Responsive Remote Teaching Capacity Building in Hong Kong During COVID-19

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***Abstract*—The COVID-19 pandemic has affected many educational institutions worldwide, forcing schools, universities and colleges to close. The closure of schools and universities has led to a sudden shift of teaching away from the classroom to online learning. However, with little preparation and training, both teachers and students struggle with remote learning/instruction. Responding to the situation, teaching support teams in three Hong Kong universities had quickly developed supporting programmes. Programmes were for responsively helping teachers to overcome the challenges and develop adequate technical and instructional design capacity for their online teaching and assessment. In this paper, we discuss how these programmes had been developed. In particular, we discuss what support had been developed, how the support had made a significant impact on practices within the community, and the consequences of moving to remote instruction.**

Keywords—responsive teaching, remote teaching, COVID-19, professional development

I. INTRODUCTION

Many regions across the world, including Hong Kong, are undergoing a difficult period due to the outbreak of COVID-19 [1,2,3]. The COVID-19 pandemic has affected many educational institutions worldwide, forcing schools, universities and colleges to close. It is estimated that the pandemic has affected around 1.6 billion learners worldwide [4]. The closure of schools and universities has led to a sudden shift of teaching away from the classroom to online learning. However, with little preparation and training, and the challenge of insufficient bandwidth at home, both teachers and students struggle with online learning. Furthermore, there was a huge time commitment for the transition from original face-to-face teaching to remote teaching. To support teachers and students cope with this sudden change, learning technologists, instructional designers and online/remote learning professionals from universities and colleges have responded quickly and consolidated lists of resources and good practices for remote teaching. For example, in the early stage of class suspension in the US, colleagues from Stanford have compiled a quick start guide on "Teaching Effectively During Times of Disruption" [5]. Other compilations of resources, articles and webinars can be found in [6].

In Hong Kong, universities often provide blended learning training for teachers who are interested and enthusiastic in teaching [7]. However, face-to-face classes had been suspended on short notice since early January 2020, and all teachers had to convert their courses into an online format. Moreover, face-to-face formative assessments (e.g. examinations) had to be cancelled as the pandemic just kept growing. Yet, learning activities had already been designed for face-to-face sessions before the outbreak, and not all teachers had received training on online learning in advance. Therefore, it was a challenge for ordinary teachers to redesign teaching activities within a short period of time as well as to facilitate engaging (a)synchronous online sessions. Furthermore, students also struggled to fully immerse themselves in the online environment due to the limitations of the offline environment in Hong Kong (e.g. small apartments without a quiet corner and reliable network connections).

Responding to the situation, within a short period of time, authors have quickly developed supporting programmes in three universities in Hong Kong, including City University of Hong Kong (CityU), the University of Hong Kong (HKU) and The Hong Kong Polytechnic University (PolyU). Programmes were for responsively helping teachers to overcome the challenges amid COVID-19 outbreak and develop adequate technical and instructional design capacity for their (a)synchronous online teaching and assessment.

In this paper, we aim to discuss how these programmes had been developed in universities. Sections II and III of this paper discusses the three programmes that had been developed by universities. In particular, we discuss what support had been developed, how the support had made a significant impact on practices within the community, and the consequences of moving to remote instruction.

II. INITIATIVES FROM THE CITY UNIVERSITY OF HONG KONG

Under the Discovery Enriched Curriculum [9], an academic development blueprint endorsed by University Grants Committee (UGC) since 2012, CityU has devoted tremendous resources to embracing the latest technology to enrich campus-wide teaching and learning. The university has been implementing various e-learning initiatives such as flipped learning, and adoptions of e-learning technology to help pave a strong foundation to confront contingencies like the sudden outbreak of COVID-19 and the following suspension of physical classes.

A. An Eight-day Transition: From Physical Classes to Remote Learning

In response to the Hong Kong Government's extension of school suspension on January 25, 2020, and the guideline of social distancing, CityU resumed classes with synchronous remote learning on February 7, 2020, which was one week after the original schedule of class resumption after the holidays of Chinese New Year. Despite the previous experience of online teaching in Fall 2019's temporary class suspension, the decision imposed a significant challenge to teaching and learning because of its novelty of full-scale online teaching and learning involving over 20,000 students.

