An investigation on the use of pre-revision assessment and the student's perception towards revision class

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Outline

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Introduction and Context

THE ROLE OF A TEACHER IS TO:

Instruct.
Guide.
Inspire.

There are new additions to these roles **with the problems of contemporary lifestyles** (information overloads, distractions etc.).

Introduction and Context

- Revision classes becomes important to aid students.

- Generally, lecturers prepare the content of revision class to cover the complete module topics or according to their belief on the areas of module content that is important.

- However, a revision class prepared after identifying the gaps in students' understanding of topics should be more favored by the students.

- In this context, the motivation for the proposed topic is to employ pre-revision assessment as a support tool to gather empirical data of where the students are lacking more and to prepare revision class on this observed data

Literature Review

- According to Gibbs (2002) and Haigh (2007) revision classes are seen by students as "treasure hunt" whereas lecturers would like to prepare an effective revision class to cover the lacks in the students' preparation.

- The main issue for both students and lecturers is to understand which topic need to be revised more deeply before the exam. In Twigg (2003), Hewson and Hughes (2002) and Dochy et al (2002), a strategy is analysed.

- Revision class effectiveness will affect the students' attendance which in turn will affect the exam performance, Chen and Lin (2006, 2008) and Twigg (2003)

Literature Review

- Gibbs, G. "Thinking radically about assessment: reducing marking and improving learning." *lecture given at Oxford Brookes University* (2002).

- Haigh, Martin. "Sustaining learning through assessment: an evaluation of the value of a weekly class quiz." *Assessment & Evaluation in Higher Education*32.4 (2007): 457-474.

- Twigg, Carol A. "Models for online learning." *Educause review* 38 (2003): 28-38.

- Hewson, Lindsay, and Chris Hughes. "WebTeach: interactive web-based teaching." *Available online at: www2. auckland. ac. nz/cpd/HERDSA/HTML/EquiPol/HewHug. HTM (accessed August 2016)*(2002).

- Dochy, Filip, Catherine De Rijdt, and Walter Dyck. "Cognitive prerequisites and learning how far have we progressed since bloom? Implications for educational practice and teaching."*Active learning in higher education* 3.3 (2002): 265-284.

- Lin, Tsui-Fang, and Jennjou Chen. "Cumulative class attendance and exam performance." *Applied Economics Letters* 13.14 (2006): 937-942.

- Chen, Jennjou, and Tsui-Fang Lin. "Class attendance and exam performance: A randomized experiment." *The Journal of Economic Education* 39.3 (2008): 213-227.

Research Questions

- What are students' perceptions of the conventional revision classes?
- How pre-revision assessment can be used to improve instructional practices of a revision class?
- What are students' perceptions of the proposed revision class?

Methodology

STUDENTS'S PERCEPTION OF TRADITIONAL REVISION CLASS

PRE-REVISION ASSESSMENT

POST-REVISION SURVEY QUESTIONS

Methodology

- **Students' perceptions**
  - Identified through an online survey consisting of 5 Likert's scale closed ended questionnaire

- **Formative pre-revision assessment**
  - Conducted by each lecturer. The result was also used as a platform by the conveners to build the content of revision classes

- **Post-assessment perception**
  - After convening the revision classes, **a second survey** consisting of 20 close-ended questions was conducted on the effectiveness of the pre-revision assessments and the students' perceptions on revision class based onthe pre-revision assessment.

Methodology
Design of the Survey Questions

All survey questions were formulated during intense brainstorming sessions involving all four participants.

Methodology
Survey Questions for the Pre-Revision Class

Q1: I have experienced a revision class previously.

Q2: The revision class has helped me to understand the module better.

Q3: The revision class helped me to clarify my doubts on certain topics of the module.

Q4: The revision class was always focused on certain important topics.

Q5: The revision class met my expectations to cover certain topics which I did not understand.

Q6: The two hours duration of revision class was sufficient.

Q7: I am satisfied with exercise focused revision class.

Q8: I am satisfied with theoretical focused revision class.

Q9: I am satisfied with the lecturer's deciding the topics covered in the revision class.

Q10: I don't attend a revision class because I don't find it useful.

