Quality Enhancement Support Scheme Appendix 11



Case Studies in Intervention Programme for

The eTeaching Literacy Project (eTeachLit):
Improving Students' Learning Performance
Through Empowering Teachers' Digital
Teaching Capacity

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Section 1: Outcomes

Primary outcome

Teachers' eTeaching literacy was the primary outcome of the project. The evaluation assessments were carried out in form of self-rated survey and case study. There were 15 teachers selected to participate in the project. They were required to complete a survey in pre-and-post intervention stages, with aim to measure the change in their attitude towards, confidence in and usage of eTeaching. There were 3 teachers dropped out soon after the first semester, and 3 more teachers were invited to join the project for the replacement starting from semester 2. **Data provided by teachers dropped out was included in baseline. Newly joined teachers' data were included in both baseline and posttest. **

For the case study, data were collected through interview with teachers individually at the end of the first and second semester in AY2019/2020 respectively. A set of guiding questions (Appendix) were adopted to facilitate the data collection and formulate the case study.

**P.S. Due to the adoption of hyper link for baseline data collection, individual data of pretest and posttest could not be paired up for comparison. Data collection for pretest of 3 newly joined teachers and posttest of all teachers were conducted with a tracking function. The pretest and posttest comparison of 3 newly joined teachers will be presented in their case study respectively.

Secondary outcome

Students' learning experience was the secondary outcome of the project. It was determined by comparing the post-intervention Course and Teaching Evaluation (CTE) score with the historical data obtained in AY2018/2019. However, due to the outbreak of COVID-19, the CTE scores of nominated courses in the first semester of AY2019/2020 were unable to obtain. For the second semester, due to the privacy issue, only 80% of CTE scores of nominated courses were collected from teachers, however some historical data of AY2018/2019 were not provided. All collected data would be presented under each case study in form of simple statistics.

Section 2: Survey

Part 1 Teachers' attitude towards e-Teaching

Overall, there were negative change in the mean of teachers' attitude towards e-Teaching in post-intervention (M= 54.53, SD =6.34) compared with baseline (M=56.47, SD=5.08), but the change was not significant (t (14) = -0.79, p =.44)

On the post test, the mean of teachers' attitude towards e-Teaching was still high regarding perceived importance (Q4; M=4.27, SD=0.59; Q13; 4.20, SD=0.68), willingness to learn (Q15; M=4.20, SD=0.56) and application in the classroom (Q5; M=4.00, SD=0.66). Whilst, teacher still prefer face-to-face teaching than e-Teaching as the mean in protest was still the lowest (Q8; M=2.93, SD=0.8).

In item 7, teachers reported significantly negative attitude change associated with the effectiveness of e-Teaching to students' learning (Pretest: M=3.53, SD=0.99 vs Posttest: M=2.60, SD=0.83); (t (14) = -3.00, p =.01). In addition, teachers felt e-Teaching provided students with less personal care on learning (Pretest: M=3.73, SD=0.80 vs Posttest: M=3.13, SD=1.25).

Table 1

	Teachers' attitude change towards eTeaching	Pretest	Posttest
	(N=15)	M(SD)	M(SD)
1	I enjoy eTeaching	3.80(0.56)	3.93(1.03)
2	I feel comfortable while using eTeaching	3.53(0.52)	3.93(0.96)
3	I think that eTeaching makes me feel less	3.60(0.83)	3.53(0.83)
	connected with students		
4	I believe that it is important for me to learn how to	4.13(0.52)	4.27(0.59)
	use eTeaching		
5	I would like to use eTeaching in the classroom	4.13(0.52)	4.00(0.66)
6	I think that my teaching can be improved by	4.07(0.46)	3.93(0.88)
	adapting eTeaching		
7	The eTeaching is not conductive to students	3.53(0.99)	2.60(0.83)
	learning because it is not easy to use		
8	The eTeaching is more useful than traditional ways	2.87(0.74)	2.93(0.80)
	of teaching		
9	I think that eTeaching can make learning more	3.93(0.26)	3.80(0.86)
	interesting		
10	I believe that eTeaching helps teachers to teach	3.93(0.46)	3.60(0.91)
	more effectively		
11	I believe that eTeaching helps students learn	3.80(0.56)	3.47(0.74)
	because it allows them to express their thinking in		
	better and different ways		

12	I think that eTeaching reduces face-to-face	3.27(1.03)	3.80(1.01)
	interaction		
	with students		
13	I believe that training of eTeaching should be	3.80(0.94)	4.20(0.68)
	included in teacher education programmes		
14	I think that eTeaching reduces personal care to	3.73(0.80)	3.13(1.25)
	students		
15	I am willing to learn more about eTeaching	4.33(0.49)	4.20(0.56)

Part 2 Confidence in using eTeaching activities

Overall, no significant difference was found in the mean of teachers' confidence in using e-Teaching activities (Pretest: M=34.33, SD=7.56 vs Posttest: M=36.00, SD=7.09) (t (14) =0.51, p=.62).

On the posttest, teachers were still most confident in downloading and uploading curriculum resources from/to learning platforms for students (Q1; M=4.47, SD=0.83), and posting assignment on some platform for students (Q2; M=4.07, SD=0.96). Whilst they felt that they were most weak in evaluating digital learning resources in the subject(s) they teach (Q9; M=2.47, SD=1.01).

Compared to the pretest, teachers became more confident in preparing online exercises and tasks (Q7: Pretest: M=3.47, SD=1.06 vs Posttest: M=3.80, SD=1.01), and using student response system (Q8: Pretest: M=3.07, SD=1.16 vs Posttest: M=3.87, SD=0.99). Although they were still most weak in evaluating digital learning resources (Q9; Pretest: M=2.47, SD=1.19 vs Posttest: M=2.80, SD=1.01), it was encouraging to see the improvement.

Table 2

	Teachers' confidence about eTeaching (N=15)	<u>Pretest</u>	<u>Posttest</u>
		M(SD)	M(SD)
1	Download or upload curriculum resources from/to	4.33(0.62)	4.47(0.83)
	learning platforms for students		
2	Post assignments for students	3.87(0.92)	4.07(0.96)
3	Provide feedback (e.g. to mark examination paper	3.33(0.90)	3.40(0.99)
	by rubrics/grading function) and/or assess students'		
	learning		
4	Prepare your own digital materials to use (e.g. To	3.47(1.13)	3.40(1.06)
	create a presentation with simple animation		
	functions for lessons)		
5	Create and facilitate discussion forum	3.33(0.82)	3.47(0.52)

6	Create and/or edit questionnaires online	3.33(1.05)	3.47(0.52)
7	Prepare exercises and tasks for students	3.47(1.06)	3.80(1.01)
8	Use a Student Response System (e.g. Poll	3.07(1.16)	3.87(0.99)
	Everywhere, Kahoot, Slido or other)		
9	Evaluate digital learning resources in the subject(s)	2.47(1.19)	2.80(1.01)
	you teach (e.g. using performance dashboard		
	function)		
10	Communicate with students effectively	3.67(1.05)	3.67(0.82)

Part 3 Use of e-Teaching activities

Overall, teachers reported no significant difference in the usage of eTeaching between protest (M=35.53, SD=4.60) and pretest (M=32.73, SD=8.00); (t (14) = 0.93, p=.37)

As for the frequency of using e-Teaching tools, it was found that teachers held significant positive change in applying student response system (Q7: Pretest: M=3.47, SD=1.06 vs Posttest: M=3.80, SD=1.01); (t (14) = 2.31, p = .04). The posttest results also showed that teachers were more often in using e-Teaching tools for posting assignments (Q2: Pretest: M=3.93, SD=1.36 vs Posttest: M=4.60, SD=0.73), providing feedback (Q3: Pretest: M=3.20, SD=1.15 vs Posttest: M=3.47, SD=0.92), creating questionnaires (Q6: Pretest: M=2.40, SD=1.30 vs Posttest: M=3.00, SD=1.07) and preparing exercises and tasks for students (Q7: Pretest: M=3.40, SD=1.24 vs Posttest: M=4.20, SD=0.68). However, teachers reported reduced usage of digital materials for students (Q4: Pretest: M=4.00, SD=1.00 vs Posttest: M=3.53, SD=1.06).