A cross-department collaborative team among the Office of the Provost, the Office of Chief Information Officer (OCIO), Computing Services Centre (CSC), Office of Education Development and Gateway Education (EDGE), and various teaching departments, made a concerted effort to lay the transition from face-to-face teaching to online classes. In the preliminary stage, team members had to reach a compromise among various technology stacks for the delivery of online classes. Because of time constraints, part of the team was simultaneously organising and preparing relevant training materials before the conclusion was drawn. After a thorough discussion and analysis, Zoom was selected as the final candidate because of its user-friendliness and seamless integration with Canvas, CityU's status quo learning management system (LMS), where teachers and students would experience a lower learning curve during the transition to remote teaching and learning.

A Zoom pilot training among the team members was arranged immediately to gather feedback. That feedback was then consolidated for the upcoming training video and future training sessions for instructors. Although the video was produced and published within one day, the 17-minute online video covered all the basics in Zoom for online learning, e.g., set up of a Zoom session, PowerPoint and other interactive features in Zoom to promote students' learning. The video provides not only step-by-step guidelines through screencast to help instructors set up their online sessions, but also practical best practices to promote students' participation and facilitate formative assessment. Over 1,900 teaching staff were invited to watch the video and included in the LMS member site for training and sharing. The site also recorded nearly 8,200 page views in one day.

Adopting a flipped classroom approach [10], the publishing of the training video acted as a pre-class activity while interactive sessions were intended to clarify the concerns of online teaching, as well as to provide a first-hand experience of the upcoming online learning among the teachers. The LMS member site for training and sharing acted as a post-class activity for teachers to express their concerns and a place for them to post questions. Within three days before the commencement of school, the team conducted 30 interactive sessions, including a few physical sessions, for over 1,200 teachers.

With a series of preparation and training, classes resumed online remotely on February 7, 2020. Around 2,000 students at peak carried out their online learning in Zoom smoothly. The initial success strengthened the confidence of the adoption of online learning between teaching staff and students and fulfilled CityU's goal to provide students with the best possible option. Throughout the semester, the solution supported teaching and learning of over 3,000 students and over 100 online sessions at peak simultaneously. In addition to real-time classes conducted online, video recordings of live sessions were made available via Zoom, Panopto and Canvas Media Recordings functions depending on the needs of the teachers and students.

B. Assessing the Assessment

The successive challenge of remote learning lay on the assessment because of the suspension of face-to-face examinations. Although continuous assessments had replaced the exams in the first semester (December 2019), teachers and students were concerned whether there would be other alternative solutions. The joint-force team then assessed the existing assessment options that would fit various demands and environments. In the end, assessments through the LMS were recommended to instructors to carry out the remote examination.

Teachers were offered tools such as Respondus LockDown Browser, Respondous Monitor and Canvas Quizzes/Assignments to facilitate online examinations. Respondus LockDown Browser, integrated into the LMS, provided a more formal assessment environment by limiting candidates' access to other applications like messaging or screen-sharing, as well as unnecessary functions of a keyboard and a mouse. Furthermore, Respondous Monitor can be supplemented through a webcam to ensure the authenticity of online exams that are not invigilated in real-time when authenticity is highly demanded in certain subjects. Respondus Monitor is able to flag the exam if a student leaves the view or if another person comes into the screen as well as check students' eye movements. Although Respondus LockDown Browser and Respondus Monitor could be integrated and launched automatically after some settings in the LMS, support personnel were standing by the hotline to answer and solve any technical problems encountered by teachers and candidates during the examination period.

Inside the LMS, Quizzes is an online assessment platform that allowed teachers to construct their assessments, either in the interface of a multiple-choice type question or open-ended essay, with multimedia support. Alternatively, Assignments facilitated the distribution and collection of question papers and answer sheets for online exams. The access of Canvas Quizzes/Assignments can be set in advance, and the system will act according to the designated time and duration. Alternatively, Canvas Assignments can align well with Turnitin to prevent plagiarism. Since many colleagues had no experience in running exams online, the team worked out two step-by-step manuals [11], as supplementary learning materials of the two training sessions, to illustrate the related features and customisations for the most common scenarios in an online exam setting. Each manual includes a detailed guide to help teachers conduct a mock assessment before the creation of the final assessment.

C. Reflecting on the Past and Embracing the Future

The semester, including the assessments, ended satisfactorily on May 23, 2020, even though minor disruptions and challenges had been encountered. Students responded well to remote learning [12], and they felt engaged with teachers and peers. Throughout the implementation and operation phases of the initiative, the university sincerely appreciates the relentless effort from every team member of different disciplines who underwent numerous quick

iterations to bring out the best available solutions to support the new teaching and learning mode at CityU.

