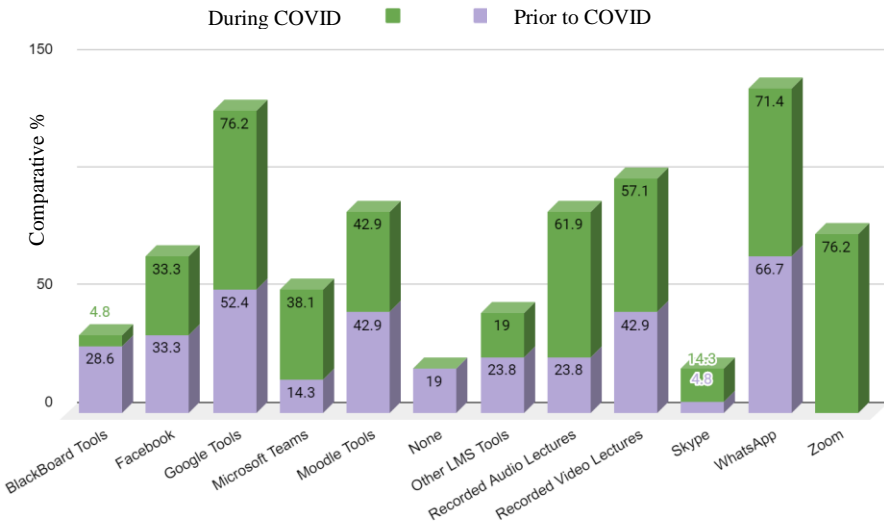


Figure 2: Teaching Tools Adoption Summary

Results showed that average proficiency ratings were significantly above the central rating of ‘3’ for both teaching methods (mean rating = 4.14,

$p < .0005$) and assessment methods (mean rating = 3.90, $p < .0005$). This indicates that the respondents rated themselves as better than average, tending towards excellent, in their proficiency in adopting technology for both teaching and assessment. This is in fact a promising and confident point to be noted here that Mauritian academics are ready to adopt and adapt any kind of online teaching techniques during and post COVID-19 and the adoption of new educational technology is quite significant for them to meet students' needs. To identify the tools most commonly adopted to support online teaching in Mauritian HEIs, prior to and during the pandemic, respondents were asked to indicate which, from a list of 12 tools, they adopted. Results are summarised in Figure 2 below.

As illustrated in Figure 2, the teaching tools most commonly adopted prior to the pandemic were WhatsApp (66.7%), Google Tools (52.4%), and Moodle Tools (42.9%). During the pandemic, Zoom and Google Tools were the most popular (76.2% each), followed by WhatsApp (71.4%). A small number of respondents (19%) did not use any form of online teaching tools prior to the pandemic. It appears from this data that the preparedness of academics and students to this new mode of teaching was mandatory. For the post-COVID-19 era, it is recommended that all Mauritian HEIs offer training to all academics and part time training on educational technology and provide guidelines to students to keep them on track with their studies by using the different modes of T&L the university will adopt. The remote learning might enable academic luminaries to teach without any barriers and create opportunities for information sharing and career development through digital educational technology.

A Binomial test was conducted to identify if a significant proportion of the sample responded to usage of each of these tools prior to or during the pandemic. Results showed that the only tools significantly selected for use in supporting online teaching during the pandemic were Zoom and Google Tools (76%, $p = .027$).

Similarly, respondents were asked to indicate the tools they adopted to support online assessment, prior to and during the pandemic. These results are summarised in Figure 3.

As illustrated, the prominent assessment tools adopted prior to the pandemic were Moodle Tools (33.3%), Google Tools (28.6%), and WhatsApp (28.6%). However, during the pandemic Google Tools topped the list (71.4%),

followed by Recorded Video Lectures (66.7%), Zoom and WhatsApp (both 47.6%). With the onset of the pandemic many academics willingly or unwillingly, had to rethink their teaching and assessment methods to support a new mode of teaching. This was supported by many institutions offering digital literacy and pedagogy training to equip academics with this transition to operating in an online space (Singh 2020a).

