Re-Designing Seminar Practice:

Enhancing Student Engagement through Active, Technology Supported Pedagogies!

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Fish Is Fish (1970) by Leo Lionni, Knopf Books

ABOUT ME

My Background:

- Senior Lecturer, Construction Project Management, Northumbria University, UK
- Postdoctoral Fellow, Norwegian University of Science & Technology, Norway
- Postdoctoral Fellow, Tsinghua University, China
- Postdoctoral Fellow, Hong Kong Polytechnic University, Hong Kong
- Visiting Professor, Pontifical Catolica del Peru, Peru
- Visiting Professor, Universidad del Rosario, Colombia

My Role at Northumbria:

❖ **Year Tutor (Level 5) – Construction Engineering Management**

❖ **SEM1 - 2021**

Teaching:

- **KB7030: Research Methods** **(275 students)**
- **AT7027: Research Methods** **(19 students)**
- KB5028: Commercial Management (25 students)
- KB7056: Advance Practice (4 Students)

Supervisory:

- KB6020 (YL): Investigative Project (3 students)
- KB7052 (SEM1): Research Project (13 students)

❖ **SEM1 2020 to SEM3 2020**

Teaching:

- KB7035: 2020SEM1: Procurement & Supply Chain Management (135 students)
- KB5028: 2020SEM1: Commercial Management (31 students)
- KB5027: 2020SEM2: Health & Safety in Construction (34 students)

Supervisory:

- KB6020 (YL): Investigative Project (2 students)
- KB7052 (SEM1): Research Project (3 students)
- KB7052 (2020SEM2): Research Project (3 students)
- KB7052 (2020SEM3): Research Project (6 students)
- KB7056: (2020SEM2): Advance Practice (13 Students)
- KB7056: (2020SEM1): Advance Practice (4 Students)

Research:

- Member of IC3- International Centre for Connected Construction
- Member of P3M – Project, Programme, Portfolio Management
- Member of Construction Futures Research Group

Other activities:

- PhD Principal Supervisor – Augmenting Digital Transformation in Project Management
- PhD Internal Reviewer – Improving costing in infrastructure project to accommodate uncertainties
- PhD External Examiner – Exploring the Relationship between Leadership Styles and Organizational Commitment with Mediating Role of Motivation
- Funding Applications/Projects – Three applications already submitted.
- A total of 30 quality research publications.
- Personal Tutor (~50 students, 2020SEM1 & 2021SEM1)

Lectures/Lectorial

- Pre-recorded, 60 minutes, uploaded a week before the seminar
- Lectorial, 60 minutes, Face to face and online BB.

Seminars

- Problems/Handouts uploaded a week before the seminar
- Solving problems, **Bi-weekly** Classroom Seminar activity, 120 minutes
- Q&A

Exam (100%)

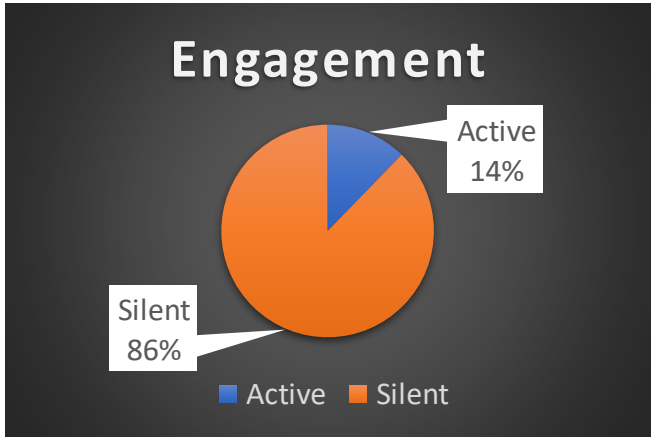
- 90-minutes exam (Time restricted)
- Short Q/A
- Multiples Choice Q/A
- Knowledge assessment about research tools.

IDENTITY: My thinking about teaching and learning.

