

Examining RPg Student Learning Performance by Flipping a Classroom with SPOC – Pilot Study



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Intended outcome

By the end of this presentation, you should be able to:

- ✓ Identify an innovative **SPOC-Flipped Classroom approach** for enhancing RPg student learning at HKBU.

Outline

- **Why Adopt SPOCs @HKBU ?**
- **Why Flipped Classroom ?**
- **Course Design of SPOC-Flipped Classroom**
 - **Overview of MCCP**
 - **3-Stage of SPOC-Flipped Classroom**
- **Impact of SPOC-Flipped Classroom on Student Learning : Pilot Study Results**
 - **Quantitative statistics**
 - **Qualitative results**
- **Concluding Remarks**



Hong Kong Baptist University

- 3 Faculties, 4 Schools and 1 Academy
 - Faculty of **Arts**
 - Faculty of **Science**
 - Faculty of **Social Sciences**
 - School of **Business**
 - School of **Chinese Medicine**
 - School of **Communication**
 - School of **Continuing Education**
 - Academy of **Visual Arts**
- From Bachelor's to Doctorate Degrees
- ~ 11,000 students
- ~ 2,400 staff



Vision

To be a leading liberal arts university in Asia for the world delivering academic excellence in a caring, creative and global culture.

Why Adopt Small Private Online Courses (SPOCs) at HKBU?



- “Internationalization”: a strategic focus of the University
- To promote “Internationalization at Home” i.e. to internationalize our students’ learning experience while they are in Hong Kong
- Encourage students’ interaction with overseas counterparts for in-class learning activities, joint projects or joint presentations etc
- Enhance students’ intercultural competence and global awareness *[contributing to one of our graduate attributes of “Citizenship”]*
- Encourage teachers to co-teach with overseas partners
- A platform to develop cross-institutional teaching and collaboration

Why Flipped Classroom?

Video for flipped classroom: <https://www.youtube.com/watch?v=dxPVyieptwA>

- Flipped classroom is defined as a set of pedagogical approaches that move most of the information-transmission teaching out of the class and use the class time for learning activities that are **active and engaging**. It also requires students to complete the **pre and post activities** learning online or other medium that were non class based (*Abeysekera & Dawson, 2015*).
- Students can **get themselves ready before** coming to class to take part in various active learning activities
- Educators give students **timely feedback** and continuously assess their progress (*Wang, 2017, Computers & Education, 114, 79-91*)

Course Design of SPOC-Flipped Classroom...

“Teaching University Students”

- A one-credit Mandatory Common Core Programme (MCCP) for all research postgraduate (RPg) students

Intended Learning Outcomes of this course

By the end of this course, students should be able to:

- **Describe** the context for learning and teaching at university;
- **Explain** the importance of promoting a culture of impeccable academic integrity at university;
- **Apply** learning theories and classroom management techniques to the preparation of teaching;
- **Deliver** a high quality teaching and learning activity;
- **Reflect** on their teaching and learning.

About MCCP7010

“Teaching University Students”

- ~50 RPg students with diverse backgrounds (with different disciplines) from *Hong Kong, Mainland China, Africa, India, Greece, Germany* etc.
- 6-week face-to-face (F2F) course with 3-week FL online materials
- Students are instructed to study the 3-week online materials designed in FL (~2 hours/week) before class
- Various in-class/outside classroom activities like Personal response system, discussion, video, think-pair-share, Q&As, external speakers, presentation & learning trail etc. to reinforce on-line learning concepts
- Overseas partners:
 - Nanyang Technological University (NTU), Singapore
 - Western University, Canada



3-Stage of SPOC-Flipped Classroom



SPOCs via FutureLearn

Centre for Holistic Teaching & Learning

<http://ctl.hkbu.edu.hk/main/onlinecourse/>

Teaching University Students

The course provides an introduction to basic theoretical knowledge and practical skills required to begin teaching at university.



香港浸會大學
HONG KONG BAPTIST UNIVERSITY

[Go to course – started 26 Feb](#)

[Overview](#)

[Topics](#)

[Start dates](#)

[Requirements](#)

[Educators](#)



香港浸會大學
HONG KONG BAPTIST UNIVERSITY



全人教育教與學中心
Centre for Holistic
Teaching and Learning



Teaching University Students



Duration
3 weeks



2 hours
per week

3-Week SPOC Design for MCCP

“Teaching University Students”



WEEK 1: INTRODUCTION AND EFFECTIVE TEACHING/LEARNING

Welcome to the course "Teaching University Students"

This introductory course aims to prepare you to undertake a role in teaching university students and is offered by the Centre for Holistic Teaching and Learning (CHTL) at the Hong Kong Baptist University.



- 1.1 WELCOME VIDEO (04:10)
- 1.2 COURSE SYLLABUS ARTICLE
- 1.3 INTRODUC
- 1.4 YOUR UN

What is le
What are the in
what way do y

Week 1 (16 Steps)

- Video: 1
- Article: 9
- Quiz: 1
- Discussion: 4
- Poll: 1



WEEK 2: INTRODUCTION OF OUTCOMES-BASED TEACHING & LEARNING (OBTL)

Outcomes-based teaching and learning (OBTL)

This week we will focus on the concepts of OBTL and Constructive Alignment.



