

# Development of a digital escape room to raise awareness of the effects of climate change on human health

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## Background

Climate change presents an increasing threat to human life and health. The WHO has predicted that malnutrition, malaria, diarrhoea and heat stress alone will cause around 250,000 additional deaths annually between 2030 and 2050. However, the health impacts of climate change are currently sparsely taught in medical curricula. The aim of this Aberdeen Summer Research Scholarship project was to develop a digital escape room to raise awareness of the effects of climate change on human health.

## Summary of work

The escape room was hosted on a WordPress website and H5P (HTML5 Package) was used to create 7 interactive puzzles (Fig. 1). Solving each puzzle revealed a code to “unlock” the door. During summer 2023, all current medical students were invited to play the digital escape room via email. Anonymous pre- and post-activity surveys (Microsoft Forms) were used to collect feedback. A second iteration of the escape room ran as a face-to-face activity during induction week for incoming year 1 medical students. After a briefing, groups of 5-7 students worked through the escape room. Academic staff and senior medical students acted as facilitators.

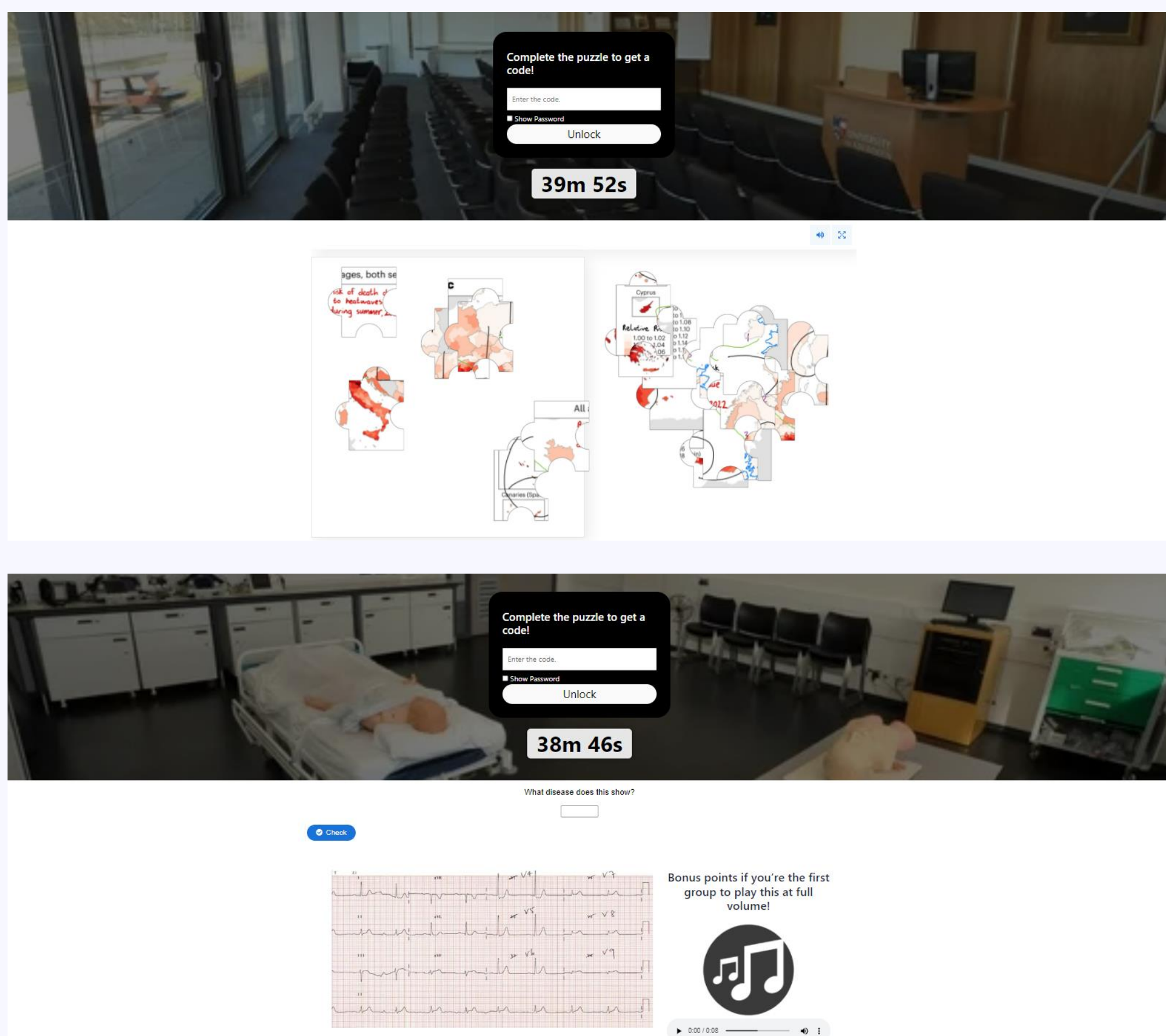


Figure 1: Screenshots of two rooms.