ASK: Improving student engagement in seminars.

KB7030 (2020SEM1) – feedback

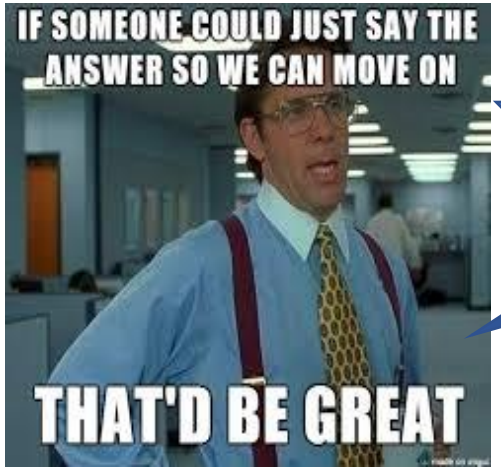
KB7030 (2020SEM1)



- Different point of views!
- How to increase students' engagement in a **limited time** for **varied learning styles**?

Suggestions to improve the Seminars!

- **Tutors point of view:** Absolutely nothing it was really good I came out of it feeling confident about the contents.
- I do not know why students still don't participate in the seminars.
- **Students' point of view:** Questions were fairly similar to each other.
- All problems seemed to be really similar, so it would be good to have different ways to work on material like different styles of problems
- **Supervisors' point of view:** Students have no knowledge how to initiate their research and how to apply research tools on their assigned topics.
- To go through research tools for varying educational background to apply in their contextual settings.



Large teaching cohort at MCE

Diverse educational backgrounds

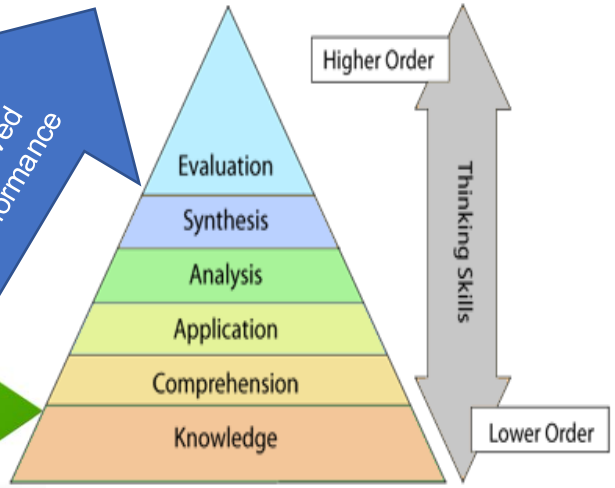
Limited learning time

Varied learning styles

Improved performance

Bloom's Taxonomy

(Romanovs et al., 2012)



INVESTIGATE: Solving the problem.

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Reasons of students' less engagement

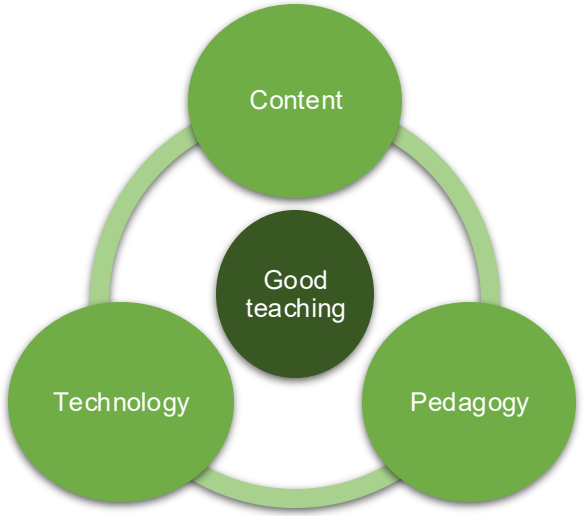
- Cultural background (Black, 2009; O'Neal, 2012)
- Educational background (Black, 2009; Ruiz-Primo, 2011)
- Fear of being wrong
- Views of learning and teaching
- Traditional teaching (Duederstadt, 2008)
- Preparation before sessions
- Discussion block (Jaques, 2003)
- **COVID-19**