- 2.1 INTRODUCTION TO OBTL VIDEO (02:21)
- 2.2 WHAT DOES "OBTL" MEAN TO YOU? DISCUSSION

OBTL

Learning with OB
professor asks y
ILO). You don't c
attached to it.

- 2.3 WHAT IS C
- 2.4 HOW TO T

Week 2 (14 Steps)

- Video: 1
- Article: 6
- Quiz: 2
- Graded Test: 1
- Discussion: 4



WEEK 3: ASSESSMENT AND GRADING WITH RUBRICS

Assessment

This activity will elaborate the characteristics of Criterion-Referenced Assessment (CRA) and Norm-Referenced Assessment (NRA).



- 3.1 WELCOME TO WEEK 3 VIDEO (01:18)

- 3.2 CRA VS NRA ARTICLE
- 3.3 CASE STUDY: GRADING STUDENT'S PERFORMANCE
- 3.4 FURTHER UN

Rubrics review
This activity aims to
establish design

ASSESSMEN

Week 3 (12 Steps)

- Video: 2
- Article: 6
- Graded Test: 1
- Discussion: 3

<https://www.futurelearn.com/courses/teachinguniversitystudent/2>

Stage 1 – Online Self-learning

Login to Learning Management System (Moodle)*

* Students to login LMS for course information

Received invitation from FutureLearn to login SPOC platform#

Students to login "FutureLearn" for online learning materials

Successful Login?

NO

YES

Self-paced studying on pre-designed SPOC online learning materials

Remark: students are instructed to complete the relevant online activities before class

Online articles/videos of new learning concepts

Online discussions/feedback

Online quizzes for checking understanding

Online graded tests for reinforcement

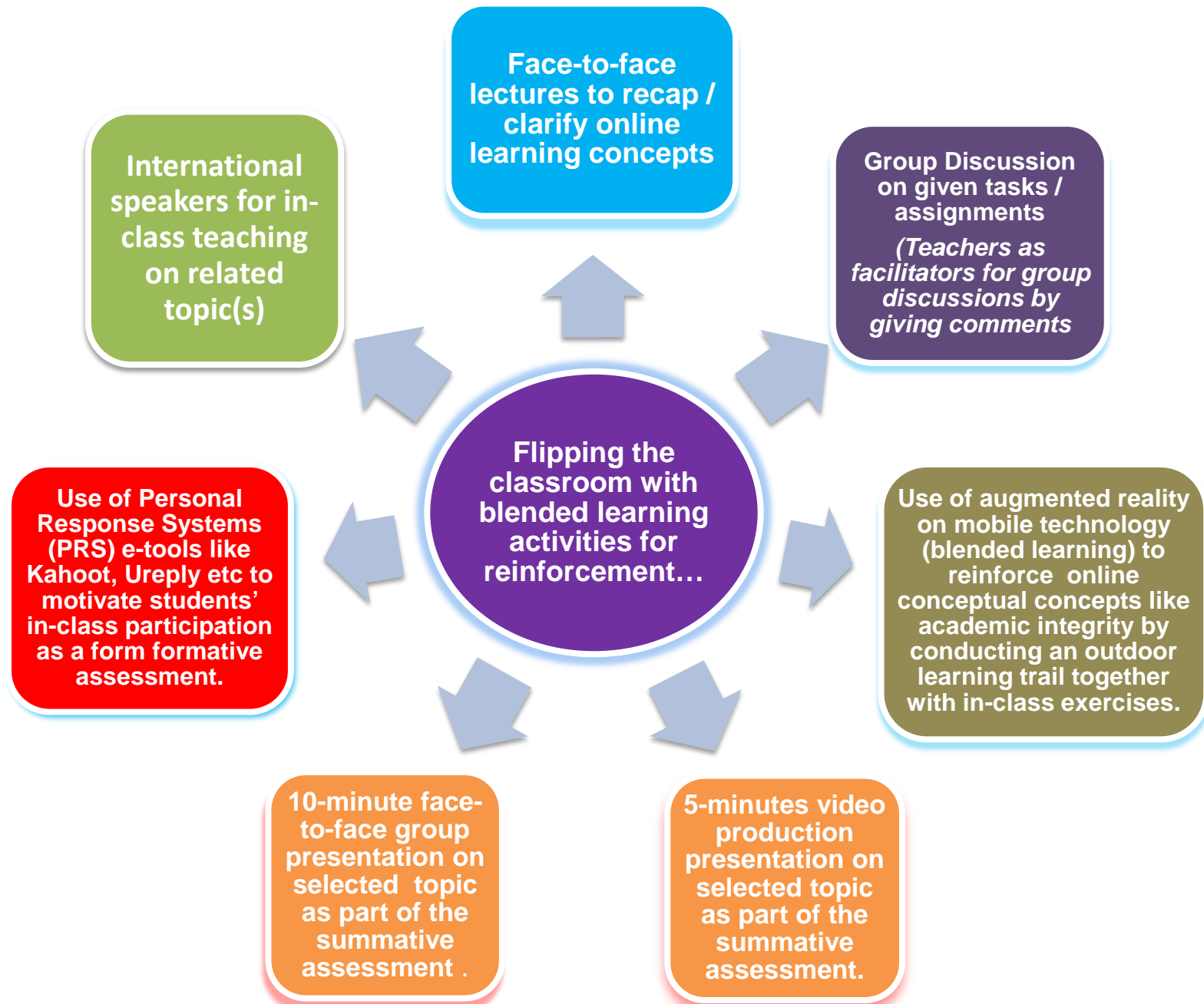
Completion of SPOC learning materials



Students study online learning materials of FL in their own pace and leave comments for teachers to respond before class

