

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Hands-on Space Education and Outreach (8)

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“3DSPACEARK” EDUCATIVE GAMING SCHEME TO INSPIRE NEXT GENERATION PURSUING
STEAM (SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATH) AND TO ENABLE
MULTI-SECTOR COLLABORATIVE BUSINESS MODEL FOR RESEARCH AND DEVELOPMENT
IN SPACE APPLICATION

Abstract

Space renaissance time, the scheme of age about a futuristic travel that has been an aspiration for technology development is designed in the form of an educative game. An interactive adventure-tactic featured in the application-based is proposed to attract the young generation with a STEAM subject while he/she enjoyed playing the game. The world-peace story game according to lesson-learned history, the scientific evidence plus a prospective space age is made to increase awareness to society towards space capabilities. The variable depth of understanding about scientific phenomena from Earth to beyond and the game difficulty level can be maintained proportionally to the user's playing behavior and the lowest performance of the examination in the primary-secondary school. So, it is expected that after enduring the focused problem as the main mission in a fun-attractive way using visual media and a memorable structured story, each student can pass the exam with high knowledgeable satisfaction and attain the goal according to the targeted score in a difficult subject. The project was motivated by the decreasing of passing rate and stagnant total score distribution every year as specified by the report of the International Baccalaureate Organization report in May 2019. On the other hands, relation to QS World University Ranking 2019, a huge gap of education quality between states and the different regions was discovered in term of academic-employer reputation, citation per faculty, international students and several economic aspects (e.g. local income, living cost, and tuition fee). Therefore, the main objective of this game is to create a high impact, low cost and an accessible STEAM curriculum game to everyone. The player also can learn about creative art and social politics with the configured setup, so the outcome of increasing the readiness level in academic and professional employment according to the strongest interest from a broad career perspective can be achieved. With the constant update of recent scientific discoveries, the game can help every generation for having an equal right towards a high-quality education. To mitigate the weakness against prolonged exposure of low radiation as the consequences of playing the game through the monitor, the life balance rule for a deliverable mission inside the game is strongly promoted throughout the story. In addition, a collaborative business model to attract participation from the sector of space, aeronautics, automotive, medical, government, academia and organizations, is devised.

Keywords: space, educative game, STEAM, world-peace story, life balance, collaborative business