

Gamification and E-Content During Online Education and Lock-Down Situations: Empirical and Feasibility Study Focusing on Student's Learning, Health-Wellness, Engagement and Behaviour

Ankita Sharma^{1*}, Ankita Sharma²

Abstract

*The current trends in the education field are gamification and game-based learning activities. Target language is mostly used by the teacher and students in a foreign language situation. Because of this, learning new words is challenging for students to pick up, remember, and retain. This study looks at the games that the MOODLE Learning Management System (LMS) uses and how they were applied to strengthen the tertiary level vocabulary learning of German learners. Pre- and post-tests, as well as a two-week intervention using Moodle games, were completed. The findings indicate both a considerable improvement in test scores and a favourable attitude among students toward learning German through games. The learners' ability to remember new words has improved. Previously, instructors would tell students to put their phones away before entering the classroom. We might now advise them to turn on their gadgets and use social media or other online services. Although it is not yet typical, active social media use in class is increasing, and staff and students' reactions to it are divided. Students frequently have questions about how and when they should use social media services in this environment, which is why it's not just academics who struggle with social media's effects. Instead of being a tool for teaching or to enhance learning, social media was first used to express personal identity and to sustain an online social life. During COVID-19 and lockdown, schools or colleges all over the world switched to online education. Due to this, students, parents as well as the teachers were forced to make an immense change in their daily routine. To prevent academic loss of students, teaching was conducted via digital platforms using computers and mobile phones. Online instruction was once seen as a fantastic benefit, but over time it turned out to be a disaster. This sudden change from the traditional way of teaching to the virtual way, has affected physical as well as the mental health of the students. Excessive use of mobile phones affect mental health, which can lead to stress, depression, anxiety, sleep disorder, etc. Working in law enforcement may be a physically and emotionally stressful job. It is common knowledge that safety, career longevity, and job performance are all strongly correlated with health and fitness. The establishment of higher education-based coursework in criminal justice programmes that emphasise the development of healthy behaviour patterns and physical fitness has not been sufficiently studied. A health promotion programme that incorporated several aspects of wellbeing, such as physical fitness, exercise principles, good eating behaviours, goal planning, and stress management, involved college students. Results showed that a college-based health promotion course can successfully prepare criminal justice graduates who are physically fit and prepared for the police academy and who have a basis in healthy lifestyle. **Objective of Research:** A*

*Author for Correspondence

Ankita Sharma

E-mail: Ankitasharmamcm@gmail.com

¹Assistant Professor in English, Chandigarh Law College, Mohali, Punjab, India

²Assistant Professor in Commerce, Chandigarh Law College, Mohali, Punjab, India

Received Date: November 23, 2022

Accepted Date: December 26, 2022

Published Date: December 31, 2022

Citation: Ankita Sharma, Ankita Sharma. Gamification and E-Content During Online Education and Lock-Down Situations: Empirical and Feasibility Study Focusing on Student's Learning, Health-Wellness, Engagement and Behaviour. National Journal of Cyber Security Law. 2022; 5(2): 20–27p.

*framework of various facets for Gamification and E-Content during Online Education: Empirical and Feasibility Study Focusing on Student's Learning, Health- Wellness, Engagement and Behaviour is discussed. An analytical study of International Conventions/ Declarations, Constitutional and Statutory aspects with ground realities, is undertaken to find suitable amendments. **Methods:** For the purpose of gathering data, students were randomly assigned to participate in either group-based interactive video gaming or health education. We looked at how the intervention affected neuropsychological performance as well as other secondary outcomes even though the primary outcomes had to do with study viability. **Research Methodology:** The purpose of research is to examine and verify the positive and negative outcomes of games on mobile/ laptop, etc. on the health and wellness of students. The use of standard legal provisions at national and international level, articles and research papers also gone through for the same. The primary data collected for the check the ground reality along with secondary data. Total 84 students have responded to the questionnaire for the main theme of the paper.*

Keywords: Gamification, E-content, online education, student's learning, health-wellness

INTRODUCTION

Earlier, faculties in class would have instructed the students to turn off their cell phones before entering the classroom. We might now advise them to turn on their gadgets and use social media or other online services. Although it is not yet typical, active social media use in class is increasing, and staff and students' reactions to it are divided. Students frequently have questions about how and when they should use social media services in this environment, which is why it's not just academics who struggle with social media's effects [1–5]. Instead of being a tool for teaching or to enhance learning, social media was first used to express personal identity and to sustain an online social life. Social media can now offer educational contexts tools that encourage the formation of communities of practice, notwithstanding its initial intent. Without the necessity for particular and discrete social media learning events, the creation of a learning community alone may have a major positive impact on a student's learning experience. Social media can connect formal and informal learning by allowing for student-led interactions in their various communities on their own. These communities may develop among peers from their own social networks, from the course they are enrolled in, with the people they live with while attending university. These communities work best when they put the needs of the students first, are centred on a common objective, promote knowledge sharing, shared understanding, and shared responsibility. The tutor can start communities that allow for these activities, for instance by creating group work activities, seminar or tutorial groups, or casual social events. Social media platforms enable both synchronous and asynchronous interaction [6–10].