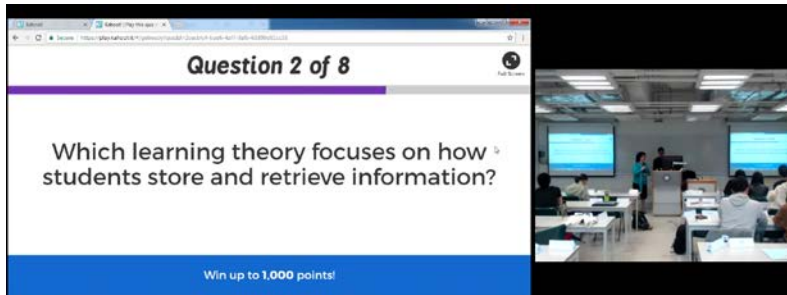
Instructors provide feedback to students' online comments

Stage 2 – Student-centered TLAs

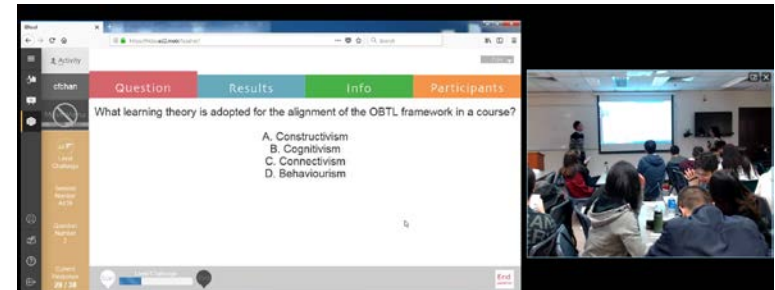


Using e-Tools to Reinforce / Clarify Online Learning Concepts

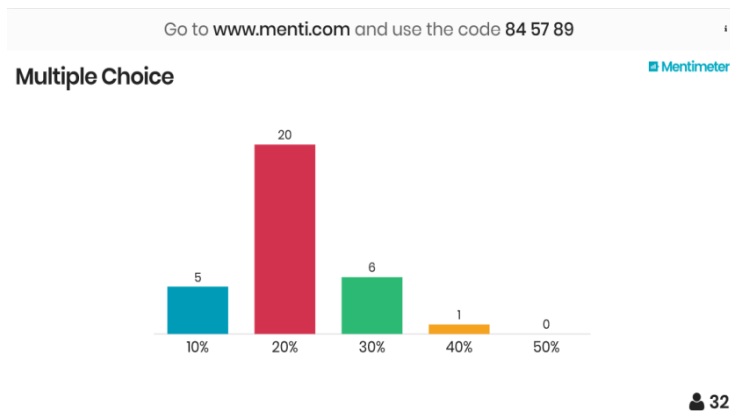
Kahoot



Ureply (EDtool)



Mentimeter



Qualtrics (Questionnaire)

Q1 Trails of Integrity and Ethics (TIEs)

Post-trail Question & Survey

Q3 Confidentiality Assurance and Participant Consent

This inter-institutional project, Reinforcing the Importance of Academic Integrity and Ethics in Students through Blended Learning – A Deployment of Augmented Reality Applications, is led by HKBU with CUHK, EdUHK and PolyU as partners. The project is funded by University Grants Committee of Hong Kong.

You are invited to participate in the teaching and learning activities developed under this project. Your responses and related data collected by this project will be used to generate statistics and reports for analysis and research. Please be assured that your personal identity will be kept confidential and the results will not be made available in a form which identifies you. If you understand and consent to the above, and agree to participate in the teaching and learning activities, please check the following statement and proceed.

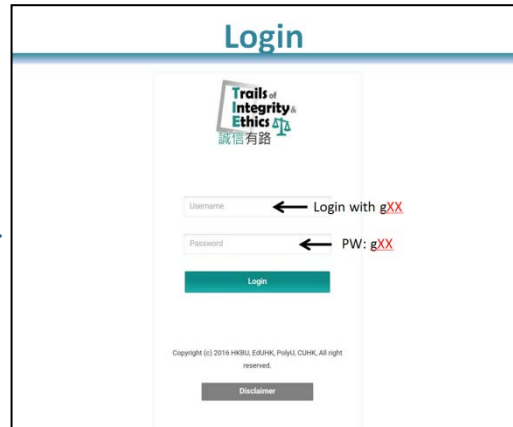
I understand and consent to the above, and agree to participate in the teaching and learning activities.

Section 1

The image shows a Qualtrics questionnaire interface. It includes a title 'Trails of Integrity and Ethics (TIEs)', a logo with the Chinese characters '誠信有路', and a section for 'Confidentiality Assurance and Participant Consent' with a consent checkbox.

Various teaching & learning activities for reinforcement / timely clarification of online learning concepts in F2F classroom setting

Using AR Mobile Learning Trail to Reinforce Abstract Concepts



Triggers

You need to use different Triggers to activate the learning contents, e.g.

