Online Teaching and Assessment Practices During COVID-19 Crisis: Perspectives from University Students

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Abstract In the academic year 2019/20, to ensure continuity of teaching and learning activities for students, Hong Kong universities largely moved their education online due to social unrest and then worldwide COVID-19 outbreak. **Research objective**: This study explored the student perspectives on online teaching and assessment practices during global COVID-19 crisis at a university in Hong Kong. **Methodology**: The good practices on online teaching and assessment were identified via qualitative analysis of the students' open-ended comments collected from the university's course-based evaluation with 8145 students involved near the end of Spring term of the academic year 2019/20. **Key results**: Six good practices on online teaching and assessment were identified. The findings provided useful insights for universities to review and reinforce their online education practices for the circumstances where in-person classes are rigorously limited.

Keywords Educational emergency · Higher education · Online learning · Student needs · Student learning experience · Course evaluation

1 Introduction

Starting from early 2020, the world has experienced an unprecedented public health emergency owing to the COVID-19 pandemic. To help control the spread of the coronavirus, various countries and regional areas temporarily suspended in-person classes in schools and universities as one of the precautionary measures in reducing the social contact among students and academic/administrative staff (Hussain et al., 2020). Universities had taken action to switch to online education so as to ensure continuity of teaching and learning activities and assessment for their students to study at home in the context of coronavirus crisis (Rahiem, 2020).

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In Hong Kong, the first confirmed COVID-19 case was found on January 22, 2020 (three days before public holidays of the Chinese New Year in Spring) and the University Response Team was immediately formed to help manage related matters and disseminate information to students and staff. In view of the pandemic situation in Hong Kong, physical presence on campus was subsequently not required for the whole Spring term for the university students. All classes were delivered using live interactive online mode on the scheduled timetable, and proctored online examination or alternative assessment were conducted. Therefore, students who were physically not on campus were still able to participate in and complete their classes and assessments online. Before the arrival of the pandemic, university classes in Hong Kong had been moved online few months earlier in November 2019 (Fall term of academic year 2019/20) due to the escalation of violence and confrontation throughout the society.

The transition to online university education had already been continued for a period of time. There were studies about the impact of the pandemic on academics, educational delivery, and higher education sector (e.g., Jung et al., 2021; Lin et al., 2020; Wong et al., 2020). But little was known on how students perceived and experienced online teaching and assessment practices at institutional level. Thus, the present study investigated the student perspectives on online teaching and assessment practices during COVID-19 crisis at a university in Hong Kong. The research question was: What kinds of online teaching and assessment practices do university students want and commend during the emergency situations like COVID-19 outbreak where physical presences of students on campus are rigorously limited? The good practices on online teaching and assessment were determined via qualitative analysis of the students' open-ended comments collected from the university's course-based evaluation. The findings of this study would act as useful reference for universities to strengthen their online teaching and assessment capacities to respond to future emergency situations where in-person classes are needed to be temporarily suspended, and to better administer the sudden transition to online education.

2 Literature Review

There were research studies conducted on the influence of the unprecedented pandemic on university teaching and learning in different countries and places, particularly in the early stage of sudden transition to online teaching and learning. Hussain et al. (2020) reported the experience of a national university in Qatar in responding to the suspension of classes under the pandemic. The university ensured continuity of teaching and learning activities and enriched students' learning experience by using available educational technologies of the university. Ismail et al. (2020) investigated the challenges and problems faced by Malaysia's university students when implementing online learning at the beginning of time that the world was shaken by the pandemic. They revealed that majority of the students were not ready for online teaching and learning approach primarily because of the low Internet connection which hindered the online learning.