ONLINE EDUCATION AND STUDENT'S LEARNING

COVID-19 turned out to be a real disaster, not only for India but for the whole world. It brings major changes to our lifestyle and also in our education system. During the lockdown online study is very useful to connect the students with the study, and that time they can learn all things online in flexibility hours because they aren't tied down to a fixed schedule like daily classes before lockdown. In a traditional classroom each and everything is very systematic, class time, class meeting times are set, and the student has no power they all have forcing to work their schedules around these dates. So now so many students want to continue their study through online mode online education can cost less due to these reasons. For example, there is no cost for traveling [11–15]. No cost related to transport, such as fuel, parking, car maintenance, and public transportation costs did not affect the students, and also save the time of travelling so students can go for the other activities because they have lot of free time. With online study students have more knowledge about technology, they can access all the things easily through online networking and they can collect the study material online from different institutes (Figures 1 and 2). According to the survey, we can see that only a few students (10.7%) are in favor of the effectiveness of online classes [16–18].

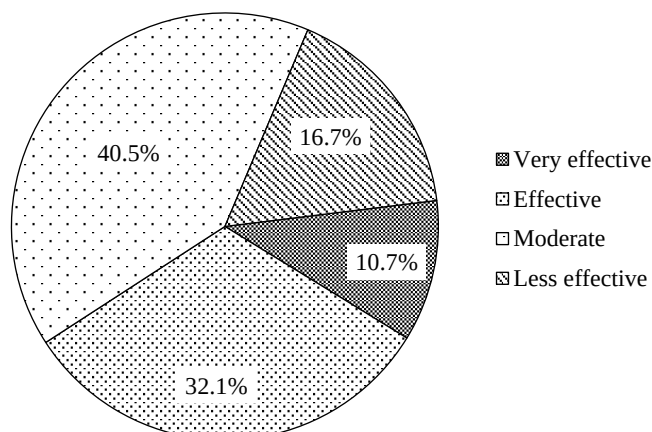


Figure 1. What do you think about online education during lockdown? (84 Responses).

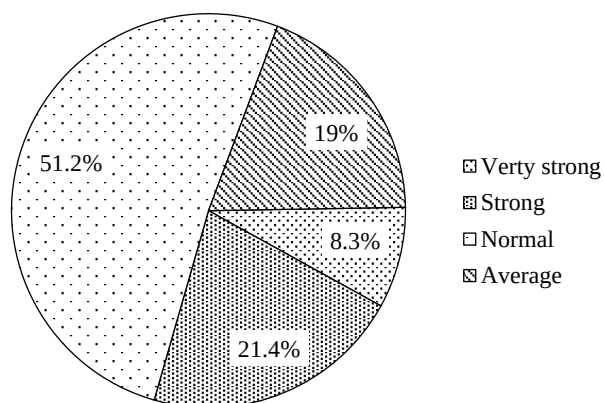


Figure 2. Your understanding level during online classes? (84 Responses).

51.2% of students voted for the normal level of understanding during online classes.

UNDERSTANDING LEVEL OF STUDENTS DURING ONLINE TEACHING

The question was also asked on the basis of understanding the level of the teaching pedagogies for the syllabus and topic in class [19–22]. The student's learning outcome is significant for the proper understanding and to fill the gap between theoretical and practical aspects (Figure 3).

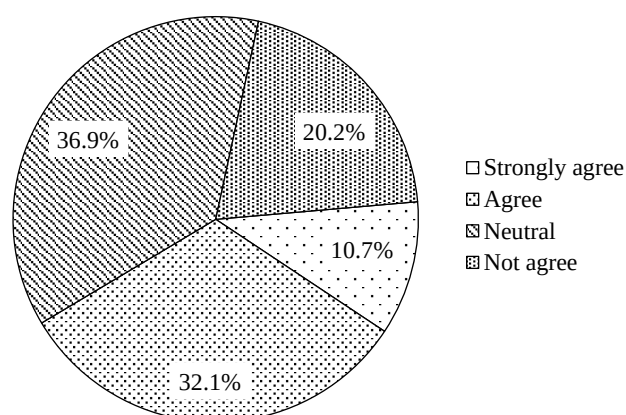


Figure 3. Have you feel lack of communication gap with subject faculties? (84 Responses).