Methodology
A MindMap of the Formulated Ideas for the Pre-revision Survey
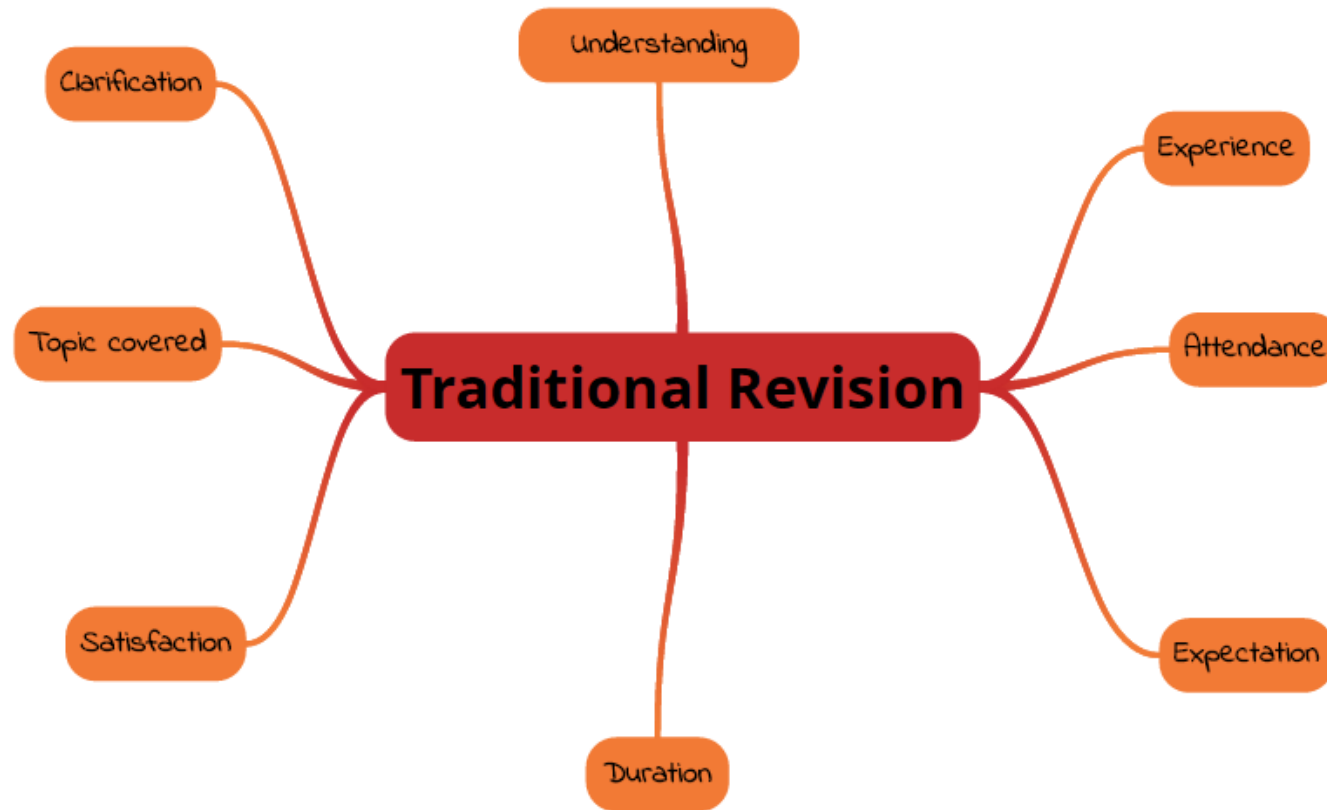
Methodology
Pedagogy of the Pre-revision Assessment

IDENTIFY CRACK IN UNDERSTANDING

ONLINE ASSESSMENT

LESSON PLANNING

AFTER THE ASSESSMENT

DELIVERY

LECTURE BASED ON DATA

Methodology
A Sample of Pre-revision Assessment Questions

Rapid Product Development (Spring 2016)

This is a ten-question online pre-revision assessment related to the knowledge of topics covered in the RPD classes in the past weeks of the semester. The quiz is anonymous and participation or non-participation in this quiz does not affect your grade in any way.

Question 1 (Product Development): List 2 factors that have lead to the rise of rapid product development technologies.

Your answer

Question 2 (Concurrent Engineering): List 4 tools that are available in CE for reducing time-to-market.

Your answer

Question 3 (Purpose of prototype): Which of these is not among the benefits offer by prototypes in RPD?

○ Cost estimation

○ Marketing purpose

○ Identifies problems in design

○ Identifies problems of inventory

Question 4 (RPD for Prototyping): Consider that you are appointed as a consultant to an advanced manufacturing company. Recommend two rapid prototyping technique for developing prototypes.

