APPLYING USER-CENTERED DESIGN FOR A CLIMATE RESILIENCE VIDEO GAME

Yavor Dankov, Albena Antonova, Valentina Terzieva, Boyan Bontchev

Abstract. Serious games for education have the potential to raise awareness among the general public and to increase professional knowledge in emerging domains such as climate resilience. Climate resilience is a new topic both for professionals and in the terms of life-long learning. In this context, the process of design and developing educational video games, has to apply a user-centered design approach and take into consideration the user experience metrics to significantly improve its educational and motivational outcomes. The paper aims to outline the main stages for the design and implementation of an educational video maze game in the field of protection of monumental cultural heritage. The video game "Let's save Venice" is part of the learning resources of the EU-funded project e-Creha. The paper introduces the context of the game development and, next, outlines the main steps and findings for its design and evaluation. Finally, it presents some results of the game validation and user evaluation.

Key words: user-centered design, video games, education, climate resilience.

Acknowledgments

The research leading to these results has received funding from the e-Creha project, funded under the Erasmus+ programme with project number 2020-1-NL01-KA203-064610, and from the APOGEE project, funded by the Bulgarian National Science Fund, Grant Agreement No. DN12/7/2017.

Yavor Dankov^{1,*}, Albena Antonova², Valentina Terzieva³, Boyan Bontchev⁴
^{1,2,4} University of Sofia "St. Kl. Ohridski",

Faculty of Mathematics and Informatics,

5 James Bourchier Blvd., 1164 Sofia, Bulgaria

³ Bulgarian Academy of Sciences

Institute of Information and Communication Technologies,

Acad. G. Bonchev St., Block 2, 1113 Sofia, Bulgaria *Corresponding author: yavor.dankov@fmi.uni-sofia.bg