Turning the Coronavirus Tide: How to C.A.R.E. for students through self-determined learning via remote learning

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Project Synopsis

This project described the transformation of a course which was using traditional face-to-face delivery to a full blended learning course and the implementation of C.A.R.E strategy to enable the remote learning for the students during the teaching disruption due to the COVID-19 outbreaks. By using the blended learning approach, student learning time can be used more effectively and allow the students to achieve better learning outcomes with better learning experiences. Due to the closing of the university, several strategies were implemented to substitute face-to-face delivery in this blended learning course. Here, I used C.A.R.E. strategies to help students to do self-determined learning via remote learning by Connect (C), Accountable (A), Realistic (R), and Engage (E). There are more than half of the students manage to progress in their learning at their own even they have the choice to only continue their learning after the semester starts again. During the two months of break, this is the only course that third-year students of HS03 follow fully since the day one of the breaks. The model of this course and the strategies used to engage students in their learning could be applied to most of the other course to enable remote learning.

Transformation of the course (2015-2019)
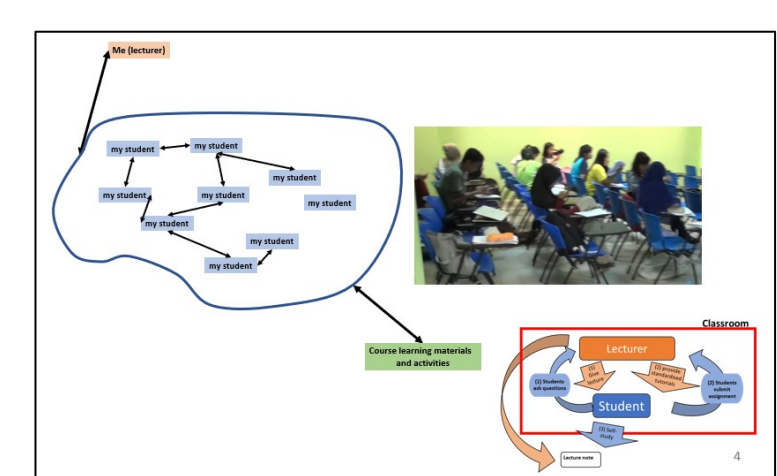
Academic year 2014/15

Figure 1. Traditional full face-to-face class for the entire course in the year 2014.

The instructional of the course was redesigned for remote learning
(1) Learning Outcomes
   a. Improve constructive alignment.
(2) Facility
   a. Use free software so the students can learn and practice anytime, anywhere with their device.
(3) Preparation
   a. Produce bit-sized lecture and tutorial videos which were uploaded and organised at YouTube.
(4) Delivery
   a. Administrate all video links, forums, assessment were administrated in a single learning management system for student's easy access of student.
(5) Assessment
   a. Provide clear rubrics for all assessments.
   b. Improving interconnectedness among task-based tutorial and implementing problem-based learning for a mini-project..
   c. Implementing delayed grading.

