



University
of Glasgow

Evaluation of Student and Staff Perceptions on L&T Models Across Multiple Disciplines

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THE SUNDAY TIMES
GOOD
UNIVERSITY
GUIDE
2018
SCOTTISH
UNIVERSITY
OF THE YEAR



BACKGROUND

Joint degree programme discussions on the number of contact hours required for **effective student engagement**, while retaining the ethos of research-informed teaching of the University.

Opportunity to review active learning approaches (including **blended and team-based learning**) to offer an enhanced learning experience for students.

Enhance **UofG's reputation in Singapore** and internationally as a leading institution in delivering excellence in learning and teaching.



AIMS

- Provide a framework for creating and using online materials across all joint SIT-UofG degree programmes
- Evaluate students' learning experience & gain, challenges & acceptance levels for active learning in pilot courses
- Evaluate staffs' perceptions on the use of digital materials & their competency in the development of such materials



FRAMEWORK

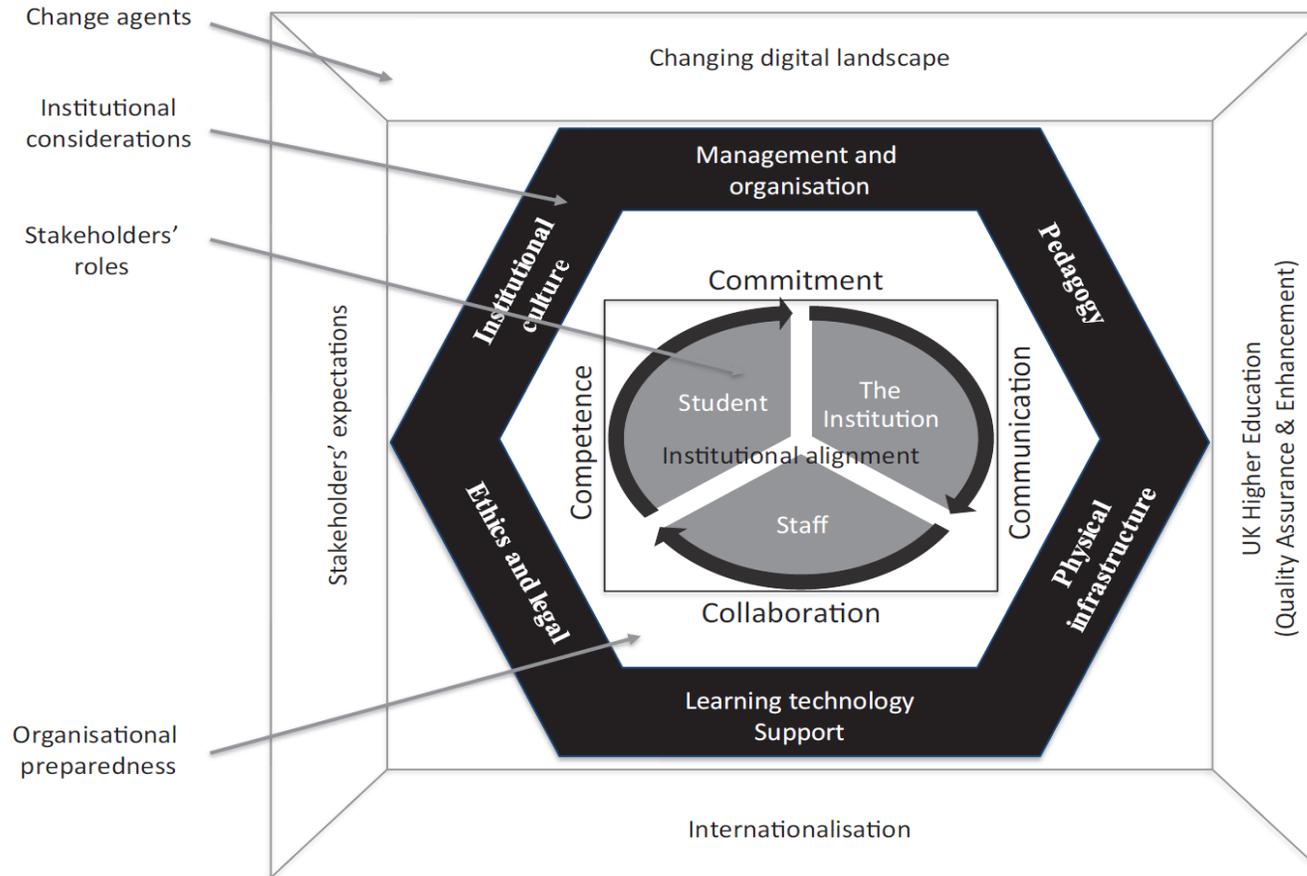


Figure 1. Holistic framework to support effective institutional transitions into enhanced blended learning.



EVALUATION

Computing Science (CS)



→ Videos from FutureLearn (MOOCS) created with LightBoard
58 Respondents

Nursing (NUR)



→ Lesson Plan on xSiTe with Voice-over Powerpoints, selected YouTube Clips and Learning activities
59 Respondents

Mechatronics (MT)



→ Lesson Plan on Moodle with videos created with Explain Everything, lecture quiz, review and assignment
74 Respondents

Civil Engineering (CVE)



→ Full video lectures and tutorials created with Explain Everything on xSiTe
49 Respondents

Varying lesson plans, mixture of digital content (Videos/Learning Activities)

