

Strengthening and Sustaining Online and Blended Learning in the Aftermath of Covid-19 through Quality Assurance Measures: The Case of Public Higher Education Institutions in Mauritius

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ABSTRACT

COVID-19 has caused major disruptions in higher education systems worldwide. In Mauritius, during the 2020 and 2021 national lockdowns, local universities had to pivot to online/blended learning and emergency remote teaching. However, few higher education institutions (HEIs) in Mauritius were prepared for online learning, resorting mostly to emergency remote teaching. It was observed that there was a dearth of quality assurance guidelines and standards for Online/blended Learning, hence underlining the need to support HEIs in their transition from face-to-face to online delivery, while simultaneously upholding the quality of the programmes delivered. With funding from the Mauritius Research and Innovation Council (MRIC), a project was submitted jointly by the University of Mauritius and the Open University of Mauritius to help mitigate the impact of COVID-19 on Mauritius' higher education sector and its students, by providing short-term solutions in the form of quality assurance rubrics and an ODL handbook, so that HEIs can ensure the continuity of high-quality education with minimal disruptions during the pandemic and beyond. These tools were validated at national and institutional levels in order to capture specificities of the local context while meeting international standards (benchmarks). Based on interviews of key stakeholders, policy makers, CEOs of HEIs and the research team's knowledge and experience in this field, a number of recommendations emerged. This paper will present the methodology, major findings, recommendations and tools developed under this project. It is also hoped that online learning becomes part and parcel of the DNA of HEIs, to build the robustness and resilience of their online learning provisions so that they can confidently face any future disruptions.

Key words: Quality assurance, online education, QA guidelines, rubrics, policy measures

INTRODUCTION

COVID-19 has caused major disruptions in higher education systems worldwide. In Mauritius, during the 2020 and 2021 national lockdowns, local universities had to pivot to online/blended learning and emergency remote teaching. Regarding modes of delivery, there was a continuum: fully online to use of PowerPoint slides/PDF notes, and videos circulated to students via email and WhatsApp.

However, few HEIs in Mauritius were prepared for integrating technology in the classroom. This lack of confidence and attempts at *bricolage* pedagogy underlined the need to provide support to HEIs in their transition from face-to-face to online delivery, while at the same time, ensuring that students continue to receive quality in the delivery and learner support.

To help HEIs in this shift while upholding educational quality standards, recommendations for transitioning as well as quality assurance guidelines, rubrics and standards were needed. However, in 2020 and 2021, it was found that there was a dearth of quality assurance guidelines and standards for Open and Distance Learning (ODL)/Online Learning. Most of the HEIs are only now considering the implementation of quality management systems to address new innovative approaches of technology enabled learning. However, it is worth noting that the [Quality Assurance Authority](#) (Mauritius) has now developed standards and guidelines for online delivery.

In this context, a project was submitted to the Mauritius Research and Innovation Council (MRIC) and aimed to mitigate the impact of COVID-19 on Mauritius' higher education sector and its students, by providing short-term solutions in the form of quality assurance rubrics and a handbook so that HEIs can start to assess their own online courses, online delivery, learner support etc., to ensure the continuity of high-quality education with minimal disruptions during the pandemic and beyond. The project also proposed to pave the way for future endeavors to build the groundwork for institutional and national quality assurance systems and policies for online and blended learning.

This paper will present the methodology, major findings, recommendations and tools developed under this MRIC project. It is also hoped that online learning becomes part and parcel of the DNA of HEIs, to build the robustness and resilience of their online learning provisions so that they can confidently face any future disruptions.