There were four reflections drawn from the whole initiative: (a) learners nowadays are generally more digitally native and more capable of managing technology; (b) teachers who might feel reluctant to online teaching can be migrated to online lessons smoothly via proper and timely support and training; (c) security and privacy issues of online learning tools are highly concerned by several teachers and students; and, (d) further research of remote learning covering fieldwork or lab work is needed when online classes may become a norm in the future.

III. Initiatives from The University of Hong Kong

Technology nowadays is more advanced and can support live-streaming lessons (synchronous teaching). However, with limited preparation time amid the coronavirus outbreak, it would be very demanding for teachers to restructure all lectures to hours-long online sessions with synchronous discussions. Therefore, we have proposed teachers to adopt a hybrid approach in their online teaching: assigning offline pre-class preparation tasks followed by an online meeting with students for discussions, and finally having offline consolidation activities. For the pre-class preparation tasks, we introduce and guide teachers in using Panopto and PowerPoint recording functions for pre-recording factual and introductory content and support them in using Zoom for synchronous online discussion.

Assessment is another challenge faced by teachers. As there will be no face-to-face examinations, there is a pressing need for teachers to redesign part of their assessments evaluating students' performance in the course. Some teachers who perceive themselves as less digitally competent may worry about conducting online assessments while some concern about the risk of students' academic misconduct in online assessment. With an understanding of their concerns in mind, we have conducted training introducing various tools for online assessment, as well as online test/examination proctoring methods. The training aims to help teachers to understand the potential of various assessment tools and online proctoring for them to design online assessment.

A. *Support Developed through Initiatives*

- E-learning/-Assessment Quick Start Guides: These guides serve as a portal of online resources provided to HKU staff. They describe how online learning and assessment can be adopted in different teaching contexts and styles. The guide includes technical demonstration videos of tools as well as tips and strategies for creating online learning/assessment sessions. Practices on online learning shared by digital-savvy teachers and suggested practices based on students' feedback are also provided. Training guides can be found through https://hku.to/elearn_quickstart and https://hku.to/elearn_assessment.
- Online learning FAQ video channel: These videos provide step-by-step tool demonstrations to teachers, such that they can quickly learn the tools for teaching and learning. They also explain problems that teachers may encounter in their online teaching. Teachers who perceive themselves as less digitally competent can follow the instructions on-demand. Videos can be found through https://hku.to/OnlineLearningFAQ.
- Real-time Online E-learning Consultation Channel: Teachers can contact E-learning Technologists through a WhatsApp hotline (a cross-platform messaging service) for a real-time one-to-one consultation session on any questions related to online T&L such as the setting-up of a virtual classroom with Zoom (a video conferencing tool).
- Institutional-/Faculty-wide face-to-face and live-streamed training: We provide hands-on training and deep-dive tool demonstrations on online learning tools to teachers on demand. Faculty-specific case sharing, tool demonstration and troubleshooting are also provided for addressing specific needs. These training are also live-streamed to teachers who cannot attend the face-to-face session amid coronavirus pandemic.
- Online Learning Resources for Students: Student quick start video guides are also provided to HKU students preparing them for online learning (https://hku.to/edtechextra_v). A student ambassador has also been invited and is developing resources and tips on e-learning (e.g. how to collaborate remotely on completing group projects).

B. *Effective Resource Development through "First Principles of Instruction" Design Framework*

To assure the quality of the support programme we develop, we have adopted Merrill's "First Principles of Instruction" framework for guiding the design of the resources [13]. Details of how we have implemented the principles in the support programme and resources are as follow:

- **Problem-centered**: Teachers are encouraged to share the problems they have encountered in their online teaching. We then consolidate all these problems and adjust the training content to address their needs.
- **Activation**: Teachers are provided with a structure on how to transfer from face-to-face teaching to online teaching. This practice allows teachers to recall their previous experiences as the foundation to organise the new practices.
- **Demonstration**: A series of demonstrations on various online teaching tools are conducted during the face-to-face training workshops. These demonstrations are also recorded and uploaded to the Online Learning FAQ YouTube playlist for teachers to re-watch and practice.
- **Application**: Teachers are guided, in levels of their digital literacy skills and digital teaching experience, to design and deliver a solution to their teaching problems with considerations on the tools to be used, the alignment of the technologies with their teaching, and the number of students affected by the adoption of online learning.
- **Integration**: Some teachers are more confident and may have found their own and effective ways of conducting online teaching. We then consolidate these cases and share their good practices with other teachers.