Table 3

	Teachers' usage of eTeaching (N=15)	Pretest	Posttest
		M(SD)	M(SD)
1	Download or upload curriculum resources	4.67(0.49)	4.47(0.83)
	from/to learning platforms for students		
2	Post assignments for students	3.93(1.36)	4.60(0.73)
3	Provide feedback (e.g. to mark examination paper	3.20(1.15)	3.47(0.92)
	by rubrics/grading function) and/or assess		
	students' learning		
4	Prepare your own digital materials to use (e.g. To	4.00(1.00)	3.53(1.06)
	create a presentation with simple animation		
	functions for lessons)		
5	Create and facilitate discussion forum	2.87(1.25)	2.93(1.16)
6	Create and/or edit questionnaires online	2.40(1.30)	3.00(1.07)

7	Prepare exercises and tasks for students	3.40(1.24)	4.20(0.68)
8	Use a Student Response System (e.g. Poll	2.40(1.24)	3.47(1.19)
	Everywhere, Kahoot, Slido or other)		
9	Evaluate digital learning resources in the	2.20(1.27)	2.20(0.94)
	subject(s) you teach (e.g. using performance		
	dashboard function		
10	Communicate with students effectively	3.67(0.90)	3.67(0.82)

Section 3: Case studies

Teachers' e-Teaching experience throughout the project period will be presented as follows. This section will focus on teachers' actual experience of e-Teaching, including pros and cons with using technology in teaching, and revelation of their experiences in the project. All names used have been changed.

Section 3.1: Case Study of Teacher A (School of Medical and Health Sciences)

Nominated course

Seminar 2: PHT1010 Functional Anatomy for Physiotherapy
This functional anatomy course introduces the phenomenon of human motion
and function within the context of physiotherapy. A detailed study of the
skeletal, articular, muscular and nervous systems is offered. In the course,
students will analyse human joint motion, identify anatomical landmarks
through palpation and investigate human movement required for daily
activities.

Situation

Owing to the suspension of on-campus classes, online teaching was adopted to deliver the lectures and tutorials. Technical support was required for different tools for online teaching, such as online assessment, in-class short quiz, video recording.

Interactive solutions

The Project Team introduced some online courses about Anatomy and illustrated approaches on different MOOC platforms to illustrate different ways to deliver a course of similar to online mode. Several online assessment tools were suggested, such as assessment engine of Blackboard, Socrative and Microsoft Forms, to substitute the paper quizzes. The Project Team demonstrated how to use narration function in PowerPoint to produce a lesson video from existing lecture slides.

Results and evaluation

Overall, he reported a positive attitude change in e-teaching after the intervention. The mean increased from 3.1 in pretest to 3.6 in protest. There was a slight increase in terms of confidence and usage of e-teaching. His confident and usage score increased from the mean of 4.1 to 4.3, and 2.8 to 3.7 respectively.

The lessons were delivered via PowerPoint videos with the use of diagrams and pictures as supplementary information. Blackboard Collaboration Ultra was adopted to conduct online live lectures and tutorials. Formal assessments were created in Blackboard.

Owing to the perceived workload, he intended to make his online teaching simple, direct and with more examples. In order to facilitate students' learning, he made use of resources from Tung Wah College's Library and added YouTube videos & AV as teaching materials. He was satisfied with the approach. With his personal coaching and students' efforts, it achieved good outcome of learning consolidation, reflected by students' excellent academic performance:

'Many got A/A- because of the extra videos and diagram/photos, plus their intensive studies. This enhanced the eLearning with the solid examples plus I gave many personal coaching to students who expressed difficulties.'

For the experience with Blackboard Collaboration Ultra, he indicated that the challenges were related to the inability of face-to-face communication and technical issue. The online teaching might not draw the same students' attention as the face-to-face classes. It was difficult to maintain the learning momentum of all students throughout a lesson. To remedy the situation, a strategy of questioning was adopted to reinforce students' attention:

'While conducting online live lectures, I tended to ask frequent questions to attract/maintain the attention of the students and to ensure the students were NOT doing his/her "personal things" in my lectures/tutorials'.

He revealed that technical issues posed challenges for him to adoption and implementation of e-teaching if without immediate technical support:

'When using Blackboard Collaboration Ultra did "disconnected" for a short while in several occasions of my teaching. Although the Project Team gave suggestions to improve the quality of online lectures, some hardware of the computer, video camera and microphone in the

classroom could not be upgraded in time.'

Reflection and conclusion

He expressed that this e-teaching experience was a great opportunity to brush up skills in the Blackboard Collaboration Ultra and other e-teaching tools. He could learn more modalities to facilitate students' learning and improve his teaching skills.

He told e-teaching was good for factual teaching. For teaching abstract concepts, face-to-face contact seemed to be more preferred as the teacher-student reflection would be better.

It was learnt that students' learning attitude played an important role to eteaching achievement. Teachers could work better when technology was applied as supplementary functions to core face-to-face teaching activities and not for replacing traditional classes.

Section 3.2: Case Study of Teacher B (School of Medical and Health Sciences)

Nominated course

Semester 2: OCC1001 Human Development Across Lifespan
This course introduces students to the concept of lifespan development and
why health professional students study the subject. Physical, cognitive and
socioemotional development is examined in relation to major theorists and
stages of human development from birth through to death. Socio-cultural
aspects in relation to multi-culturalism and health and well-being are
examined. Major topics will include: biological beginnings, infancy, early
childhood, middle and late childhood, adolescence, early adulthood, middle
adulthood, late adulthood, and death and dying.

Situation

She joined the project starting from the second semester of AY2019/2020. Owing to the COVID-19 outbreak, she adopted an online approach to deliver lessons. Different technical supports were needed to facilitate online teaching.

Interactive solutions

The Project Team suggested different e-tools according to fit for her pedagogy. She adopted Zoom and Blackboard Collaborate Ultra for online lectures,

Microsoft Forms for class quiz, and Skype for Business for student interaction after lessons. She used Articulate Rise 360 to develop online, self-paced and interactive courses and deployed in the Learning Management System, so that the students' learning progress were centralized in one system.

Results and evaluation

She reported a very positive attitude change in e-teaching after the intervention. The mean increased from 2.8 in pretest to 4.47 in protest. Same as other teachers, her attitude towards items related to students' learning were negative. There was a slight increase in terms of confidence and usage of e-teaching. Her confident and usage score increased from the mean of 2.8 to 3, and 3.3 to 3.7 respectively.

She used Microsoft Forms to conduct in-class quiz in classroom at the beginning. Her plan did not go far because of on-campus class suspension soon after semester was started. She found the use of mobile devices for inclass quiz saved her effort in collecting and marking the quizzes:

'Microsoft Forms is a great tool for online test as it is easy-to-use and names of student can be recorded automatically. All the responses and students information can be exported to Excel file for keeping.'

She also had a good experience with Articulate Rise 360 – a content authoring tool to create online self-learning modules to facilitate students' learning with multimedia, effects and interactions:

'Students can learn the course anytime, anywhere, and at their own pace. Pictures, videos, and interactive quizzes can be inserted at the right position of the page to facilitate the flow of presentation.'

She pointed out the impact of the technologies on learning and teaching depended on students' motivation and learning styles. She revealed that students' feedback to online teaching vary widely in her class.

Since unexpected problems might pop up during teaching and learning, a just-in-time pedagogical and technical support from the Project Team was important to an effective implementation in her e-teaching.

Reflection and conclusion

Participation in the project provided her necessary skills to further utilize eteaching:

'I am more familiar with the innovative tools, such as how to operate and apply them in teaching.'

She concluded by recommending some long-term strategies for utilizing the technologies more fully in teaching:

'I think it can be implemented as a school basis, allowing teachers in the same programme/school work as a team to adopt technologies in teaching. This facilitates teachers in the same school to adopt technology with similar pedagogical direction and fully utilize the potential tools in order to get the expected benefits and improve student learning.'