Enhancing learning and engagement

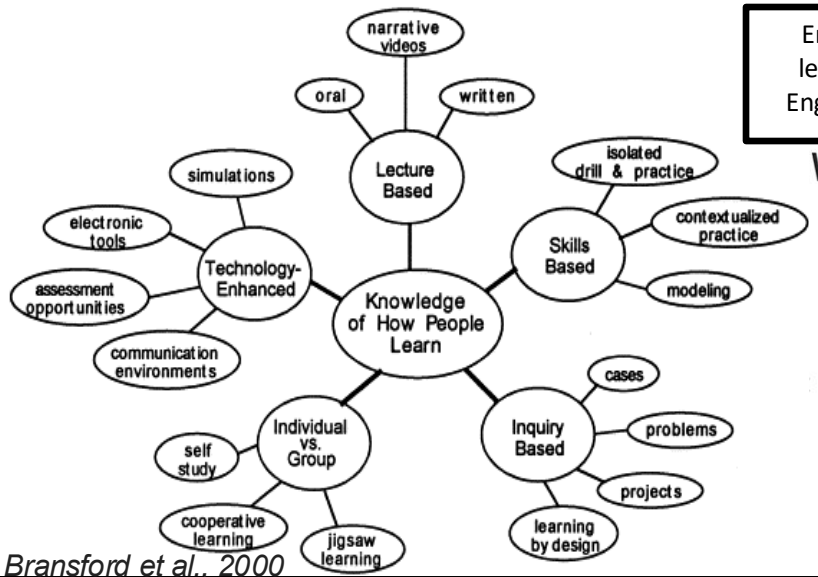
- Active learning (Freeman et al., 2014)
- Role of the teacher (Hill, 1982)
- ★ Repetition in learning (Khan and Madden, 2016)
- ★ Motivational tactics (Guvenc, 2015)
- Speed learning methodology (Khan and Madden, 2016)
- ★ Technology (Gokbulut, 2020; Mayhew et al., 2020)

(Koehler et al., 2009)

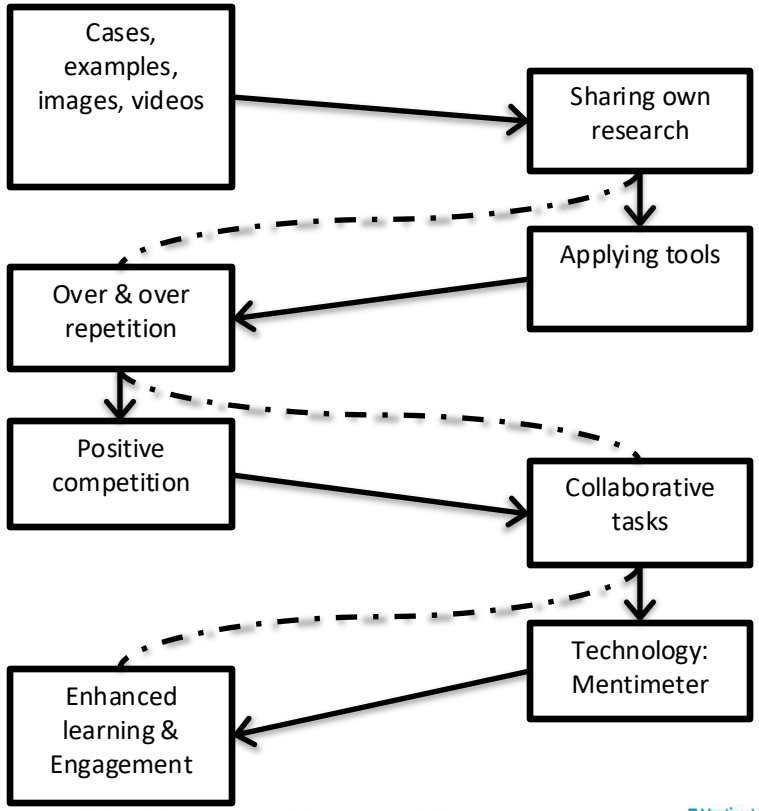
- Teaching is complex or easier?
- Specificity?
- Stability?
- Transparency of function?
- Knowledge base and skill?
- Consistent with pedagogical beliefs?
- Neutral or unbiased?