- QR Code scanner
- IR (Image Recognition)
- BLE (Bluetooth)

You **MUST** use the Triggers within the App

The image shows the app's menu and triggers interface. On the left, a 'Menu' screen displays a user profile with a red arrow pointing to the 'main menu' and a list of options: 'Institutes', 'QR Code', 'IR', 'Disclaimer', and 'Logout'. On the right, a 'Triggers' screen shows the app's logo and logos for four partner institutions: Hong Kong Baptist University, Hong Kong Polytechnic University, The Chinese University of Hong Kong, and The Education University of Hong Kong.

Feedback to Students' Pre & Post Questionnaire

Online Discussions (FL)

(i) Collect comments before the class through FL

Your understanding of academic integrity

As academics, it is important to uphold professional ethics and academic integrity in both teaching and research. Please share with us your view on "academic integrity and ethics" in the comments below and respond to (reply, like, or follow) others' views.

What is your understanding of academic integrity? (maximum 100 words)



(ii) Collect comments again from In-Class activities and compare the results before and after the class

(iii) Show the analytical results to the students during In-Class activities

In-Class Activities



Before (Pre)



Comparison

After (Post)



Stage 3- Learning Outputs



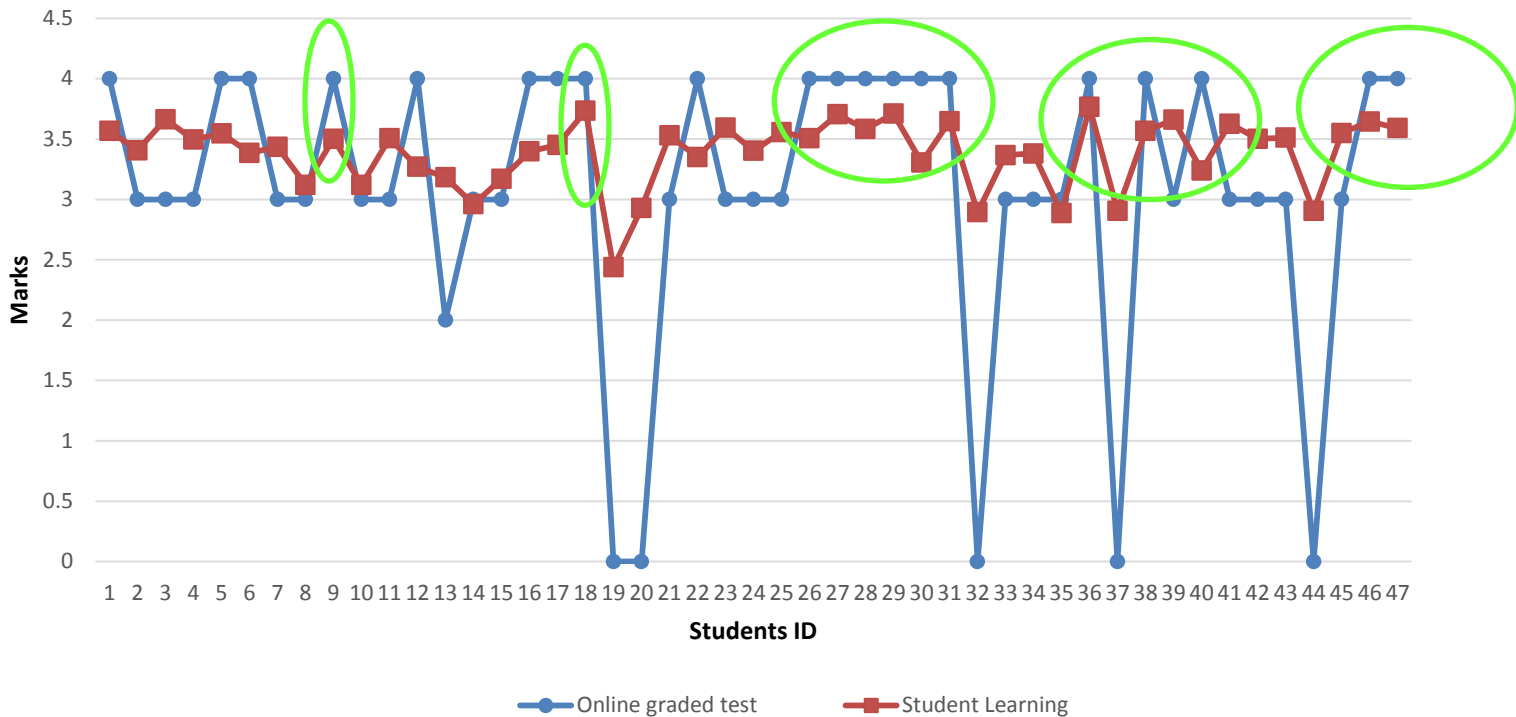
**Impact of SPOC-Flipped Classroom
on Student Learning :
Pilot Study Results**

Assessment Tasks for M CCP

- **Preparation, Participation and Discussion (30%)**
 - Students are expected to prepare for class by reading and completing designated online materials & exercises before classes, and participate in discussions in class and online.
- **Assessed Team Teaching and Learning Activities(ATTLA) (50%)**
 - Students in groups of five to six will be asked to prepare a 10-minutes F2F presentation and produce a 5-minutes video.
- **Reflection on Learning and Teaching (20%)**
 - Each student has to write a reflective article on what s/he has learned in this course, identify areas for personal and professional development as a teacher