LITERATURE REVIEW

○ Higher Education and Online Learning

Pre-COVID-19 pandemic, the African Education Sector was steeped in grappling with a spectrum of new economic, social and cultural challenges, particularly those resulting from the 4th/5th Industrial transformations, massification of Higher Education, changes in paradigms of learning, demographic challenges, an increased focus on quality assurance and qualification frameworks, diversification of provisions and providers and increase in mobility (UNESCO, 2019). The COVID-19 grafted itself on a higher education sector that was thus already trying to reinvent itself. The question that needs to be asked is whether the situation will or should return to normalcy; that is, should HEIs mainstream online learning in all their programmes and consider online education as part of their regular pedagogical offer or should they return to the traditional mode whereby students attend face-to-face lectures on campus and make the use of technology as an additional educational resource? The above question garners more attention when we witnessed a remake of 2020 in March-April 2021, up to 2022, when universities had to pivot back to online learning locally as a result of resurgence of local cases of COVID-19.

The rapid developments in technology have made distance education and online learning easy (McBrien *et al.*, 2009) and the use of technology has offered the possibility of learning from anywhere, anytime, with any means (Cojocariu *et al.*, 2014). As such, online learning is probably one of the most popular and newest trends in post-secondary education and has both strong supporters as well as strong opponents (Peters, 2002; Noble, 2003). Online education takes the form of blended learning, technology enabled learning, e-learning, adaptive learning, flipped classroom, MOOCs and OERs. As such, there are fundamental pedagogical, methodological, organizational and academic differences between face-to-face and online learning: learner-centredness, multidisciplinary teams involved in course design and development, higher dependence on part time staff, change in academic workload model are some of the key characteristics of online learning (Van Zyl, Els & Blignaut, 2013).

○ Quality in Online Learning in Higher Education

Quality is at the forefront of issues relating to tertiary education in developing countries, including small states. According to Tremblay & Kis (2008), the growing interest for QA in Higher Education is due to the emergence and/or expansion of private agencies and the diversification of modes of providers.

Quality is a multidimensional concept: to Prisacariu & Shah (2016), “*there is an absence of a commonly accepted notion of what quality means*”. Harvey & Green (1993) used five interrelated definitions of quality: exceptional; perfection (or consistency); fitness for purpose; value for money; and transformation. These notions were highlighted by Bogue (1998), who considered HE as positional market in which institutions compete for status, fitness for purpose and value added in terms of impact on the students’ knowledge and personal development. For Vlasceanu *et al.* (2004), QA is “*an ongoing and continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of higher education system, institutions or programmes*”. Researchers lay emphasis on adopting a systematic approach to QA, so that it is perceived as a systematic process of continuous improvement.

QA in ODL is critical given that there is an issue of perception and the low parity of esteem in ODL graduates. However, nowadays, based on success stories like the Open University UK, where ODL students seem to exhibit additional qualities such as juggling with various responsibilities and demonstrating an absolute motivation to succeed (Gaskell & Mills, 2014)

○ Quality in Online and Blending Learning in Mauritius

Online learning requires institutional vision and investments, proper pedagogical training/instructional design, contingency planning, technology-oriented learning outcomes, reliable infrastructure and ample learner support, hence requires that QA is central to all the activities of an institution. To ensure quality in the provisions of higher education in the local context, we have the Higher Education Commission (Mauritius) (HEC) and the Quality Assurance Authority (Mauritius) (QAA). HEC has as objects to promote, plan, develop and coordinate post-secondary education in Mauritius and to implement an overarching regulatory framework to achieve high international quality. The objectives of the Quality Assurance Authority (QAA) are “*to promote, maintain and*

enhance quality assurance of higher education in line with international high-quality standards in higher education through appropriate quality assurance mechanisms”.

○ **ODL and QA Policies in Public Universities: UoM**

The University of Mauritius (UoM) has already gone through the three Cycle Quality Assurance Audits (2005, 2012, 2018) and the reports are available online. The Centre for Innovative and Lifelong Learning (CILL) is the focal point for the design and development of modules and programmes for lifelong learners, using innovative modes of teaching and learning. CILL has several programmes designed specifically for the industry but that abide by the general rules and regulations of UoM as they are UoM awards. As such, there are no policies on QA *per se* that are specific to ODL. In addition, there are inbuilt mechanisms in the system that reflect QA concerns/considerations: educational technologists to support course developers, a team approach for module development, system of peer and external review allows better monitoring.