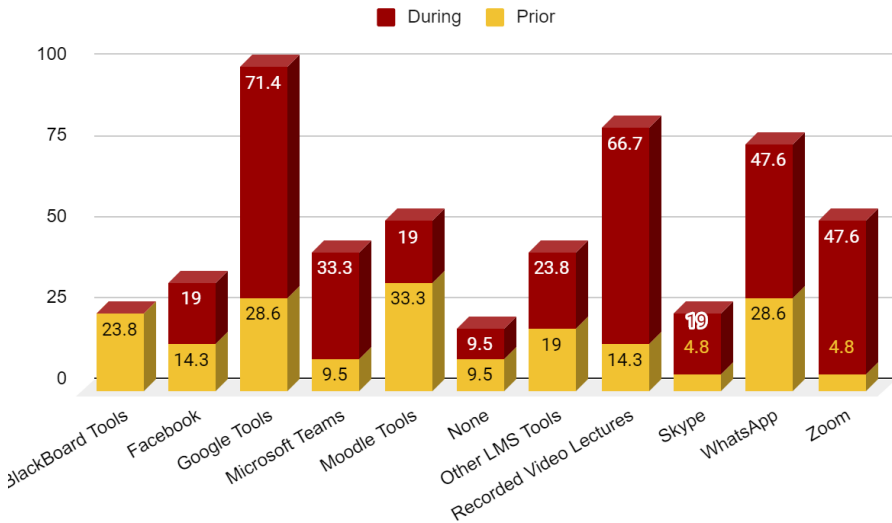


Figure 3: Assessment Tools Adoption Summary

Owing to the emergency of delivering online courses, it is noted that 19% of academics used the support of social media, specifically Facebook (FB) to deliver online classes, which students are always enthusiastic about using when interacting with classmates. However, it has been past evidence has shown that FB is not the most appropriate tool for education purposes and is rather regarded as students’ *‘personal’* space (Banna, Lin, Stewart & Fialkowski 2015).

Further statistical analysis indicated no significant usage of any of these teaching or assessment tools prior to or during the pandemic; in addition, there was no significant difference in adoption of any of these tools between public and private institutions.

When asked to rate their proficiency in communicating with their students in an online environment during the pandemic, on a scale from 1 = very difficult to 5 = very easy, Mauritian academics found it significantly easy to communicate with their students (mean rating =3.45 is significantly greater than '3', $p=.038$).

From Figure 4 it is noted that the biggest challenge Mauritian academics perceived that their students faced when moving to the online environment was the 'Lack of Interaction' (57.1%). Thereafter, the infrastructural factors were reported – 'Access to devices' (42.9%), and 'Access to connectivity' (42.9%). Social and emotional factors were less frequently cited.

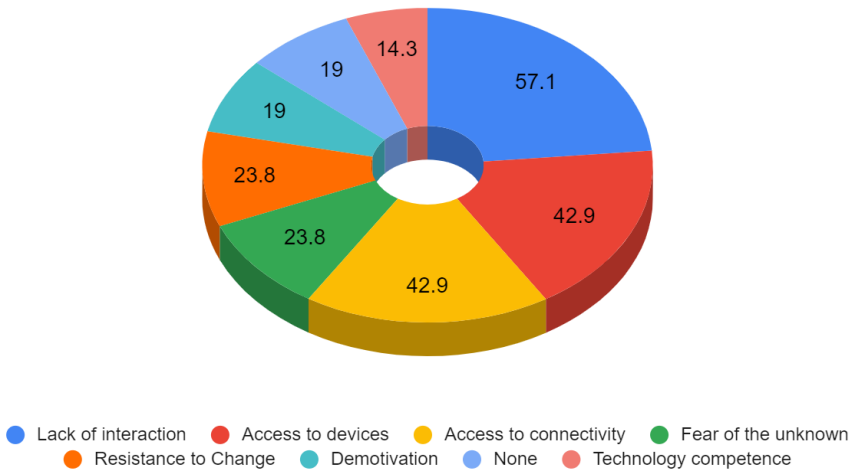


Figure 4: Mauritian Academics' Perceptions of Challenges Faced by Students in Moving Online