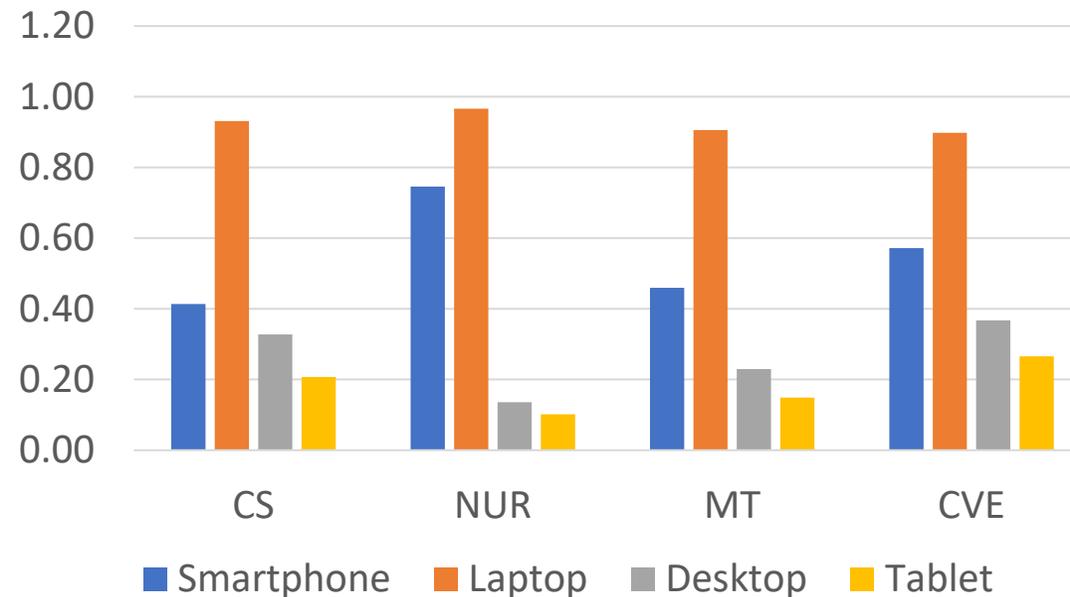
COMMUNICATION & APPROACH

To what extent, do you tell the students how the videos are meant to supplement their learning?

COMMUNICATION	CS	NUR	MT	CVE
Not at all				
Sufficient information on whether they should view the videos before or after lectures			✓	✓
Explanation on the contents covered in the videos and how they can be applied in subsequent lectures and assessments	✓	✓		
APPROACH	Week 1 to 6: Video MOOC + F2F, Week 8-13: F2F	E-Learning Week, followed by F2F	Weeks 1 to 9: F2F, Weeks 10 to 11: Active Learning	Weeks 1 to 13: F2F supplemented with lecture and tutorial videos

ACCESSIBILITY

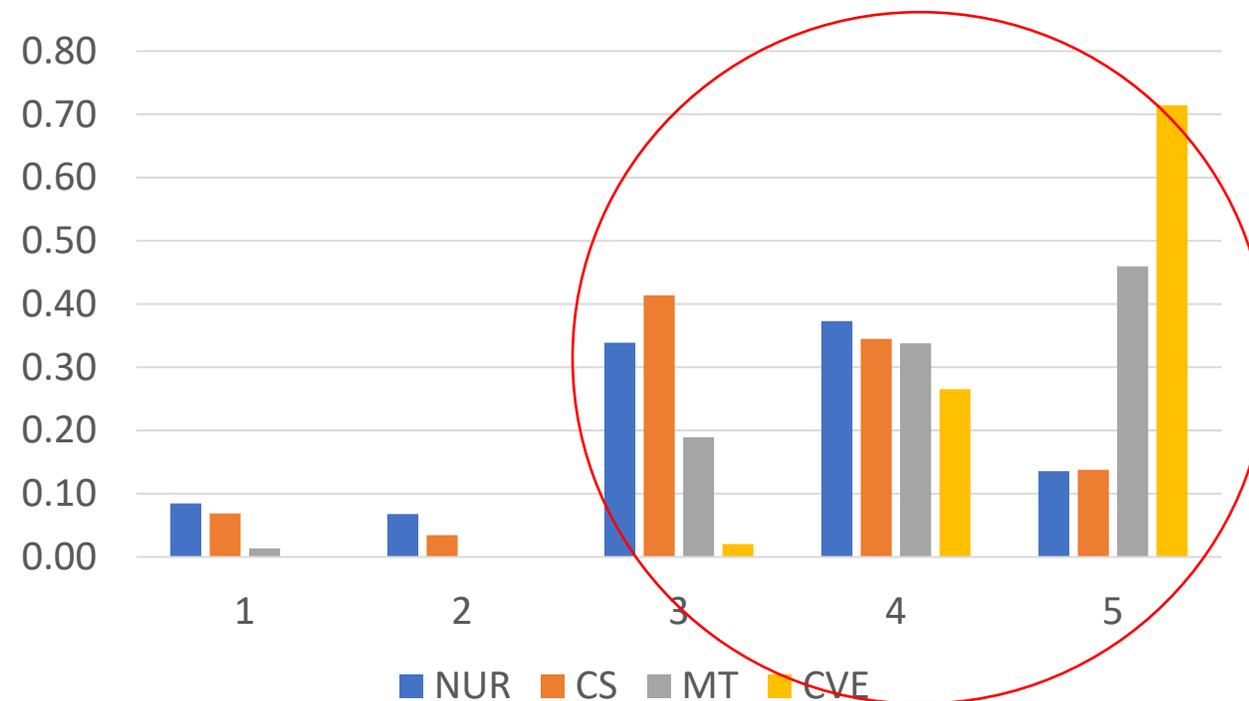
Which electronic devices do you use to view the videos? (1: Smartphone, 2: Laptop, 3: Desktop, 4: Tablet)



Around 48% to 75% of the students viewed the video on a smartphone, Close to 95% used a laptop. Less than 40% used a desktop or a tablet.

ACCEPTANCE LEVELS

Are you comfortable with video-supplemented learning and would you recommended it? (1: Not at all, 5: To a large extent)



ACCEPTANCE LEVELS

Do you think the students are comfortable with video-supplemented learning and whether they would recommend it? (1: Not at all, 5: To a large extent)

“I did a Start Stop Continue evaluation after the online week and the feedback was positive”

“I have received many compliments from the students about the videos.”

