

“What I did...”: Using local dilemmas to enhance engagement, relevance, and discussion in Responsible Conduct of Research courses

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Background

The importance of training, and supervision in research integrity is highlighted in several codes of conducts for research integrity (1-4). Courses in responsible conduct of research (RCR) are an institutionalized way of establishing awareness and knowledge about guidelines and rules for proper conduct among early career researchers. Previous studies among Scandinavian PhD students, including our institution, indicated that research integrity is to some degree challenged (5-9). Therefore, learning elements that include training in actually ‘playing by the rules’ in an everyday practice full of dilemmas and grey zones are important for RCR courses to gain success.

The SDU PhD course in responsible conduct of research is mandatory (2 ECTS) and orchestrated and co-run by the university library.

We aim to share our experiences from embedding learning sessions on dilemmas experienced by local researchers. The overall goal of the learning elements is to enhance higher-order student learning through perceived high relevance and active learning.

Methods.

We developed learning sessions comprising short videos on real dilemmas, Dialogic E-tools for Teaching (DIET-RCR), experienced by local researchers, along with teacher-directed suggestions for use in teaching in dialogic ways. Topics were selected based on perceived relevance by acting RCR teachers, along with ideas from the researchers that we approached with invitations to take part. For each topic (for instance authorships or conflicts of interest), we recorded interviews where the researcher shared their story on 1) the situation and the dilemma and, 2) how they dealt with it. The recordings were edited into short videos (approx. 1-4½ min) and cut into two separate parts, the first part finishing by a “What would you do?”. The materials were introduced for RCR teachers with suggestions for use (learning paths) that targeted both in-class and pre-class use, with follow-up. The dilemma videos were used in the course to initiate discussion among participants. Participants were invited to anonymously fill out a questionnaire about the dilemma videos during class via QR code. Answer options were a 5-point Likert scale of either: “greatly liked to greatly disliked”, “Engaging - pacifying”, “Exciting – boring”, and “Helpful – annoying”.

References

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“... you can reflect on dilemmas that you might not have thought would happen and can discuss them with other people in a safe space”

Results

Overall response rate was 93.2%. 123/127 completed the questionnaire in full, and only those 123 are included in the presentation of results.

	Engineering	Natural Sciences	Health
Completed questionnaires	34	38	51
Total participants	38	41	53

Session: Overall, the PhD students liked the sessions containing the dilemma videos (graph top right).

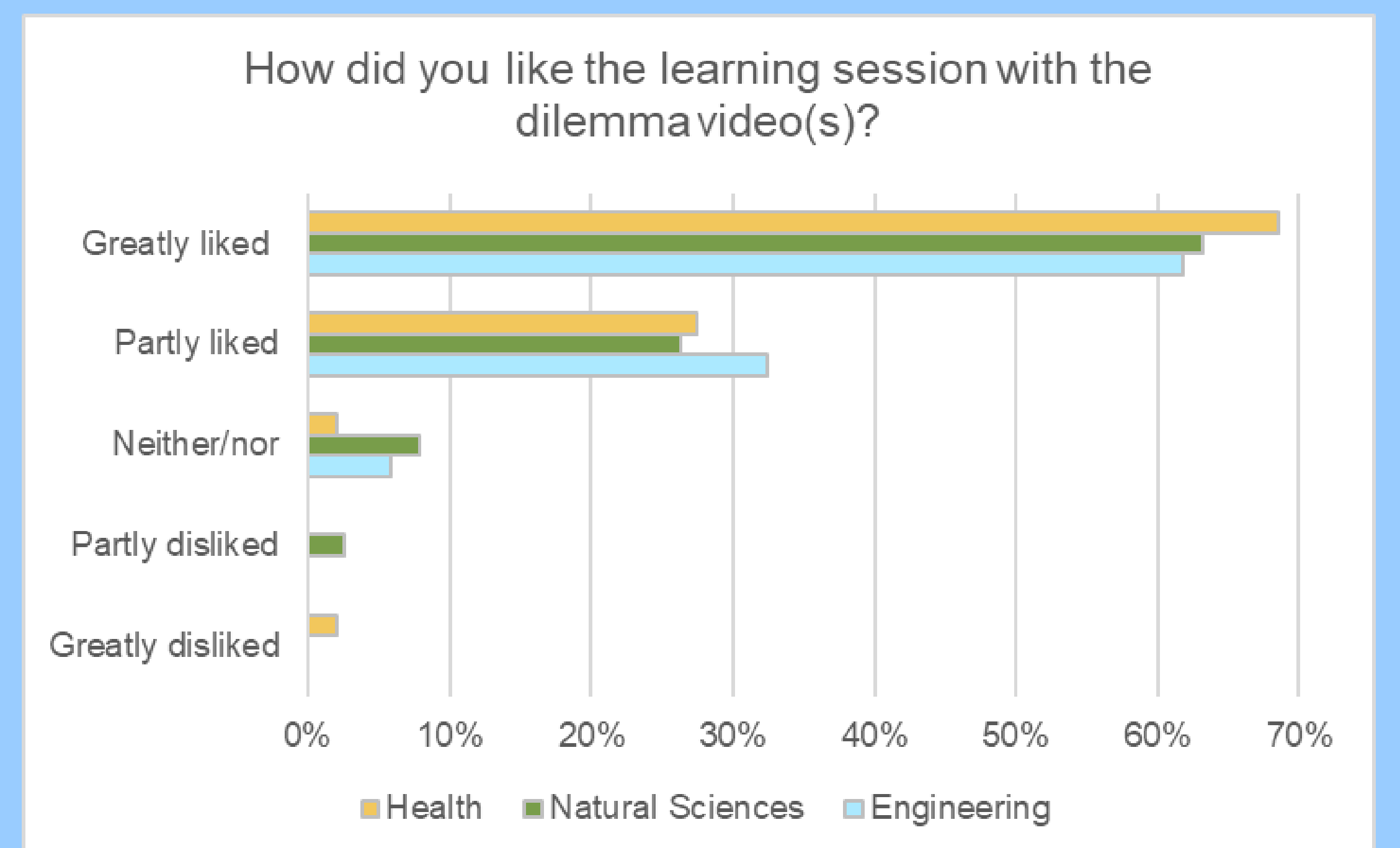
Engaging: There was a little more spread between faculties in the perception of the videos being engaging or pacifying, but most found them engaging, which were also seen in the qualitative answers, where many described the benefit of discussion of the dilemma videos (graph bottom right).

