

Teaching of the computer programming during COVID-19 pandemics

Charoenporn Bouyam

Information technology, School of Informatics, Walailak University , NST, Thailand

Overview

In the third semester of academic year 2019, I am teaching web programming that is a lecture and laboratory subjects. The course was designed to be a work shop learning process with lectures and practice in the computer laboratory at the same time. At the beginning of the semester there was a problem with COVID-19 in Thailand, so teaching at universities needed to adapt to online learning. The web programming subject is requires to modify the teaching and assessment methods to online class.

Aims and Objectives

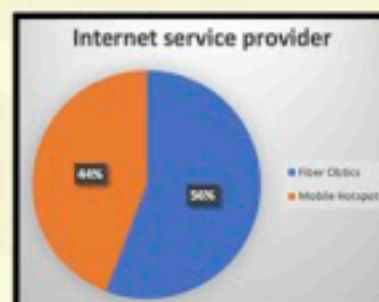
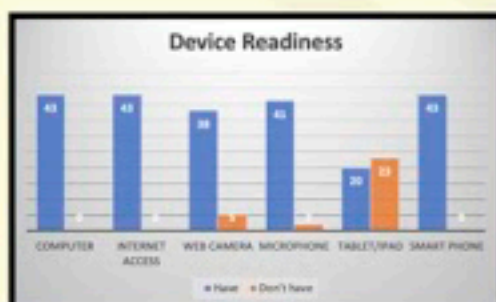
To find a solution to learn web programming during COVID-19 problems that can still achieve the same learning objectives as studying in a computer lab.

Activity

The 3 steps to go from traditional to online learning were:

1. Surveying the readiness of students
2. Finding teaching tools and student preparations
3. Teaching and Assessment
4. Collecting the feedback and reflecting

I surveyed students for the availability of Computer , Web Camera, Microphone, Tablet/ iPad, Smart Phone, Internet Access, and The



Topic	Max	Min	Average
Download speed (Mbps)	483.3	4.00	63.05
Upload speed (Mbps)	241.4	0.89	43.54
Latency (ms) ●	1.20	114.9	23.50

● Having a small number will be well.

Outcome

The readiness survey of students found that some students will have problems with online learning because of the speed of the internet. The students with low internet speed problems can learn via YouTube because the streaming of YouTube use internet speed less than Zoom.

The solution tools used to teach online computer programming are:

Google Classroom
To share the learning resources

Zoom & YouTube
To live teaching session

TeamViewer
To resolve the problem on student computers

GitHUB
To Work with team between classmates

Facebook
To Communicate inside and outside classroom hours

Impact

The online studying of computer programming can achieve the goals of the course as face-to-face learning. This can be seen from the assessment of student satisfaction with 4.65 which is less than the previous year for 0.04 with face-to-face learning. According to the survey, most students are able to understand and practice programming, but some students did not like online learning because it took more effort to study on their own and more difficult to communicate with their peers than in the classroom.