In creating a vibrant online community, academics must facilitate sustained communication and engagement with course materials and use specially tailored online assignments (Bar 2011). Furthermore, Banna *et al.* (2015) highlight that engaged learning or learning that an instructor facilitates and is student focused, is a topic of importance in today's learning environment, which increasingly incorporates technology to smooth the know-ledge construction process. It is extremely frustrating to attend an online class and at

the same time face technical and infrastructural challenges such as delay, poor internet connection or computer problems, etc. Students and academics should be readily prepared and provided with ample tutoring and time to familiarise themselves with the new online system and functions. In this context, around 42.9 % claimed to have experienced technical and access problems.

None of the academics showed any signs of demotivating factors to shift to the online learning platform, although students demonstrated signs of demotivation. Concerning student-academic staff interaction, the social presence of the academic staff member is an integral component of a successful online course; the academic must perform activities that translate virtual interaction into an impression of a ‘real’ face to face interaction (Dixson 2010). The academics simply have to re-examine their traditional ways of teaching and redesign their course delivery with the aid of technologies in a student-centered way, in order to motivate students and create the motivated learning space based on SDT theory during this sudden pandemic. Therefore, every setback for the academics during this crisis has become an opportunity for change. What is very important is that the goals and priorities of students and universities are met and surely, the transformation of knowledge is taking place. This pivotal moment is causing academics to revamp traditional teaching and learning processes and will mark the future of HE for the better transformation of digital learning.

When asked to indicate which methods, from a list of 6 methods, were used to support students during the pandemic, the top methods adopted by academics were ‘Online lectures’ (95.2%), ‘Direct Emails’ (90.5%), ‘Online tutorials’ (76.2%), and Phone (71.4%) (cf. Figure 5 below).

Method	%	p-value
Online lectures	95	<.0005
Online tutorials	76	.027
Emails	90	<.0005

Table 3: Significant Methods Adopted for Student Support

As summarised in Table 3, Online lectures, online tutorials and personal emails were indicated by a significant proportion of the respondents as ways through which they supported their students successfully.

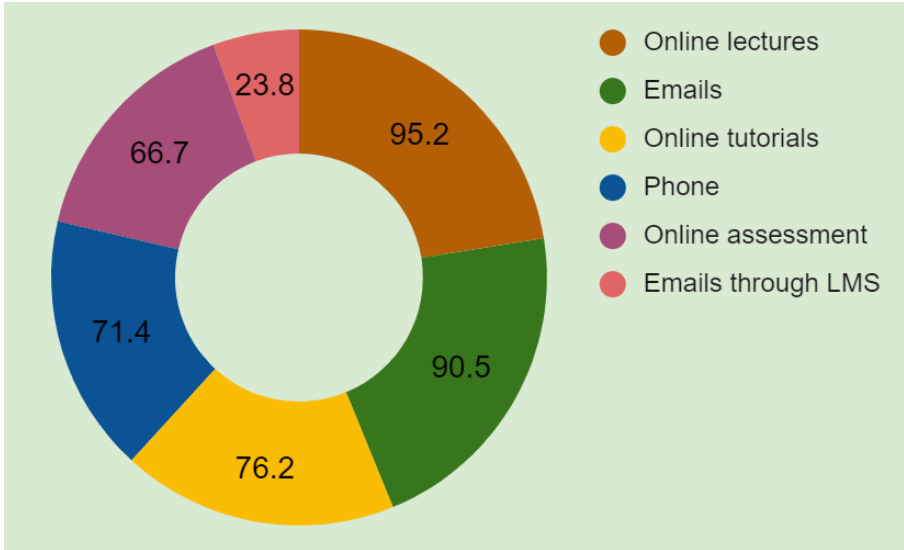


Figure 5: Methods used by academics to support students during the pandemic

Academic support at HEIs takes different forms such as tutoring, guiding the students, counselling them and assisting them with their digital platform. These, in fact, are important roles for academics which help students to cope with their studies and not to drop out of their respective courses.

