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A K20 Center Research Brief

Educational escape games in primary and secondary education: A framework synthesis review

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Introduction

This intervention brief explores the use of educational escape games (EEGs) in primary and secondary education. The research article by Peter Grepperud (2025) synthesizes findings from 35 peer-reviewed journal articles to analyze the characteristics, design criteria, and educational contexts of EEGs. The literature reviewed highlights the growing interest in using escape rooms as educational tools, emphasizing their potential to enhance student motivation, engagement, satisfaction, and collaboration. The significance of this research lies in its detailed examination of EEGs within primary and secondary education, a context that has been less explored compared to higher education.

Methodology

Research Design:

The study employs a framework synthesis approach, constructing an a priori conceptual framework and refining it through the analysis of selected studies. This method allows for systematic interrogation of heterogeneous studies on EEGs.

Sample:

The review includes 35 peer-reviewed journal articles published between 2015 and 2022, focusing on EEGs in primary and secondary education settings. The articles were sourced from ERIC, Scopus, and Web of Science databases.

Data Analysis:

Data were extracted and analyzed using NVivo software, focusing on game shape characteristics, educational contexts, and design implications. The synthesis involved compiling and combining themes from the selected studies to address the research questions.

Results

The review identifies four distinct game shapes of EEGs: pop-up escape rooms, puzzle boxes, digital escape games, and stationary escape rooms. Across all game shapes, EEGs were found to increase student motivation, engagement, satisfaction, and collaboration. They also support

short-term knowledge acquisition. The results suggest that EEGs can be effectively integrated into various subjects, particularly STEM, and can be adapted to different educational contexts. Design recommendations emphasize aligning game mechanics with learning objectives, providing structured briefing and debriefing sessions, and considering contextual constraints such as time, class size, and resources.

Application into Practice

To replicate the intervention in a school context, educators should:

1. Select an appropriate game shape: Choose between pop-up escape rooms, puzzle boxes, digital escape games, or stationary escape rooms based on available resources and educational goals.
2. Align game mechanics with learning objectives: Ensure that the game narrative and puzzles are connected to curriculum goals and student characteristics.
3. Prepare structured briefing and debriefing sessions: Brief students on the rules and storyline before the game and conduct a debrief session to reflect on the learning outcomes.
4. Consider contextual constraints: Plan for time, class size, expenses, materials, and technology required for the EEG.
5. Test and refine the game: Gather feedback from students and educators to improve the game design and implementation.

Work Cited

Grepperud, P. (2025). Educational escape games in primary and secondary education: a framework synthesis review. *Education Inquiry*, 1–17. https://doi.org/10.1080/20004508.2025.2476271