As early as 2020 (January/February), UoM had anticipated disruptions to University courses and a number of guidelines on Google Meet and Google Classroom were prepared and shared with academics. Moreover, the Centre for Information and Technology Services (CITS) and CILL regularly run training on campus on tools, online learning, etc. Post-lockdown in 2020, UoM also developed the Digital Transformation Strategy and more targeted training were offered to academic staff, following a needs analysis. These were run over a month to ensure that all academics are groomed on blended/online learning. A dedicated space was also created on Moodle and academics could use the space to access learning friendly materials on how to design and develop their content and use some tools (video making and editing, Mentimeter, etc.).

○ **Quality Assurance at the Open University of Mauritius (OUM)**

Since 2015, OUM is the first ISO 9001 certified organization. In 2018, it underwent its first cycle Quality Assurance Audit and has invested fully in developing a Quality Assurance System with the assistance of several experts from COL and QAA UK. In addition, OU has set up the appropriate mechanism to ensure adequate control over its activities and process by implementing a Quality Management System based on ISO 9001. Since its start of operations in July 2012, OU has been offering most of its courses on blended mode. The student's learning process, learning environment, and all the enabling academic and non-academic processes are informed by OU's Quality Assurance Framework and the Quality Framework was thought alongside the University's core values, namely Openness, Flexibility, Diversity, Quality and Excellence, urged by OU in defining its commitment to the very purpose of the organization's mission. Its Quality Management System based on the ISO 9001:2015 has helped in enhancing the trust of students and other stakeholders in OUM.

Note: The MRIC project has also addressed OER and MOOCs, though both are not yet adopted in the Mauritian HE culture. Hence this paper will not discuss MOOC and OER though OUM has pioneered the launch of a MOOC on Sustainable development in business which was highly successful with 4 intakes and above 13000 students.

METHODOLOGY

The objective of this research project was to explore the current state of ODL and Quality Assurance of ODL in public HEIs of Mauritius, identify gaps, areas for improvement, challenges faced or emphasized by the outbreak of the COVID-19 pandemic as well as strategies employed by HEIs to address and overcome these challenges. To meet the objective of the research, a two- pronged approach was adopted:

- Survey of stakeholders, policy makers, CEOs of HEIs
 - Assessment of online courses at UoM and OUM
- (i) For the survey, the research team developed six different surveys, two general ones on QA and ODL for ODL and QA representatives of public HEIs in Mauritius, and four customized surveys on QA and ODL for four other main stakeholders involved in the Higher Education sector in Mauritius, including representatives from QAA, SCE, HEC as well as VCs of the surveyed HEIs. With a limited number of public HEIs in Mauritius, a census approach was used and the developed surveys were sent out to public HEIs.

The collected data were gathered using Google forms and stored securely on the University of Mauritius' internal server. Access to the instruments and collected data was given solely to members of this research team. The data have been analyzed using the software for qualitative analyses, NVivo.

- (ii) Five (5) UoM and OUM courses were evaluated, constituting a premiere in the context of Mauritius. Even for past QA Audits, the online content have not been evaluated. This study aimed to test a few rubrics against the modules developed locally and to gauge the courses against various standards. At the UoM, external examiners are given guest access to the online platform to moderate individual marks if required. Given the sensitive nature of the exercise, where an outsider audits a course, it was deemed more appropriate that the exercise be carried out by an insider but independent party. OU Quality assurance Division was put to contribution in auditing course modules against specific ISO Standards.

The QA rubrics have been developed by COL. The evaluation instrument has 8 good categories that can be used to evaluate the design of a technology-supported course: (i) course navigation, (ii) course content, (iii) instructional design, (iv) course structure, (v) student support, (vi) technological and multimedia tools, (vii) student assessment, and (viii) quality assurance.

The sample of modules from both institutions included undergraduate and postgraduate modules being delivered in different disciplines (pedagogy, management, IT, creative arts, accounting). Some modules were fully assessed by coursework and some involved a final examinations. The five filled rubrics were then sent for analysis by an external independent party for analysis and findings.

