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The Hong Kong University of Science and Technology (HKUST) began promoting online teaching some time ago but not many faculty members had tried it until online teaching became the only option to safeguard students' safety amid the ongoing disruptions in the city.

The social unrest in fall 2019 provided HKUST with an early experience of rapidly migrating the whole university to an online teaching mode, which we built upon in spring 2020.

To serve as food for thought, we hope to share our experiences of providing online education and some other issues we addressed during this challenging time.

An early taste of online teaching

The social unrest that rocked Hong Kong last year (2019) made headlines around the world. The confrontation and violence escalated towards the last two months of 2019 and caused mounting disruption throughout the city, including its higher-education institutions.

Owning to safety concerns, some non-local students started to leave the city. At HKUST, the decision to suspend all classes was made in early November.

With only three weeks left until the end of the fall term, HKUST decided to switch to online teaching. All courses were required to migrate online over a few days, if not overnight. Individual faculty were free to make choices for their own classes: synchronous or asynchronous; recordings; voice-over presentations; Zoom or something else. The main objective was to tide the semester over.

Our MBA was the first programme across the university to get its online courses up and running using Zoom. About 30% of MBA students attended classes online at that time depending on the extent of traffic disruption to campus. Within about a week, most courses for our broad portfolio of MSc programmes and for our 3,500 undergraduate business students were also available online. Through the conscientious efforts of faculty and staff, the delivery of these programmes was carefully monitored and many teething issues were resolved.

In response to strong demand from students and with enhanced safety measures on campus, face-to-face classes were soon resumed for our MBA and MSc programmes, accompanied by an online option for those who expressed concerns about their safety or found it difficult to commute to campus.

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50%

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Listening and responding

However, there was still considerable concerns from some students to online learning. Some groups of students launched petitions on social media platforms, questioning the quality of online courses and their methods of assessment.

At our business school, undergraduate students need to select their major by the end of fall term in their second year and thus grades from most courses are required by this point. Hence, we decided to retain the original grading schemes after migrating to the online mode, despite some dissatisfaction.

To address these, we communicated to students that we understood their concerns regarding online learning. While holding firm that continuing courses online was the best way to achieve the two objectives of ensuring safety and continuing learning, we were mindful that communication and sympathy were vital.

Our senior administrators and programme offices explained the reasons for all major decisions, responding rapidly to students' questions and meeting with students in person.

Multiple measures, including providing additional support and resources for students and faculty, were introduced to ensure that we could deliver high-quality learning despite the change in teaching mode. In terms of assessment, we encouraged the use of alternatives to traditional closed-book proctored exams and provided faculty with suggestions of best practices for designing online exams. Student feedback at the end of the term revealed that while most classes had gone well, those classes held in synchronous, interactive mode, had, on average, done better.

Preparing for COVID-19

Having weathered the storm in the fall, we anticipated face-to-face or mixed-mode classes in spring term in 2020 but this did not happen.

With the outbreak of COVID-19, HKUST made another decision to deliver all classes online to contain the spread of the pandemic. To prepare for the change, the university deferred the beginning of spring term by two weeks, to February 19.

A Task Force led by the President oversees the overall safety of the campus and devises measures to cope with the disruptions to teaching and research activities. Now a cross-departmental team, led by the Provost Office and consisting of Associate Deans of all Schools and senior administrators from our Center for Education Innovation, Academic Registry and Information Technology Services Center was created to be the driving force in facilitating the exchange of experiences and achieving university-wide co-ordination to migrate all courses online within the two-week extension.

Based on the experience of the fall, it was decided that all classes would be in "online, real-time, interactive" mode. The team, which had gained early experience back in November, quickly decided to support only one delivery platform—Zoom.

The Zoom platform was chosen not only to allow focused training and support but on account of its accessibility around the world, server capacity and integration with existing online learning management systems.

Although some faculty members had experience of teaching online, online delivery was still new to most of the 680 faculty members at HKUST. They were encouraged to experience online learning, first as students and then as teachers, in multiple training sessions conducted to get everyone up to speed.

With repeated training and hotline support, they have formed their own support community and started learning from each other. Meanwhile, constant feedback and best practices from faculty were put together on a one-stop webpage.