32.1% of students felt a communication gap with the faculty during online classes. While 36.9% of students are neutral about it (Figure 4).

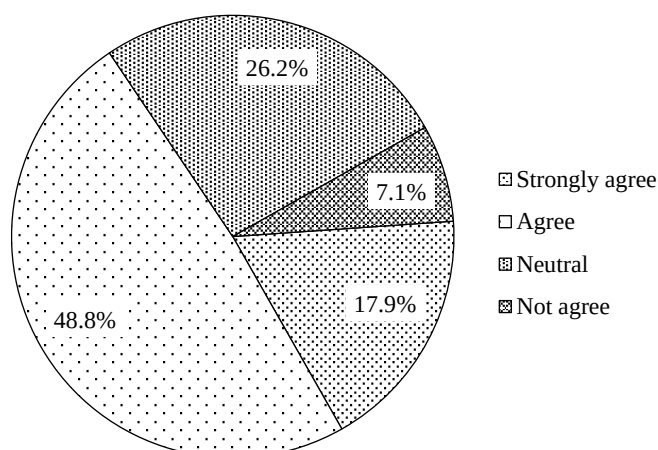


Figure 4. Is online classes focuses more on theory rather than practical aspects? (84 Responses).

48.8% of students agreed that online classes focus more on theory and not on practical.

GAMIFICATION AND E-CONTENT: MEASURING IMPACT AND OUTCOMES

Social media is frequently viewed as a diversion; as a platform with so much content connected to so many various connections, it easily diverts people from the websites they came for or directs them to a number of unproductive channels (Figure 5). Tutors worry that once students access these online resources, they will become quickly engrossed in the most recent “hot” subject and become sidetracked from their academic tasks. Online instruction is perceived as being much more challenging, and without thought and preparation, it can be challenging to keep the pupils “on topic.”

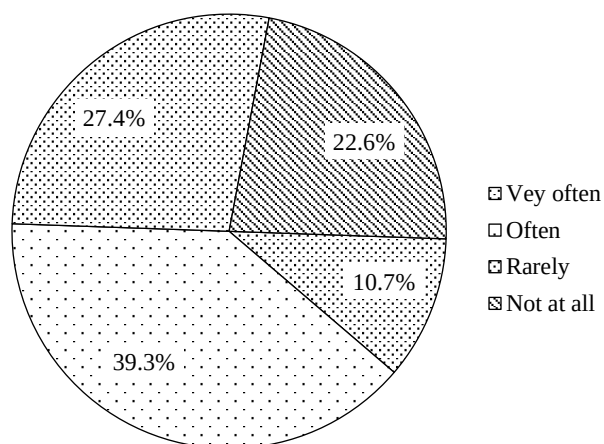


Figure 5. How often you divert towards gamification or online content? (84 Responses).

39.3 % of students got distracted oftenly during online classes.

Social media has also been criticised for just offering surface-level connection and involvement; in fact, sites like Twitter move quickly and have a limited character limit. Brevity does not always imply superficiality, though, and encouraging pupils to consider how to communicate clearly and quickly can promote the growth of powerful information processing abilities. Social media is not simply a passing trend; it is here to stay and is already transforming how we share and exchange information in our personal and professional lives as well as in society at large. Our students can develop their digital communication skills and capabilities in a supported atmosphere by including learning activities in the social media space. Both peer-led and tutor-led support is possible (Figure 6).

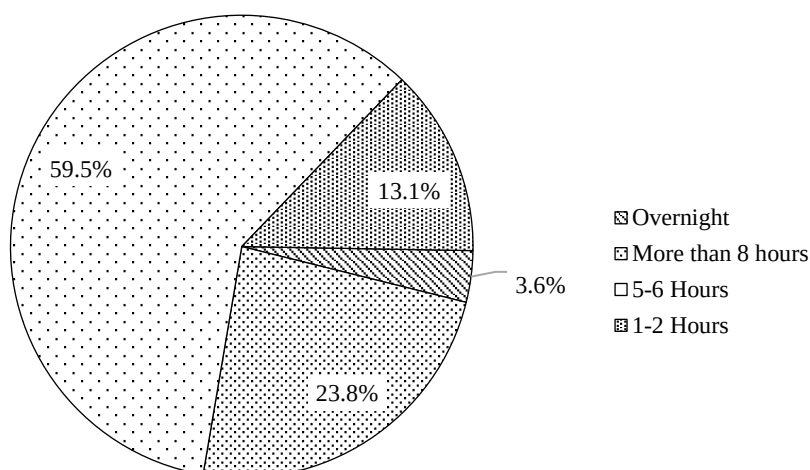


Figure 6. How many hours have you spent on your laptop/desktop/mobile/tablets? (84 Responses).