When rating the responsiveness of their students to the support, on a scale from 1 = unresponsive to 5 = very responsive, results from a Wilcoxon signed ranks test show that the mean rating of 3.86 is significantly higher than the central score of '3' ($p=.002$), indicating that they were more responsive than average. In the same way, the mean rating of the effectiveness of working with students online when using a scale of 1 = not at all effective to 5 = very effective was 3.67 which is also significantly higher than the average score of '3, indicating better than average effectiveness, $p=.006$.

The next section of the questionnaire focused on the shift to work-from-home (WFH), and its impact on the lives of Mauritian academics.

As illustrated in Figure 6, the predominant challenges faced by Mauritian academics in the 'forced' WFH arrangements during the pandemic were 'Social isolation' (42.9%), 'My Physical Workspace' (36.1%), and 'General anxiety about COVID-19' (33.3%). Further statistical analysis indicated that

none of these challenges were indicated by a significant proportion of the respondents.

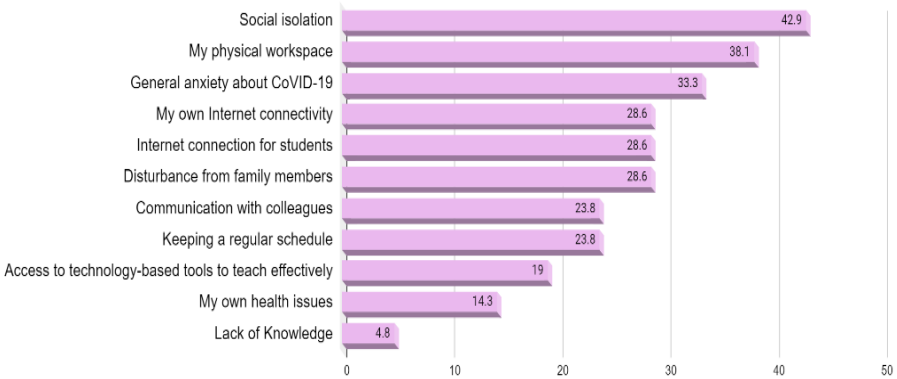


Figure 6: Challenges with the forced work-from-home scenario

The type of WFH arrangements used by academics to communicate with students and colleagues during the pandemic is summarised in Figure 7 below.

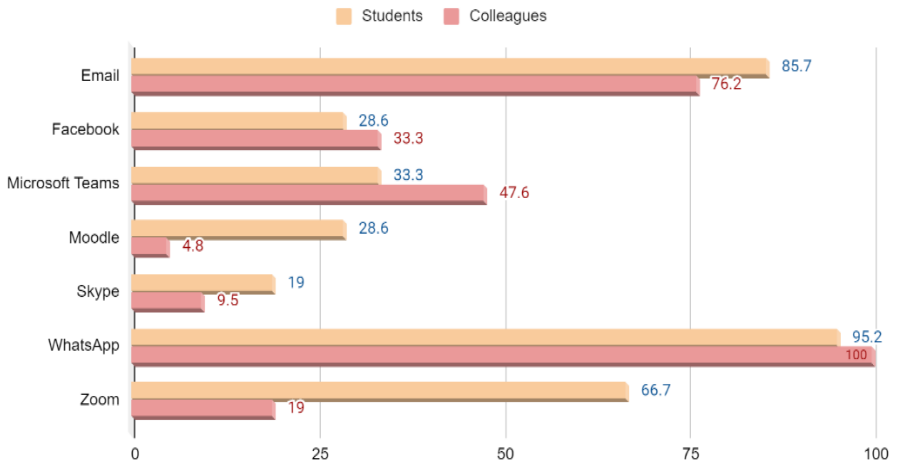


Figure 7: Work-from-home Communication Methods Adopted

Marks (2020) stressed the importance of how institutions were forced by the pandemic to embrace home-based working (HBW) at ‘break-neck’ speed, with very little chance to consider the implication on academics and students. There have been concerns regarding physical workspace at home conducive to effective output, poor work-life balance and enhanced domestic hurdles and stress.

