Problem-based learning in Cybersecurity at CCCU

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Overview

- Project with Sunderland, Warwick & Gloucestershire

- PBL

  - Active learning

  - Student focused

  - More interesting

  - More enjoyable

  - Increased motivation

  - Employability

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Scenarios

- AAN Cyber Security Case Study

- Scenario 1 (Year 1/Level 4 BSc (Hons) Computer Forensics & Security):

  - Cyber Essentials

- Scenario 2 (Year 2/Level 5 BSc (Hons) Computer Forensics & Security):

  - Social Engineering

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Sessions

- Weekly session of 2 hours duration X 3

  - Sessions 1: Introduction to PBL, Case Study, Scenario

  - Session 2: Work on PowerPoint presentation, reporting on and discussion of progress

  - Session 3: Presentation submission, feedback and evaluation

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Issues

- Not credit bearing

- Presentation

- Group work

- Student focused

- Lateness

- Absence

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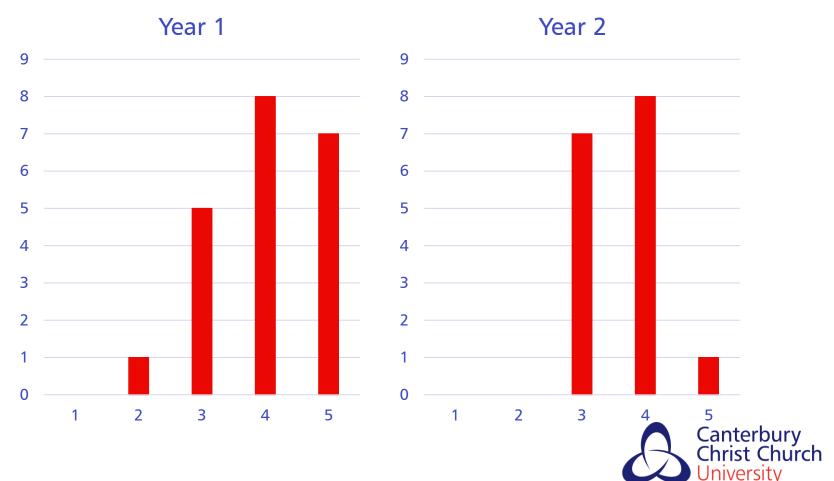
Method of Evaluation

- Questionnaire based on:

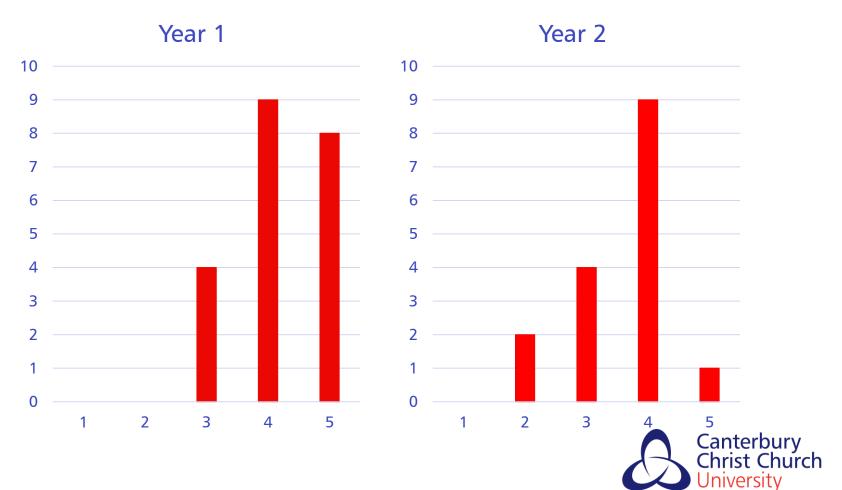 - Quantitative elements: http://teaching.polyu.edu.hk/datafiles/r79a.doc (page 2)

