OP16

Gamification in Physiotherapy Case-study Classes – From Design to Implementation

Chong D.Y.K., Wirman H., Watson D., Mak M.K.Y., Kwok J.S.
The Hong Kong Polytechnic University, Hong Kong

Introduction: Case study learning using text-based information is common in physiotherapy education. While bringing in real life patient information, this traditional method may not provide students with a full understanding of clinical problems because of limitations in visualization and conceptualization. Moreover, it may be difficult to motivate students using text-based information only. Using multimedia virtual patient cases combined with gamification can potentially help in overcoming these disadvantages.

Method: The project of gamifying selected case-study classes was conducted within the subject Neurological Physiotherapy II. The project team consists of a game-based learning design expert, an education instructional designer, two physiotherapy content experts, and a project assistant. The cases were built mainly using iSpring Suite 8.1 toolkit, which allows the creation of interactive PowerPoint presentations. The developed teaching material was housed on the respective course site of learning management system. Six case-study classes were gamified with a combination of interactive elements embedded, e.g. prioritisation using the drag and drop function, hotspot, matching, quizzes using built-in iSpring functions, online websites such as Kahoot, discussion, presentation, and demonstration. Originally text-based materials of three out of the six classes were extended by virtual patient videos – simulated, animated, and real. Leaderboard, scores, prizes, and teamwork mechanics were utilized. Teams aimed at achieving the highest score combining the results from the activities of all six classes.

Findings: Mapping of class designs and gamification mechanics is required in order to foster positive experience and motivation in gamified education. Our experience also shows that class design needs to be authentic to spark instructors-peers' interaction. Leaderboards appear to be the most motivating mechanic in our context.

Conclusion: This study provided an example of designing and implementing gamified case-study classes in physiotherapy education. Recommendations were provided on how to best map class designs and mechanics to enhance positive gamified experience, which informs future research investigation.