Online Graded Tests vs Student Learning

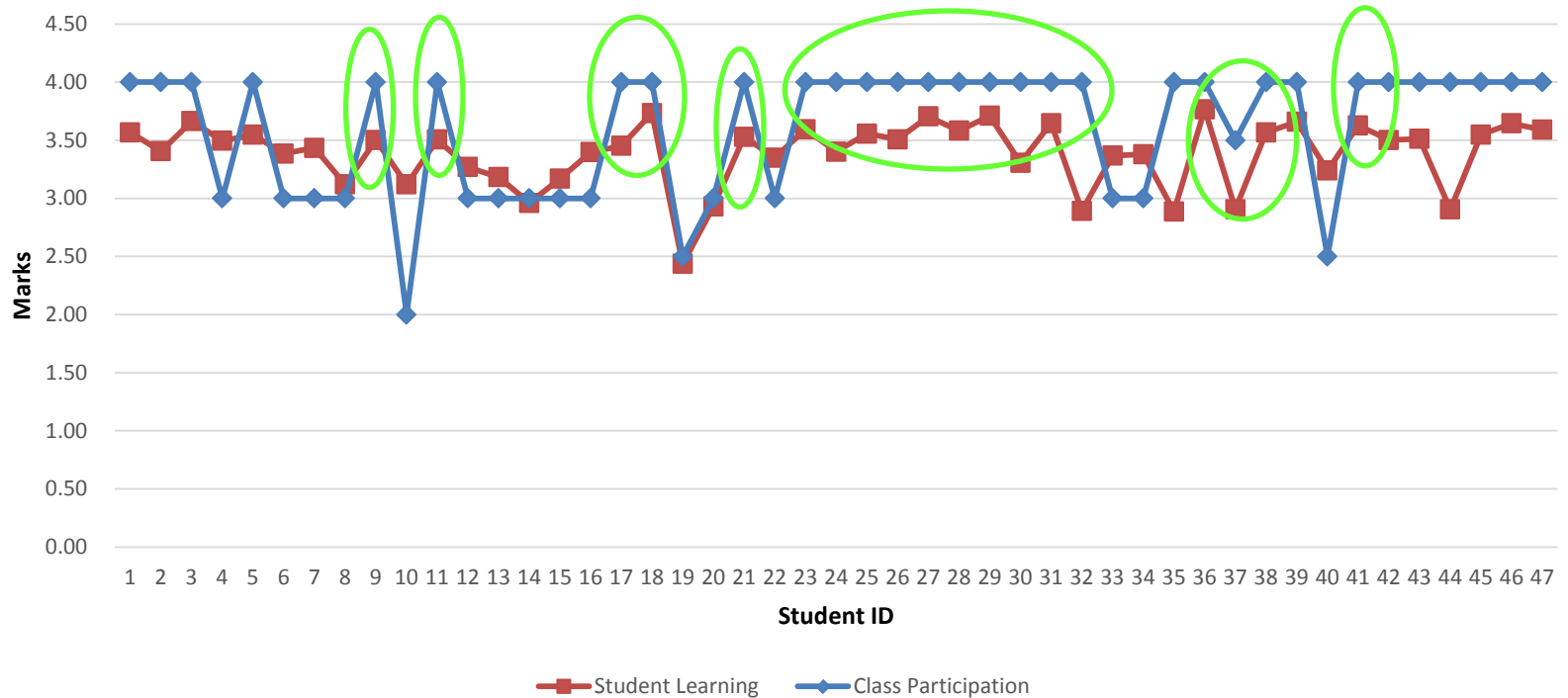
N=47



✓ Strong and positive correlation between “Online Graded Test” score and “Overall Student Learning Performance”

Classroom Participation vs Student Learning

N=47



✓ Strong and positive correlation between “Classroom Participation” Score and “Overall Student Learning Performance”

Students' Feedback on SPOC-Flipped Classroom

(Online Survey Conducted at the end of the 4th Lesson)

Q1: Describe the flipped classroom approach in your own words.