''Integration efforts should be creatively designed or structured for particular subject matters ideas in specific classroom contexts'' - *Koehler et al., 2009*



Bransford et al., 2000



CREATE: The plan.

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Stage I

- Blackboard polling
- Ask a question
- Pre seminars reading?

Stage II

- Presentations of handout contents
- Introducing seminar contents
- Learning sources, objectives and outcome

Stage III

- Defining tasks
- Preparing groups
- Participations into groups
- Addressing questions

Stage IV

- **Mentimeter**
- 2-3 **warm-up** questions
- Encouraging comments for better performances.

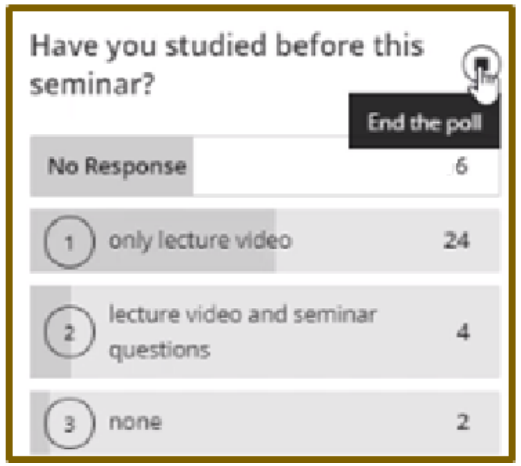
Stage V

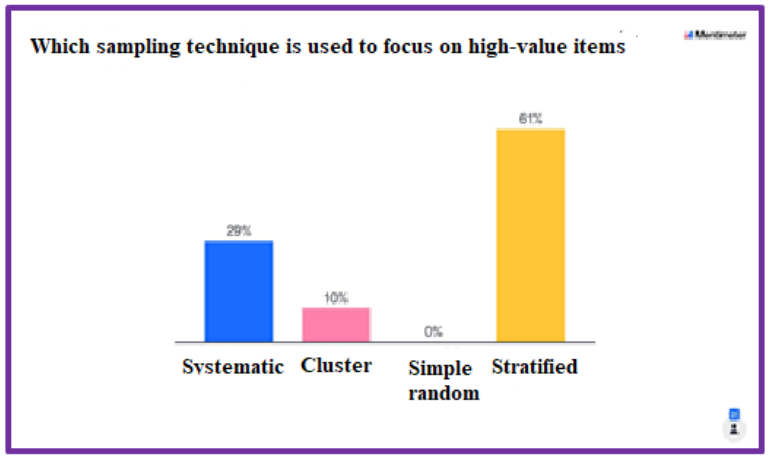
- Whiteboard + Chat
- Solving problems + Q&A
- Explaining about practical implications in real research scenarios