After a period of conversion to online education, student comments on university teaching and learning were examined. Rahiem (2020) studied the experience of Indonesian university students after a month of emergency remote learning during the pandemic. Students had both positive and negative experiences of emergency remote learning that utilized blended strategies of e-learning, mobility learning, and conventional learning techniques. They enjoyed learning from home but technical barriers and resources hindered their learning. For example, students only used open access materials as libraries were closed and they did not have any access to paid online journals. Having been learning remotely for more than a month, students mentioned that they had some negative emotions such as feeling depressed, confused, devastated, and isolated. Cicha et al. (2021) explored Polish first-year undergraduate students' expectations about the education shift to distance learning under the second wave of pandemic situation in Poland. The study showed that students' feeling of pleasure in distance learning and sense of self-efficacy were the most important factors affecting the perceived usefulness rating and ease of use in the distance learning process.

The pandemic became a barrier preventing students from studying abroad. Based on the online study abroad experience of university students under the pandemic, Lewis and Markey (2021) suggested that future virtual study trips should incorporate more opportunities for student interaction (e.g., promote more student discussion) and explore online approximation of the informal interaction with local people. They found that a good study abroad experience relied heavily on student interaction with each other and with local people in the trip but these were not fully covered in the online format. Regarding the overseas study plans against the pandemic crisis, Mok et al. (2021) showed that the pandemic significantly decreased mobility of international students, and the management of pandemic and post-pandemic crisis became an additional consideration of the choices of destination for overseas learning. Thus, previous findings on the expectations and considerations of international students choosing a university before the pandemic crisis (Ng & Lee, 2020) may need to be updated in the future.

Comparing with other regional areas, due to social unrest, Hong Kong had transited to online teaching and learning mode a few months earlier before the arrival of pandemic. Lin et al. (2020) identified that teacher–student interactions played a major role in making a successful virtual classroom for Hong Kong university students. Ng et al. (2020) examined challenges on rapid conversion of university teaching and learning during the pandemic in Hong Kong. They found that students were concerned about the data privacy issue of web conference software and thus educating students' technology literacy (e.g., security and privacy settings) was crucial. For instructors, the results showed that there was a need of university support and professional training to equip them to become accustomed to online teaching. There were research studies about the online university education situation of Hong Kong for the period of pandemic. However, comprehensive studies about university students' perspectives on online teaching and assessment practices of the first and foremost semester without physical presence on campus were still limited.

3 Method

This study was conducted to investigate the perspectives of students at a university in Hong Kong on online teaching and assessment practices near the end of the first and foremost semester where physical presence on campus was not essential. A total of 13,728 students were invited to participate in the Student Feedback Questionnaire (SFQ) exercise Spring 2020 to provide feedback on the quality and effectiveness on their course learning experience. The students received an email invitation to complete an online SFQ survey for each of their enrolled course sections that were included in the exercise. Each survey generally was opened for 15 days, and an email reminder was sent to non-respondents of the survey on every three days. There were 8145 university students participating in the SFQ exercise, with a response rate of 59%; and a total of 1374 sections of courses were evaluated. The respondents were from different disciplines: business, engineering, science, humanities and social science, and interdisciplinary studies. The students' open-ended responses on the two open-ended questions "What is good about the course?" and "What could be done to improve the course?" which were about online teaching and assessment in the courses were extracted for further analysis in this study.

4 Results

There were a total of 827 open-ended responses related to online teaching and assessment out of the 8145 respondents. The content analysis approach was used to analyze the open-ended responses about online teaching and assessment in the courses. Each of the open-ended responses was examined and assigned with a code according to content and meaning. Similar codes were grouped together to delineate themes and sub-themes, providing six good practices on online teaching and assessment: (i) Effective usage of Zoom features and other teaching tools to facilitate real-time online classes, (ii) Adjustment of course design and lesson arrangement for adapting to online teaching, (iii) Willingness to answer students' questions during and after online classes, (iv) Well thought assessment arrangement for an online-teaching semester, (v) Actively seeking and responding to student feedback about online classes arrangement, and (vi) Sense of close relationship with instructors and peers during online classes.