Key Themes Collected

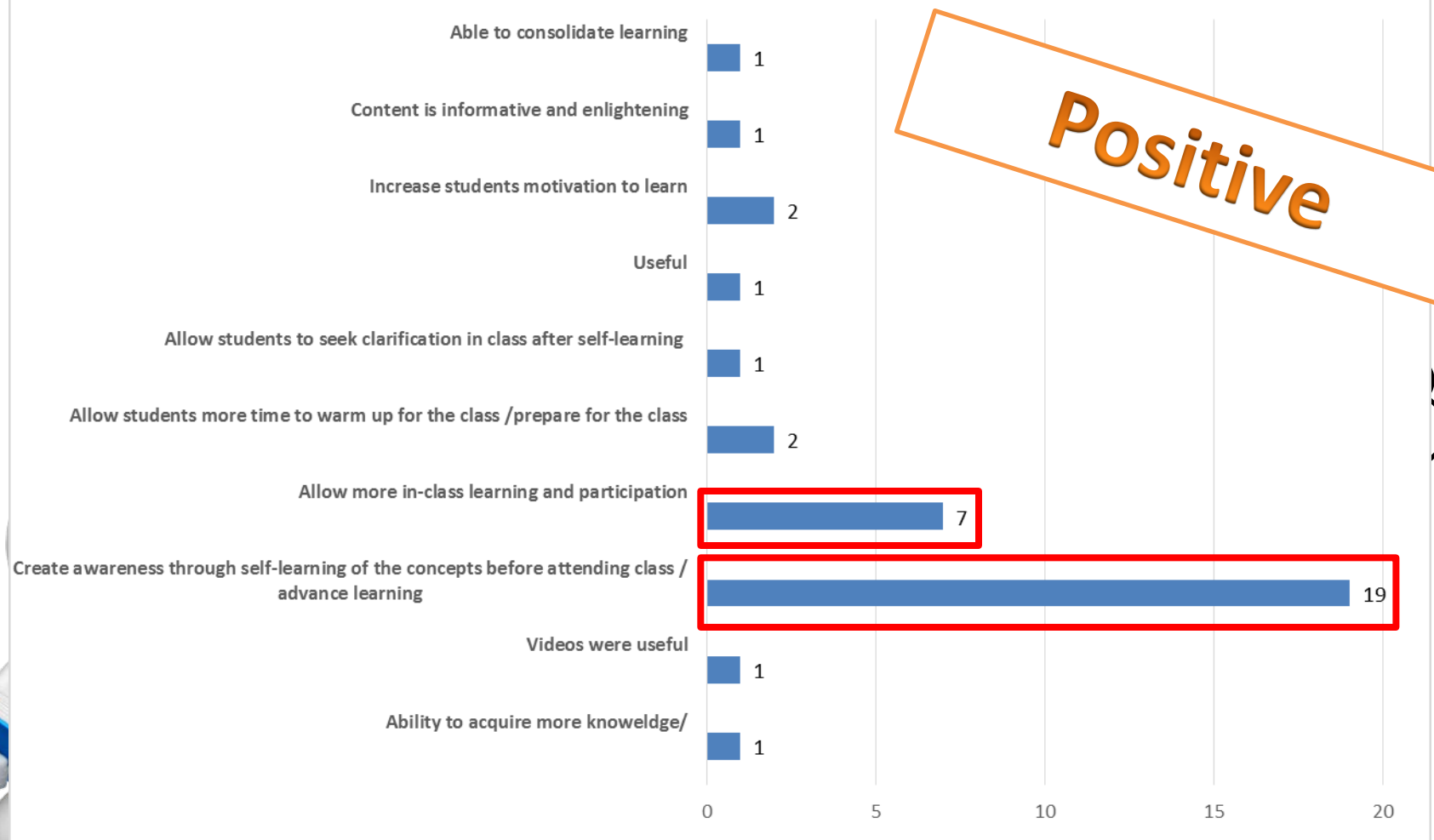
- (i) Self-learning before class / flexible learning... (16)**
- (ii) Interactive online and in-class activities / Multiple teaching approaches such as videos, games... (7)**
- (iii) Changed / Switching the role of teachers and learners / Increased team co-operation / student-centered approach ...(8)**
- (iv) Interesting / innovative / new approach... (7)**

Positive

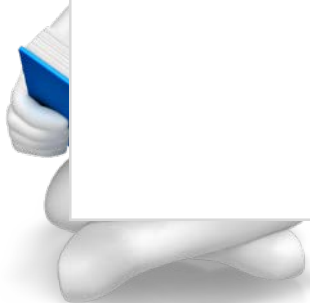
Students' Feedback on SPOC-Flipped Classroom

(Online Survey Conducted at the End of the 4th Lesson)

How constructive content for online study on FL is useful to learning?



