

Effectiveness of Gamified Simulators in the Health Sector

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Abstract : The integration of serious games with gamification in management education and training has gained significant importance in recent years as innovative strategies are sought to improve target audience engagement and learning outcomes. This research presents a case study that evaluates the ex-post impact of a sample of applications of the BIGAMES management simulator in the training of top managers from various hospital institutions. The methodology includes evaluating the reaction of participants after each edition of BIGAMES Accident & Emergency (A&E) carried out over the last 3 years, as well as monitoring the career path of a significant sample of participants and their feedback more than a year after their experience with this management simulator. Former participants are invited to answer a questionnaire structured for this purpose, where they are asked, among other questions, about the importance and impact that the BIGAMES A&E simulator has had on their professional activity. The research methodology also includes an exhaustive literature review, focusing on empirical studies in the field of education and training in management and business that investigate the effectiveness of gamification and serious games in improving learning, team collaboration, critical thinking, problem-solving skills and overall performance, with a focus on training contexts in the health sector. The results of the research carried out show that gamification and serious games that simulate real scenarios, such as Business Interactive Games - BIGAMES®, can significantly increase the motivation and commitment of participants, stimulating the development of transversal skills, the mobilization of group synergies and the acquisition and retention of knowledge through interactive user-centered scenarios. Individuals who participate in game-based learning series show a higher level of commitment to learning because they find these teaching methods more enjoyable and interactive. This research study aims to demonstrate that, as executive education and training programs develop to meet the current needs of managers, gamification and serious games stand out as effective means of bridging the gap between traditional teaching methods and modern educational and training requirements. To this end, this research evaluates the medium/long-term effects of gamified learning on the professional performance of participants in the BIGAMES simulator applied to healthcare (A&E). Based on the conclusions of the evaluation of the effectiveness of training using gamification and taking into account the results of the opinion poll of former A&E participants, this research study proposes an integrated approach for the transversal application of the A&E Serious Game in various educational contexts, covering top management (traditionally the target audience of BIGAMES A&E), middle and operational management in healthcare institutions (functional area heads and professionals with career development potential), as well as higher education in medicine and nursing courses. The integrated solution called 'BIGAMES A&E plus', developed as part of this research, includes the digitalization of key processes and the incorporation of AI into this Serious Game.

Keywords : artificial intelligence (AI), executive training, gamification, higher education, management simulators, serious games (SG), training effectiveness

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