ACCEPTANCE LEVELS

Are you comfortable with video-supplemented learning and would you recommended it? (1: Not at all, 5: To a large extent)

“Able to rewind lectures are clearer and Prof do not feel pressured; calmer”

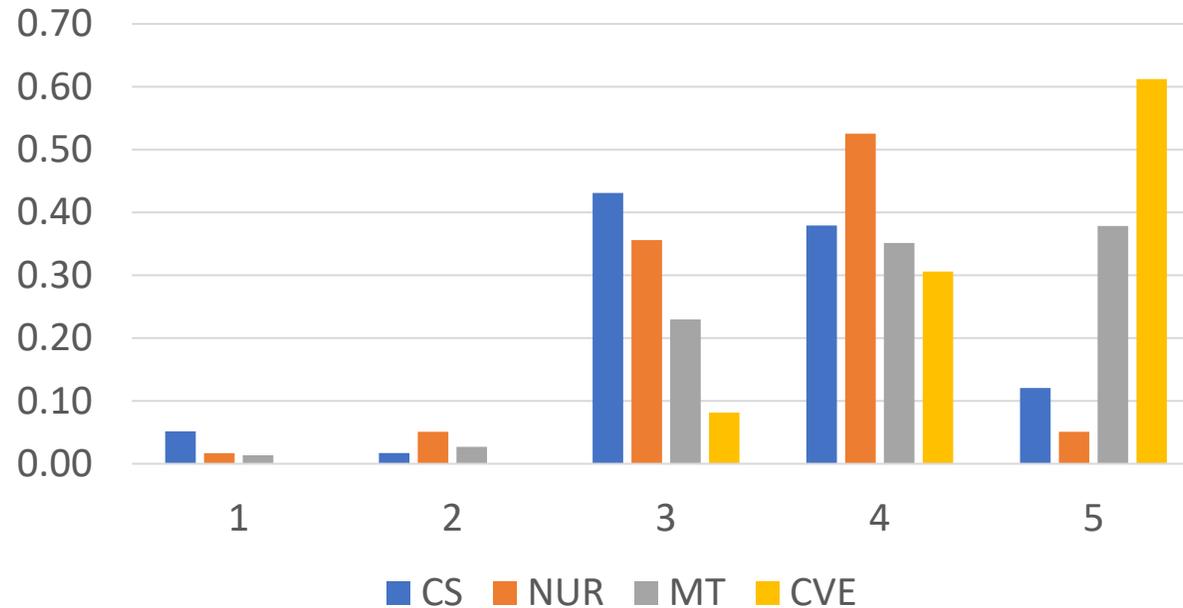
“Able to pace our own learning, practise while playing video lecture”

“It allows me to understand better by repeating parts that I do not understand . Great help in self learning”



LEARNER'S GAIN

To what extent, do you think the videos have helped you in your understanding of the course? (1: No effect, 3: Moderate effect, 5: Substantial effect)



> 93% of the students believe that the videos have a moderate to substantial effect in their understanding of the course.

LEARNER'S GAIN

To what extent, do you think the videos have helped you in your understanding of the course? (1: No effect, 3: Moderate effect, 5: Substantial effect)

“By going through the video, I was able to clarify my doubts and strengthen my understanding which I was not able to during the actual lecture because I am a slow learner”

“I have difficulty in understanding and capturing the key important points in lecture due to the fast on-going pace . The videos help me to review the module slowly at my own pace and help in understanding the module better”

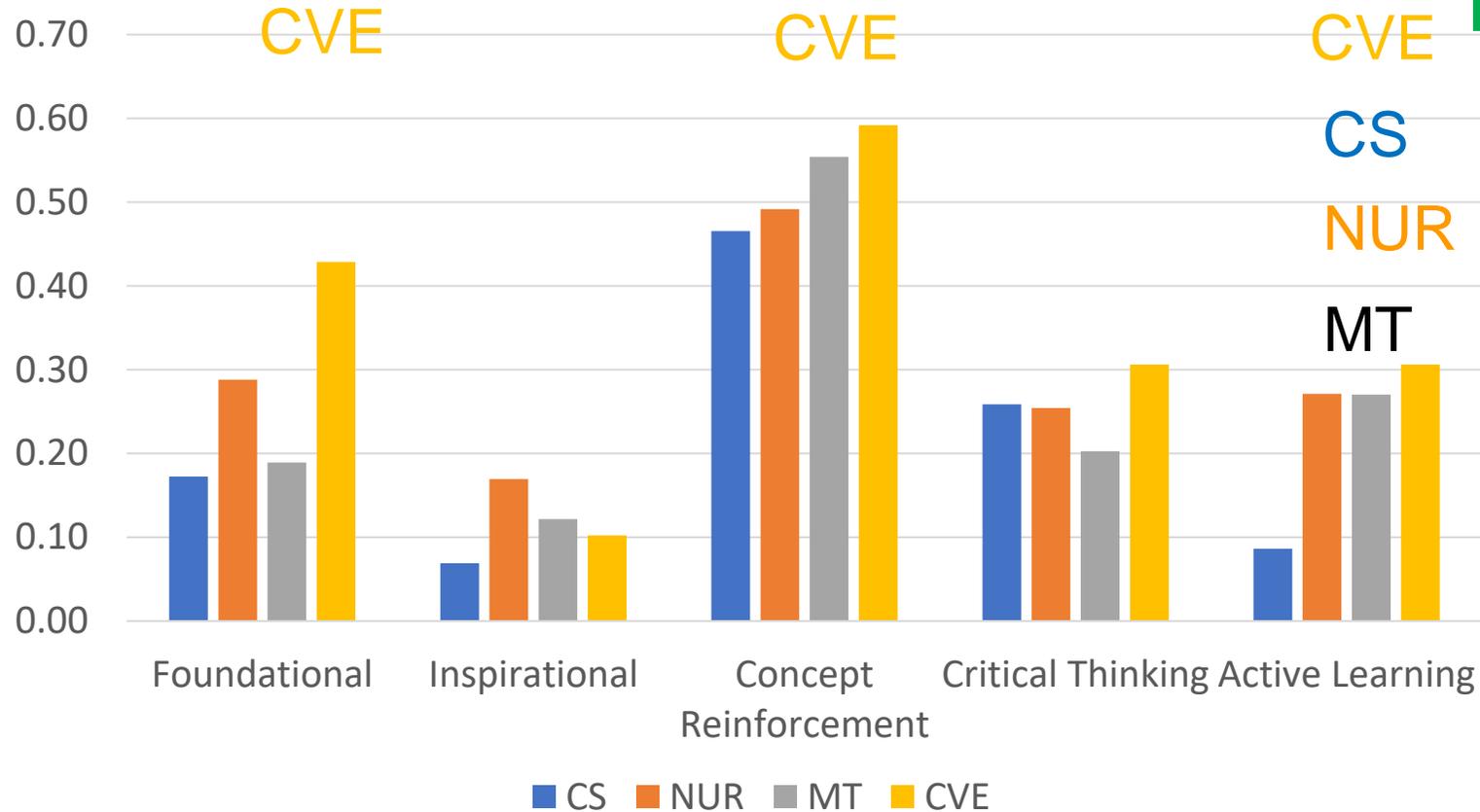
DEFINITION: APPROACHES TO VIDEO-SUPPLEMENTED L&T

- 1: **Foundational:** Videos are used to review/refresh foundational materials
- 2: **Inspirational:** Students are inspired to know more about the course materials
- 3: **Concept Reinforcement/Problem-solving:** Students are enthused and guided in learning the concepts and problem-solving process.
- 4: **Critical Thinking:** Students are encouraged to question/analyse materials at a higher level through a blended learning approach.
- 5: **Active Learning:** Students are encouraged to question and develop themselves through the videos, lectures and subsequent group/peer discussion.