Above and top:

An instructor delivers a real-time, interactive online class

Left:

A one-button online feedback form for students

With a view to achieving the same outcome for our programmes, a continuous quality assessment was put in place, with a one-button online feedback form for students to anonymously express their views or report technical problems.

After around eight weeks (as of mid-April), most faculty had settled in quite well. To review the effectiveness of online learning, a student survey was conducted in mid-March. Over 70% of the students surveyed were satisfied or very satisfied with the technical aspects of their online courses and the instructors' arrangements for the course logistics.

Many students rated their learning as effective or highly effective. Achieving this level of satisfaction would not have been possible without the sustained efforts of all members of the university.

New possibilities

The occurrence of social unrest and the pandemic outbreak within a few months of each other drove the rapid adoption of online teaching across the university. Our experiments have taught us that, even after these crises subside, online education offers many new possibilities.

In our ongoing endeavours to improve teaching and learning, we have observed that some teachers who are not good at traditional teaching can perform well online whereas other teachers find interactive features offered by online teaching, such as polling and screen sharing, new and useful. We are also pleased to see several students, who would normally be quiet in physical classrooms, participate actively through online "chat".

Other issues

HKUST has about 230 exchange partners across 36 countries around the world. All of our undergraduate students are encouraged to apply for overseas exchange places to complement their programmes. We also welcome incoming exchange students. In fact, more than 50% of our undergraduate students will have at least one-semester international exchange before graduation.

In the fall term 2019, our business school alone hosted 190 incoming exchange students. Due to safety concerns on campus and in Hong Kong, these students were given the option of leaving earlier and continuing their classes remotely in their home countries.

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They were also offered the choice of pass/fail grading or withdrawing from their courses. Our major challenge was to ensure that they could return home safely if they wanted to. The majority of these 190 overseas students chose to leave early.

Shortly after finishing the arrangements for the incoming exchange students, the COVID-19 pandemic began to pose a different level of risk to our 222 outgoing exchange students around the world, some of whom were in the hardest-hit cities.

A flexible approach, including offering students the possibility of resuming their studies later at HKUST or taking classes via remote learning offered by host institutions, was adopted to help those who wanted to return to Hong Kong or their home countries.

Our programme office worked around the clock to check their whereabouts, advise individual students on their return and communicate with our partner institutions regarding the status of our students.

Of all of the outgoing exchange students in the spring term, over 170 have already returned home. For those non-local students returning to Hong Kong from affected regions, the university arranged a quarantine facility to host these students for two weeks before they returned to their dormitories.

Today, universities around the world are facing exceptional challenges with the running of student exchange programmes. As students preparing to study abroad need to make arrangements many months in advance, HKUST has announced the suspension of its undergraduate exchange programme (inbound and outbound), including that in fall term 2020, as we feel that this is in our students' best interests.

Ongoing support

MBA students tend to be especially keen to look for networking opportunities to advance their careers and thus find these difficult times particularly stressful. Indeed, many people and institutions around the world, including businesses, governments and universities, are victims of these unfortunate circumstances. We sympathise with students' concerns and are trying our best to minimise the impact of the virus outbreak on their learning.

For examples, we have introduced series of workshops to help students manage changes and crises. We have arranged online recruitment talks and provided training on online interviews. We have called on and received strong support from our alumni to provide jobs, internships and consultancy projects for graduating students.

We have invited senior alumni including those who graduated in 2003—the year in which Hong Kong was hit hardest by the SARS outbreak—to share their stories of how they grew stronger and wiser after a particularly challenging period in Hong Kong.

Every cloud has a silver lining. Hong Kong rebounded quickly after the SARS outbreak. We believe that as long as we uphold our commitment to providing the best education in good times and bad, our graduates will succeed in their lifelong journeys.

Instead of focusing on short-term impact, they should concentrate on the long-term value of their investment and prepare for the new opportunities ahead. Much like our online education experience, when the right time comes, their efforts will pay off.

HKUST conducted an online forum to exchange online teaching experience, attended by representatives of more than 40 universities around the world. Readers can watch on: http://cei.ust.hk/migrating-whole-university-online-real-time-interactive-teaching



About the Author

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