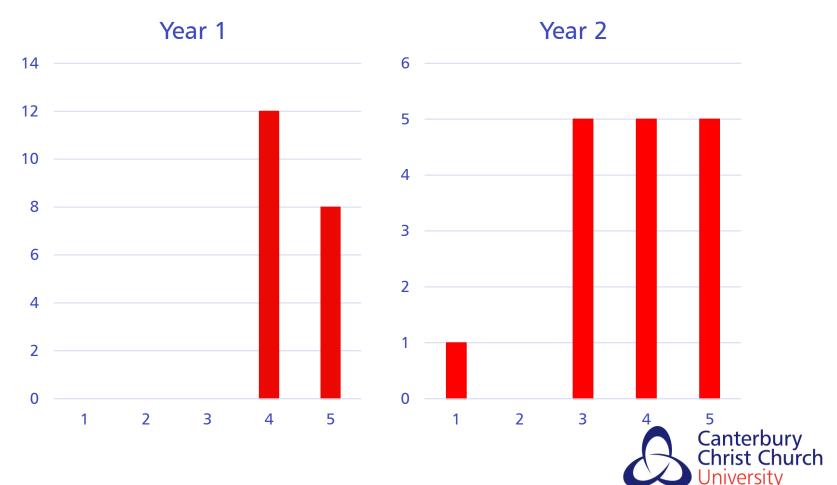 - Qualitative elements: http://www.pbldirectory.com/downloads/pbl-toolkit.pdf (pages 24-25)

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1) Have you found the PBL element of this module interesting?

Year 1

Year 2

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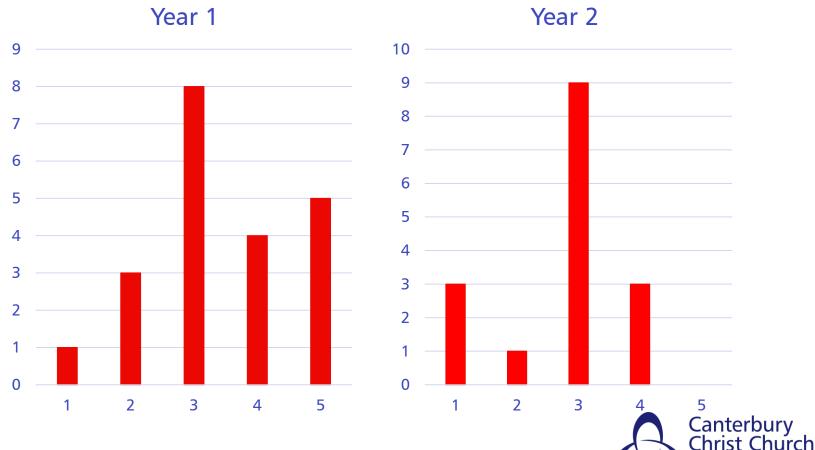Christ Church
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2) Have you enjoyed the PBL element of this module?

Year 1

Year 2

8

3) Did you find that focusing on real world problems made the module seem much more relevant to your interests?