LECTURER'S APPROACH

Which approach **best describes your experience on** video-supplemented teaching?

STAFF



HIGHER-LEVEL LEARNING

In the classroom interaction or consultations, do you think the students are learning at a higher level, i.e. thinking or asking questions at a higher level?

“From my personal experience comparing two cohort of students (one cohort with videos this year and the other without), I think the videos helped a lot.

Students’ questions on the trivial questions are much lesser. Most questions are common pitfalls in understanding that are expected.”

HIGHER-LEVEL LEARNING

In the classroom interaction or consultations, do you think the students are learning at a higher level, i.e. thinking or asking questions at a higher level?

“The basics of know-how are covered in the video MOOC. Students are having more time to think about the higher level questions.”

“Yes, the students are more active in asking questions, and some questions are more in-depth.”

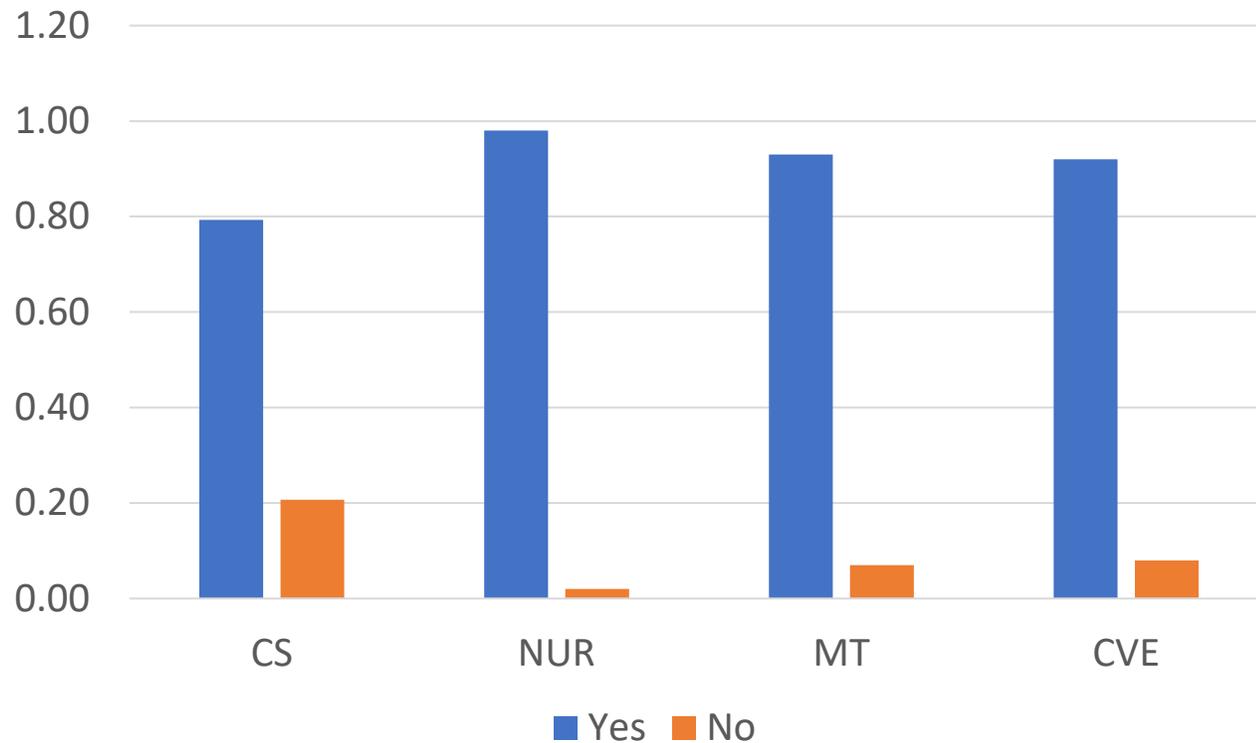
HIGHER-LEVEL LEARNING

In the classroom interaction or consultations, do you think the students are learning at a higher level, i.e. thinking or asking questions at a higher level?

“Students seemed to engage well with the online learning, including videos, and made insightful comments on their experience of the related learning activities set, comparing and contrasting with earlier learning in Tri 1. This led me to believe they had learned at a reasonably deep level.”

HIGHER LEVEL LEARNING

Do you think that viewing the videos before class will allow you to learn at a higher level subsequently, i.e. thinking or asking questions at a higher level?



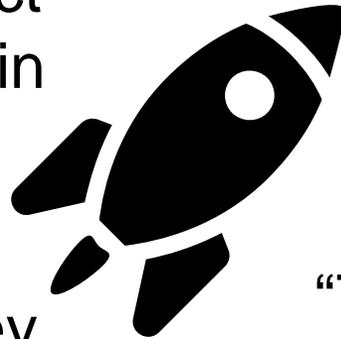
HIGHER LEVEL LEARNING

Do you think that viewing the videos before class will allow you to learn at a higher level subsequently, i.e. thinking or asking questions at a higher level?

