

**TAL YACHIN**

Technion - Israel institute of technology, Israel

## **A MODEL FOR THE DESIGN OF EDUCATIONAL ESCAPE GAMES TO FACILITATE LEARNING ABOUT HEALTHY NUTRITION**

### **Abstract:**

Educating about healthy nutrition to reduce the consumption of harmful foods is an important challenge of today's global society (World Health Organization, 2017). One way to do so is by learning through games. Game-based learning refers to learning environments or activities that use games to support teaching and learning. In the recent years, this educational method is gaining momentum, providing learners the opportunities to practice skills that traditional teaching may not offer. Among the various game-based learning approaches, educational escape games are a new and growing trend, which its educational value exploration is still in initial stages. Hence, the goal of the current study was to develop and implement a model for educational escape games (EduEG) and examine its role in facilitating students' learning about healthy nutrition.

The study was guided by the situated learning theory that emphasizes the intercorrelation between the learning process and the physical and social environments in which it occurs. A mixed-methods design approach was used to answer the following research questions: 1) What situated learning components can be associated with EduEG? 2) What learning outcomes can be related to EduEG? 3) How can participation in an EduEG facilitate learning about healthy nutrition? The study was conducted in two stages. First, a survey was administered among 54 science education pre- and in-service teachers, leading to the design of the EduEG model and the first version of the escape game. Second, the game was introduced to 229 participants who played the game in groups of four. The data were collected through pre- and post- questionnaires, game observations, and semi-structured interviews. The findings indicated that EduEG learning environment can be associated with four situated learning components: Authentic situation, professional information, collaboration, and self-reflection. Knowledge gain, awareness to healthy foods, and motivation to learn, were identified as the learning outcomes that can be related to EduEG. The findings also indicated that these learning outcomes can be significantly increased once the participants are fully immersed in the game and their teamwork is well structured.

### **Keywords:**

Educational escape games, Game-based learning, Situated learning

**JEL Classification:** I00, I29