4.1 Effective Usage of Zoom Features and Other Teaching Tools to Facilitate Real-Time Online Classes

In this study, 21% of responses were about effective usage of Zoom features and other teaching tools to facilitate online teaching. Students liked instructors who could use

the tools available in Zoom (e.g., "polling," "chat room," "raise hand", and "breakout room") properly to conduct classes so as to make classes more lively, interesting, and interactive. They added that the good use of some Zoom features could encourage students to answer questions and share ideas in classes more likely, and helped check the knowledge and understanding of students about the course content.

– *"Polling function could be used during lectures to check or recall the knowledge from students. Meanwhile, they can check their own understanding on certain topics or concepts."*
– *"use poll function in Zoom if the course is online again so more students are more likely to answer the questions"*
– *"Did a good job in managing the class and breakout rooms"*
– "*Breakout groups were fun*"
– *"Professor encourages participation in the Zoom chat so more people are able to share ideas at the same time."*
– *"As we use Zoom to have our lectures, it would be better if we can use the chat function in Zoom. We somehow don't want to speak* via *mic, chat room would be a great alternative for us to answer questions."*
– *"I think we can use more "raise hand" function of zoom to encourage students to answer questions/discuss to earn the participation marks"*.

Some students, as highlighted in the following comments, noted the appropriate usage of other digital tools and accessories such as iPad, screen highlighter, and screen pen, to facilitate real-time online classes teaching was necessary. This could let students read the writing notes and illustrations, and key points on the slides more clearly and easily so as to understand the contents of the lectures better.

– *"His standard of teaching was very high with online classes … he used the iPad to draw graphs and write notes which was very clear."*
– *"She writes in the iPad, which is effective for teaching under online mode. Piazza is a good website."*
– *"He gave clear and attracting lecture as well as using smart tools like iPad for illustration in Zoom environment, which really helped us understand the content better."*
– *"It would be great if prof can write or highlight on the screen."*
– *" I think seeing the paper writing and the slide at the same time is kind of inconvenient. Maybe for online learning, some tools can be used to directly writing notes on the slide."*

4.2   Adjustment of Course Design and Lesson Arrangement for Adapting to Online Teaching

Around one-third of the student responses (33%) were about adjustment of course design and lesson arrangement for adapting to online teaching. Students very much appreciated instructors who thoughtfully adjusted course design and structure to fit and accommodate the totally online teaching and learning environment:

– *"The course is very well designed and accommodated well to the sudden shift to an online environment."*
– *"The course design also fits the online environment well, with online discussion forums and rich online resources."*
– *"She very successfully creates an interesting and fine learning environment. She adapted the course structure very well for online teaching."*
– *"The professor has designed the course really well. The mode of instruction has been well taken care off [sic] especially in this challenging condition of online classes."*

Students indicated that they could be easily distracted in online classes. They emphasized the importance of offering short breaks during 3-h online lectures and playing course related games and interactive activities to help students concentrate in online lesson.

– *"Separating a three-hour session into three 1 h session helps student focus."*
– *"Professor makes time for us to get some rest 3 times in the 3 h class. It is very helpful since online class could be distractive."*
– *"3 h lecture ONLINE is way too long for me to keep up."*
– *"I think the content is pretty interesting and the professor is doing a great job keeping our attention through the activities."*
– *"It raises my awareness towards sustainability through different games and interactive activities. There were online simulation, role play, measuring our daily use of resource and online board game. They helped me concentrate in class. I love this new mode of teaching very much."*

4.3   Willingness to Answer Students' Questions During and After Online Classes

There were 16% of responses related to the willingness to answer students' questions during and after online classes. It was vitally important for instructors to be responsive and ready to answer students' questions efficiently and patiently during and after online classes as it was not possible for students and instructors to physically meet up on campus.