To support their communication between students and colleagues while working from home, Mauritian academics indicated that WhatsApp and emails were the most convenient tools. Both these tools were significantly adopted for communication with both students and colleagues, as summarised in Table 4 below.

Tool	Student communication		Colleague communication	
	%	p-value	%	p-value
WhatsApp	95	.001	100	<.027
Email	86	<.0005	76	<.0005

Table 4: Significant Communication Tools Adopted

The ASSET© framework outlines eight basic skills that lecturers need to develop or possess to support a smooth transition from the face-to-face to the online teaching space, which will most likely find its balance in a blended space post COVID-19. It highlights the importance of good communication skills, to support students, especially considering the nuances of non-contact communication; and emotional intelligence by developing empathy for both students and fellow colleagues who may be studying or working from environments that are non-conducive to effective working or studying (Singh 2020b).

While results from a Chi-square goodness of fit test showed that no response option was selected by a significant number of respondents ($\chi^2(6) = 11.333, p=.079$).

A third of the respondents were comfortable with the work-from-home arrangement and suggested that they could sustain their current WFH arrangements indefinitely.

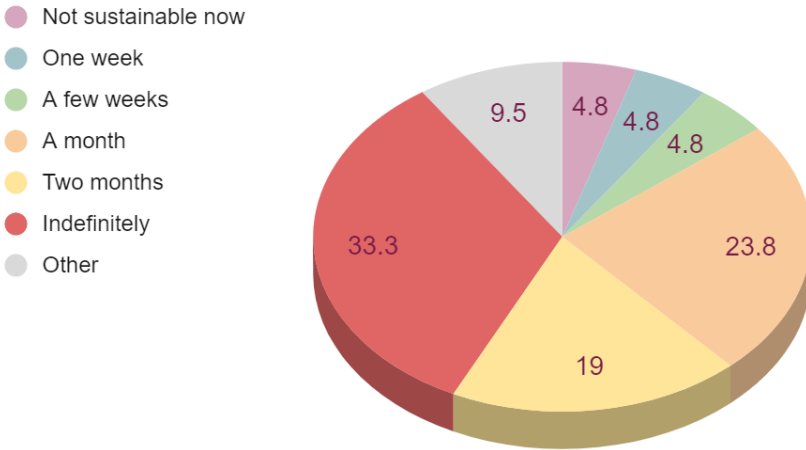


Figure 8: Duration that Respondents could Sustain their Current Work-from-home Arrangements

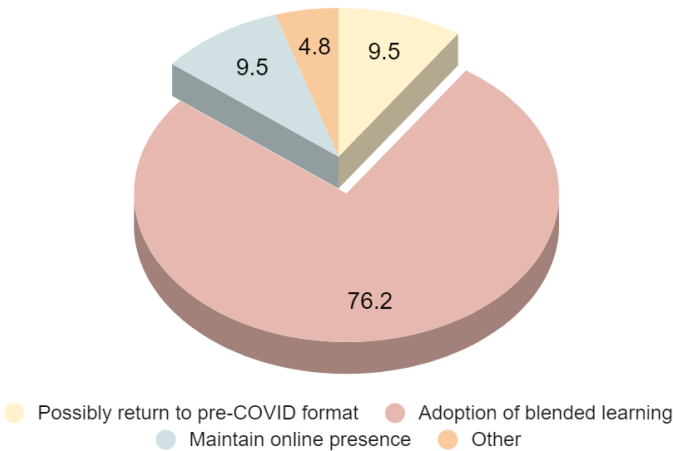


Figure 9: Future Shape of Institution

A Chi-square goodness of fit analysis showed that a significant number of respondents (n=16, 76.2%) perceived that their Institution will adopt blended learning post the pandemic, i.e. ($\chi^2(3) = 29.476, p < .0005$), as shown in Figure 9. With the changes that have arisen due to the COVID-19 crisis, some institutions may no longer be viable and they will need to rethink their business model entirely in the education sector. Whatever the scenario beyond 2020, the landscape of HEIs remains a complex tapestry of goals, strategies, competing pressures and education sustainability. The reconstruction plan for Mauritius beyond 2020 may need health, security and quality education consideration at the heart of the strategy. Mauritian universities must accelerate plans for adopting digital technology and artificial intelligence as tools to uphold student learning outcomes and to reach a new population of students.