Using C.A.R.E. strategy to engage students
(1) Connect
   a. Design a develop asynchronous online learning materials that students can access anytime and anywhere at their own pace even without internet.
(2) Accountability
   a. Make the students feel accountable for their learning, by making the students feel being watched, reducing opportunities to avoid being watched.
(3) Realistic
   a. Scaffold the learning to reduce hassle factor as many students are deterred by even seemingly small barriers.
(4) Engage
   a. Use various strategies to continuously engage students to keep student attention and interest throughout the course.
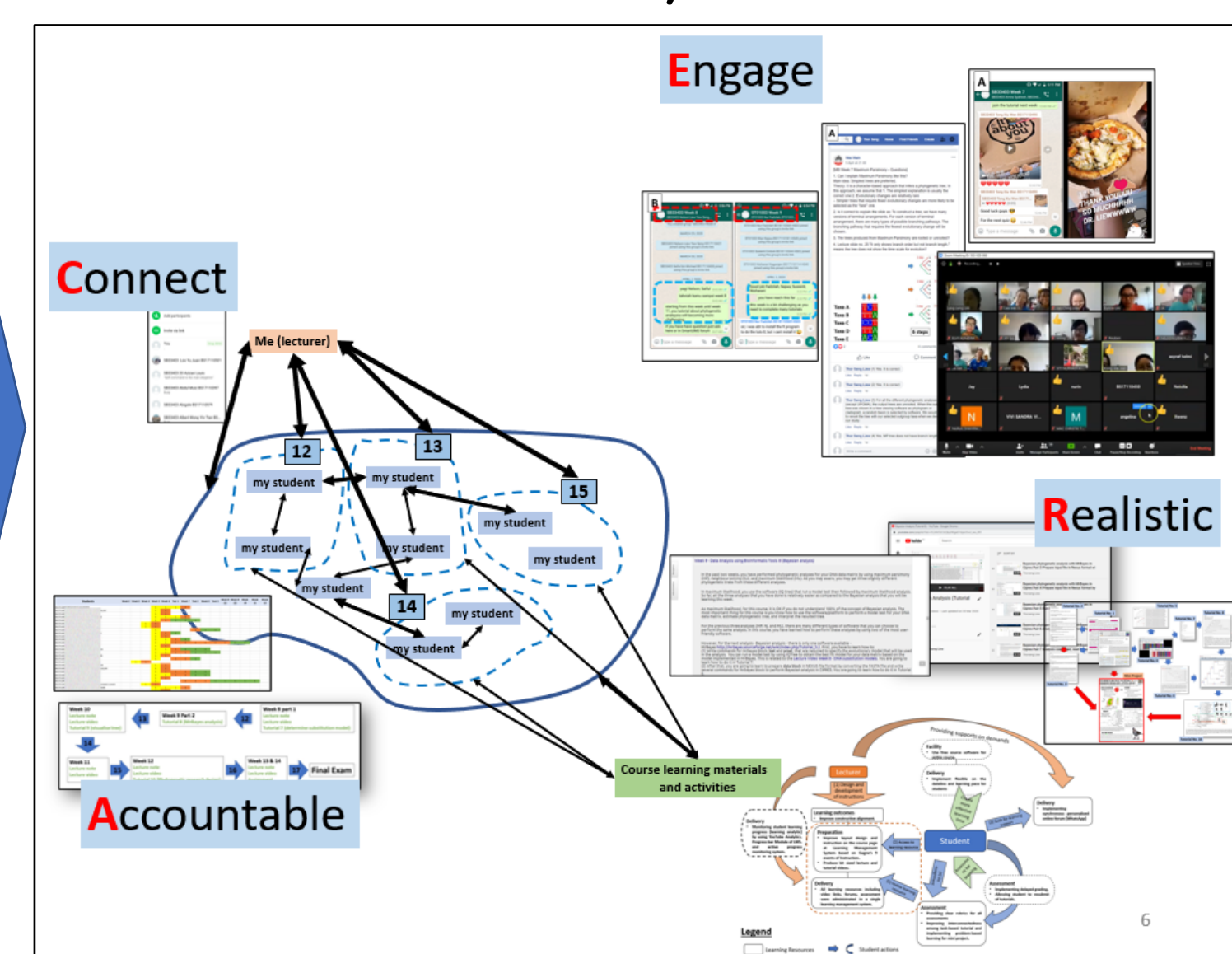
Academic year 2019/20

Figure 2. Fully implementation of the instructional for remote learning in a holistic manner and C.A.R.E. strategies in the year 2020.
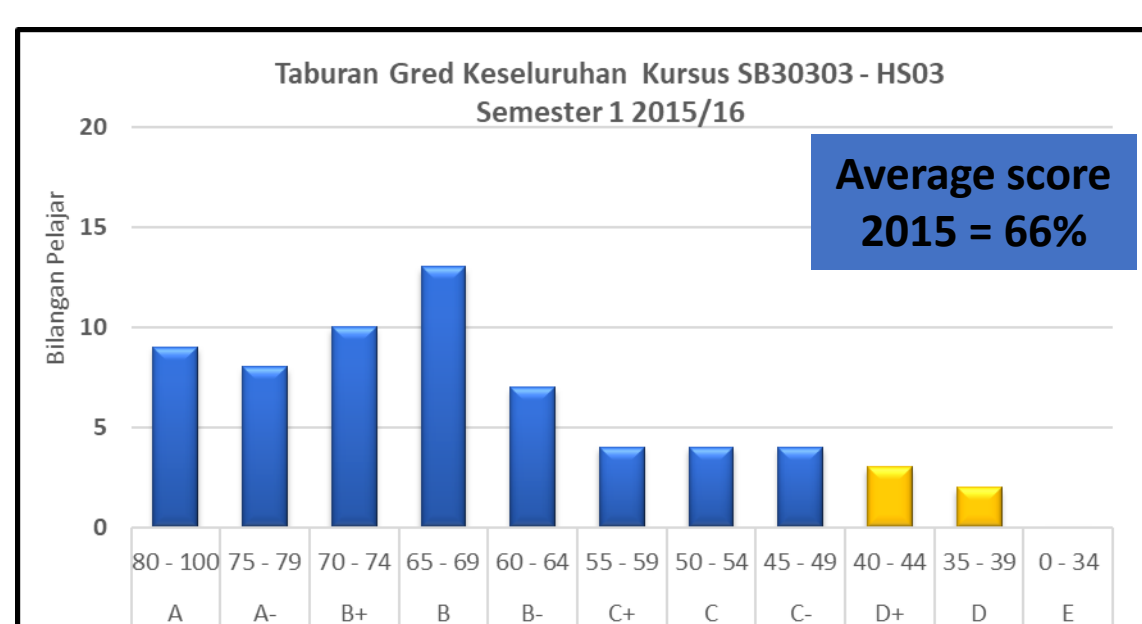
Improve Students' Learning Outcomes