Positive

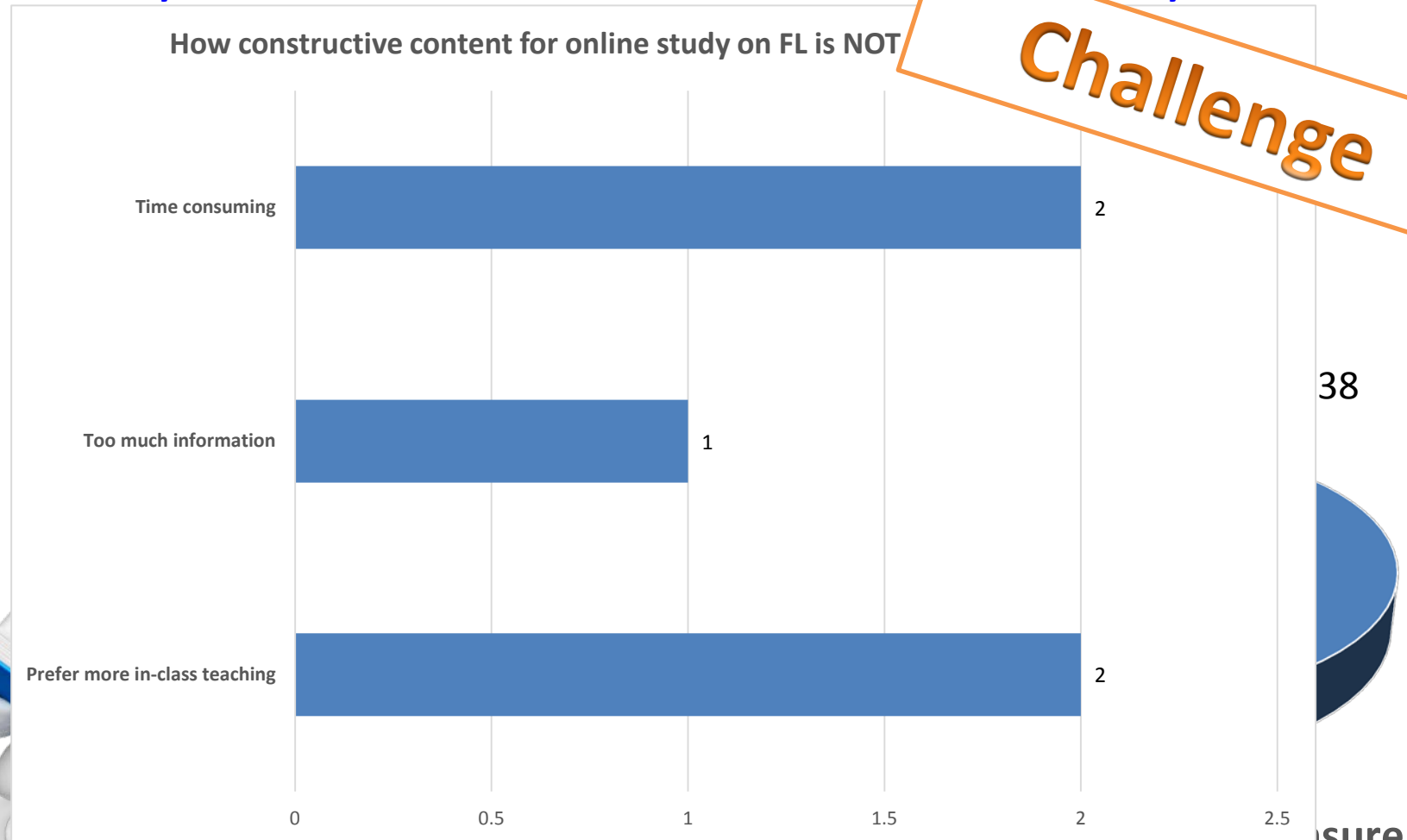


Students' Feedback on SPOC-Flipped Classroom

(Online Survey Conducted at the End of the 4th Lesson)

Conti.