Section 3.3: Case Study of Teacher C (School of Nursing)

Nominated courses

Semester 1 and 2: NUR3111 Care of People with Non-communicable Diseases (I)

This course aims to impart on students the essential knowledge and skills in meeting the needs of client who are experiencing non-communicable diseases of respiratory and cardiovascular systems.

Situation

The nominated course related to disease-based with specific care. PowerPoint slides were used as the major tool to deliver a lecture. Because of the positive attitude towards using e-teaching technology, she wanted to understand various e-teaching tools and applied at least one in her teaching to improve students' learning. The project team suggested student response system to increase the interaction with students.

For semester 2, owing to the pandemic, online teaching was adopted to conduct the courses. Individual advice from the team was needed for better eteaching implementation.

Interactive solutions

The Project Team organised various training sessions were to enhance our knowledge about the tools, such as how to improve student learning and involvement through various e-learning tools. Considering the large class size, she chose Kahoot, a student response system, to conduct in-class revision exercise and students use mobile phones to answer multiple choices together.

For semester 2, online lectures, tutorials, & seminars were conducted via Blackboard Collaborate Ultra. Some questions for each lecture were also created to evaluate students' learning. A breakout room function in Blackboard Collaborate Ultra was used for online group discussion in online tutorial lessons. Zoom was also used for group project discussion. She produced stimulation videos with the assistance from Project Team to demonstrate the procedural knowledge for laboratory classes.

Results and evaluation

She had a very positive experience with Kahoot because it helped her to evaluate student learning, and she found students enjoying the activity:

'I used the Kahoot after my lecture. Kahoot is like a game for students. The questions are related to the e-learning exercises they are expected to complete them via Blackboard after the respective lectures. The students were quite excited and engaged during the activity. It is useful and good for me to find out the teaching where students encounter difficulties in understanding.'

For her experience in online teaching in the second semester of AY2019/2020, she believed that the functions of Blackboard Collaborate Ultra and Zoom were useful but the hardware in classroom might hinder its operation.

'Blackboard Collaborate Ultra and Zoom are useful. However, I encountered the same technical issue twice during the seminar project presentation by students at KPC. The speaker was on but no sound suddenly at the middle of presentation. I needed to quit and re-joined the session.'

She valued the experience of participation in the project since it was good for her e-teaching skill development.

'I really appreciated as I have learned various methods for teaching. Although not all of them can be used in Nursing courses (due to the class size), the content is useful and interesting.'

Reflection and conclusion

She said that that the good interaction with Project Team was an important contribution to her positive experience:

'It's a good experience to use different and useful tools to improve students' learning. The interaction between the Project Team and teachers is very good that is important for teachers to learn new things. The Project Team is very supportive.'

She highlighted that professional advice and technical support are necessary for technology adoption:

'I found that teachers need more expertise support if using e-learning methods. It will be great if there is an advisor to support our teaching staff in the future.'

Students' learning experience

By compared the CTE scores of NUR3111 Care of People with Non-communicable Diseases (I) in the second semester of AY2019/2020 with the previous academic year of AY2018/2019, the change in medium in each item were listed as below:

114 (53.02%) Response rate in AY2018/2019	81 (37.33%) Response rate in AY2019/2020
From 5 (57%) to 4 (48.15%) in Q3 'The explanations on the important principles and issues have been clear.'	From 5 (60.18%) to 4 (43.221%) in Q4 Useful feedback from teacher

From 5 (61.95%) to 4 (48.15%)
in

Q5 'The teacher has been well prepared
for the class'

Section 3.4: Case Study of Teacher D (School of Management)

Nominated courses

Semester 1: MKT2001 Marketing Principles

This course introduces the basic marketing principles and concepts for forprofit and non-profit organizations. It provides students a solid foundation for taking advanced marketing courses and helps students develop a good marketing sense for the study of other courses in the program.

Semester 2: MKT 3221 Consumer behaviour

This course aims to develop students' conceptual, theoretical, and practical understanding of the behavioral aspects of consumers and their marketing implications. It draws on concepts and theories from psychology, sociology, and anthropology to explain consumer needs, buying motives, choices, and behaviors. The consumer decision making process is taught to provide skills and knowledge in formulating marketing strategies that influence the choice and behavior of consumers in the context of China and global markets.

Situation

Both nominated courses were principle- and concept-based. One of the important learning outcomes in both courses was to apply the theories and concepts in real cases. Students were required to voice out their thoughts so that teachers could understand their learning progress. Passiveness and shyness of students were common barriers. Therefore, the teacher looked for a solution to enhance students' engagement in classroom, so as to facilitate students' learning.

Interactive Solutions

A couple of e-teaching tools were adopted: Kahoot for in-class review exercise, Blackboard Collaborate Ultra and Zoom for online live lessons, iSpring Suite for creating interactive exercises on Learning Management System, PowerPoint for creating slide-based video lesson with narration, Articulate Rise 360 for creating self-paced online course.

Benefits

Throughout the project period, she had used more e-teaching tools than she expected. Despite some technical difficulties, the advantages of using those e-teaching tools still overweighed the disadvantages.

In the first semester, she focused on using tools to create interactive quizzes - Kahoot! for in-class revision and iSpring Suite for home exercise, with an aim to understand students' learning:

'For Kahoot!, I can know immediately the level of understanding among students on the concepts just taught in the class. Supplementary explanation could be provided right away to facilitate students' understanding when necessary. For quizzes made by iSpring Suite, students can complete after class. I can monitor the learning progress of students and keep the learning momentum even after class.'

From the second half of semester 1 to the end of semester 2, online teaching was adopted. As suggested by the College, she used Blackboard Collaborate Ultra to conduct online live lectures, and lecture video created from PowerPoint with quiz developed through Microsoft Forms. Those tools help students' revision after lessons:

'Students' learning could be enhanced by being able to review the lecture materials and participate in the quiz anytime, anywhere. They were able to attend the lecture and attempt the test anywhere.'

Barriers

Teachers had to spend extra time to learn how to use those tools, prepare and convert the teaching materials into various formats. These might largely increase their workload. Although tools were user-friendly, it did not seem to lessen the intensity of time as a main barrier for teachers:

'Articulate Rise 360 is a good tool for online course development, it is easy to use but quite time consuming as I have to spend a lot of time to reorganize those exciting materials in order to make sure the flow is clear'

Student engagement and reaction

Teacher observed that students have interest in participating in digital learning:

'When I played Kahoot! in the class, students were so excited to participate in the quiz as they could earn points to indicate their level of concept understanding.

She also pointed out that interactive quizzes could help students to understand concepts:

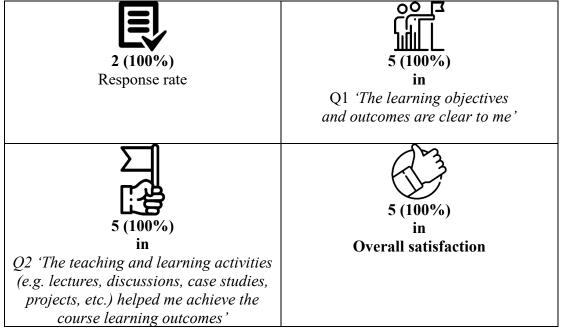
'From students' reaction and facial expression, I've found that the supplementary explanation on relevant concepts after the quiz could enhance their understanding.'

Reflection and conclusion

She enjoyed the experience of e-teaching. In the project, she learnt teaching in a digital way and she hoped the project could be sustained in future. She was thankful to Project Team's support. They provided training to and also help her in setting up those tools in order to manage the use of digital tools.

Students' learning experience

The CTE scores (Medium) of MKT 3221 Consumer Behaviors in the second semester of AY2019/2020 were shown as below:



Section 3.5: Case Study of Teacher E (School of Nursing)

Nominated courses

Semester 1

NUR2028 Psychosocial Dimensions of Health and Illness

This course aims to provide students with knowledge on current psychological and social dimensions of health and illness in both Eastern and Western perspectives. It also explores the inter-relationships between people's health seeking behaviors, races and cultures. This course also requires students to critically appraise their own psychosocial dimension of health and illness through discussions.