– *"A nice instructor. Patient to answer our question after class."*

- *"The professor provided well-pitched level of lecture to us, and he was ready to answer our questions both during the class and outside of classroom."*
- *"The instructor was always open to questions both in class and after class."*
- *"The Professor is engaging, humorous and encourages students to ask questions in class or otherwise."*

Students mentioned that the questioning and answering process could help make the online lectures more interactive. There was no need for students to be on campus during the pandemic crisis period. If students had any questions after online classes, they appreciated instructors who could be approachable through various medium such as email, Canvas Discussion, and Zoom chat room. Some instructors also provided additional Zoom classes/meeting hours where students could drop in to ask questions.

- *"He is more than eager to answer our questions in lessons, making the lectures very interactive despite it is an online lecture. I am happy that we can still maintain the quality of the lectures."*
- *"She replies email quite quickly. She is patient while answering my questions."*
- *"Very responsive to students through all medium e.g. chatroom on Zoom and emails."*
- *"He also prepared extra office hours (2 days a week) where students could drop in on Zoom and ask questions."*
- *"Professor gave additional Zoom class for questions."*
- *"He is willing to hold zoom meetings for students to consult him one on one regarding lecture material."*
- *"Professor lets us ask as many questions as we can in the Discussion on canvas."*

One student reported: "Professor provided strong support to every student … sending individual email to each of the student to ask how's the progress in studying this course and if there are any difficulties, he mentioned a lot of times that he can provide help if we need." The quote implied that showing care and support to students were crucial during the special learning situations.

4.4 Well Thought Assessment Arrangement for an Online-Teaching Semester

Twenty-two percent of student responses were about assessment arrangement for an online-teaching semester. For online education semester, students were very concerned about the trials of online examination setting for a course, prevention measures for avoiding student cheating, and fairness of the online examination. They reported that some instructors had conducted several trials of the online examination setting with students prior to the examination, so as to minimize worries due to changing the mode of examination from paper to online. Students also commended

that instructors made extra efforts on online examination question design to reduce student cheating.

– *"He did multiple trials for our exam from last semester, so he was well-versed in online exam. In addition, his exam questions were unique and challenging, so students didn't have to worry about others cheating by looking up answers online or by colluding."*
– *"With online teaching, the assessment method is not really good. As marks will only be given when the students get the right number. I think for this accounting course, steps and concepts are also important, and it becomes easier for student to cheat under the current practice."*
– *"I think the setting of quizzes are very well for preventing cheating when compared to other courses, although I think there are still loopholes for cheating actually when the mode is changed to online."*
– *"She tried her best to make online exams fair."*

Suggestions on assessment arrangement were also made by students. They indicated that instructors should thoroughly consider whether a particular kind of assessment (e.g., field trip, groupwork) could be conducted smoothly after being moved to online mode, and also which kind of assessment was suitable for an escalating pandemic situation that students were recommended studying and staying at home.

– *"Field trip and field report assessment seem not suitable to be conducted* via *online teaching."*
– *"Better avoid group project due to remote teaching. It is difficult for students to cooperate with each other under this situation."*
– *"Too much groupwork in online setting is really challenging"*
– *"Professor also replaces the group project with individual simulation games, showing his understanding in regards to the online learning environment."*

4.5   Actively Seeking and Responding to Student Feedback About Online Classes Arrangement

Some comments (12%) highlighted that instructors should actively seek student feedback on course setup to strive for better online teaching quality, well consider students' opinion, and respond to students' request no matter the proposed arrangement accepted or not.

– *"My favourite thing about the prof was that he was actively trying to improve by asking students which courses have good setups so he can observe."*
– *"More than 1/5 of the students have asked to adjust the online exam in a way such that it is allowed to skip questions during the test, but the instructors are unwilling to listen. From their perspective, making it a question-by-question order is to prevent students from cheating. … Professors should try to put themselves in our shoes and consider our situations, not going their own ways."*

– *"I personally feel like instructors are a bit arrogant and just pretend they would listen to students' opinions."*
– *"Professor made up his schedule and responded to our request of holding extra workshops for the remaining topics."*