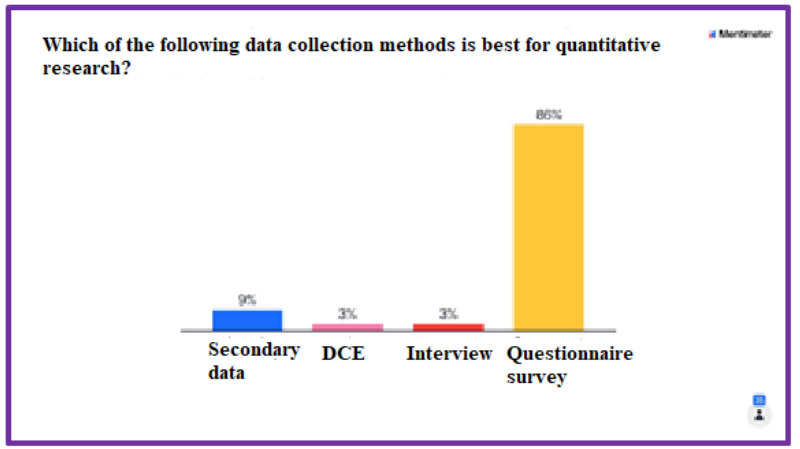
Stage VI

- Whiteboard + Chat
- Further Q&A
- Any doubt?

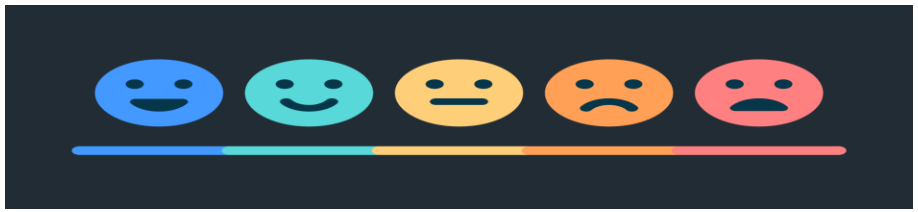
Contents explanation + Participative roles + Addressing queries + Technology + Motivational tactics

