

FlavourGame – a hybrid board game with digital and edible components for childhood nutrition

Nelson Zagalo¹, Ana Patrícia Oliveira¹, Mário Vairinhos¹

1 – DigiMedia & Department of Communication and Art, University of Aveiro.

FIGURE 1

Children tasting food earned during the game (above).

The table board (hexagons) and the tablet application, which acts as an assistant that guides the game's tasks (below).

FIGURE 2

Final Prototype of the Smart Food Tweezers.

FlavourGame (<http://flavourgame.web.ua.pt>) is a project in the intersection of arts, technology, communication, and health [1]. It is aimed at kids aged 10-12, the age at which food neophobia (resistance to new foods) is most prevalent. The hybrid game comprised one table board, a digital application, real food, and smart tweezers, mixing fictional and digital worlds through merging physical interactions and rich sensory experiences in search of behavior change.

FlavourGame is a cooperative hybrid board game for up to 3 players. Kids work together to explore a fantastical world, encountering challenges and learning about healthy eating through the story and special food-themed cards. Players choose characters with unique abilities and travel across hexagons representing different environments (Figure 1). They might taste real food during their journey and earn rewards, but will also face setbacks they must overcome together [2].

The research team worked on the creation of a hybrid game model based on a TUI — tangible user interface. The tangible object created was the Smart Food Tweezers (national patent application No. 118774) which has sensors to recognise food in hybrid ludic environments (Figure 2). The Smart Tweezers were invented for new mechanics involving tasting real food. The research for its creation was grounded in the need for a new interaction approach, requested by the game hybridity.

The DigiMedia research unity coordinated the project in collaboration with a team on Nutrition from the Portuguese Catholic University (Porto) and a Communication team from the University of Minho. All the user-centered experiences with kids to evaluate the hybrid game were conducted at PROBRANCA-CATL (a Leisure-time Activities Center in Albergaria-a-Velha) and College “Paulo VI” (Porto).

The results were disseminated through the publication of various articles in international journals and conferences, being also covered by reference media – RTP, LUSA, Antena 1 – through 13 news stories.

Reference

[1] Oliveira et al., 2020 – <https://doi.org/10.1109/SeGAH49190.2020.9201838>

[2] Zagalo et al., 2023 – <https://doi.org/10.24140/ijfma.v8.n1.03>