Semester 2

GER3013 Chronic Illness Management

This course aims to prepare students to acquire knowledge in self-management of chronic illnesses among older people. Students will develop an understanding in biological and psychosocial needs of older people with chronic illness and to devise strategies to empower older people with chronic illness and their families to manage their chronic illness.

Situation

Courses were conducted in form of lectures and tutorials. Before the intervention, his usage of technological tools was limited. He used forum function in Blackboard to post discussion questions and upload readings for students before lectures. He identified some points for improvement:

- Engaging students in class
- A video platform for students and post questions

From the second half of first semester, the social situation and pandemic created an urgent need of e-teaching. He needed more technical supports to implement e-teaching.

Interactive solutions

Beside the mode of online teaching, the use of other relevance online tools was on his initiatives. In the first semester, he chose to use Poll Everywhere to

engage students to express their views. For the second semester, he utilized Blackboard Collaboration Ultra to conduct online lectures, and Microsoft Forms for students to answer questions and give feedbacks.

Results and evaluation

For the use of Poll Everywhere, he was quite satisfied with the high response rate from students, and believed that the anonymity nature of the tool encouraged students to express views. There was a considerable improvement comparing the previous situation where students would chit-chat instead of providing constructive opinions during discussion time.

However, he found some drawbacks of the online teaching because of technical issues:

'It is expected that the online class would be hold smoothly. In fact, both teacher and students often encountering technical issues, which involved the occasional unstable WiFi connection and the unclear sound with background noise'

The Project Team spotted out the problem of hardware and recommended some models of headset to improve sound quality. He observed that students' learning attitude had positive change after solving the audio problem.

Reflection and conclusion

Overall, he held negative impression towards his e-teaching experience of AY2019/2020. The technical issues hindered the goal achievement. He mentioned that online teaching required consideration investment, especially working hours and hardware. It spent unnecessary time and effort for normal users to get the systems working smoothly.

The cost and benefit of adopting more e-teaching means was doubtful when an institute is not technologically ready. Many problems were encountered and outreached the benefits of e-teaching. This might result in a resistance for teachers to change their ways in the future.

Section 3.6: Case Study of Teacher F (School of Medical and Health Sciences)

Nominated courses:

Semester 1 NUR1016 Microbiology and Pharmacology

This course aims to provide students with the basic principles of microbiology and pathogenesis that underlie a wide range of infectious diseases. It aims at developing an understanding of microorganisms that are of medical relevance to humans including bacteria, viruses, fungi, and protozoans. Students are expected to be able to apply knowledge of Immunology, Pathophysiology and Pharmacology in caring clients of different kinds of diseases or health problems

Semester 2: NUR1021 Microbiology

This course aims to provide foundation knowledge on microorganisms that are of medical relevance to humans and the relevant methods of identification.

Situation:

Firstly, she would like to seek for a vivid interesting online platform for students to consolidate what they have been learned. Secondly, she would want suggestions of tools which allowed her to collect laboratory data from students in a massive way.

Interactive solutions

She preferred tools which could be learnt in short time. For first semester, she chose Kahoot and Mentimeter to create online tests for students. For data collection in laboratory lessons, the Project Team suggested her to create digital forms by Microsoft Forms for data input in a distributed way.

For the second semester, she demonstrated laboratory skills by videos. Panopto was used to host videos with access control. Panopto provide basic statistics information of viewing by students.

Results and evaluation

The application of e-teaching tools provided some benefits and drawbacks for her. She had good experience with using Kahoot and Mentimeter for class activities. The gamification approach could engage student to learn. However, she doubted if those games really help to consolidate students learning.

'To some of them, it might just indulge them to pursuit on gaming, which our compact curriculum cannot afford. A waste of time and they just learn the superficial.'

The use of Microsoft Forms for data collection provided her much convenience and saved her and students' time to come back to fill in the forms. For the drawbacks, she learned that if the digital forms were not configured correctly, it would introduce dirty data due to repeated inputs or typo and it was difficult to change afterwards. She would like to have functions for data validation.

'Application of Microsoft Forms increased the chance for students mistakenly filling in the form and I was unable to correct them instantly. As a result, I had to spend more time than usual to ask those students for correction. It got better for the second time as the project team reminded me to apply advanced settings to minimize those mistakes.'

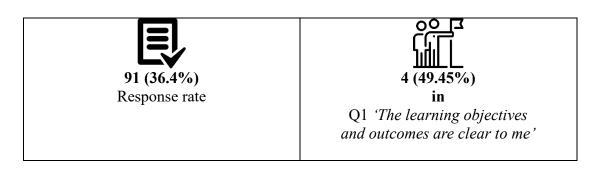
Reflection and conclusion

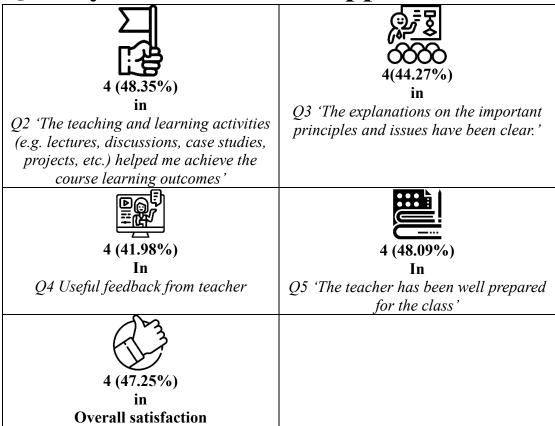
With increasing workload, the time factor became a significant barrier to her building up e-teaching skills. She found it difficult to concentrate on e-teaching with all the other distractions related to student affairs.

'Helpful and useful but needs time. When you are facing 500 to 600 students per semester, you will know why I always emphasize on time. Can't afford on a skill that takes too much time to learn.'

Students' learning experience

The CTE scores (Medium) of NUR1021 Microbiology in the second semester of AY2019/2020 were shown as below:





Section 3.7: Case Study of Teacher G (School of Medical and Health Sciences)

Nominated courses:

Semester 2: PHT1021 Assessment and Evaluation in Physiotherapy. This course aims to prepare students to have a good understanding of the Physiotherapy process which is built on a thorough and systematic assessment of the patient or client. The course will also equip the students with the fundamental knowledge and practical skills in conducting a basic physical assessment

Semester 2: PHT2024 Physiotherapy in Musculoskeletal Context
This course aims to equip students with knowledge and practical skills in
assessing and managing musculoskeletal dysfunction in the upper limb region.
Those courses were delivered in form of lecture, tutorial and laboratory

Situation

She joined the project in semester 2. For course PHT1021, she looked for a tool which allowed teachers and students to track their learning process and consolidate on what they had learnt.

For course PHT2024, it emphasized on students' practical skills development. Before the intervention, she tended to record some teaching videos as supplementary for students to review practical skills. However, the quality of videos was not satisfactory and not well-planned as they were recorded during the in-class demonstration. She seek expertise advice to produce or reproduce videos with better quality.

Interactive solutions

She chose Kahoot as a platform to create in-class activities for knowledge check. The project team also introduced her the workflow and details of video production and highlighted the key elements and equipment for a reasonable quality under limited resoures.

Results and evaluation

Based on her results of survey, the mean of total attitude point towards e-teaching increased from 3.00 to 3.90. However, by looking into the individual item, we found that her attitude point towards the effectiveness and efficiency of technology to students' learning decreased from 4 in pretest to 2 in posttest, and the attitude point towards personal care to students was still the lowest.

She observed that students were accepting e-teaching at the beginning, but they became reluctant to play associated with continuous usage of the tool. Although she had made the in-class exercises as purpose, for example, using Kahoot for revision in each lecture with aim to facilitate their participation, students still showed their reluctance to join.

On the other hand, she also revealed positive change in confidence and usage of e-teaching. Her confident and usage score increased from the mean of 4.0 to 4.5, and 3.3 to 3.8 respectively.

She indicated that the expertise advice and supports mattered to the success of e-teaching. For her experience of video recording in the second semester, the Project Team provided her with useful ideas and technique.

'They provided me with some techniques and suggestions proactively, such as microphone, lighting, flow of the presentation, and format etc'.

