

# Combining live session and self-study for basic R programming

Udomsak Saengow, MD, M Econ, PhD  
School of Medicine, Walailak University

## Overview

During the peak of COVID-19 epidemic situation in Thailand, I have to teach basic R programming for statistical analysis to medical students, majority of which have no programming background. This is my first online teaching of this kind.

## Aims and Objectives

1. To design teaching methods suitable for teaching programming to students without background of programming language online.
2. To embrace differences in students' devices, operation systems, and internet access.

## Activities

- Using Google Classroom: posting material including workbook, software installation guides for both Mac and PC.
- Preparing short introduction video.
- Using videos for self-study before live session. The videos were posted on Youtube as unlisted videos.
- Using Zoom for live sessions, recording live sessions and posting them on Youtube later.

- Creating Discussion forum on Google Classroom, LINE account, Facebook messenger for students to ask questions and receive feedback.

## Outcome

- There are several unprecedented advantages of online programming teaching like this. For beginners, programming errors are common; for on-site session I need to walk to see errors on individual student screen. For Zoom session, students can share their screens and everyone can see and learn from each other mistakes.
- Some students did not have any laptops. I need to add an on-web programming during the class as an alternative platform.
- As all students are familiar with Youtube, posting class videos on Youtube is one of their favourite points of this class.

## Impact

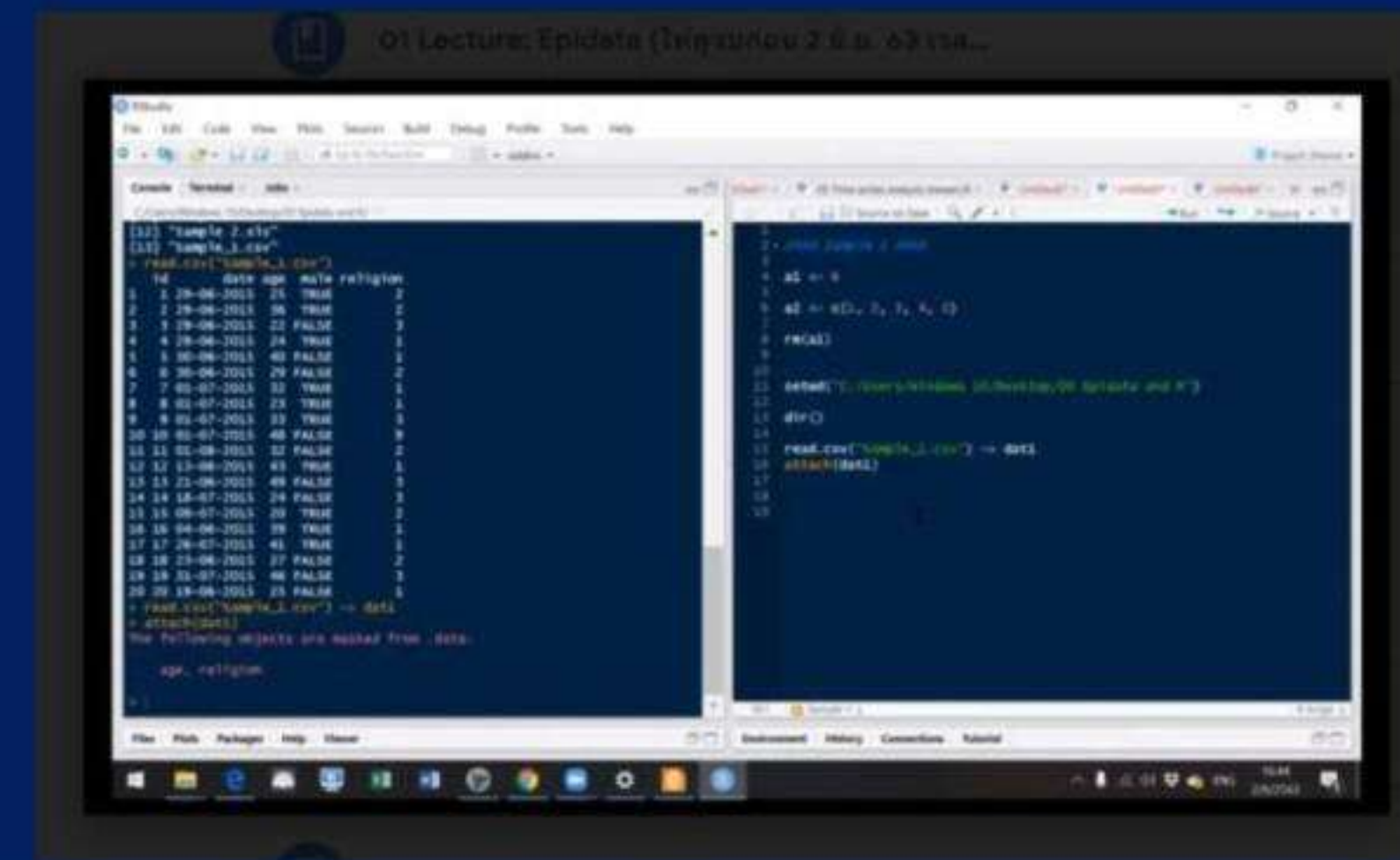
- Student satisfaction score: 4.77/5
- Student feedback:

**“Care about all students especially about students’ (lack of) devices”**

**“Watching lecture videos on Youtube was smooth.”**

**“One of the best online lectures !!!”**

**“Lecturer can answer all questions from students.”**



## Future development of project

- Add on-web programming platform beforehand
- Add weekly office hour

## Reference

1. El-Sheikh, E. M. (2009). Techniques for engaging students in an online computer programming course. *Journal of Systemics, Cybernetics and Informatics*, 7(1), 1-12.
2. Maltby, J. R., & Whittle, J. (2000). Learning programming online: Student perceptions and performance. In *Proceedings of the ASCILITE 2000 Conference*.