“Videos serve as a foundation to understand basic information and allow for me to think and interact face to face with lecturer in class”

“Students will assume they know everything, hence may not pay attention”

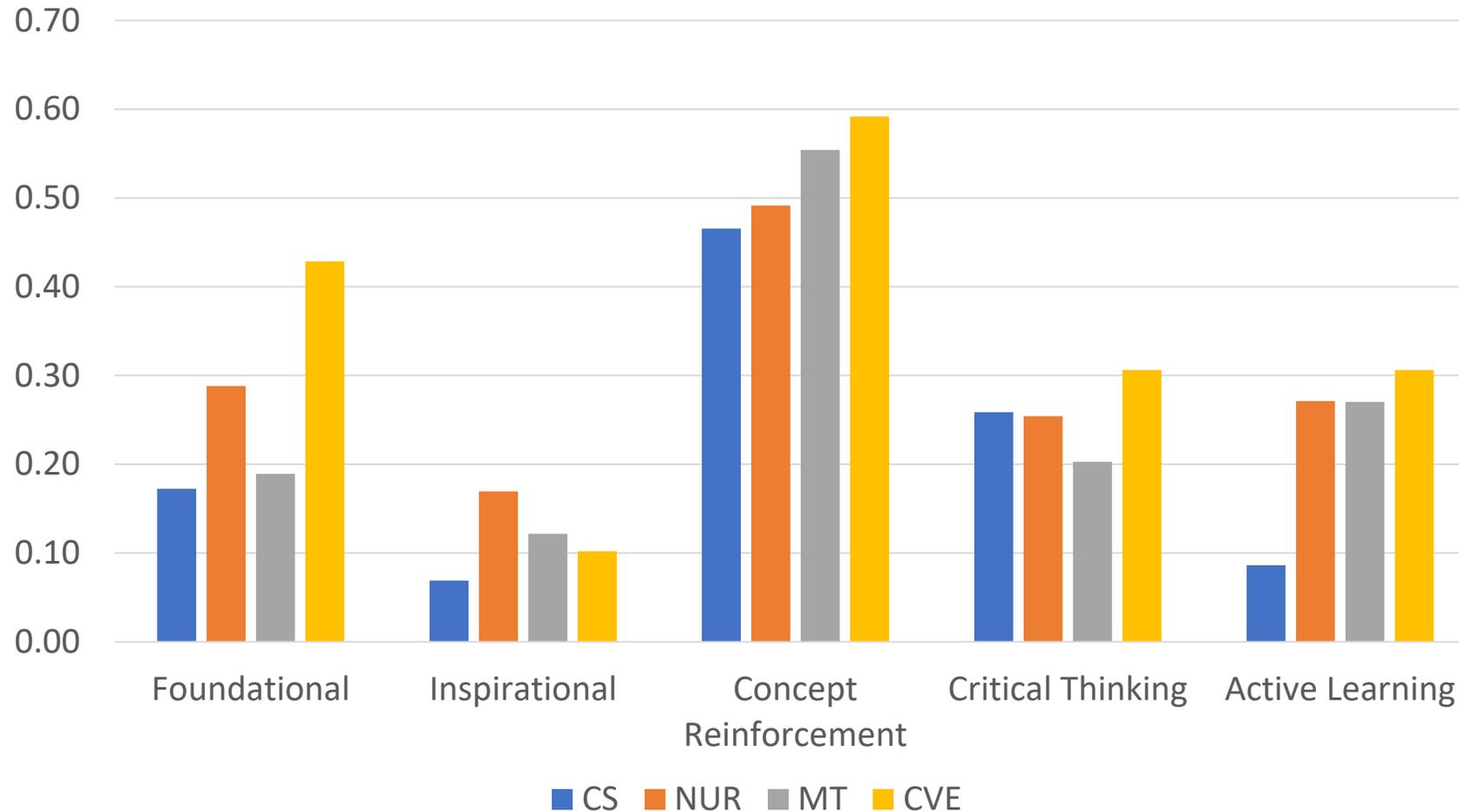
“Focus on critical thinking portion, tutorials & practice. Enhance & encourage one on consultancy”



“Time for questions to be formulated and clarified”

LEARNERS' PERCEPTION

Which approach would result in the most successful learning outcome for you?



LEARNERS' PERCEPTION

Which approach would **result in the most successful learning outcome** for you?

Foundational
& Concept
Reinforcement

“Good mix of foundation building and application of learning”

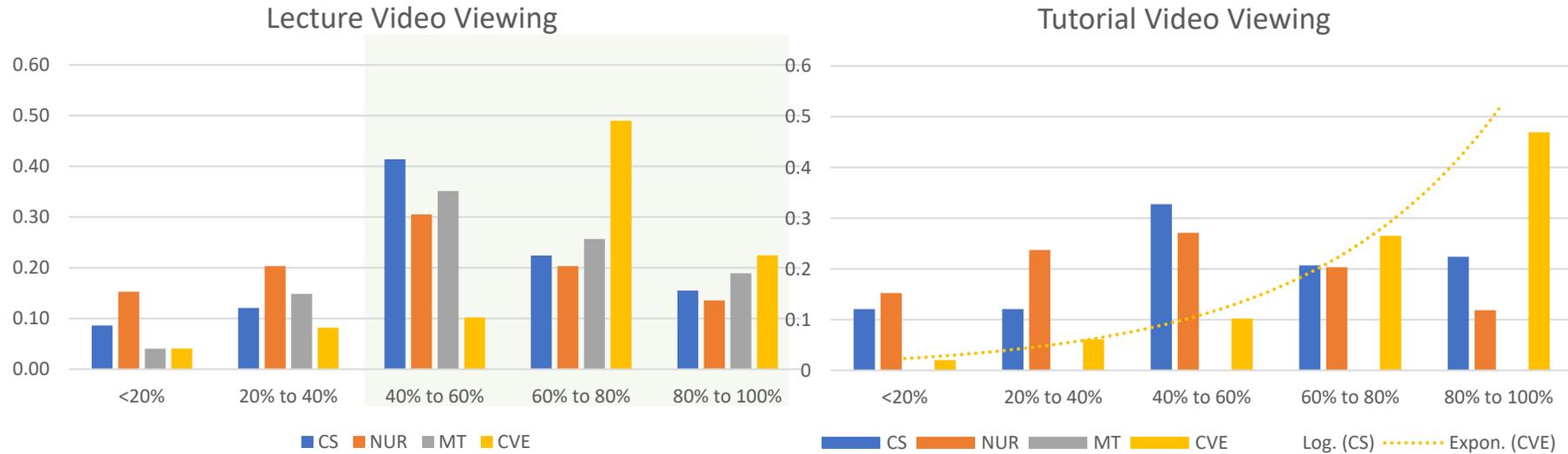
Concept
Reinforcement

“reinforcing concepts would enable student to retain the information better”