Reflection and conclusion

According to her experience of e-teaching in the last semester, she identified that sufficient time for preparation and enough budget for innovative technologies input were important contributions to the successful implementation of e-teaching. Additionally, she felt that discussion with the Project Team to exchange ideas, and explore the methods were helpful for further improvement

'Sometimes, we explored method and test the feasibility of the idea. I think it is a good experience to exchange ideas, and know how to do better next time'.

Section 3.8: Case Study of Teacher H (School of Management)

Nominated courses:

Semester 1 ACY4101 Advanced Financial Reporting

This course builds on the foundation laid in the previous financial reporting courses and deals with the more advanced aspects of financial accounting. It focuses to familiarize students with the fundamental concepts of business combinations, group reporting with subsidiaries, investments in associates, investments in joint ventures and foreign currency translation in both the local and global context.

Semester 2 ACY3401 Taxation

This course covers the laws and practice of Hong Kong taxation system. Students learn to apply tax law principles to determine tax liabilities for individuals and businesses in Hong Kong. Practical tax problems and tax cases will be used throughout the course to provide the opportunity for analysis and discussion. Students will also be exposed to current issues such as tax ethics, tax planning and Hong Kong-Mainland tax arrangement.

Situation

The nominated courses consisted of two parts: concepts and calculations. For the concept, she needed some tools to verify students' understanding of concepts. For calculation, she wanted a recording of calculation steps by writing on paper, for students' revision. In the second semester, she also seek for advice for online live teaching.

Interactive solutions

She chose to use Kahoot for revision and Microsoft Forms for exercises after lesson. For video production, a screen recording on iPad was recommended as an digital whiteboard. The calculation videos were then published to Panopto or Microsoft Stream for streaming. For online lecture, she chose Zoom to during the pandemic in the second semester.

Results and evaluation

Her experience of using Kahoot was very positive as the game session provided students with a fun learning environment

'Kahoot created a competitive learning environment for students, the higher marks they get, the happier they would be. Also the background music really helped to make the game more interesting.'

However, she found that gamification approach may not work for concepts or knowledge retention and recall.

'One of the cons of using Kahoot is that it only works for developing shortterm memory because my students gave the correct answers while playing the game but they could not answer the questions correctly in exam.'

The teaching of finance calculation was recorded with aims to consolidate students' learning and save lesson time.

'Students were able to review anytime afterwards, and I did not have to explain repeatedly.'

In order to fulfil her teaching style and eliminate the technical issues, she chose to use Zoom as a platform to conduct online live lecture:

'For me, Zoom is the most appropriated tools to conduct online lectures since I had used Sky business and Teams before but encountered connection problems occasionally. I also prefer to see students' faces while teaching because I would like to make sure if students are paying attention to the class. These are reasons why I paid for a Zoom license instead of using other free

tools.

Reflection and conclusion

She learnt how to create a fun learning environment for students with the help of technologies. This strengthened her confidence to conduct e-teaching tools independently, such as video recording, application of tools for in-class and after-class activities.

Finally, she pointed out that teaching online may weaken the connection between teachers and students, resulting in difficult to track their learning progress

'The pandemic reduced the communication with students, for example, students' learning progress, I could know more about it through chit chatting when we see every week.'

Students' learning experience

By compared the CTE scores of ACY3401 Taxation in the second semester of AY2019/2020 with the previous academic year of AY2018/2019, the change in medium in each item were listed as below:

2 (100%) Response rate in AY2018/2019	1 (54.55%) Response rate in AY2019/2020
Maintain 5 (100%) in Q3 'The explanations on the important principles and issues have been clear.'	Maintain 5 (100%) in Q4 Useful feedback from teacher
Maintain 5 (100%) in Q5 'The teacher has been well prepared for the class'	

Section 3.9: Case Study of Teacher I (School of Arts and Humanities)

Nominated course

Semester 1 and 2: ENG1001 (Developing English Language Skills)

Situation

Before the intervention, the lecture sessions were generally conducted through the coverage of course materials in the Powerpoint or Word formats. Each lecture corresponded to a set of printable course documents, including the weekly lecture handouts, supplementary readings, assignment guidelines, etc. Some elements have been identified for improvement:

- To enhance the learning motivation of students and lengthen the attention span of students in a three-hour lecture.
- To provide students with more opportunities for peer learning. Other than receiving teachers' feedback on their writing or speaking performance, they may gain insightful evaluation from their classmates.
- To encourage students to engage in more practice activities beyond their regular classes

Suggestions from the project team

The Project Team gave suggestions for the implementation of teaching and learning activities as the semester progressed. Several applications and online platforms were recommended to address the concerns.

- Microsoft OneNote (as an electronic whiteboard)
- Flipgrid (as a hub for speaking practice)
- Kahoot (as a game-based learning platform for recapping the main points of the lessons)
- Audacity (for editing audio files)
- GoFormative (for the teacher's evaluation of students' in-class writing)

Interactive solutions

The teacher made the decision to select the online tools, and to pick the specific functions of the tools to serve the teaching and learning purposes.

The following actions were taken to improve the course contents:

- Gamification approach was adopted to create real-time exercises the coverage of a topic so that students could revise and consolidate what they had learnt
- Microsoft OneNote was adopted as the electronic whiteboard, where he could add annotations and hand-write notes while explaining. The screen of the whiteboard was projected to the screen in the classrooms through the wireless connection. The files were then uploaded to Blackboard for students' reference. As he used to making annotations on the whiteboard, the solution with tablet with wireless connection fit his teaching style and simplified the workflow.
- The software Xodo was used for adding annotations on the .pdf files.
- The online platform GoFormative was accessed by students to type texts and sentences with the use of their digital keyboards. He could then give comments on students' work in front of the whole class. This approach is more effective than presenting students' handwritten work through the visualisers, as all participants could view each other's progress in real time and review their peers' performance.
- The application Flipgrid was used for students to record their impromptu speaking exercise. This help teachers to facilitate in-class practice and allow all students to do a peer-evaluation and learn from each other.

Skills development

The participation in the Project gave him positive impact on e-teaching skills development.

'I have growing familiarity with the e-teaching approaches, such as learning how to utilize electronic technologies to promote teaching and learning activities within and beyond a traditional classroom, and realized how technology is intertwined with the enhancement of motivation in learning and interaction in classrooms.'

In addition, he gained insights into ultilising different technology tools in the lesson plan, the course outline and the assessment methods. The implementation process in the classrooms became smoother after the several trials.

Results and evaluation

Students' level of participation in the e-teaching activities might reflect the

effectiveness of the e-teaching approach. He observed that students generally welcomed the changes, whereas the majority of them showed hesitations while being asked to record a two-minute impromptu speech using mobile app Flipgrid. It is understood that students might feel embarrassed to make their appearances in front of their cameras and had their speeches recorded and evaluated by other classmates. The reluctance of showing their faces in video might be a factor hindering the peer-evaluation of other students' speech (as a student had to record a video in order to comment on other students' speeches). The issue seemed uncommon for junior secondary students in overseas institutions, which might imply a difference in ages or cultural backgrounds play a decisive role.

On the other hand, he identified several technical issues, which could be resolved to further enhance the teaching and learning effectiveness. The issues involve the occasional unstable wi-fi connection, the lack of dual screens in classrooms, and the incompatibility of electronic applications with particular operation systems.

Reflection and conclusion

He said that it was a fruitful and enlightening experience to design and implement the new initiatives throughout the past 2 semesters. He also became more mindful of students' interaction with classmates and their motivation in learning, reflected from their level of participation in the range of teaching and learning activities.

He pointed out that the discussion with the Project Team had provided inspirations for changes, from traditional unidirectional classroom teaching to the participatory approach inviting all members to be active audience and to express their opinions. Despite the technical obstacles, the rationale for the eteaching literacy project could be promoted across other courses.