ANALYSIS OF FINDINGS

The findings based on the two pronged study reveal the following:

- *ODL Infrastructure:* Most HEIS were predominantly using face-to-face mode of delivery, with only one exception that was using blended and flipped classroom mode. OERs and MOOCs had not yet permeated the institutions' culture though the interview did reveal that one of them (OUM) had pioneered MOOC in the Mauritian context. Only one institution claimed to have one unit dedicated for digital innovation and only one having Instructional designers. Half of the institutions surveyed responded to having a QA system specifically for ODL.
- *Training:* Most universities provide training in ODL for tutors, and in instructional design, while distance learning course delivery/teaching and the use of ICTs is provided only by one institution. However, none identified any training gaps in their current provision.
- *Support Services:* Only one of the surveyed institutions had provided an orientation (online for international and face-to-face for local students) in ODL for new students pre-COVID-19. The types of support services for ODL offered to students do not seem to have been different pre-COVID-19 in comparison to the time since COVID-19. Two institutions stated to have offered support to students in the use of web conferencing technologies and have given access to online collaborative spaces. Only one institution claimed to have provided support in the use of online or virtual technologies, communication technologies or have given students remote access to software applications. Only one institution has reported providing ODL support and support in the use of virtual technologies and provision of online collaborative spaces to faculty. Only one institution has been offering capacity building workshops for ODL, both pre-COVID-19 and since.
- *Access to ICT Infrastructure:* All institutions provide access to: internet; computer labs to students and faculty; Learning Management System; and continuous training in ICT skills for both students and faculty. Half of the institutions affirmed to provide students and teachers with institutionally owned digital devices.
- To address the challenge of access to appropriate technologies for distance teaching and learning since the COVID-19 outbreak, three institutions have been providing laptops to faculty and desktops to students and one has been providing laptops to students and two desktops to faculty. Only one institution has been providing tablets to its students but none to faculty. For students with no access to the internet, one institution claimed to have negotiated internet packages while another claimed to have only been able to provide connectivity on campus. Another institution reported having no connectivity issues neither for students nor for faculty even before the COVID-19 outbreak. Furthermore, some institutions reported to have made special provisions to support remote learning such as increasing the number of Office 365 licenses for staff and students as well as providing access to Google Classroom, ZOOM, and Google Meet.
- *Budget:* All surveyed institutions reported to have plans to increase the budget for ODL in their institution, especially for training, the development of online courses and the provision of quality support services. One institution claimed to have a separate budget for ODL and QA while another institution reported to be currently revisiting the possibility of separating budgets for ODL and QA as part of the general move towards improving QA mechanisms.

- *COVID-19 response*: Strategies adopted to cope with COVID-19 included: making adjustments or substituting exams with alternative assessments, moving all tutorials online, developing online guidelines and tutorials for both students and faculty, setting up online teaching facilities, and using evaluation surveys to maintain quality standards. Some institutions have emphasized the importance of training and plan to invest further in this area. Another institution responded to address the ODL challenges emphasized by the COVID-19 outbreak through a robust QA system involving all academic and non-academic staff including top management. Other institutions further invested in capacity building initiatives for students and faculty or provided more online learning materials for lecturers.
- *Aspirations and the Way Forward*: Generally, all surveyed institutions share a positive outlook on the future of ODL in Mauritius. Most have reported to have plans on expanding ODL within their institution, including increasing the budget allocated to ODL as well as quality measures and systems, in the near future and increase collaboration internationally, some even aspiring to become a leading ODL university on the global stage. The need for guiding policies on the national and institutional levels was recognized by most institutions as a much-needed step to improve.
- *Evaluation of online courses*: A need for more clarity on constructive alignment, to target high order cognitive skills on the revised Bloom's taxonomy and to have more authentic assessment (solve work and life-related problems) was highlighted. It was also recommended that when academics use the evaluation form for the first time, they need to be trained on what constitutes valid evidence for each quality element.