Your answer

Findings
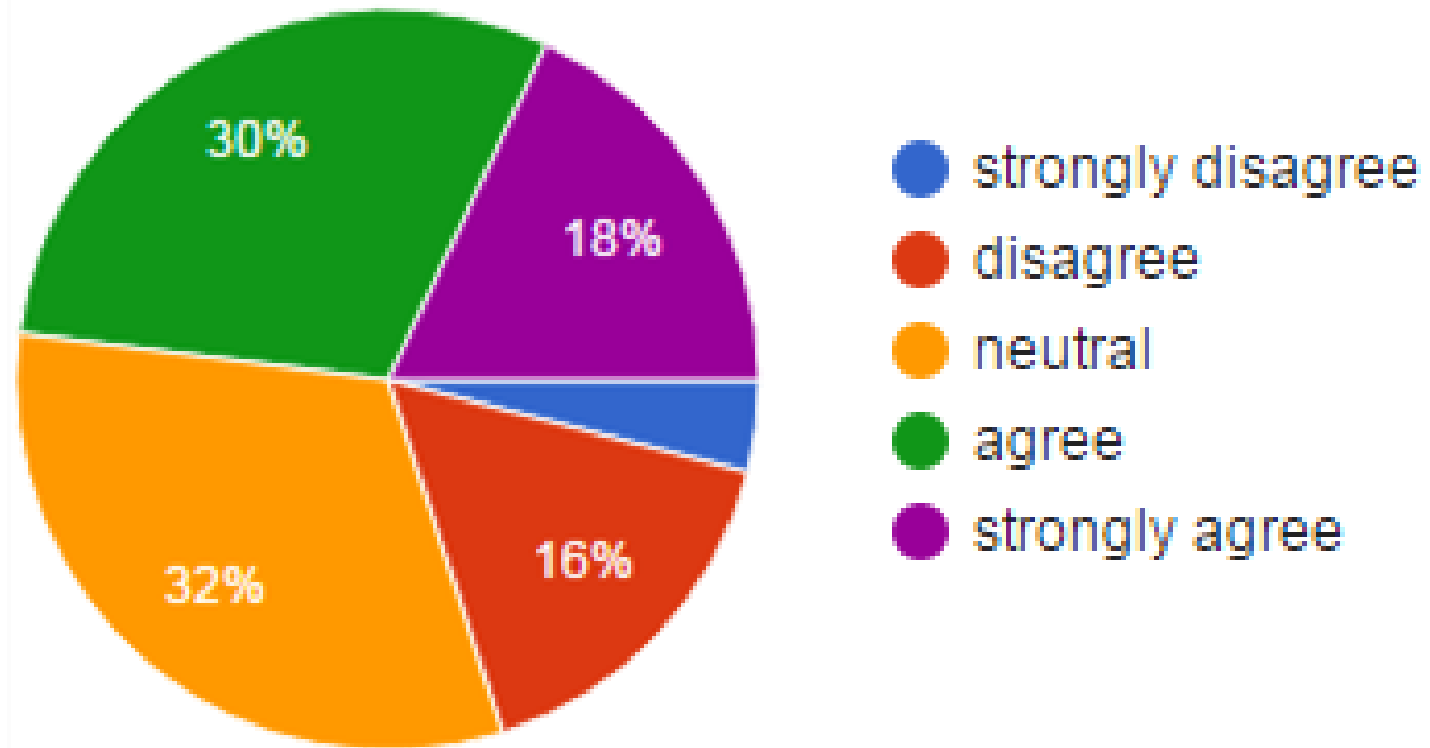## *Perception of Conventional Revision Class*

56 students completed the survey of perception of conventional revision class, out of 318 students enrolled with four lecturer.
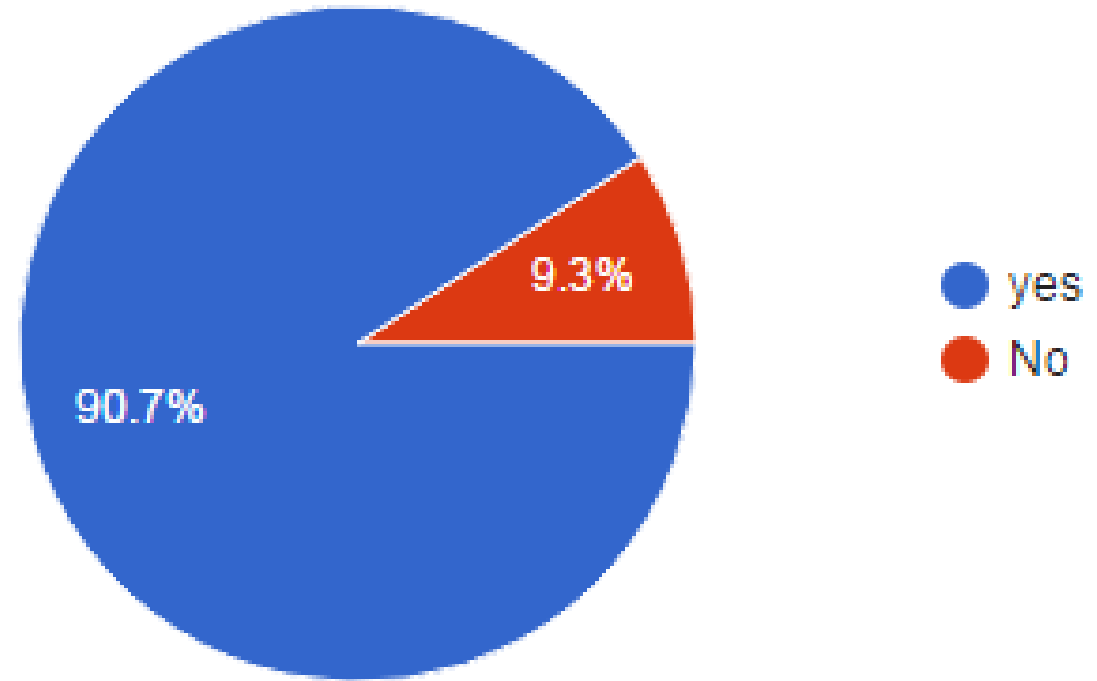
■ 90.7% have experienced a revision class previously