Students' learning experience

The CTE scores (Medium) of ENG1001 (Developing English Language Skills) in the second semester of AY2019/2020 were shown as below:



C 212227	ne support sentine
86 (40%)	4 (62.79%)
Response rate	in
-	Q1 'The learning objectives
	and outcomes are clear to me'
\sim	⊘
│ ॔	<u>\$</u>
Г Г Д Д Д	\ \times \(\frac{\times \times \times \}{\times \times \times \}}
المنا المنا	5 (45.83%)
4 (54.65%)	in
in	Q3 'The explanations on the important
Q2 'The teaching and learning activities	1 -
(e.g. lectures, discussions, case studies,	principles and issues have been clear.'
projects, etc.) helped me achieve the	
course learning outcomes'	
(Ba	FFFI I
	
4 (43.75%)	5 (52.08%)
In	In
Q4 Useful feedback from teacher	Q5 'The teacher has been well prepared
_	for the class'
My My	
1 (1)	
4 (59.30%)	
in	
Overall satisfaction	

Section 3.10: Case Study of Teacher J (School of Arts and Humanities)

Nominated courses

Semester 1: GEB1305 China and The World

- 1. Provide students with historical and cultural background of mainland China.
- 2. Provide students with knowledge in the recent social, economic, legal and political developments of modern China.
- 3. Understand China's policies toward Hong Kong, Macau, and Taiwan.
- 4. Develop insights in China's foreign policies in developing relationships internationally.

Understand China's role in world politics and economy.

Semester 2 GEB1310 Chinese History and Culture

本科旨在讓學員通過"經驗學習"的方式,就不同方面的主題,包括科舉、宗教、飲食、喪葬等,探索中國的歷史和文化。香港是個現代化的城市,但中國傳統仍根深蒂固,對生活各方面影響甚大,有需要重新學習。透過研習、參觀、互動,學員將獲得廣泛的中國歷史、文化知識,亦有助提升學員對國家的歸屬咸

Situation

Courses were conducted in form of lectures and tutorials. The lectures were generally conducted through the coverage of course materials in the PowerPoint. Video playback was used and discussions were also organized in lectures and tutorials. For better teaching, she would like to learn how to embed videos onto PowerPoint slides, and set up an ore interactive classroom for students.

Interactive solutions

A variety of interactive tools were suggested, and workshops were also held for teachers to learn how to manipulate those tools. Individual demonstrations were also provided according to her need. Narrated PowerPoint videos for playback were adopted to deliver online lectures during the social unrest and pandemic.

Results and evaluation

She became more confident in utilizing technologies in teaching after the intervention as she has learned some techniques, she wanted to enhance teaching and learning

'After participating in this project, I have learnt how to embed the Youtube videos in PowerPoint, especially with specifying the start time and end time. Also, I have learnt how to set up the online quizzes for in-class activities. By using Kahoot and Poll Everywhere, I can recap the key concepts and for revision purpose in every lecture. They can be applied to test the students' memories for the previous lectures.'

For the second semester of AY2019/2020, she focused on recording online lectures by using PowerPoint narration. Besides, the training workshops provided her with useful skills and long-term benefits for e-teaching:

'I enjoyed the workshops, especially Creating Infographics with Canva and PowerPoint, and Educational Video Production—Design and Filming. They help improve my e-teaching in the future semesters.'

Reflection and conclusion

The experience increased her confidence in adopting e-teaching, and enabled her to create an interactive leaning atmosphere for students

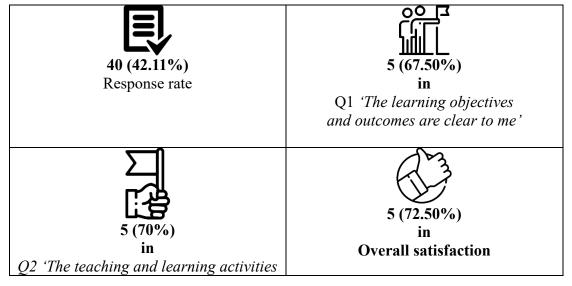
'This project gives a wonderful experience to me. After participating in this project, I have more confidence in e-teaching. Students also enjoyed the lectures and tutorials. Classes became interesting. They were willing to express their opinions.'

Apart from this, she highlighted that the substantive guidance and instant support from the project team throughout the process contributed to her confidence boost.

'They have held various workshops for teachers to learn to setup and manage those tools. Those workshops were very useful since I learned how to manage those tools by myself. The project team assist me a lot especially when I encountered technical issues every time.'

Students' learning experience

The CTE scores (Medium) of GEB1310 Chinese History and Culture in the second semester of AY2019/2020 were shown as below:



(e.g. lectures, discussions, case studies,	
projects, etc.) helped me achieve the	
course learning outcomes'	

Section 3.11: Case Study of Teacher K and Teacher N (School of Medical and Health Sciences)

Nominated courses

Semester 1 MED1003 Molecules, Cells and Genes

This course provides an introduction to the cell and the main method of cellular study. Cell is the basic structural and functional unit of living organism and thus understanding the components of cells and how cells work serves as the basis to medical science. In this course, the structural and physiological characteristics of animal cells, their main organelles as well as their interactions with the environment, are considered. An integrated approach to the structural and functional relationships in cellular process will be emphasized.

Semester 1: MED1001 Human Physiology

This course aims to provide students with a +basic presentation of the function of the major organs and organ systems of the human body. This course will help the student understand the role of each organ and organ system in maintaining health

Semester 2: MED1005 Biochemistry

This course provides a good understanding of the chemistry of important biological molecules (proteins, carbohydrates, lipids and nucleic acids) in relation to their metabolic function in biological systems and at the molecular and cellular level. This will be the underpinning knowledge for other disciplines.

Semester 2: MED1006 General Microbiology and Immunology
This course provides a fundamental knowledge of microbiology as well as the
most recent concepts of structure and functions of the immune system to
students taking Medical Science. This course will introduce the concepts and
principles of microbiology; the role of pathogenic microorganisms in various
infectious diseases; the various types of disease-related immunological
reactions and the immunological disorders; and the modern immunological

techniques in clinical diagnosis and methods of immune-based therapies.

Situation

The two teachers co-taught in biology related courses. They were quite experienced and skilful in adopting online tools for teaching, such as using Blackboard for online exercises, Poll Everywhere for in-class activities and online videos for concept explanation etc. For students to have better understanding of concepts, they would like to adopt an animation approach to explain biological concepts and ask if there any software can help to produce animation videos. Secondly, they seek for advice on online peer evaluation.

Interactive solutions

A tool called 'Explained Everything' was suggested for them to create explanation videos with animation. iSpring Suite was also suggested to produce variety of online exercises. For peer evaluation, Microsoft Forms was adopted to collect data from students without their physically presentation. Because of the pandemic, they also use Blackboard Collaborate Ultra for online lectures, and to post assignment/exercises

Results and evaluation

Unfortunately, the animation approach of producing tailor-made explanation videos for students was unable to achieve due to deprivation of time.

'We actually would like to do it. However, due to the time limitation, we do not have time to explore and make it happen. We still stick to using those exciting videos for concept explanation'

On the other hand, they were very satisfied with the experience of using Microsoft Forms because of the convenience.

'Students can assess the form to evaluate via a link, and all of the collected data will be recorded in an Excel form automatically.'

As for the online lectures via Blackboard Collaborate Ultra, they observed the negative change in students' engagement:

'There were only 50% of students were there attending the online lecture. The interaction also became weaken compared to face-to-face mode.'