Conclusion

The demographics indicated that the majority of the respondents were middle-aged males, with a large majority holding a postgraduate degree. The majority held permanent lecturer positions at their institution, indicating early career academics. There was a clear transition to online learning, with a notable increase in blended learning, during the pandemic. It is interesting to note that none of the respondents had adopted online learning prior to the pandemic. Encouragingly, that despite not having adopted online teaching prior to the pandemic, respondents rated themselves as better than average in their proficiency in adopting technology for both teaching and assessment. WhatsApp and Learning Management System (LMS) platforms, like Google and Moodle were the preferred choices for teaching prior to the pandemic. During the pandemic, the previously unadopted Zoom, claimed equal prominence with Google Tools. It was also encouraging to note that while a small number of respondents indicated that they had not adopted any online teaching tools prior to the pandemic, during the pandemic, all respondents were adopting some form of technology to support online teaching. A similar pattern was observed for online assessment tool adoption where LMS platforms such as Google, Moodle and WhatsApp were the preferred choice for assessment prior to the pandemic. During the pandemic, Google Tools dominated. The number of respondents that indicated they had not adopted any online assessment tools prior to the pandemic remained consistent during the pandemic. Amongst all

the tools, Zoom and Google tools emerged as the most preferred communication digital platforms used by students in Mauritius for learning and interaction. There was no indication of any forms of difficulty faced by Mauritian academics in communicating with their students in the 'new' online environment. The lack of interaction and infrastructural issues associated with lack of access to devices and internet connection, were the main challenges Mauritian academics perceived that their students faced when moving to the forced online environment.

Direct contact methods such as communication during online sessions, personal emails and phone calls, were the most significant methods adopted by Mauritian academics in this shift to the online space. Mauritian academics noted that their students were responsive to their support. These academics found working in an online space an effective means of continuing with their academic activities to support students' learning. Thus, there was also a significant indication that these academics would continue to adopt online learning post-pandemic.

While Mauritian academics faced challenges with internet connectivity for themselves and their students, their main concerns with the forced shift to WFH were social isolation, lack of a physical workspace conducive to effective work and general anxiety about COVID-19. While Zoom was adopted for communication with students and MS Teams for communication with colleagues, during the pandemic, WhatsApp and Emails were the tools that were the most frequently used communication channels by both students, colleagues and academics.

Only 33% of Mauritian academics were comfortable with sustaining their current WFH arrangements indefinitely. The others indicated that they would be willing to sustain these WFH arrangements for shorter periods ranging from one month to one week. A significant number of respondents felt that their institutions would adopt a blended learning approach after the pandemic. Although the hard work of understanding education at the level of HE in a time of the pandemic is still ahead and determinant, it can be concluded that open distance learning is perpetual and cannot survive without effective and appropriate technology. The data stemming from this research provides evidence to support the argument that open and life-long learning is taking place at HEIs in Mauritius. Increased access to internet connectivity to improve and uphold equity and enable students to access courses remotely should be

the priority of the government in the next budget as most of the public universities are moving to hybrid approaches, as depicted by this study.

Limitations

Data was collected during the latter stages of the lockdown in Mauritius (May to June 2020). This was a busy period for academics, having to transition to a fully online teaching and learning environment, in an attempt to ensure continuity of academic activities. Hence, despite numerous requests and extensions for participation, the response rate was low. This means that while the results may prove interesting, and provide an insight during the pandemic, they cannot be projected onto the general academic population due to the small sample size.

Future Research

The body of literature on the impact of COVID-19 on HEIs is still developing. Future research could focus on the lived experiences of Mauritian academics in the transition to the online environment and its sustainability after the pandemic, and lessons from working from home can be well documented. It would be beneficial to investigate the impact of the transition to the online environment on Mauritian students, administrative and support staff at Mauritian HEIs as well.

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