C. *Responsive Resource Development through Agile Learning Development*

The team often supports HKU teachers on experimenting with innovative technologies in their teaching and learning. However, under the emergency situation, we need rapid development of training resources that can build up teachers' online learning capacity quickly. Furthermore, the developed resources should be able to respond to the dynamic nature of teaching needs in different subjects. With these two objectives in mind, we have adopted a rapid iterative approach, "Agile Learning Development" (a "sprint" concept) for developing the resources [14]. Each sprint has a clear goal to expand the resources beyond one dimension. In each sprint, the team reviewed the feedback of the existing resources, regularly checked in with teachers for their teaching needs and then continued to develop new content. At the end of each sprint, the team integrated the new content to the existing training resources. This helps to determine the goal for the next sprint.

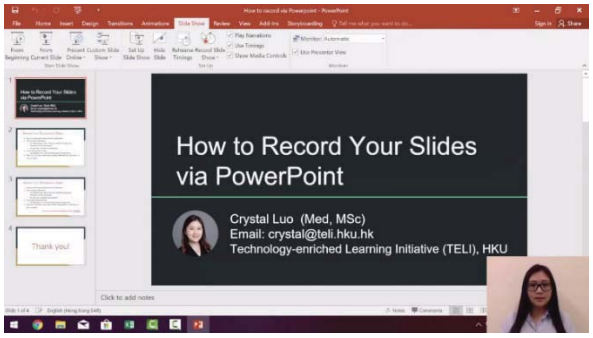

Fig. 1. Screenshot showing the variety of e-learning tools that had been demonstrated in training videos.

Themes for every sprint are as follows:

- Sprint 1: Online teaching tools (Training videos) [Zoom, Panopto, Moodle, YouTube]
- Sprint 2: Online teaching tools (Quick start guide)
- Sprint 3: Organising online discussions [Zoom]
- Sprint 4: Responding to student's e-learning concerns and sharing good teaching practices from teachers [Cisco Webex, Microsoft Teams]
- Sprint 5: Screen annotations during online lecturing [Zoom, PowerPoint]
- Sprint 6: Online assessment (Grading STEM questions and essays) [Turnitin, Moodle]
- Sprint 7: Online assessment (Test proctoring) [Moodle]
- Sprint 8: Online assessment (Examination proctoring) [Home grown online examination system]

Some teachers are not digital savvy and may not be able to describe their challenge clearly. Therefore, instead of using emails, we use Whatsapp to quickly respond to teachers' inquiries. WhatsApp is a popular device-independent and user-friendly cross-platform messaging service, which minimises obstacles of communicating and encourages teachers to contact us. Furthermore, the team and teachers can interact effectively through sending images, videos, audios and documents to each other, so that we can provide better support and precise answers to meet the teacher's needs. Since our training resources are prepared by several training colleagues at the same time, instead of using a static website for showing the training resources, we use Google Slides as the resource container/portal. Extra documents, videos and external resources had been included in the slides for teachers' further exploration.

D. *Evaluation of the Effectiveness of Initiatives*

We believe that we can still remain optimistic amid the coronavirus outbreak. With the continuous support and training workshops we are giving out, we can observe that we are cultivating more and more e-teachers. The outcome of the resources and training we have delivered so far is promising:

- The online E-learning quick start guides have been accessed > 2500 times,
- 31 training videos have been watched > 13,450 times (> 495 hours in total) by > 4800 staff and students (As shown in Table 1),
- > 50 staff have contacted us for individual online teaching consultation, and
- > 430 staff have physically or remotely attended our training.

TABLE I. LEARNER BROWSING BEHAVIOUR OF VIDEOS

Theme	No. of Videos	A	B	C
Exam training	6	31.87	211	11174
Remote lecturing (Basic)	5	35.02	67	177
Assessment	7	39.88	87	139
Video production	8	41.26	64	129
Remote lecturing (Advanced)	4	44.94	57	87

A: Average percentage viewed (%); B: Average view duration (seconds); C: Number of views

Table 1 shows how teachers and students consumed videos. Results show that producing training videos are necessary for ordinary teachers, since they can follow step-by-step instructions and learn by themselves through videos anytime they want. Training videos also save support staff time since teachers and students often ask similar questions, which can be answered through the same video. Furthermore, both teachers and students worried about examinations, which is the most high-stake component in teaching and learning. Since examinations have been shifted to online proctored examination, both teachers and students want to know how examination should be done properly, under the guidance and instructions from the university. This reminds us to design a mechanism for scalable, fair and efficient online proctored examinations in the future.