RECOMMENDATIONS

Based on the surveys conducted, courses assessed and analysis of the findings, a number of recommendations have been identified:

- i. It was found that terminologies such as 'online', 'blended', 'hybrid', 'remote learning', 'open', to be defined clearly so that institutions have a common vocabulary and common understanding of the terms.
- ii. *Policies and Procedures*: There is a need for a well-defined national online learning policy/framework which provides general guidelines but allows institutions to adapt it to their respective organizational cultures and specificities. Depending on the arrangements in the institutions, it is recommended that the responsibility for quality assuring online learning should lie with the institutional Quality Assurance Unit, whether or not online is the main delivery mode. There is a need to have clear policies, frameworks, and guidelines on OERs at the national level. This would probably be available once the National OER Policy is adopted.
- iii. *Institutional Support*: Institutions should support the need for quality through their vision, planning, infrastructure, course development, teaching and learning, student support, faculty support, training of staff and evaluation of programmes and modules. Guidelines and frameworks specific to the institution's culture should be developed for online learning. The issues addressed will include guidelines and tools with regards to course design, learning design, content, pedagogy, student support, assessment of programmes and assessment of modules. There needs to be coherence and alignment when it comes to policies related to mode of delivery, course development, assessment and training of staff (academic and non-academic) for online learning. Rules and regulations specific to online learning should be formulated in the general compendium of rules and regulations of the institution. It is recommended that when online learning is not the main mode of delivery, a unit or centre be established that is dedicated to online learning matters and QA for ODL.
- iv. *Training*: Induction, ongoing training and support should be provided to all staff in online learning activities (in course design, constructive alignment, evaluation and authentic assessment, use of technology, student support, learning analytics, and administration, QA rubrics). A dedicated and up-to-date space/repository can be created for academic staff where they can easily access resources, job aids and tools to support online, blended and collaborative learning and also to ensure engagement of students, ensuring best practice in online learning and OERs.
- v. *Student Support and Engagement*: Developing MOOCs can help develop the MOOC culture of collaborative, online and self-study among students. Institutions should consider developing such courses to train students in these 21st century skills. Student support is a pillar in an online learning system and students should be provided with scaffolds to transition into online learning. Induction sessions need to be designed to help them adjust to online learning. Students need to be briefed at the outset on the mode of delivery and where they stand on the spectrum: fully online to fully face-to-face.
- vi. *Contingency Planning*: Academic calendars need to make provision for contingency planning and disruptions (to factor in disruption in the planning process). Given that some institutions lacked resources required to pivot to online learning during the pandemic, institutions need to start investing in infrastructure and training of staff to ensure robustness and resilience when faced with sudden interruption due to lockdown.

- vii. *Inter-Institutional Collaboration*: Institutions can be encouraged to collaborate with regards to ODL expertise, outsourcing of instructional design expertise, and the utilisation and promotion of the use of open content /OER developed by peer institutions. Institutions can also pool resources and offer MOOCs in fields that showcase the uniqueness and specificity of Mauritius.

LIMITATIONS OF THE STUDY

It would have been interesting to interview academics involved in online learning (as content developers, tutors and course reviewers) as well as students currently enrolled in online learning courses (blended and fully online) to get their perspectives on QA and how they coped with this mode of delivery during the pandemic.

The low response rate from HEIs made it difficult to draw general conclusions. Responses were mainly from institutions who already show great interest in ODL and QA of ODL. It would thus have been beneficial to get more information from institutions that are less engaged with ODL (to understand their reservations, challenges, etc.).

CONCLUSION

This research revealed that though ODL is present in Mauritius since the early 1990's, there is still a long way to go to get it accepted as a mode of delivery at par with conventional mode and it is critical to have nation-wide as well as institutional specific QA policies to give ODL the credibility it deserves. COVID-19 had created an urgency and the Mauritian HEIs can tap on the momentum it created to help establish ODL.

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