Findings
Perception of Conventional Revision Class

Legend:
- strongly disagree
- disagree
- neutral
- agree
- strongly agree

Pie chart values: 30%, 18%, 16%, 32%

<u>Student expectation</u> : 48% agreed the revision class met students expectations to cover certain topics which they did not understand.

Findings
Perception of Conventional Revision Class

Approach used for revision class:

80% satisfied with exercise focused revision class.
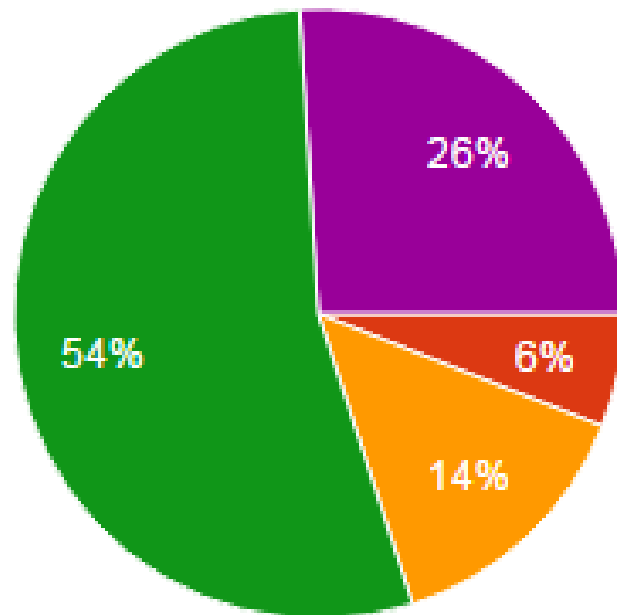
62% satisfied with theoretical focused revision class.

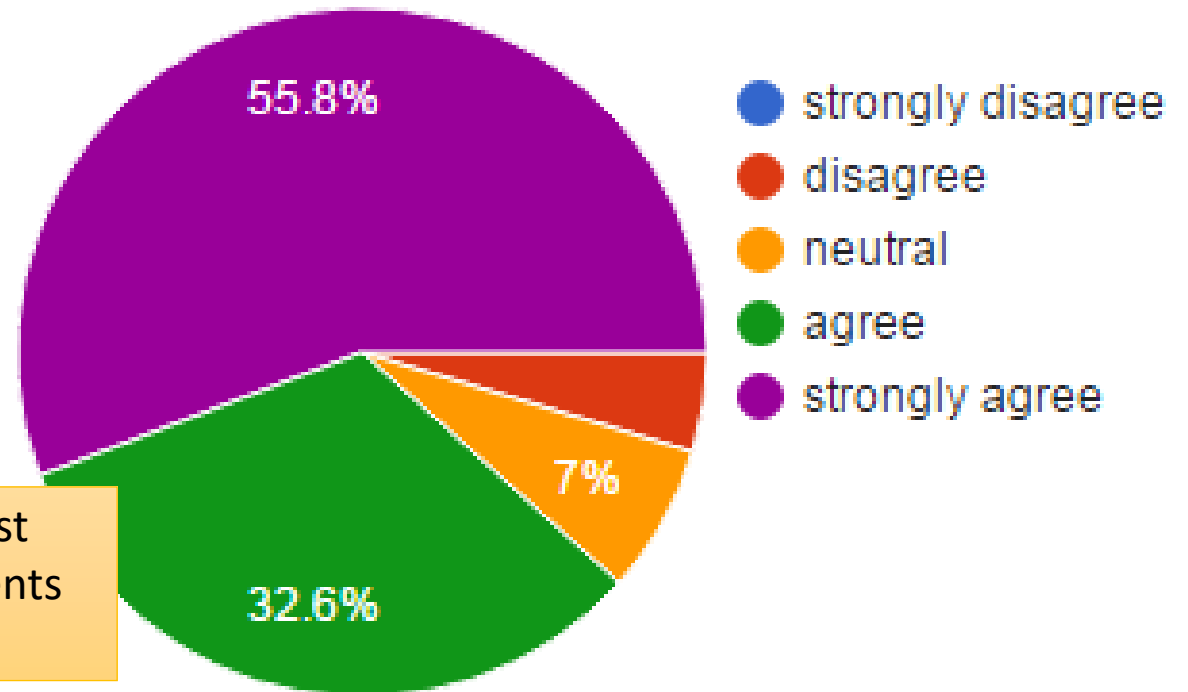- strongly disagree
- disagree
- neutral
- agree
- strongly agree