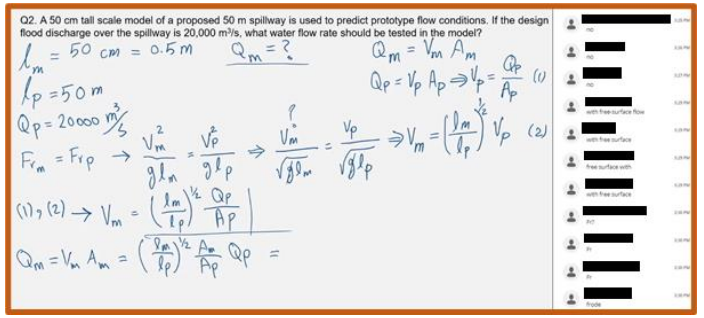




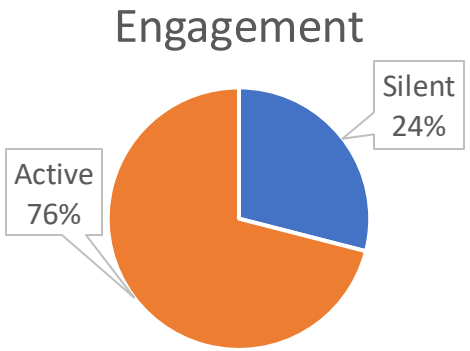


Feedback



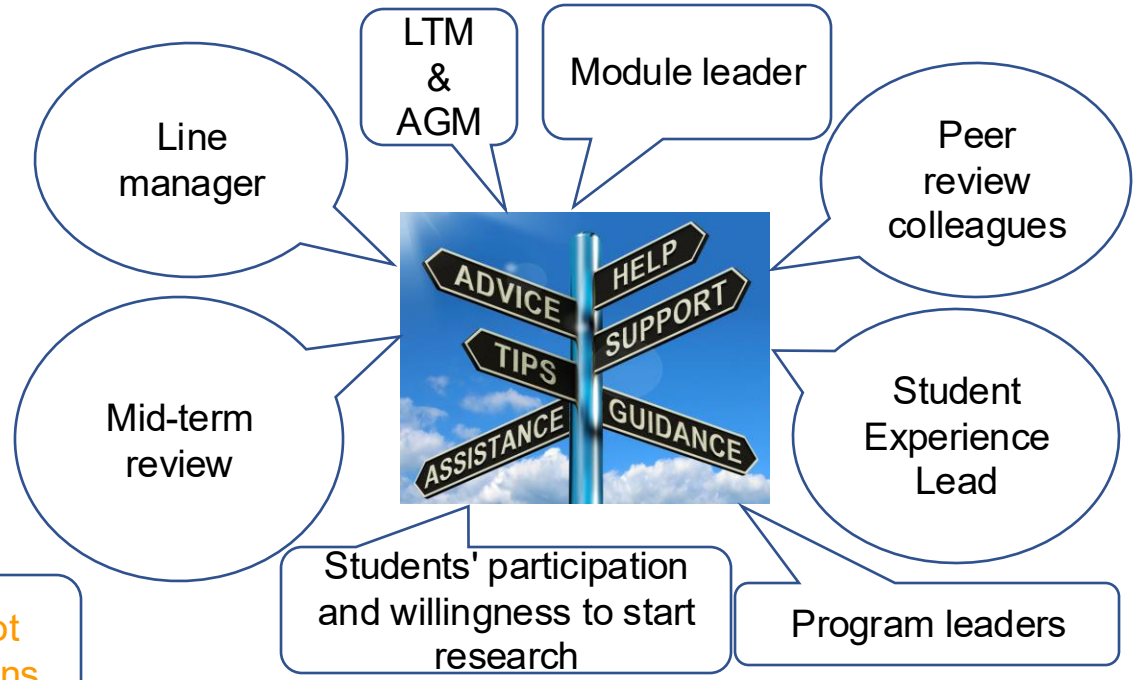


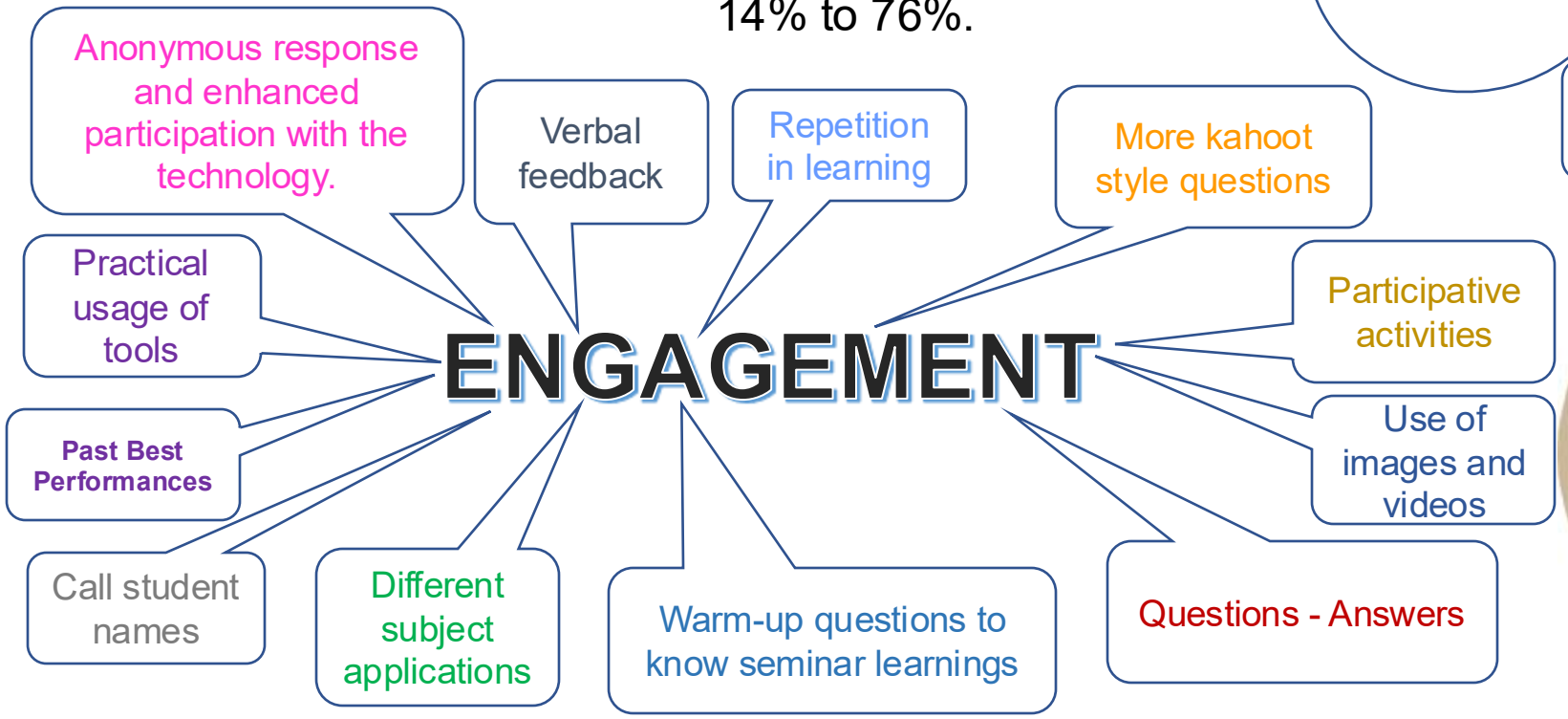
REFLECT: Impact on my teaching practice.

