The Impact of Flipped Classroom in **Blended Learning on Student Experience**



Kheng Yew Tsung

k.tsung@hw.ac.uk

Heriot-Watt University

Putrajaya, Malaysia

INTRODUCTION



A flipped classroom model in Blended Learning was introduced in the practical component of a Physics course , as replacement for lecturer-centered teaching method, to enhance interaction and engagement for better student experience. In doing this, an action research approach was undertaken. The process is presented in this poster.

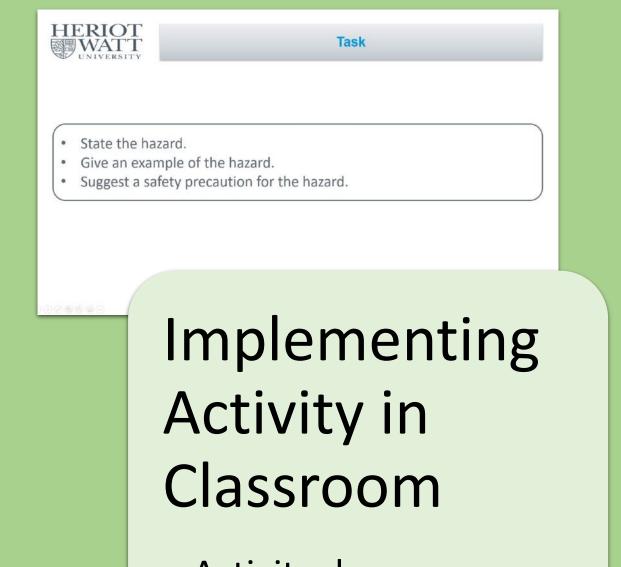
THE PROCESS

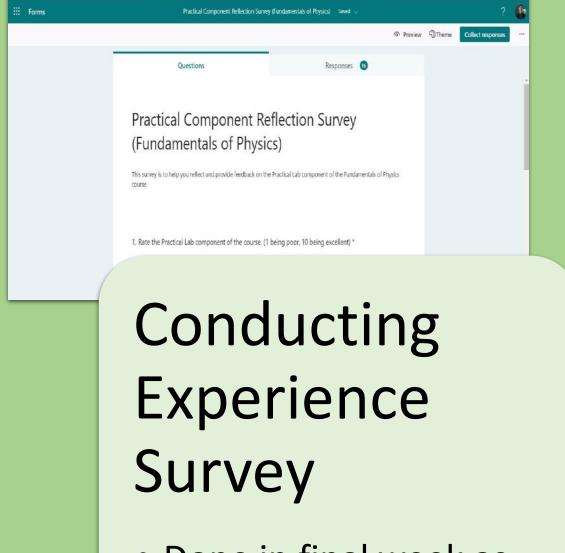
WATT

Funda	mentals of Physics	HERIOT
0 Administrator Class of 2021		Your Progress
Introduction >	Week 1: Basics of Practical Investigations	Completed: 1 of 5 🥜 🗙
Announcements	Week 2: Data Tabulation	Completed: 0 of 1 🥜
Course Guide >	Week 3: Sample Calculations and Uncertainty	Completed: 0 of 2 🥜
Big Red Button >	week 4: Graphing	Completed: 0 of 1 🥜
Wook 1 - 4 >	Week S: Result Analysis and Problem Solving	Completed: 0 of 2 🥜
Week5-8 >	Week 7: Take Home Investigation Practise (Video)	Completed: 0 of 1 💣
Woek 9 - 12 >	Week 8: Take Home Investigation Practise (Report)	Completed: 0 of 1
The Gymnasium >	Week 9: Practical Investigation Assessment (Part 1)	Completed: 1 of 1 🥜
Practical Lab >	week 10: Practical Investigation Assessment (Part 2)	Completed: 0 of 1 🖌
Final Exam Practice	Creating	Conductor 1

Manipulate apparatus and technological tools and implement safe and ethical investigation proceed Learning Outcome nstructional content Introduction: Safety Rules, Equipment: IV, DV & Instruction for activity slides CF: Procedure, Hazards & Safety Precautions earning Activit Identify equipment Identify the safety and equipment from pict Measure length of pen, submit picture Suggest alternative materials evidence. Identify components of a report. Planning Flipped Classroom Activity

Week 1





Content

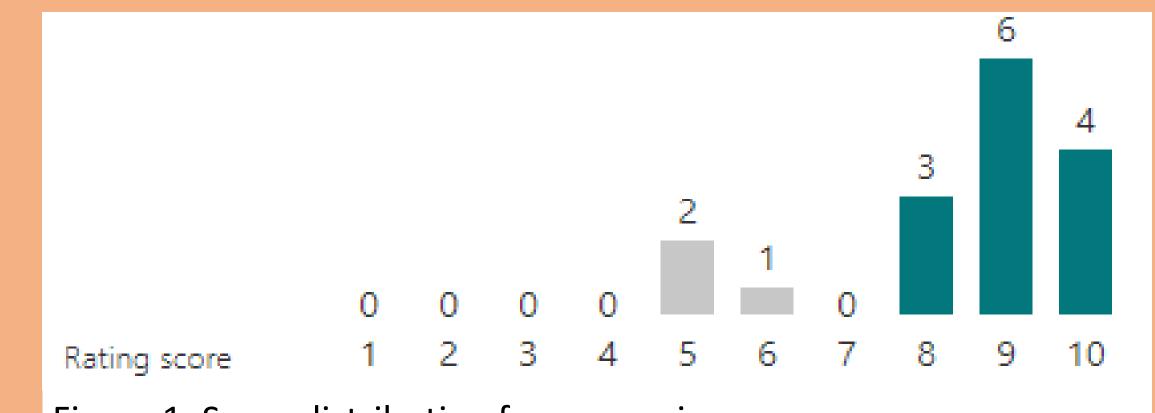
Learning

Online

- Online content replacing lectures in class.
- Consisting of learning materials & activities based on weekly lesson outcomes.
- Part of Blended Learning approach associated with students' self-learning before class.

- Flipped classroom activities synchronised with weekly online content and complements lesson outcomes.
- Bloom's taxonomy & problem-based learning embedded in design of weekly activities.
- Activity done as a replacement to lecture in class.
- Students participate in collaborative work within small groups.
- Work assessed through group presentation.
- Feedback provided to students in real-time.
- Done in final week as online activity.
- Consists of quantitative & qualitative questions.
- Used as feedback, for evaluating student experience & improving delivery.

OUTCOME



- Results of the quantitative part of the survey is shown in Figure 1.
- The results show 81% of respondents rated their experience between 8-10.

Figure 1: Score distribution from experience survey.

The average rating was 8.38.

References

Al-Samarraie, H., Shamsuddin, A., & Alzahrani, A. (2020). A flipped classroom model in higher education: a review of the evidence across disciplines. *Education Technology Research and Development*, 1017–1051. Hoic-Bozic, N., Mornar, V., & Boticki, I. (2009). A Blended Learning Approach to Course Design and Implementation. *IEEE TRANSACTIONS ON EDUCATION*, 10-30. Klein, S. R. (2012). ACTION RESEARCH METHODS. New York: PALGRAVE MACMILLAN.