4.6 Sense of Close Relationship with Instructors and Peers During Online Classes

The suspension of in-person classes was mainly used to reduce the social contact among students, academics, and staff. Some student responses (1.2%) expressed that a sense of close relationship with instructors and peers in online classes were still important under unprecedented pandemic circumstances. They liked having a chance to communicate with instructors, ask and answer questions, share their opinions and views with classmates, and listen to what their classmates said during online classes. They also appreciated those instructors who could think about different ways (e.g., call on student names, encourage students to turn their cameras on, and polling) to create an interactive atmosphere and keep all students engaged in class. Breakout room discussions (online real-time small group discussions) was certainly a good means for students to recognize their classmates and to interact with each other.

– *"Even though we had to move our classes online, Professor clearly thought about different ways he could keep us engaged. I think it is good when Professor calls on students, I believe it really does help keep students engaged."*
– *"Allowing students to turn on their cameras will definitely encourage students to have active interaction with professor."*
– *"I would like to suggest that if the instructor can interact more with students like providing some T/F [true/false] questions or polling for students to understand some concepts or calculation"*
– *"The instructor has created a good atmosphere which allows interaction between students as well as a lot of in-class discussions, even though the lesson was conducted through an online mode"*
– *"Many break out room discussions were organized during the course to provide a better understanding of various topics and also to give students a chance to communicate with one another and share their opinions and views on different issues"*
– *"I also appreciated that the breakout room groups were randomly generated every time because it allowed me a chance to get to know everyone in the class."*

5 Discussion

This study examined the online teaching and assessment practice during the pandemic crisis based on the qualitative perspectives from university students in course evaluation. Results of this study suggested that appropriate online teaching platforms and tools, adjustment of course and lesson design and assessment arrangement, enhancing in-class interaction between instructors and students and among students themselves, being available after online classes for any questions and concerns, and maintaining good communication between instructors and students were all critical for online pandemic teaching.

Regarding the online teaching platforms and tools, this study revealed that effective integration of Zoom features to deliver real-time online classes is important. Polling, chat room, raise hand, and breakout room were the four common virtual interaction features that students highly recommended. The findings were supported by Moorhouse and Beaumont (2020) that teachers should familiarize with the video conferencing software like Zoom and utilize various features such as share screen, gallery view modes, microphone mute, and raise hand appropriately in virtual classes. Results of this study also showed that the use of additional digital tools and accessories (e.g., iPad, screen highlighter, and screen pen) as online teaching equipment were necessary for writing notes and illustrations purposes and highlighting key points on slides. To let students to have smooth online teaching and learning sessions, Ismail et al. (2020) also found that identification and selection of suitable learning tools for synchronous live teaching was one of the critical success factors for online pandemic learning.

A recent study by Rahiem (2020) indicated that most of the course syllabus was not designed for online teaching and learning. To accommodate the totally online teaching and learning environment during the pandemic, this study showed that appropriate course design and structure for adapting to emergency online teaching was indispensable. Extra efforts had also been made to help students concentrate in online classes, for example, offering mid-lesson breaks and playing course related games and interactive activities were useful. The findings were consistent with Ng et al. (2020) on online teaching practice for the period of pandemic crisis. Teachers needed to re-design their pedagogies to move teaching online and attempted to maintain students' learning motivation through a diversified mode of lesson activities, making online real-time learning active and interactive. Cheung (2021) also mentioned that pedagogies are required to be updated for better utilization of technology integration in online teaching.

There was no necessity for students to be on campus during the pandemic crisis and thus it was not possible for students and instructors to physically meet up on campus. Jung et al. (2021) indicated that what students learn in university comes from both in class and outside class such as talking with a teacher at the end of a lecture. This study found that, after transition to online teaching in the period of coronavirus outbreak, it was crucial for instructors to be responsive and ready to answer students' questions in online classes, and also be approachable after online

classes through digital channels such as email, Canvas Discussion, and Zoom Chat room and video meeting. For such online teaching and learning arrangement, Jung et al. (2021) also showed that some students felt comfortable to raise questions with their teachers using the chat protocol. Therefore, instructors should adopt the online communication tools pragmatically and appropriately to facilitate students' learning during and after online classes.