Figure 3. Distribution of students' grades for the academic year 2014/15.

The overall average student's scores increased from **66%** in the academic year 2015/16 to **72%** in the academic year 2019/20.
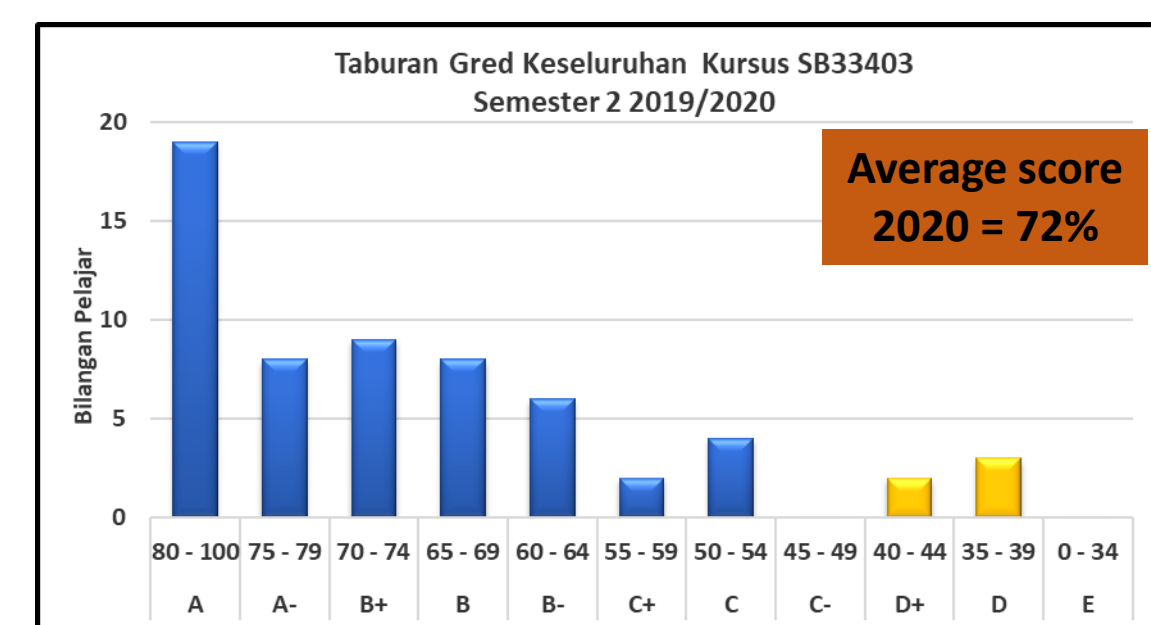

Figure 4. Distribution of students' grades for the academic year 2019/20.

Improve Students' Learning Experiences

(a) Student's evaluation (PK07)