Critical
Thinking &
Active
Learning

“Critical thinking will assist us in our writing and conceptualisation. Discussion allows students to think and participate in the conceptualisation of new lessons ”

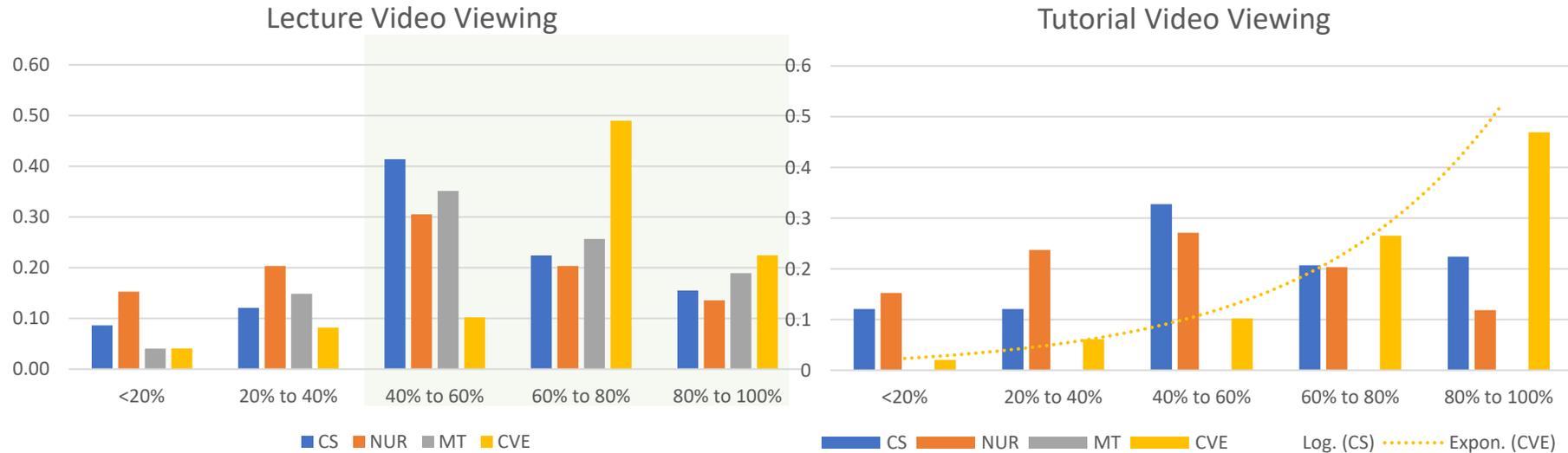
VIEWING DURATION



What do you think is the percentage of the video that students viewed?

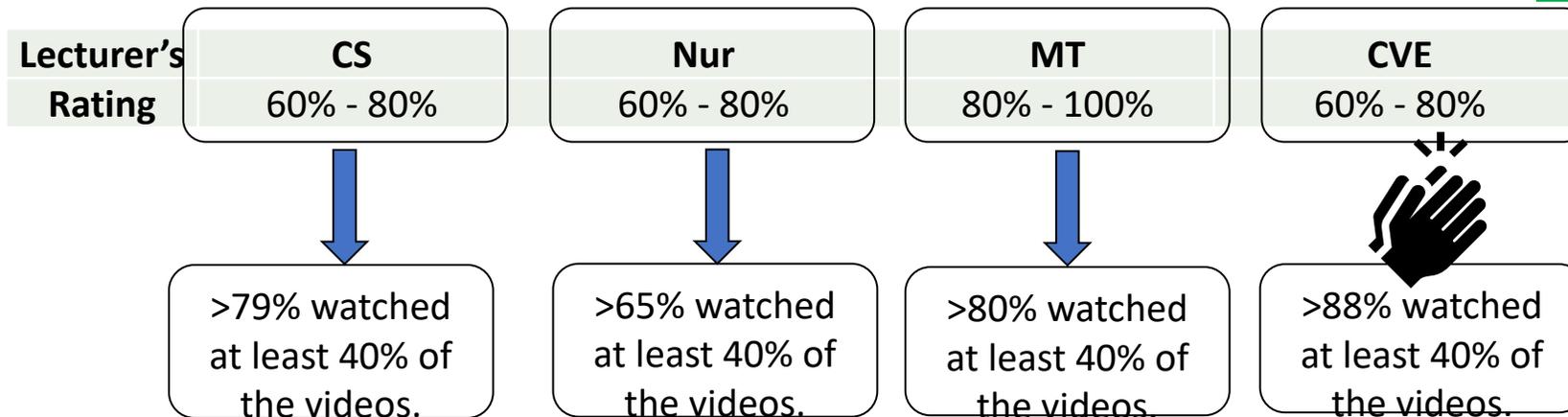
STAFF

VIEWING DURATION



What do you think is the percentage of the video that students viewed?

STAFF



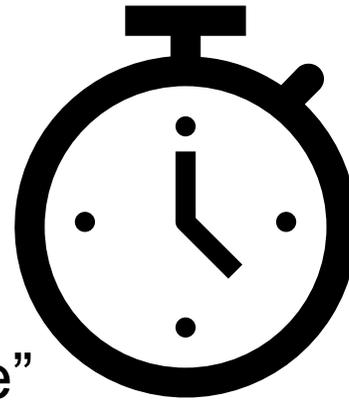
VIEWING DURATION

“Tutorials require more time to process the information. Hence viewing duration is longer”

“Only need to view the main points of a topic. Can refer back if needed”

“Too long, lose interest”

“I tend to drift off if there is no interaction for a period of time”