Examination and assessment design was also a concern for online education. To minimize student worries due to changing the mode of examination from paper to online, provision of trials of the online examination setting for a course were highly favorable. For example, instructors demonstrated and tested with students how to conduct an online proctored examination and solved any setup problems together. Preventive measures for avoiding cheating and fairness of the online examination were of students' focus and thus mitigation actions should be taken. Hussain et al. (2020) indicated that the university assessment strategy was revised to suit for online pandemic teaching. The issues of examination invigilation, integrity, and format were their major considerations while conducting online examinations with students outside of campus. This study also found that course assessment like field trip and groupwork should be planned and designed carefully before implementation in an online teaching environment under the unprecedented pandemic situation. After transitioning to online education, Lewis and Markey (2021) reflected that teachers were reluctant to assign group projects and assessments that required students to work together in groups for many hours, as students might not be capable to coordinate extensive groupwork remotely.

The suspension of in-person classes did not minimize the needs for the sense of close relationship with instructor and peers in online classes, according to the findings of this study. Enhancing virtual class interaction between instructors and students and among students themselves are necessary for online education. Lin et al. (2020) also revealed that teacher–student interactions played a dominant role in making the virtual classroom successful. In this study, students were fond of the online class atmosphere that gave them a chance to communicate with instructors and exchange their opinions and views with classmates. Encouraging students to turn their cameras on and creating breakout room discussion (online real-time small group discussion) are sample ways of keeping students engaged and interacted in class in this study. Rahiem (2020) showed that deep learning can be developed for students throughout synchronous peer discussion in online classes.

This study revealed that showing care and support to students were very important during the special learning situation and disruption of normal life due to the pandemic. Actively seeking and responding to student feedback about online class arrangement was a way to strive for better online teaching quality. Peachey (2017) showed that student feedbacks could help teachers to be aware of their online teaching performance, inspire and inform new teaching approaches, and take relevant improvement actions. For delivery of successful online learning, teachers needed to think judiciously on how to support and encourage students to learn and study.

Overall, the above-mentioned good practices on online teaching and assessment from the perspectives of students would assist universities in reviewing their current

digital education arrangement under unprecedented pandemic crisis. The findings would also facilitate universities enhancing the general quality of online teaching and learning when normal life is resumed. It was noted that there were limitations of this study. For example, demographics of the survey respondents were not collected and considered. The perspectives of online teaching and assessment practices may probably be varied in terms of full-time or part-time student status and age group of the respondents.

6   Conclusion

This study discussed the perspectives of university students on online teaching and assessment practices during unpredictable COVID-19 crisis in Hong Kong when in-person education and physical presence on campus were not recommended. The six good practices on online teaching and assessment were revealed from students' open-ended comments in the university's course-based evaluation. The identified good practices were (i) Effective usage of Zoom features and other teaching tools to facilitate real-time online classes, (ii) Adjustment of course design and lesson arrangement for adapting to online teaching, (iii) Willingness to answer students' questions during and after online classes, (iv) Well thought assessment arrangement for an online-teaching semester, (v) Actively seeking and responding to students' feedback on online classes arrangement, and (vi) Sense of close relationship among peers and between instructors and students during online classes. Results suggested that online teaching tools, appropriate lesson and assessment design, maintaining good communication between instructors and students, and enhancing in-class interaction between instructors and students and among students themselves have played vital roles in facilitating online learning under unprecedented public health situations. The findings of this study would be useful for universities to review their various aspects of online teaching and assessment so that administrators and instructors could smoothly and quickly implement and adopt the emergency digital education plan for students just in case. The findings would also be a reference for enhancing the quality of online learning design in general normal situation.

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