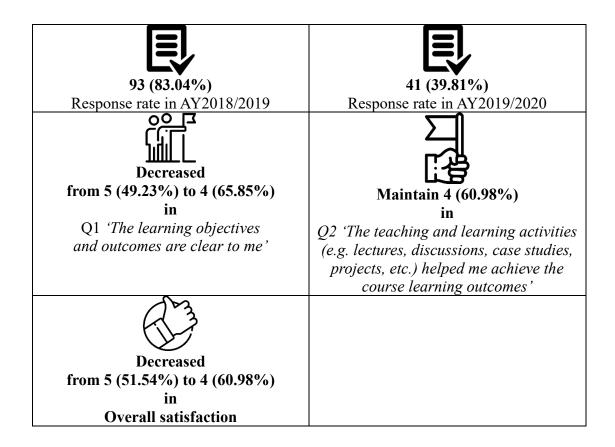
Reflection and conclusion

They agreed that technology can enhance teaching in some circumstance. However, due to the time constraints, they prefer using existing products than creating by their own

'I have found some existing online tools in the market which are helpful for students to develop laboratory skills. I think it is much time saving to adopt those existing tools, and there is high possibility that our College will get 1 to 2 licenses and install it in the library'

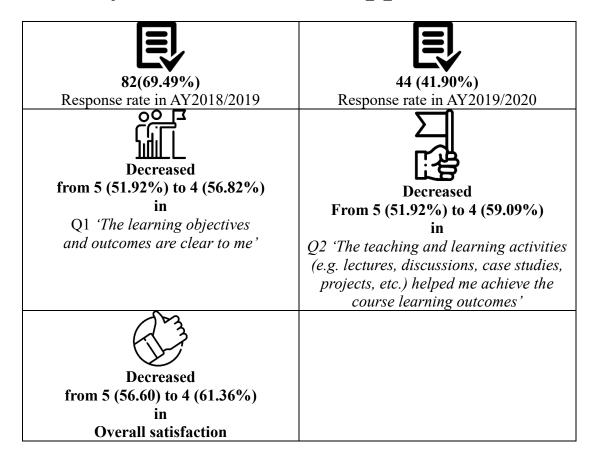
Students' learning experience

By compared the CTE scores of MED1005 Biochemistry in the second semester of AY2019/2020 with the previous academic year of AY2018/2019, the change in medium in each item were listed as below:



By compared the CTE scores of MED1006 General Microbiology and Immunology

in the second semester of AY2019/2020 with the previous academic year AY2018/2019, the change in medium in each item were listed as below:



Section 3.12: Case Study of Teacher L (School of Nursing)

Nominated courses:

Semester 1: NUR 2045 Care of Patients with Chronic Illness
This course aims to provide students opportunities to comprehend and acquire knowledge and attitude of caring for patients with chronic illness and their families. Emphasis will be given to the end-of-life care.

Semester 2: NUR1017 Care of adults

This course aims to provide students with the knowledge on how to provide care for adults, skills in communicating with adults and the practice of seeking scientific evidence and appropriate technology in delivering care.

Situation:

Semester 1:

Since he was unfamiliar with technology, he had seldom applied technology in teaching expect a limited utilization of Blackboard. He hoped that he could

make use of some other e-teaching tools, and have fully utilization of Blackboard in his teaching under the assistance and guide of project team.

Semester 2:

Due to the pandemic, the laboratory session for students' skill development were unable to conduct in face-to-face basis. Therefore, he asked for help from the Project Team to provide advise and assistance to produce 6 stimulation videos for students to strengthen their knowledge and skills, and also for review afterwards.

Results and evaluation

The Project Team gave suggestions based on the nature of his courses. Training sessions were then provided to equip teacher with adequate knowledge and skills to use different e-teaching tools. For the first semester, he chose Kahoot and Microsoft Forms for in-class and after-class activities. He used it for checking students' understanding after watching a video. He found Kahoot very useful and it was a good way to strengthen the connection with students.

'The participation rate was very high. Also, students were required to enter name before playing game, some of my students gave creative nicknames. I though it helps to develop a good bonding between students and me.'

For the second semester, he produced 6 stimulation videos under the help of Project Team. Throughout the filming process, he had opportunity to learn technique of video production, including setting up, recording, editing, highlighting contents and adding remarks to improve the content of videos. He said:

'I have no idea about filming before, the filming experience equipped me with skills to conduct teaching videos.'

Reflection and conclusion

Participating in the project equipped him with adequate skills to apply technology in teaching, thereby enhancing his utilization of e-teaching tools. Suggestions were tailor-made for his practical needs. All learned techniques were applicable in the long run. However, he expressed concerns on students' handson skills development.

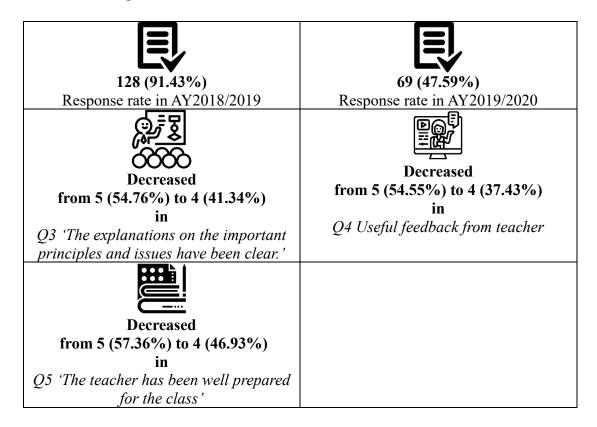
'Hands-on practices are important in Nursing related courses. Video is a good way to deliver the contents and encourage the just-in-time learning for students, but it was unable to ensure if students master those skills correctly.'

He concluded that face-to-face teaching mode might still be the best way for students to learn hands-on skills

'I can provide feedback instantly to adjust their skills if the laboratory session was held in face-to-face mode.'

Students' learning experience

By comparing the CTE scores of NUR1017 Care of adults in the second semester of AY2019/2020 with the previous academic year of AY2018/2019, the change in medium in each item were listed as below:



Section 3.13: Case Study of Teacher M (School of Arts and Humanities)

Nominated course:

ENG0200 English Enhancement Course 2 for semester 1 and 2

This course is tutorial basis with aim to helps lower-intermediate to intermediate ESL students build up their foundation so that they can manage more advanced academic English courses at a later stage. While students will have opportunities to practice all four skills in English. Students' learning process will be monitored and feedback and support will also be provided as appropriate.

Situation

Before the intervention, due to the unfamiliar with the e-teaching, she tended to distribute printed notes to handle the learning activities, such lecture handouts, supplementary readings, and sometimes she used PowerPoint to conduct the lesson. To facilitate students' learning, it is necessary to design some more interactive learning activities to engage students to learn English in class and after class.

Interactive solutions

Semester 1:

Some student response systems were suggested to create in-class activities and practical exercises. A gamification approach was adopted to launch those exercises. She joined some workshops to receive initial training of tool application and manipulation. Kahoot and Microsoft Forms were selected as platforms to conduct exercises for students practicing English due to the interactive and easy management nature.

Semester 2:

In the second semester, she continued the usage of Microsoft Forms for online exercises due to the easy management and the features of automatically retrieving students' names and emails. She also adopted PowerPoint video recording voice-over to explain students' common mistakes based on their tests

Results and evaluation

She revealed that the implementation in the classrooms became smoother after the few attempts, and students seemed to be more proactive.

'I have used Kahoot and Microsoft Forms for 6 weeks in the first semester. It was not running smoothly at the first lesson since students are not familiar with it, but they became more active from lesson 2 as I received

more responses and submissions of online exercises'.

However, she pointed out that the positive impact did not last for long time and it resulted in her increased workload.

'In the second semester, students were reluctant to complete those online tests and I have to remind them of completing those tests on regular basis via email, students were exam-oriented, as they were more motivated to complete those tests in which their performance will be accounted.'

As for using PowerPoint to produce narrated recording, she felt that it was a time consuming, especially at the early stage:

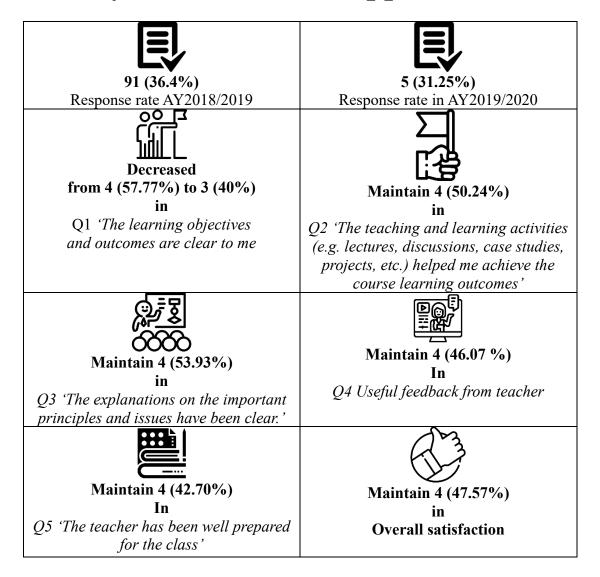
'For the second semester, concerning the quality of the audio, I spent a lot of times on PowerPoint narrated recording. It depends on the length of the contents, usually, I tended to spend 3-4 days to produce an audio recording, and 2 days for a short one. So, I think adopting technology in teaching at the early stage need extra more preparation times compared to the face-to-face mode.'