Exercise focused: 26%, 6%, 14%, 54%

Theoretical focused: 20%, 6%, 10%, 22%, 42%

Findings
Perception of Pre-revision assessment

87.8% Students participated in the pre-revision online assessment.

88.4% agreed that the pre-revision assessment was useful to gauge students understanding of the module.

yes
No

12.2%

87.8%
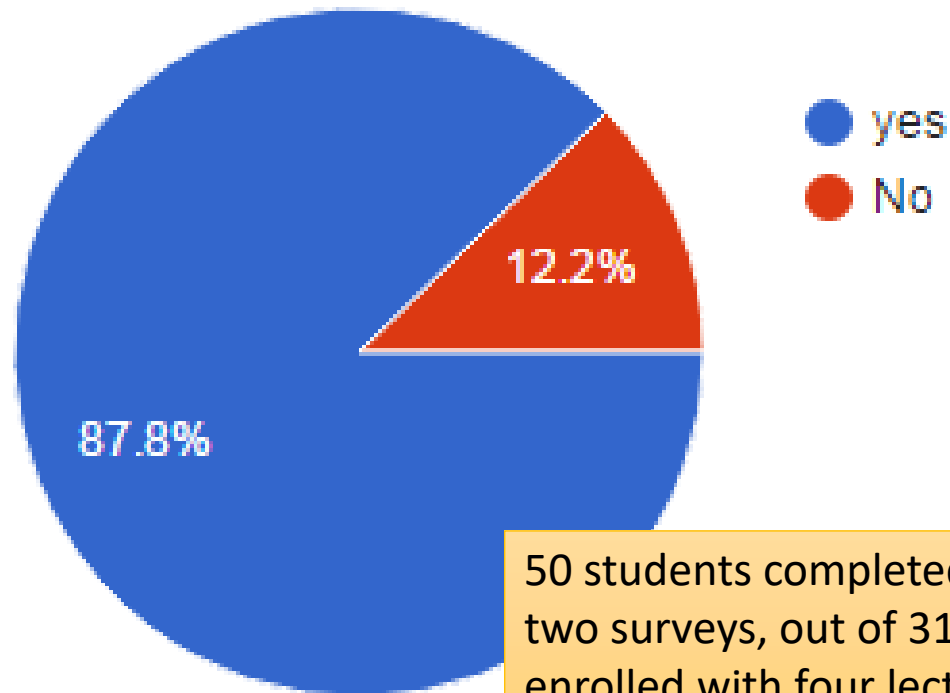
50 students completed the last two surveys, out of 318 students enrolled with four lecturer.

55.8%

strongly disagree
disagree
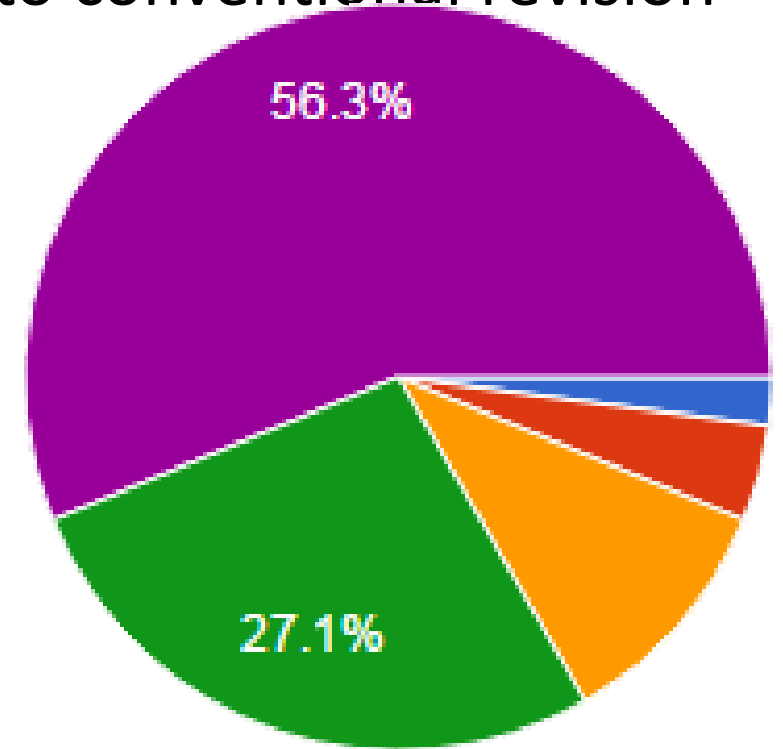neutral
agree
strongly agree