Q2: Do you find it useful to have the constructive content in FL for you

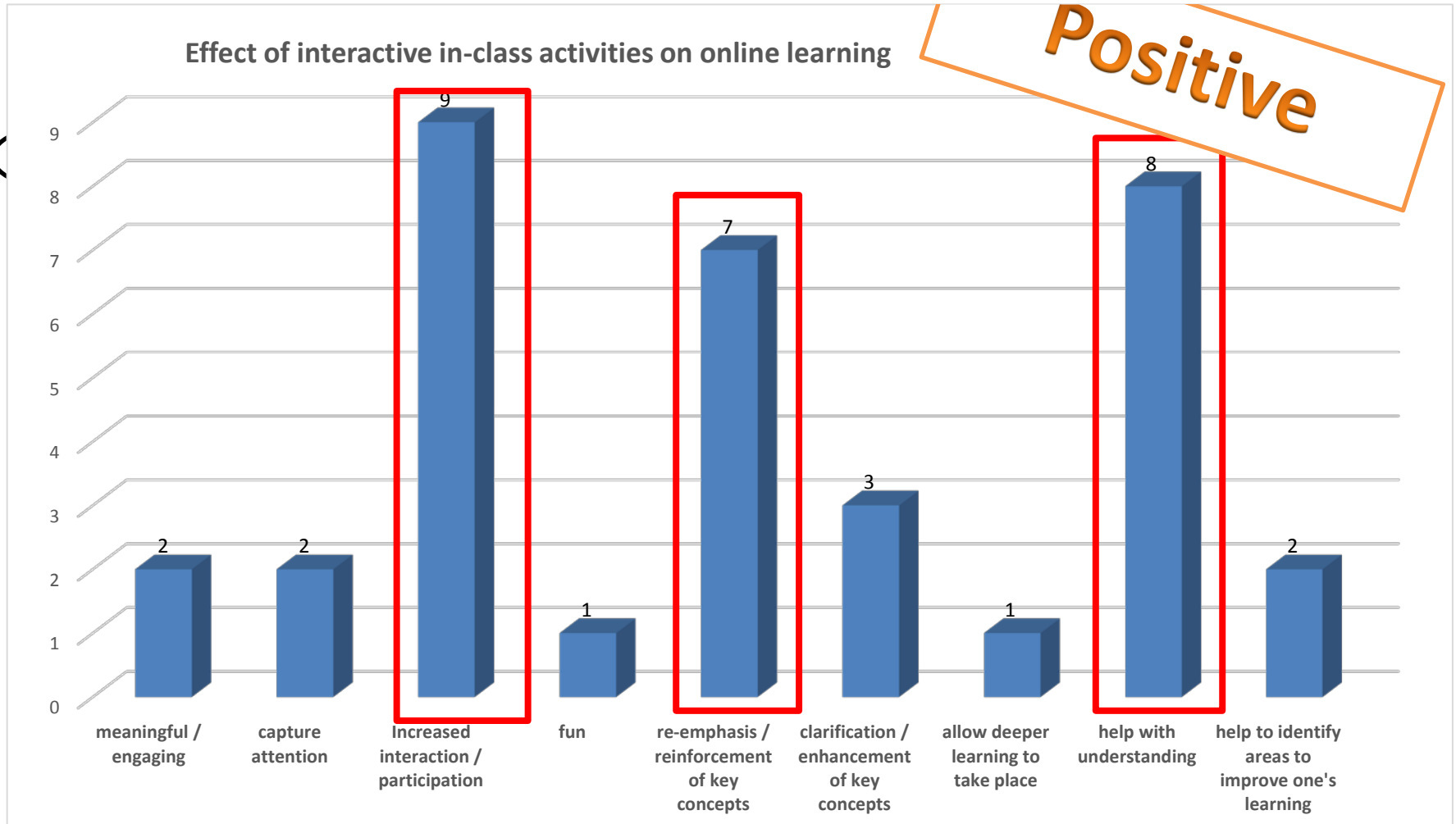


... to ... measure, ensure

Students' Feedback on SPOC-Flipped Classroom Conti.

(Online Survey Conducted at the End of the 4th Lesson)

Q3: Do the interactive activities in class help to reinforce your own understanding of the concepts described in FL? Please elaborate.



Students' Feedback on SPOC-Flipped Classroom

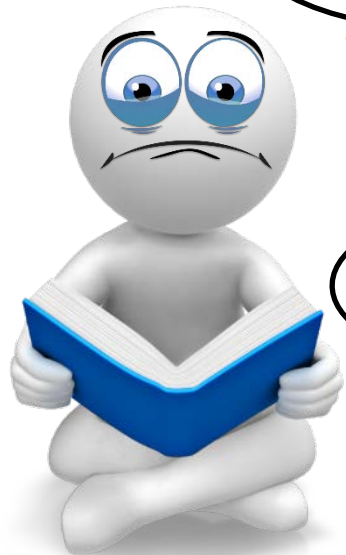
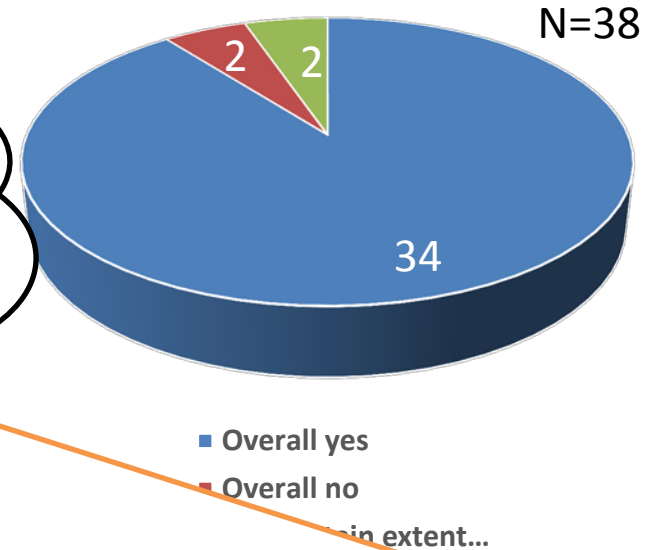
Conti.

Q3: Do the interactive activities in class help to reinforce your own understanding of the concepts described in FL? Please elaborate.

Student 5: "Not really. Usually I learn the concepts in FL and try to look for more information. The concepts are usually already before."

Challenge

Student 6: "It's not really simple sometime. I don't really make us understand more content in FL. Anyway, the activity did make us know what we do and what we don't."

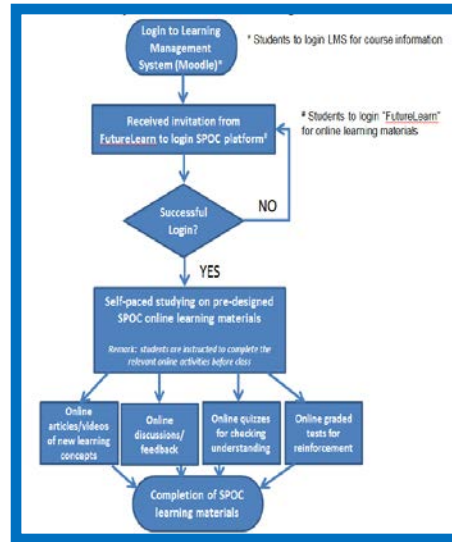


Concluding Remarks...

- ✓ This pilot study highlights the **strong correlation** between student **online learning** and the **overall student learning performance** via the SPOC-Flipped classroom pedagogical approach;
- ✓ This pedagogy enhances students' **self-learning ability** regardless of the cultural background and also strengthens their in-class participation;
- ✓ Together with **blended learning activities by integrating e-tools** into the classroom-based TLAs which creates **fun, innovative, attractive, playing, interesting, comfortable experience** as feedback given by the participants in this pilot study;
- ✓ **More classroom engagement** and **interaction** enhances students' understanding which results a **better overall grades** (Gross et al., 2015);
- ✓ Further studies can be explored by comparing two or more different groups to see the consistency of data to confirm the appropriateness of using the mentioned pedagogical design.

3-Stage of SPOC-Flipped Classroom for Teaching RPg Students on “Teaching University Students” at HKBU

Stage 1 Online Self-learning



Stage 2

Student-centered TLAs



Stage 3 Learning outputs



Selected References

- Abeysekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research. *Higher Education Research & Development*, 34(1), 1-14. doi:10.1080/07294360.2014.934336
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THANK YOU!