Reflection and conclusion

According to her, e-teaching was a trend, whereas time and resources were important investments for teachers to master necessary skills for implementation. She was delighted to join the project for learning how to apply innovative tools in teaching, and in turn facilitate students' learning. She also mentioned that the semester break is a great time for her to prepare e-teaching materials so that she could have better implementation of teaching activities in the coming semester. This indicated her willingness to use technologies in teaching for long run.

Students' learning experience

By comparing the CTE scores of ENG0200 English Enhancement Course 2 in the second semester of AY2019/2020 with AY2018/2019, the changes in medium were listed as below:



Section 3.14: Case Study of Teacher O (School of Medical and Health Sciences)

Nominated courses:

Semester 1 MED4008 Basic Neuroscience

This course provides an in-depth overview of neuroanatomy and neurophysiology with special emphasis on relationships to both normal human function and dysfunction resulting from maldevelopment or injury to the nervous system.

Semester 2 MED2106 Pathophysiology

This subject aims to provide students with the biological mechanisms of disease related to the physiologic changes caused due to various types of common illnesses in the human body. This course will help the student understand the

diagnosis and treatment to common pathophysiological conditions.

Situation

Courses were conducted in form of lectures, tutorials and laboratories. Due to social unrest and pandemic in the AY2019/2020, online teaching was adopted to handle different tasks. Technical supports were necessary to adopt digital tools in teaching. Tasks were including PowerPoint, video, case-study, project, in-class and online questions.

Interactive solutions

Lectures were delivered by pre-recorded videos with narration, Blackboard Collaboration Ultra, and Zoom. Tutorials were transformed into online assignments and Blackboard Collaboration Ultra. Discussion forum function in Blackboard was used for students to collect their questions before lesson.

In semester 2 of AY2019/2020, midterm examinations were converted into online mode. Questions of examination were modified to fit online format. Laboratory activities which could not be replaced by online teaching were rearranged once the circumstance was allowed for a classroom teaching.

The Project Team assisted her in dealing with different digital tasks, such as training and tools, training and technical issues

'Project team helped me to solve the technique issues related to my e-teaching, e.g. improving the quality of voice-over PowerPoint, inserting YouTube video, using different tools in uploading my class materials. Thanks for eTeachLit team's great support in providing information of teaching technology, e-teaching tools, courses and sharing sessions on e-teaching.'

Results and evaluation

The sudden transition from face-to-face teaching mode to online mode posed a big challenge to her and students. Without sufficient time to modify the teaching materials, the teacher was not ready to conduct deliver lessons online. In addition, some students might not ready to learn online. Therefore, the impact of the technologies on learning and teaching, in general, was varied to students.

'It was a hard and challenging work to me and students. In my class, I

uploaded voice-over PowerPoint for all lectures. Some students loved that because they could watch it more than one time whenever they need. However, most students worried about their examination and kept on asking for the main points of lectures and sample papers.'

Reflection and conclusion

She found that online teaching and face-to-face teaching were totally different. Online teaching might adversely affect teacher's performance because of the weaken sensation. She further explained that the mode of face-to-face teaching provided her with better atmosphere to teach and present herself. Therefore, for better teaching, face-to-face teaching could not be entirely replaced by online mode. Still, she valued the experience of adopting a pure e-teaching mode.

At last she indicated the necessity for the College to upgrade hardware and software:

'There is still room of improvement in the future. Some hardware and software support from college in e-teaching is in need, such as a quiet room for recording, headset for online teaching, software for making and editing the course materials.'

Summary

Overall, based on teachers' eTeaching experience, they provided feedback with both positive and negative sides. Most of teachers valued the eTeaching experience whilst the minority of them felt the negative impact overrode its benefits.

Teacher' eTeaching experience was unique while simultaneously sharing similarity in some areas. Most teachers reported that the benefits to the adoption and implementation of eTeaching were related to the higher technology utilization, enhanced knowledge and skills in eTeaching, higher flexibility for teaching and learning, better learning atmosphere for students and just-in-time technical supports.

As for the limitations, the most commonly cited were technical issues, increased workloads, and low effectiveness to students' learning. Here, we acknowledged the fact that online teaching and preparing materials for online teaching involved a great investment of time as compared to conventional teaching in classrooms. The technical issues and the difference in students learning attitude and style hindering to the adoption, implementation and achievement of eTeaching. As result, most teachers reported preference for using technologies for add-on functions in teaching rather than substituting face-to-face teaching.

Based on teachers' suggestions, in addition to extra time allocation and tools (for both software and hardware) upgrades, it was important to provide an ongoing and just-in-time pedagogical and technical support for eTeaching at the institutional level.

Summary of students' learning experience

Comparison could not be conducted in some cases due to the absence of historical data of AY2018/2019. The reason behind was that some teachers did not teach the same courses in the previous academic year, and some of them did not have the data. Overall, the adoption of eTeaching in AY2019/2020 had slightly negative impact on students' learning experience compared to the previous academic year. Limitations highlighted by teachers were believed to be contributions to the phenomenon. However, in general, students still responded positively to their learning experience since the CTE scores of those nominated courses in AY2019/2020 still at high level.

Discussion

The findings of teachers' case studies gave answers to the non-significant changes in survey regarding attitude, confidence and usage in eTeaching. For attitude, although there was no statistically significant change between the pre-and-post intervention means, there were noticeable lower post-intervention mean overall and some aspects related to students' learning. In case studies, over half of the teachers found it difficult to facilitate students to learn via eTeaching due to the differences in students' learning attitude and styles. Some teachers further expressed that it was unlikely that eTeaching can replace fully face-to-face teaching. Because the face-to-face teaching provided a better environment for teachers to take care of all students, especially for those

students who needed substantive guidance, support and counselling throughout their study process.

On the other hand, there were also no statistically significant changes between pre-and-post intervention in confidence and usage in eTeaching. The reasons were related to the problem of inadequate time for preparation and skills development. From case studies, the increased workload was recognized as a barrier to eTeaching, especially in the early implementation stages. Most of the teachers mentioned that there was inadequate time to develop and maintain eTeaching. Some teachers found it difficult to concentrate on preparing online teaching materials with all other distraction of administrative tasks and students affairs. Besides, the factors of technical issues and the low effectiveness to students' learning brought negative impacts on implementation and achievement of eTeaching as well. Because teachers tended to reduce the usage of eTeaching when they felt they were not empowered enough to apply eTeaching to achieve the expected outcomes.

External factors of social events and COVID-19 pandemic posed big challenge for teachers to conduct teaching. Originally, the basic assumption of the project was that teaching and classes were conducted in a normal manner of face-to-face delivery. The additional eTeaching approach was meant to be supplementary to the "normal" practice. However, since the commencement of the project, social events and the COVID-19 pandemic have forced all the teachers straight into fully online teaching which all staff were ill-prepared for the task. In addition, online delivery was not considered the proper way to conduct hands-on task because instant feedback from teachers were important for skill development. All these have been reflected in the responses to the survey as well as the personal interview.

Conclusion

Teachers valued the experience of participation in the project which equipped them with skills to handle day-to-day eTeaching. It is understandable that time for preparation and skill development was limited, considering all of the other things going on within the school working environment. This highlighted the importance of ample skill development time as it would positively impact the success of the implementation both initially and long term. According to

teachers, the application of eTeaching tools provided them with both benefits and drawbacks. Also, the technical issue and effectiveness to students' learning were identified as challenges of eTeaching. The social events and COVID-19 pandemic not only triggered fully online teaching but also highlighted the fact that teachers did not possess a sufficient eTeaching literacy yet. Therefore, ongoing professional development and just-in-time support were equally as important after the teachers received initial training.

End of Case Studies of Intervention Programme

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