



Report of School Knowledge Management Activity
Academic Year 2019

Topic 1: On-line Teaching

School of Biotechnology
Assumption University

Summary Report

Objectives

1. To arrange school KM activity according to university KM policy as to provide opportunities to faculty members to exchange ideas, experience, skills, and techniques (Tacit knowledge).
2. To collect and document the sharing knowledge as school best practice and as quality assurance document (Explicit knowledge).

Date 1-20 May 2020

Procedures

1. KM facilitator distributed the forms to faculty members to share their on-line teaching experience.
2. KM facilitator collected the filled forms and prepared a summary report. The report was distributed to faculty members by emailing.

Report Summary

Faculty members used Microsoft Teams software as an on-line teaching tool and faced some difficulty at the beginning to adapt to use this new program for teaching. Faculty members found that the teaching and learning was not as effective as normal classroom. The problems during on-line teaching included internet connection/network problems, lack of direct communication between lecturers and students, and lack of group studying or communication among students in class. Lecturers had to put more efforts into teaching and class preparation. Students required more efforts to pay attention to the on-line lecturing. The laboratory session to teach hand-on experiments in laboratory rooms could not be performed. Some teachers used video demonstration as a teaching tool for the laboratory session. The examinations were arranged as take-home examination and on-line examination by using Microsoft Teams.

The sharing experience from each faculty member has been provided below.

“On-line teaching is a new way of transfer knowledge as every new method of doing things. The one who do it need experience. But we were told to do that one day before we have to do it. So maybe the result could not be expected very effective. But it may improve as time go by. But for the lab session, we still cannot find the way to solve the problem. Therefore, we pray for the Covid incident will be over soon. So that we can return to normal way of teaching, especially “New Normal.”

“During corona virus pandemic, teaching and Learning are doing on-line as schools, colleges and universities temporarily closed. There are many on-line teaching tools available i.e. MS teams, Zoom, Google meet. As Assumption University managed to use MS teams, our faculty has arranged the on-line classes using MS teams so we adapt to

have new classroom for each subjects and also on-line examination has been set. Some assessments have been cancelled especially in class problem solving and lab session. Before the on-line class or examination begins, we will give instruction to students how they can access the system. Also students need to prepare their devices as computer, tablet or smart phone. Sometimes there is an internet connection problem during the class. Teachers require more time and effort in preparing classes and students need effort in learning at home with on-line teaching than normal classes.”

“For the lecture session, lecturers have to ask students turn on camera and microphone in order to make 2 ways communication. Both lecturer and students use more energy in class. For the lab session, it’s not working at all. There is no problem for on-line examination. Good point is to create awareness about ethic among students.”

“In the past few months, due to COVID-19 pandemics, the on-line teaching has been used for continuity of teaching. There were many tools that have been develop including Zoom, Microsoft Team or even the Line application to be some examples. The experiences were more than just the use of the tools available, there were advantages and disadvantages that will be discussed in the following paragraphs.

First the tools, after experiencing different tools, the MS Team that supported by the University seem to be quite convenient for both instructors and students as it is connected with Registrar office databases and also AU Spark system. However, the tools itself didn’t seem to be as problematic as the quality of network. Most of the problems occur during the classes was the quality of network that the students used to access the on-line class. While all the tools seem to have potentials for real time conference as well as for displaying the animation or short videos to help in explaining the contents of the class, some students may have problems visualize those materials in real time.

Another point of discussion is the ability of the conference program to display the participants. Currently, this ability was quite limited in all the tools that I have tried, which is one of the difficulties to involve all the students in the conversations especially when the class is large. This issue required some adjustment in term of teaching methods, as all members were quite familiar with the normal classroom that all can see each other and can learn from both verbal and non-verbal reaction. However, addition of assignment that can facilitated group discussion seem to help the students to participate in the topic well.

The laboratory teaching was also one big challenge of on-line teaching; it was quite fortunate for my class that the students already learned all basic techniques earlier in the semester. Therefore, the use of the lab simulations and reviewing of techniques through VDOs demonstration that made by instructors or from web resource have proved to be quite useful. However, due to the nature of the class that one main objectives is to make sure that the students will be able to develop laboratory skills that will needed for the future classes, the review of these skills set needed to be done when possible.

In all, the on-line teaching and learning is a challenging experience that still need improvement. The challenges including

1. The development of teaching techniques that could involve all the students in the class, or at least make them feel involved and encourage them to participate during the class.
2. Design of assessment method that would encourage them to have group discussion and/or study outside of the class.
3. The development of laboratory tools for example a specific simulations or kits that related to the actual laboratory skill that could be conducted at student's residents.

The development and approval of alternative evaluation methods that could be used instead of traditional closed-book examination which could be used to evaluate the students along the period of teaching and learning for example assignments, group discussion, games, and/or short presentations."

"On-line teaching is not suitable for the students who has low concentration to study because they lost from the class easier than study in-class. However, on-line teaching is the good teaching method for the students who pay attention during teaching hour. One of the problem, students have to study individually. Lab session cannot go forward because students need to practice in the lab (not from home). Some skills need to do, practice, and need suggestion from teachers. On-line examination as take-home examination has no problem. This exam method has no problem."

"According to the Covid 19, I have been assigned to perform on-line class. My responsibility subjects were BS2017 (Genetics) and BS2019 (Genetic and its food application). The class was immediately started on a day after the university announced to be closed. I had no time or chance to practice to learn much about how to use the program. I used the Microsoft Teams to run my on-line class. I used the PowerPoint Slides with some clips (Academic Clip) and teach the class in the schedule time as usual. Sometimes, it was feeling like taking alone, most students closed camera. However, this problem could be fixed, students opened camera. My remaining lab experiment were about the calculation and paperwork. So students can do lab at home. There was no problem with Microsoft Teams on-line examination. The effectiveness of the class is about 75 % of normal class."

"The quiz at the beginning of the class had been canceled. The quiz helped students to read and self-study before the next class and to practice solving calculation problems. In classroom, students could better develop analytical thinking skills by solving calculation problems in class. The effectiveness of teaching and learning by the on-line method was lower than the normal teaching."