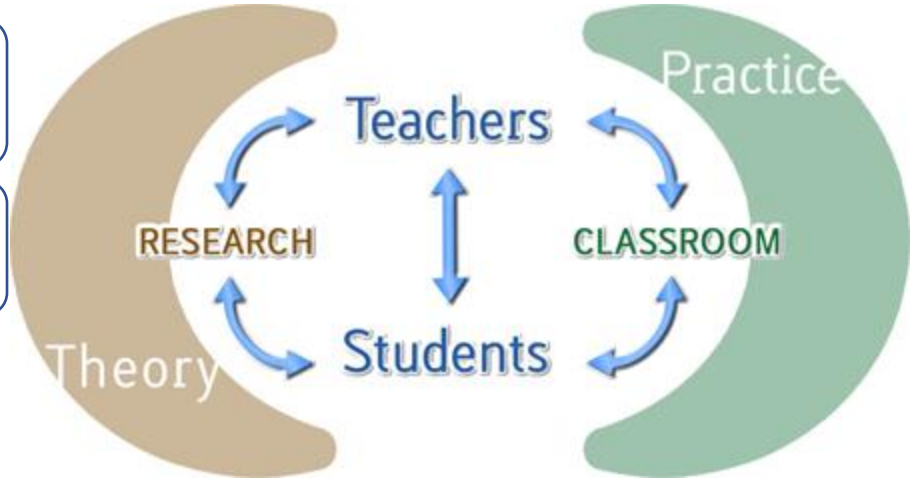


Attendance in seminars: Really good (around 75%)

Proper explanation + participative roles + repetition in learning +Technology + encouraging tactics = resulted into enhanced student participation in seminar discussions from 14% to 76%.







DISSEMINATE: Discussion about my experience & next plan.

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Challenges:

- Online bullying and technology, e.g. word cloud of Mentimeter
- Time management while Developing questions
- Which students are not responding? (gender, international, etc).

For Future:

- Need for proper Time management for technology integration (more questions and break time)
- Use of technology for longer time to see the whole picture.
- Use of technology for engineering based modules for a quick learning with more fun.
- More support from TEL team for linking technology to teaching, specially in blended learning environment.
- Need to take along all the subject backgrounds
- Explaining practical aspects of tools
- Competing activities between groups - Encouragement

❖ Supporting for research topics which could be fit in final projects

❖ Technology Integration is important for knowledge retention in Engineering Modules.

❖ There is a need to realise the technological potentials in engineering modules, accordingly, optimise its usage. How?

➢ Plan + Execution + Reflection + Respond and Manage + Time

➢ Role of TEL/IT + Role of tutor + Interactions + Practical and pedagogical thinking

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Thank you

for your attention

Questions? Thoughts? Ideas?

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