Teachers are now more confident to transfer from face-to-face teaching to online teaching. We believe some of them may be interested in exploring more learning technologies. In fact, we are collaborating with Faculties and have organised training based on their needs. For example, we talked about the synchronous discussion design in training for teachers from the Faculty of Arts. As for the teacher training in the Faculty of Science, we demonstrated how to use tablets for annotating. We have received positive feedback from the Associate Deans of Faculties and the participating teachers. Meanwhile, we are reaching out to teachers from the Faculty of Education to collect practices from them (e.g. how we

should perform laboratory activities in an online learning environment) and disseminate their practices to others. In addition, we have received requests from non-teaching units (e.g. student support centre) on e-learning support, which indicates the rising needs of online learning from all aspects.

To provide better training and support to teachers within and beyond the university, we continue to share our training experience and exchange ideas with teaching centres from other universities and professional parties. For example, we have shared our experience and the impact of our training with other professionals in the IEEE local Section and IEEE Education Society.

E. Impact of Initiatives

Through intensive engagement with teachers this year, e-learning training changes from "illustrating functions of tools" to “aligning the tool features to teacher's pedagogical needs and student's learning outcomes”. We believe our work not only helped teachers to overcome challenges in online teaching during this pandemic period but also equipped them to harness the power of technologies to assist student learning after the pandemic. Through the programme, teachers with various backgrounds and IT proficiency were able to teach and conduct assessment online. Meanwhile, students can also learn and, finally, be accessed through online proctored examinations. In some disciplines (e.g., Law), most teachers reported that the students were more engaged in remote teaching compared to the normal curriculum, with more in-depth and engaging discussions. Besides, teachers are interested in sharing their experiences on remote/dual-mode teaching. Further collaboration on remote examination analysis and virtual experiential learning can further improve student remote learning and assessment experience.

We reflected that the development of online learning is a process of co-evolution of problems and co-creation of solutions. Collecting feedback on the prototypes and doing reflection during development can lead us to have a deeper understanding of the problematic context, which inspires more solution ideas for further development. We first designed a compact slide decks as prototypes (minimum viable products) that contains the basic information (e.g. university policy and links of tool training manual). With teachers' feedback on the prototype, we then elaborate slide decks by replacing generic guides with tailor-made training videos, revamping the existing resources and covering more aspects.

As most teachers did not receive any training before, they may not be confident in conducting online teaching by themselves. We provided online teaching support to empower teachers' digital teaching capacity. Instead of presenting the newest tools, we focused on introducing user-friendly and popular tools that can be used by ordinary teachers. We explained clearly what teaching problems could be solved and provided clear solutions to meet their fundamental teaching needs. Practices adopted by peer teachers and self-help training videos were also provided to teachers to help them believe that tool adoption is not difficult. All resources can be accessed online and are updated frequently.

IV. Initiatives from The Hong Kong Polytechnic University

Before the COVID-19 campus closure since January 2020, The Hong Kong Polytechnic University (PolyU) had its campus closed in sudden notice from November 2019 to late December 2019 due to campus siege and the subsequent repair works. Experience gained during the sudden campus suspension in late 2019 provided the university with the ability to quickly respond to the latest COVID-19 situation with transformation to fully online teaching and learning. Compared with other sister institutions, PolyU staff could be more familiar with large-scale online, especially synchronised, delivery as staff members had the relevant experience before COVID-19 campus closure.

Similar to its sister institutions in Hong Kong, PolyU also faces issues in different areas, for example replacing face-to-face assessment, especially invigilated examinations, with online proctored examinations, although alternative assessments were recommended but not always practical.

A. Utilising Existing Online Learning Resources

PolyU has launched its series of Massive Open Online Courses (MOOC) in edX since 2015, long before COVID-19 outbreak. Currently, PolyU a contributing charter member of edX [15]. Funding opportunities have been provided to faculty members to develop new MOOCs, and to re-run successful MOOCs. It is anticipated that a proposed new MOOC should align with the existing PolyU curriculum, having relationship with an existing programme or at the course level, and the MOOC can be used as a component in the PolyU courses.