Relevancy: 90-95% of PhD students found the dilemma videos relevant or mostly relevant (results not shown).

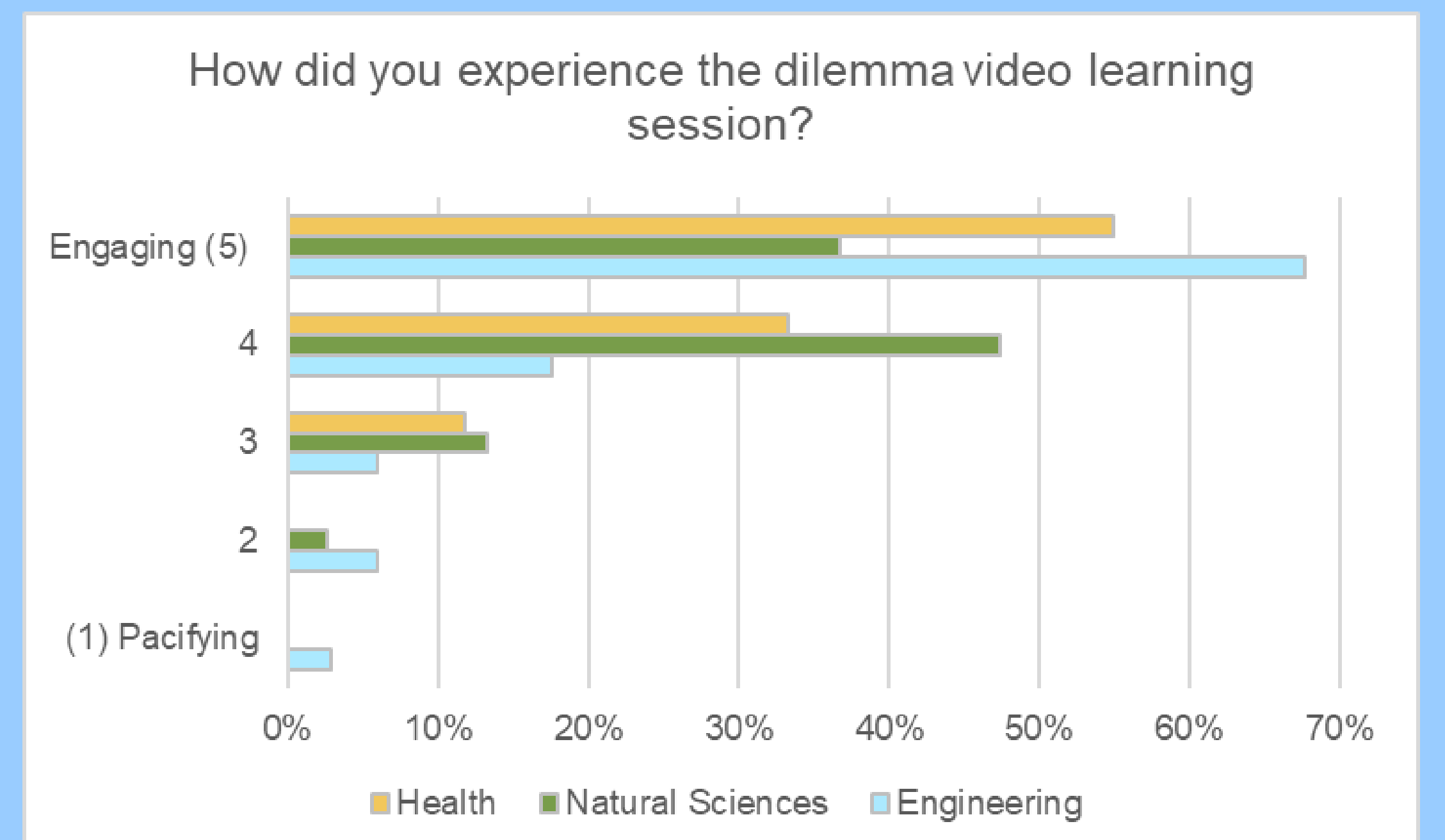
Exciting: 92-100% found it to be equally or more exciting than boring (results not shown).

Helpful: 90-98% found it to be equally or more helpful than annoying (results not shown).

“The dilemmas created a springboard for interesting discussions”



“Real dilemmas from real people. Very relatable”



Conclusion

The dilemma videos seem to enhance the outcome of the RCR course experience and learning outcomes among PhD students at University of Southern Denmark, Faculties of Health, Natural Sciences and Engineering.

Many qualitative comments were of the sentiment “this is great, do more of it”.

Suggestions for improvement:

- More dilemmas especially on research ethics grey areas.
- Anonymous rather than plenum votes for dilemma video answers and subsequent plenum discussions.
- Bringing own dilemmas for plenum discussion.