## Feedback

A total of 23 current medical students completed both the pre- and post-activity surveys with 91.3% reporting the escape room was effective in teaching new content. Free-text comments reported the escape room was engaging (n=16), fun (n=12) but some of the puzzle designs could be improved (n=6).

## Discussion

- Students overwhelmingly reported that the digital escape room was engaging and fun
- The activity increased self-reported knowledge of the impact of climate change on health
- However, a limitation is that this study was single arm and did not formally assess changes in knowledge

After participating in the F2F escape room session, year 1 medical students (n=66) reported an increase in self-assessed knowledge of the effects of climate change on human health (Fig. 2). Over 80% agreed it was an excellent icebreaker activity and the vast majority (89%) of groups successfully escaped. In the free-text comments, there were multiple positive mentions of the activity being enjoyable (n=24) and engaging (n=14). However, some groups reported that the time pressure interfered with their capacity to learn new content (n=6).

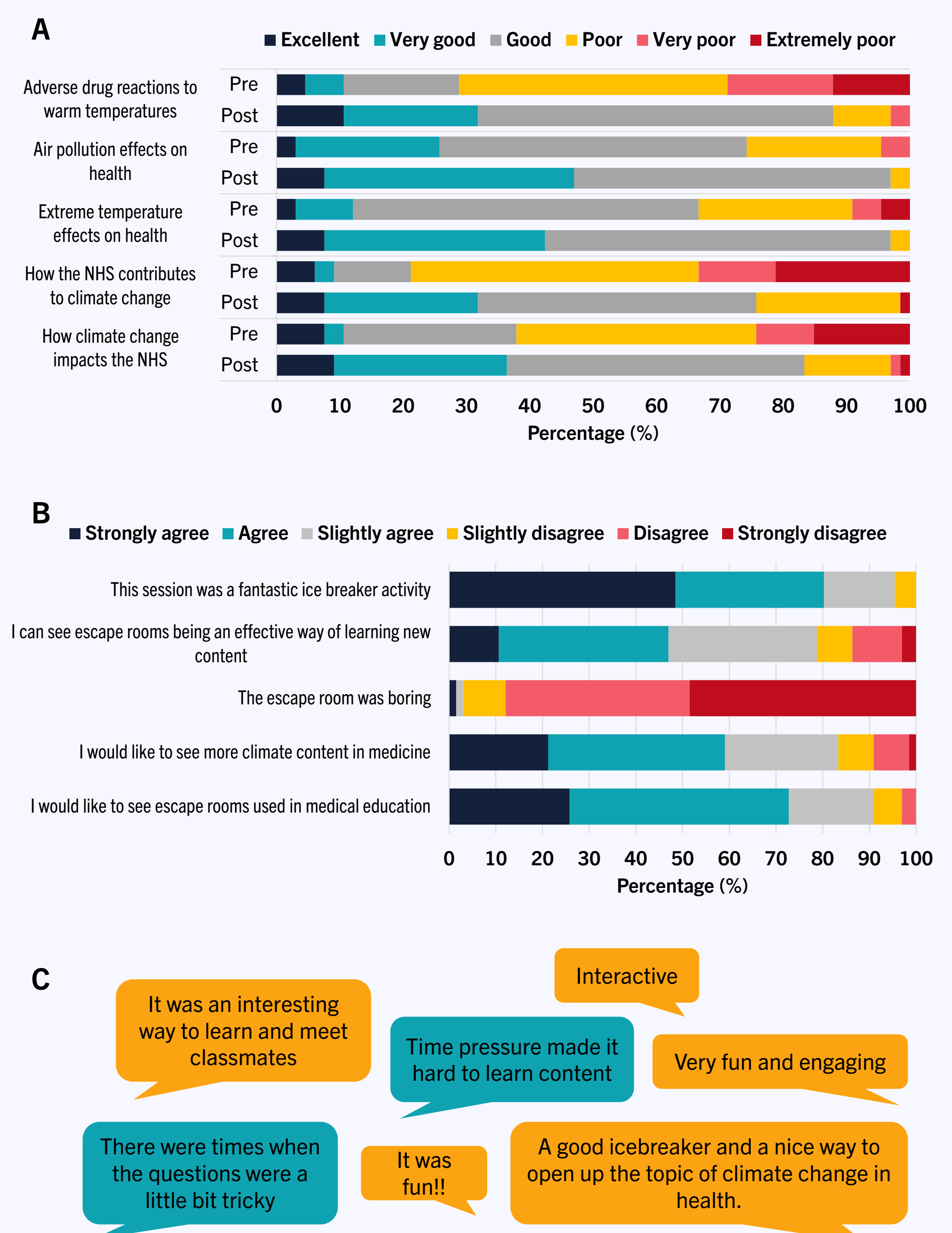


Figure 2: Survey feedback from year 1 medical students. Self-assessed changes in awareness of topics after the escape room (A), Likert scales (B) and representative free-text comments (C).

Escape room  
video demo



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