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SDG Quest: Leveraging Mobile Game-Based Learning to Foster Environmental, Social, and Economic Sustainable Development Goals

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Abstract. Amid the quest for sustainable development, education can serve as a catalyst for incentivising people of all ages and backgrounds to realise the vision towards a healthier planet, a fairer society, and a more peaceful and prosperous future for all. This study presents the design and evaluation of 'SDG Quest' – a novel mobile educational game crafted for raising awareness about environmental, social, and economic Sustainable Development Goals. Embracing gamification features and game mechanics such as rewards, points, milestones, challenges, badges, and mentor personalisation, SDG Quest aims to advance players' understanding of all dimensions and goals of sustainable development, captivate their interest through an engaging, gamified learning experience, and ultimately, nurture the right mindset required for realising the goals. This paper discusses the design and empirical evaluation of SDG Quest. The evaluation involving both users (n=73) and experts (n=12) reflects a positive user experience and highlights the game's usability, appealing design, and learning effectiveness. Creative ideas and suggestions for further enhancing the game's features and impact are also captured. The findings illuminate the beneficial contribution of mobile game-based learning in the sphere of education for sustainable development.

Keywords: Sustainable Development Goals · Mobile Game-Based Learning · Education for Sustainable Development · Usability Evaluation