7%

32.6%

Findings
Perception on Revision Class with Pre-revision assessment

85.1% prefer revision class prepared with pre-revision assessment.
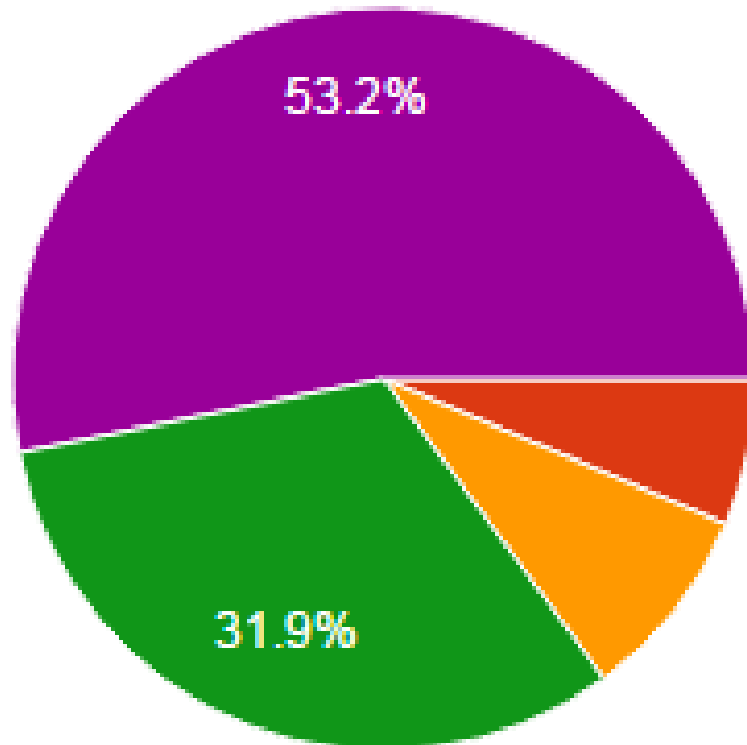
83.4% agreed that the revision class based on pre-revision assessment is more helpful compared to conventional revision class
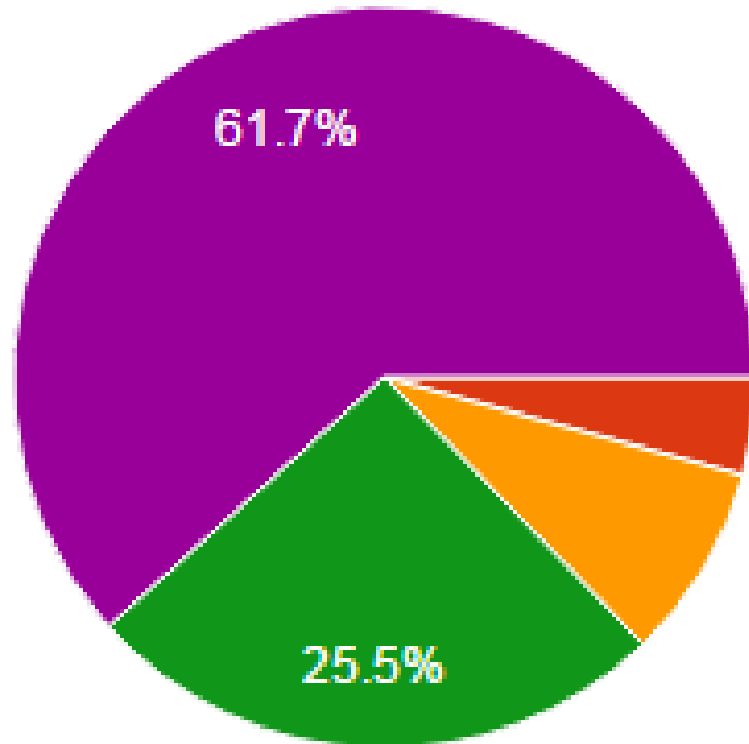

