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Digital Escape Game: Breaking out of a mathematical medley

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Abstract:

The *Escape Room* phenomena began in Japan in 2007. The premise of an Escape Room is that 'players' are locked inside a room and, in order to escape, they must solve a range of puzzles, riddles, and open mechanisms and locks inside a given timeframe. While the educational affordances of an escape room have been and continue to be explored (see for example Brown, Darby & Coronel, 2019) the grandeur and physical complexities required to set up an escape room mean than it is not a sustainable option for the average classroom teacher or smaller tertiary courses.

The *Escape Game*, however, is played on a smaller scale with portable (often mostly printable) resources with players aiming to either break into something (a toolbox for example) by solving riddles, puzzles and opening locks within a given timeframe. The logistical ease of set up and iterability mean that the escape game format is becoming increasingly popular across all sectors of education—from young primary school learners to tertiary institutions (see for example Yachin, & Barak, 2019).

A successful example of the escape game movement in education is *Breakout EDU* (see for example Detwiler, Jacobson, & O'Brien, 2018). In addition to being a platform that provides resources to create your own and use other educator-made physical breakout games, *Breakout EDU* also provide members with a digital escape game creator and online repository. It was the *Breakout EDU* digital game format that was used as the mediating artefact in this small scale case study.

A digital escape game, *Mathematical Medley*, was created for students (n=15) undertaking a postgraduate primary mathematics education course. The game was embedded into the course's learning management system and activated at a certain time point for students to complete in groups or individually (as they chose). The purpose of the study was to explore how a digital escape game might promote the learning of mathematical content (subject knowledge); and how a digital escape game might enable the use and development of key competencies and mathematical processes. An overview of the escape game, purpose, findings and implications of using the mediating artefact will be shared during the presentation of this case study.

References

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