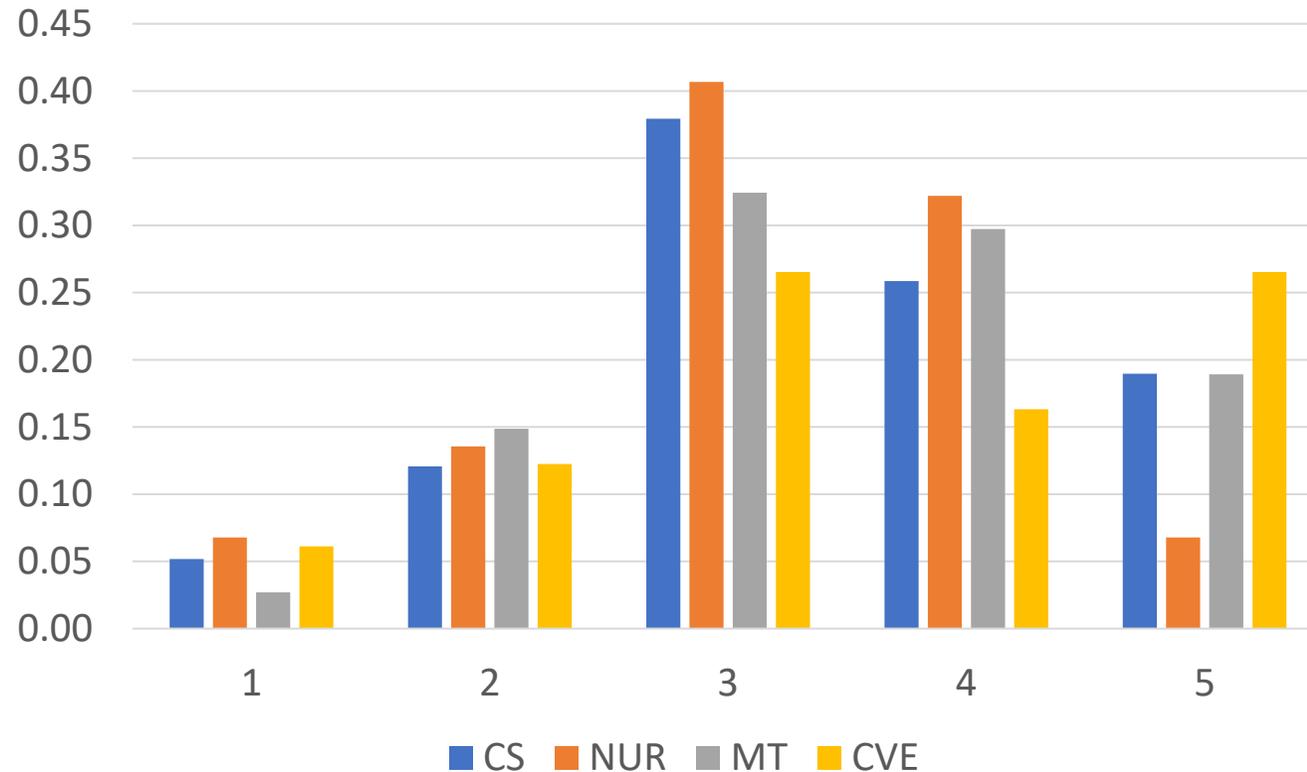
“Skip some parts, or play at 1.5X”

“I can view it while having my dinner or lunch”

“<2 mins per function line”

BLENDED LEARNING

Would you be comfortable to pre-view the videos and subsequently engage in lecturer-guided group/peer learning and discussion? (1: Not at all, 5: To a large extent)



BLENDED LEARNING

Would you be comfortable to pre-view the videos and subsequently engage in lecturer-guided group/peer learning and discussion? (1: Not at all, 5: To a large extent)

“I would be comfortable as we will learn new questions that others have. In that way, we gain more knowledge and better understand the concept”

“Need time & discipline to do pre-watching/reading prior to class. I will be comfortable to do so.”

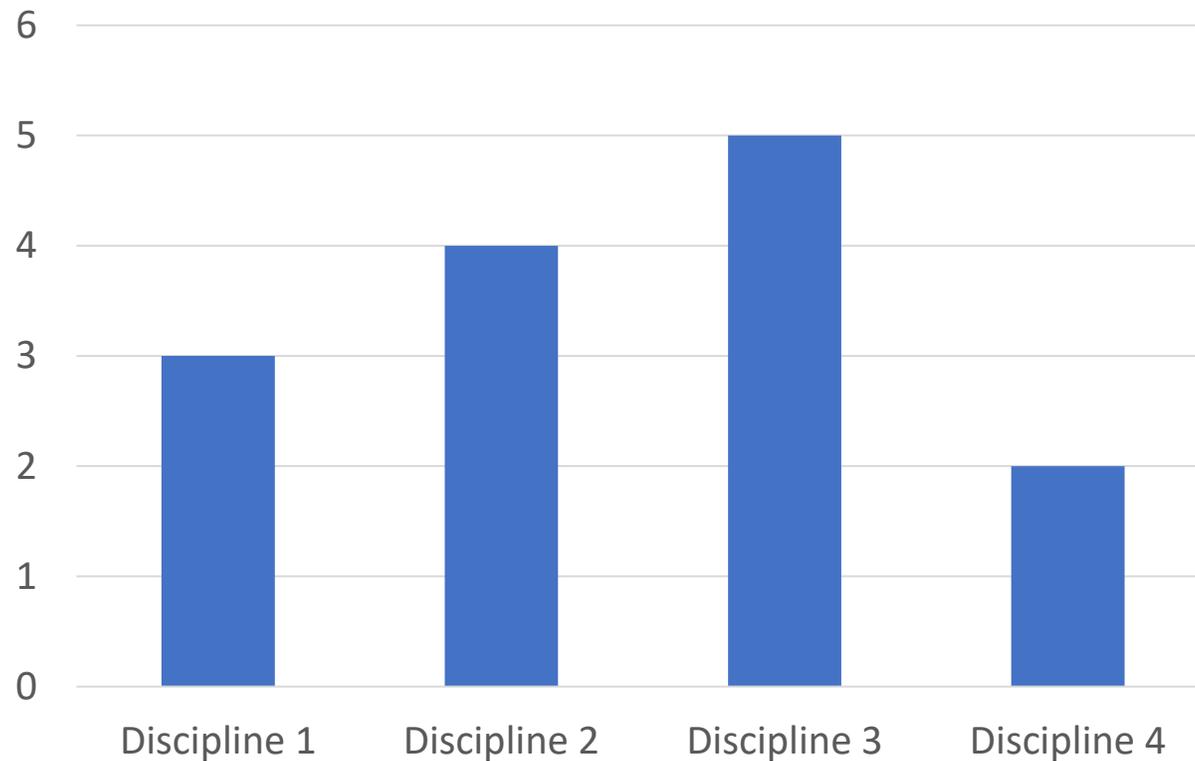
“Too shy or unsure what to ask”