As in summer 2020, 18 courses have been published on edX, with 5 scheduled for release in academic year 2020/21 [16]. PolyU students who are enrolled in the related courses are given free coupon codes to access the respective PolyU MOOCs on edX as a verified learner, so that they can participate in all assessment activities and earn a certificate without extra payment. To support the development and application of MOOCs as a part of blended learning, PolyU’s Educational Development Centre (EDC) provides regular training workshops and content production development to support MOOC development and delivery. With the adoption of MOOCs as part of blended learning under the pre-COVID-19 settings, students and teachers have been familiar with asynchronised online learning in the form of a MOOC. This prior asynchronised learning experience could make the transition into purely online delivery and learning much easier, especially during content creation and pedagogical design.

B. Faculty Training for Online and Hybrid Delivery

EDC organizes regular training sessions every week to cover different aspects of pedagogical development. In the pre-COVID-19 practice, training sessions were organized in face-to-face settings. Participants attended training in a designated venue with appropriate technical set up, e.g., ceiling camera and integrated AV system to facilitate classroom capturing.

To tackle the challenges faced by teaching staff rapidly, especially in designing effective pedagogical approaches with online synchronized learning tools in PolyU, i.e., Blackboard Collaborate Ultra, Microsoft Teams, and Zoom, online webinars and hybrid workshops (with face to face participation and online participation concurrently, when permitted), have been offered intensively to teaching staff. Frequent re-runs at different time intervals were offered during the first three weeks of the semester to allow more staff members to attend at real-time. Recordings of webinars and hybrid sessions are provided to all eligible PolyU users, in a dedicated video channel managed by PolyU.

Although PolyU teaching staff are generally more familiar with online delivery since November 2019 than counterparts in other sister institutions, hybrid delivery is still a challenge, both in terms of pedagogical development and technical maturity. Focus of training has been switched from synchronized delivery to hybrid teaching in summer. While training of technical operations using different tools has been taken care of by the Information Technology Services (ITS) on a technical and operational viewpoint, EDC training emphasizes on pedagogical design, e.g., active learning, student engagement and learning analytics.

C. Outreaching to Teaching Staff and Other Initatives

A more proactive approach has been adopted to allow EDC staff members to provide support for the PolyU teacher community in a timely manner. Blackboard Collaborate Ultra has been set up in November 2019, as a rapid response to the sudden campus closure. Later, a Whatsapp hotline has been set up during the COVID-19 campus closure to supplement the Blakcboard Collaborate Ultra real-time support session.

Since November 2019, a dedicated Blackboard Collaborate Ultra support channel for teachers has been set up by EDC. The purpose of using Blackboard Collaborate Ultra to provide real time support is to facilitate a synchronized environment supporting audio and video communication, and at the same time, a convenient platform for teachers and EDC staff to demonstrate the functions of different e-learning applications and to showcase how pedagogical designs can be implemented using different e-learning systems. The real time screen sharing feature makes Blackboard Collaborate Ultra useful in supporting remote pedagogical consultation of different e-learning systems, but the drawback is that teachers must attend the support session during the prescribed office hours, as no message dropbox would be available.

The EDC Whatsapp hotline started not long after the set up of the Blackboard Collaborate Ultra support in November, 2019 to complement the existing channels for communication with teachers. The new Whatsapp hotline only supports text and graphics enquiries with extended operating hours. When compared with other outreaching channels, Whatsapp is more effective when teaching staff members want to capture the problems they encounter, e.g., an error screen shown in the system, even outside regular office hours. With the error screen and other system messages, it is easier for EDC staff to provide customized advice to teaching staff, especially in cases that requires troubleshooting. Although the service channels are generally designed to provide pedagogical support for users, often technical and operational enquiries are received. Users are redirected for seeking assistance, with a more accurate diagnosis of the problem from EDC.

The Blackboard Collaborate Ultra and Whatsapp channels also provide useful feedback for EDC to offer subsequent support initiatives. Enquiries received from users are categorized and analysed weekly. To address the demand from users, new webinars, newsletters and other possible support can be published to users in a timely manner.

The University has maintained an online teaching web site to consolidate documents, including guidelines, policy and simple user guides. Notably, a basic standard for online teaching and a checklist is available for teaching staff. Guidelines are also available to assist Heads of Departments to comply with quality assurance standards.

V. Conclusion

The COVID-19 situation is still challenging. However, different teaching support teams have responded responsively to both the challenges faced by teachers and students and the opportunity to reach out to teachers. In our cases, three universities have been responsively developing their own training resources that suit teachers' and students' needs. As there may be more unexpected conditions in the society in future, we believe teaching support teams should create a resilient, sustainable and adjustable teaching environment for teachers. To achieve this, we have to learn from each other.

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