53.2%

31.9%

- ● strongly disagree
- ● disagree
- ● neutral
- ● agree
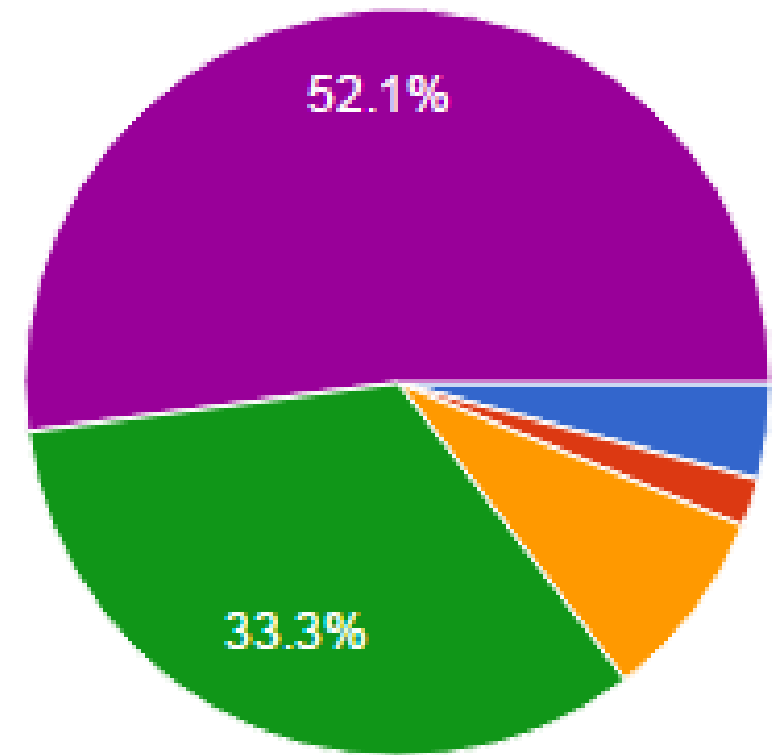- ● strongly agree

56.3%

27.1%

Findings
Perception on Revision Class with Pre-revision assessment

87.2% would like to recommend other module conveners to adopt pre-revision assessment modulated revision class.

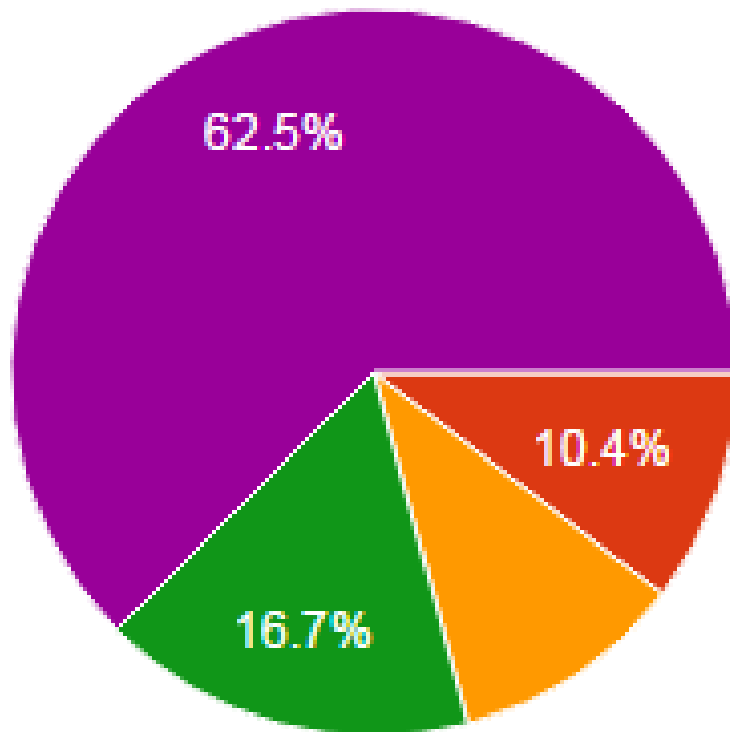85.4% agreed that the content of revision class covered the weak points in the module.