“Video should not be a substitute for lessons. It is a useful supplement not replacement”

BLENDED LEARNING

Would you be keen to use the videos to enable blended and collaborative learning? (1: Not At All, 5: To a Large extent)



Depends on Subject

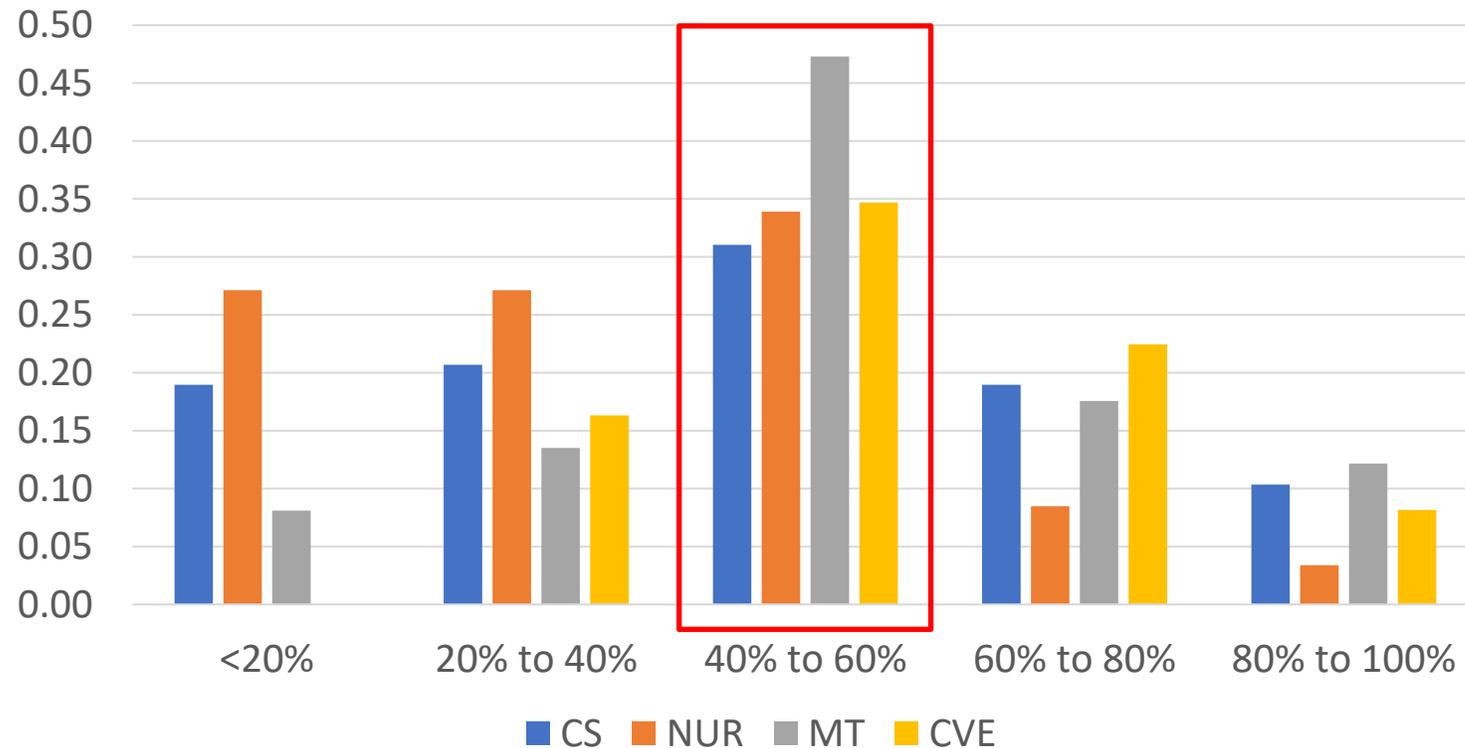
Interesting

Videos can be used over time

Investment of time and IP issues

GOLDEN RATIO

What is proportion of video-supplemented learning and teaching versus face-to-face lecturing are you comfortable with?
(1: Not at all, 5: To a large extent)



GOLDEN RATIO

What is proportion of video-supplemented learning and teaching versus face-to-face lecturing are you comfortable with?
(1: Not at all, 5: To a large extent)

“50% to learn, 50% to explore.”

“Good mix of review/preview and lecture”



“Save time for 2hrs lessons a day”

“I still prefer a teacher to answer possible FAQs from my class”

“Depends on the content, e.g role play of therapeutic communication is suitable for video”

“Prefer face to face lecturing as I am more engaged and disciplined to learn.”

EFFECTIVENESS

Using video-supplemented learning and teaching, did you see a difference in the learning experience and/or assessment results of your students?

MECHATRONICS

All marks have been normalized to be out of 10

Mark Comparison of Assignment

	2018	2019	
Average	7.92	8.14	↑2.8%
Standard Deviation	1.08	1.78	

EFFECTIVENESS

Using video-supplemented learning and teaching, did you see a difference in the learning experience and/or assessment results of your students?

Mark Comparison of Exam

Question

	2018 Exam	2019 Class Quiz (Students watch video lectures by themselves)	2019 Exam (Students watch video lectures, followed by thorough class discussion)	
Average	7.03	7.66	9.27	↑9%
Standard Deviation	3.18	2.21	1.12	↑31%
Student Selection rate	88.70%	Compulsory	100%	

BENEFITS

Do you see any benefits for the lecturer in the long term with video-supplemented teaching? (1: Not At All, 5: To a Large extent)

Learning in an interesting, accessible and repeatable format is helpful.

Further enhance the teaching and learning experience.

Frees up time for discussion on higher level problems.

With tutorial videos, lecturer can provide more F2F consultation.

SUMMARY

Acceptance Levels for Active Learning

- Deemed videos useful to learning: >88%
- Learning at a higher level: >79%
- Comfortable to engage in blended learning: >81%
- Optimal proportion of F2F: Videos → 40% to 60%

SUMMARY

Lecturer's Observations on Learner's Experience and Learner's Gain

- Students were asking questions at a higher level.
- Improvement in assessment results with blended learning.
- Usage of videos help to raise the level of discussion and increase F2F consultation time.
- With improved technological competency, production time can be reduced with enhanced functionality.

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Thank You

- Email: lihonidris.lim@glasgow.ac.uk
- A full report is available via email request.



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