Year 1

x-axis	value
1	0
2	0
3	0
4	12
5	8

Year 2

x-axis	value
1	1
2	0
3	5
4	5
5	5

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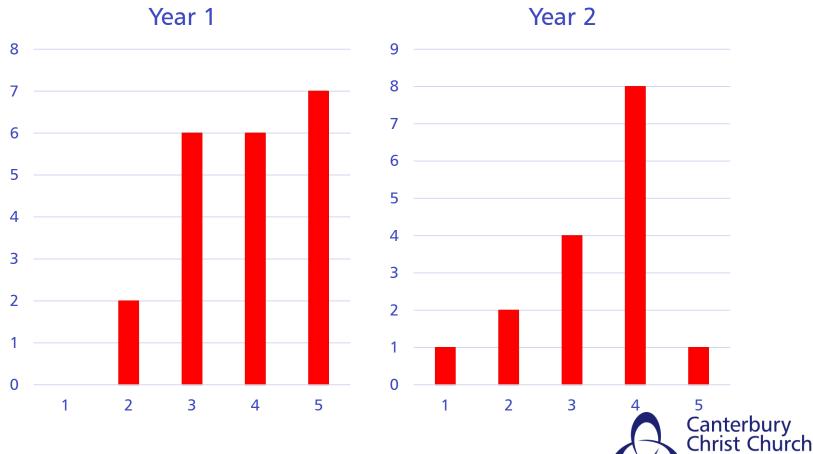# 4) Did working in groups mean that you learned from one another?
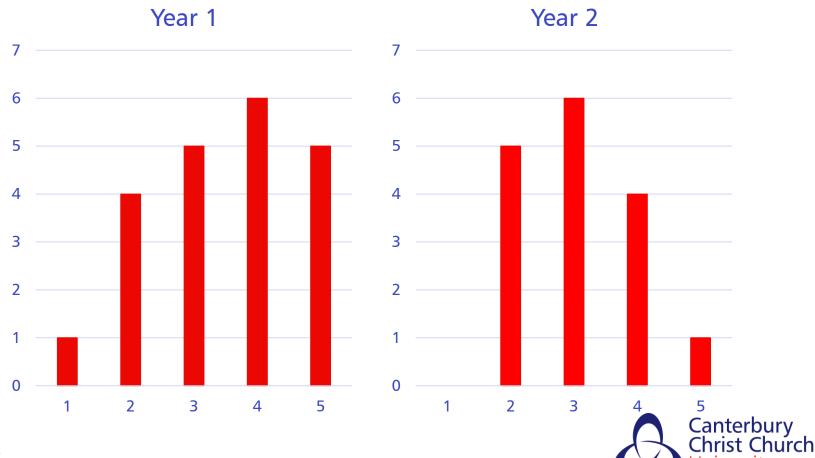
5) Have you understood the technical material of the module better than if it had been lectured in the conventional way?
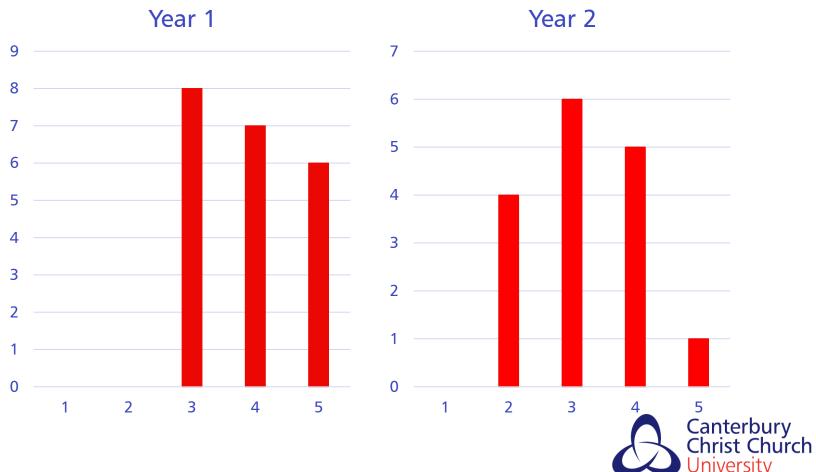
Year 1

Year 2

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6) Do you think you have learned as much technical material as you would on a conventional lecture module?

Year 1

Response	Count
1	1
2	4
3	5
4	6
5	5

Year 2

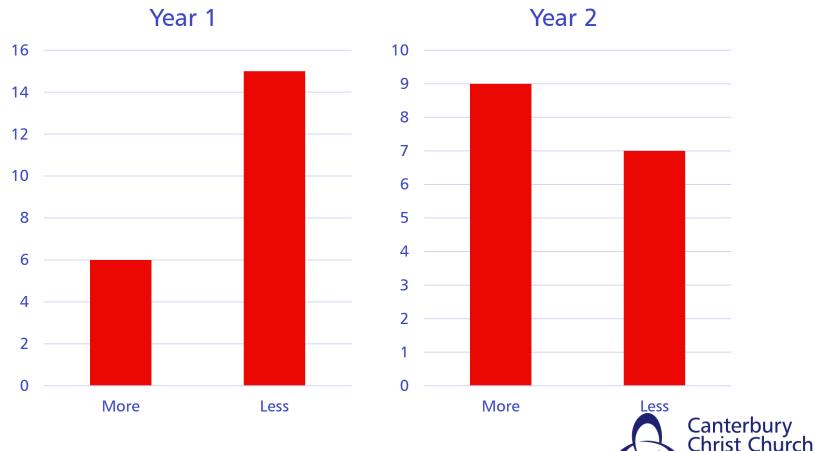| Response	Count
1	0
2	5
3	6
4	4
5	1

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7) Considering the material you have learned, do you think you have learned it more thoroughly than you would on a conventionally taught module?

Year 1

Year 2

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8) Has this part of the module taken more or less time than conventional lecture-based parts of the module? (In your assessment of the time taken by other parts of the module, you should include the time you will spend on working on assignments and revising for the exams).

Year 1

Year 2

14

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Qualitative Questions

- How does this type of learning design motivate you to learn (or not!)?

- How does PBL compare to other forms of learning and teaching you have experienced?

- How has the facilitator influenced your learning?

- Describe your positive experiences of PBL and why you found them so.

- Describe the experiences of PBL you found difficult or unhelpful.

- What do you believe you have learnt as a result of this PBL?

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Student Work

- Quality

- Depth

- Presentation

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Conclusions

- Much more to be done to analyse results

- Credit bearing?

- Group-based?

Questions?

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