- strongly disagree
- disagree
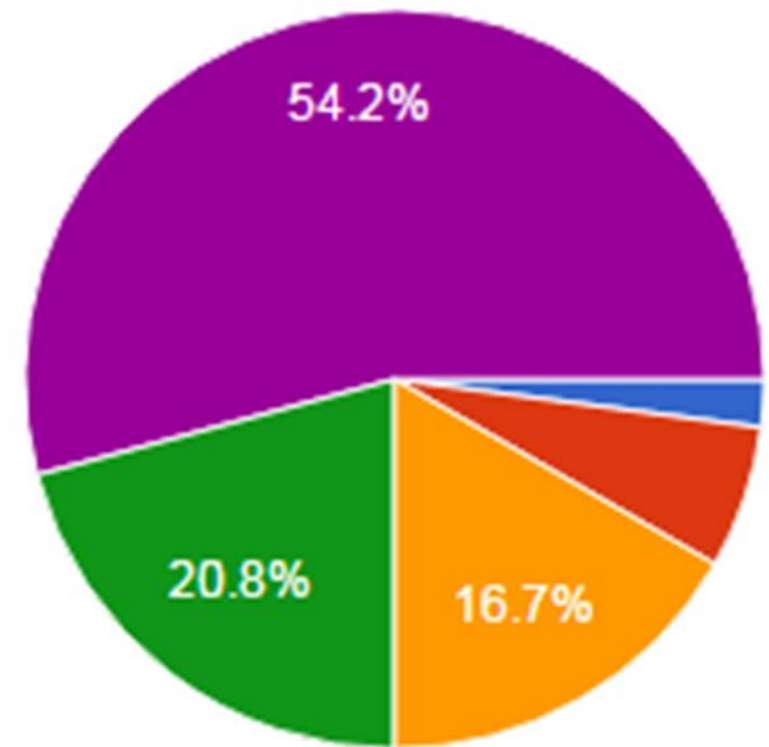- neutral
- agree
- strongly agree

Findings
Perception on Revision Class with Pre-revision assessment

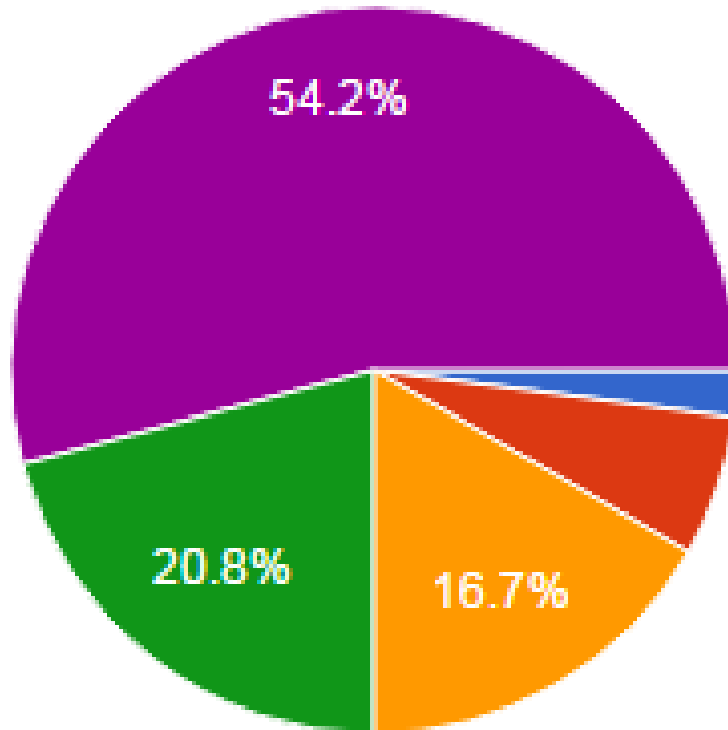79.2% satisfied with exercise focused revision class.

75% satisfied with theoretical focused revision class.

Findings
Perception on Revision Class with Pre-revision assessment

75% students more confident after revision class to prepare for exam.

- 54.2%
- 20.8%
- 16.7%

Legend:
- 🔵 strongly disagree
- 🔴 disagree
- 🟠 neutral
- 🟢 agree
- 🟣 strongly agree

Conclusions

- The results showed students were happy with conventional revision class (76%) and proposed revision class (85.1%) respectively. So, there is no high differences between conventional revision class and proposed revision class.

- However, the satisfaction over the two hours duration of conducted revision class increased dramatically from 58% to 81.3%. This we believe is due to the fact that pre-revision assessment allowed students' to understand the coverage of module content better (88.4%) which allowed for faster grasp of revision class.

- Additionally, module conveners still have the freedom of designing the revision class as the preference over theoretical (70%) or exercise (80%) focused revision class remained almost similar in both surveys.

- Conclusively, 85.1% students preferred revision class prepared from pre-revision assessment, 83.4% agreed pre-revision modulated revision class is more helpful than conventional revision class and 87.2% would like to recommend other module conveners to adopt pre-revision modulated revision class.

Limitation of the study

- Completely anonymous surveys were conducted through the shared online survey form by all the four lecturers. This generally led to two main limitations:
  - There was a limitation to track the difference in opinion among different groups of students (e.g. module/year)
  - Furthermore, the survey mainly focused on perception of students on pre-revision assessment modulated revision class whereby, students were mostly satisfied.

- For future work:
  - Direct correlation between students perception on conventional revision class and proposed revision class can be conducted to improved findings
  - The efficiency of the proposed revision class can be monitored through the exam performance of students.