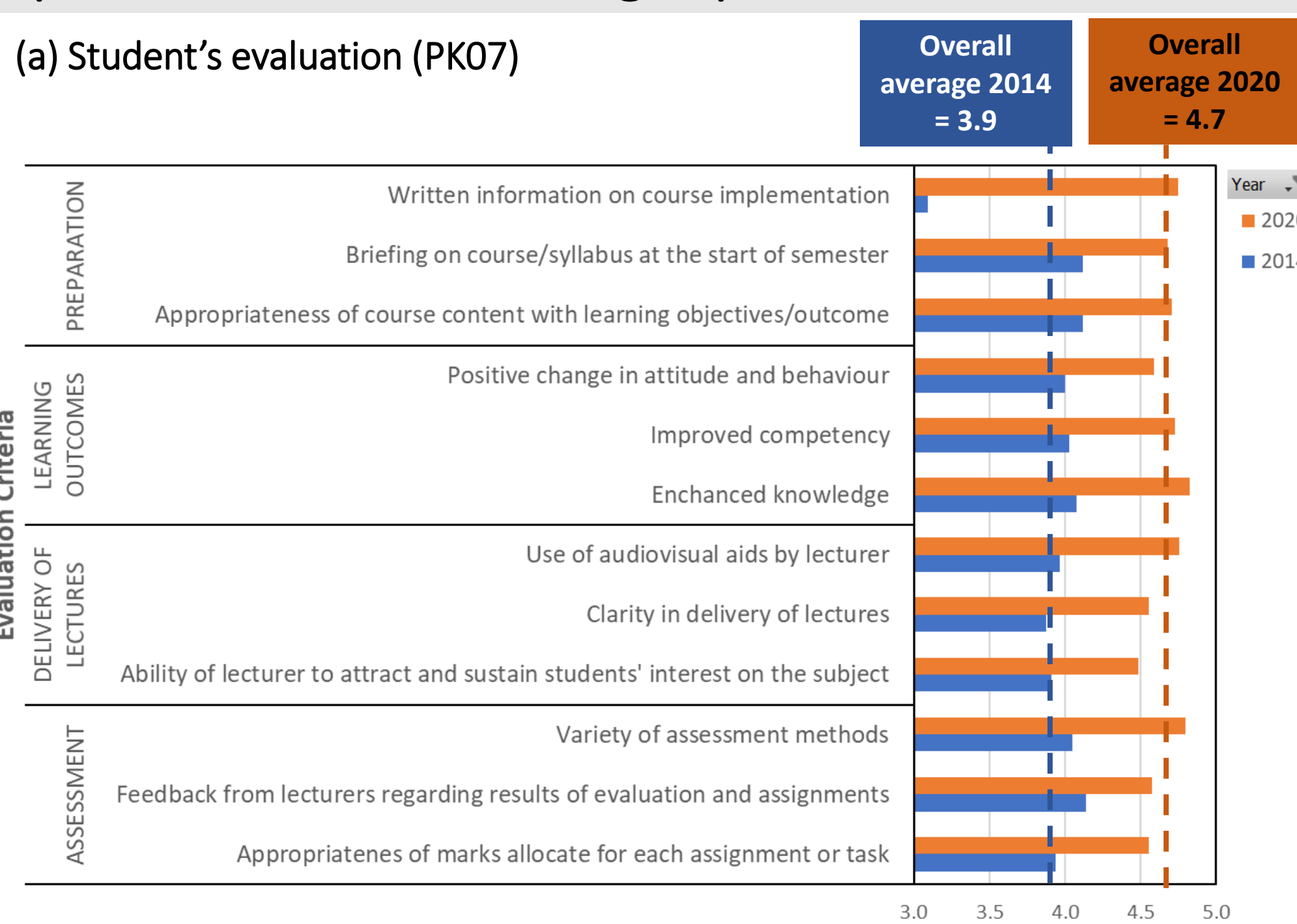Overall average 2014 = 3.9

Overall average 2020 = 4.7

Figure 5. Comparison of the student's evaluation mean score the course between academic year 2014/15 and 2019/2020.

(b) Student's feedback

Syllabus and Delivery
- Almost everything in this course were relatively new to me but despite of that, learning process can be continued smoothly with minimal hindrance were all credited for Sir's efforts to promote online learning. The information provided, I.e. lecture notes, and online tutorials were generally sufficient and understandable. Extra tutorial courses were very much appreciated especially when there were experts invited for sharing sessions. Aside from that, other forms of learning that involve interactive activities were helpful to engage us in topic discussion. Assignments given were interesting and feasible which motivates us to learn actively. Exams were also thought provoking and challenging. Overall, it is a mindset changing experience! I did enjoy the learning process throughout the course.
- Yes, Dr Liew had prepared sufficient resources for us to access which I am grateful for, that had uploaded on smartv3 and whatsapp (which can access by us easily) and even post the SD card to those who cannot access internet! Dr had planned well for the course outline despite during this hard time of online learning period.

Laboratory Sessions
- I like the way that we prepare our own manual for lab session as it gives us time to prepare mentally and physically, help us to organize things better unlike usual lab which give us manual on that practical day.
- The lab sessions for this course is interesting. Courses lain tak pernah buat lagi.

Engagement and Discussion Forum
- Dr. Liew has various (fun) methods to keep the students be interested in studying the subject. Furthermore, He also includes some videos for students to follow and get the real idea of how to do the assignment that had been assigned.
- Great effort, Dr. Liew. You were the only one who consistently kept in touch with us from the beginning until the end of semester 7. Discussions were sufficient.