59.5% of students started spending 5–6 hours per day on their laptops or mobile phones.

Gamification, or the use of gaming components and game design approaches in non-game contexts, is a modern idea established in e-learning with the goal of keeping learners motivated, honing in on the subject, and facilitating effective learning. Gamification is a new method that is being used in many different fields, not just e-learning. Following an initial analysis of the most effective techniques in various industries.

It was once widely accepted that an individual's academic achievement was influenced by their environment and IQ. Diligence and perseverance were considered to be additional factors that influenced achievement. This is untrue, as we now know. Individual learning strategies, self-regulating processes (such self-observation, self-reflection, self-evaluation, and help seeking), and motivation all contribute to learning results. A structured learning approach that supports people in achieving their learning objectives effectively and efficiently can foster all of these qualities. In e-learning, motivation is an important component. To boost a learner's intrinsic desire and dedication to learning, a variety of techniques can be applied. One of them is the use of gaming.

Gamification improves student's engagement in the class and it also makes learning more interactive and interesting. It gives opportunities to learners to see the real world applications and enhance their learning experience. Gamification increases involvement of learners more than traditional ways. Many researches have proved that the game-like atmosphere in the classes is favourable and improves productivity.

RELEVANCE OF PHYSICAL AND MENTAL HEALTH IN SCENARIO OF GAMIFICATION

During COVID-19 and lockdown, schools or colleges all over the world switched to online education. Due to this, students, parents as well as the teachers were forced to make an immense change in their daily routine. Teaching was done on digital platforms by the use of laptops and mobile phones, to prevent academic loss of students. Online teaching was started as a great advantage but after some time it turned out to be a disaster. This sudden change from the traditional way of teaching to the virtual way, has affected physical as well as the mental health of the students. Excessive use of mobile phones affect mental health, which can lead to stress, depression, anxiety, sleep disorder etc. It also affects physical health which can lead to eyesight problems, lack of Vitamin-D, zoom fatigue, postural pain, hand disabilities etc. So many researchers have proved that more than 3 hrs of screen time per day can intensify the chances of depression, which can increase suicidal instinct in youngsters. This Internet community also promotes low self-esteem among users. Online fatigue was one of the major health problems that emerged after excessive use of mobile phones. Fatigue is a feeling of exhaustion after a

long video conference call. With the increase in screen time, the mind is over flooded with the information and finds it difficult to retain, which can be a major cause of zoom fatigue. Parents as well as students were confined to the four walls of their house, which increases involvement of parents in children's life and that also increases the level of stress and anxiety (Figure 7).

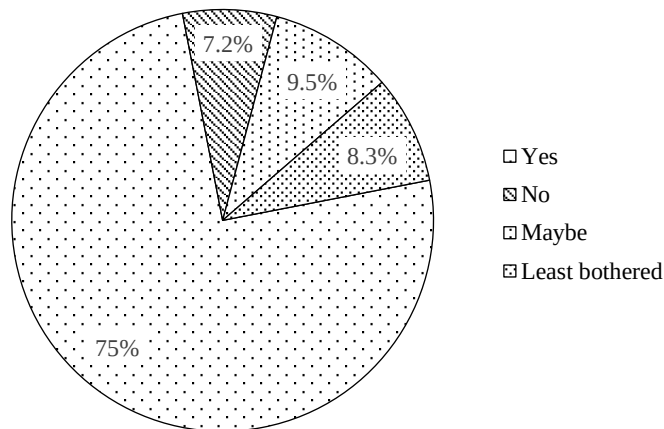


Figure 7. Have you aware about negative health impacts of using laptop/desktop/mobile/tablets continues long time (84 Responses).

Most of the students (75%) are very well aware about the negative effects of using laptops and mobile phones for a long time. While only a few are not aware about it.

Physical Health experts have recommended 3-5 hrs of moderate and 1.5-3 hrs of vigorous physical activity. But during COVID-19 lockdown, people were forced to stay in their houses, which reduces the amount of physical activities and results in weight gain, social isolation and reduction in PA levels, cardiac and metabolic disease. In a study, 8 million mental health helpline calls of 19 countries were observed during the pandemic, which reveals 35% of the rise in calls related to loneliness and fear (Figure 8).

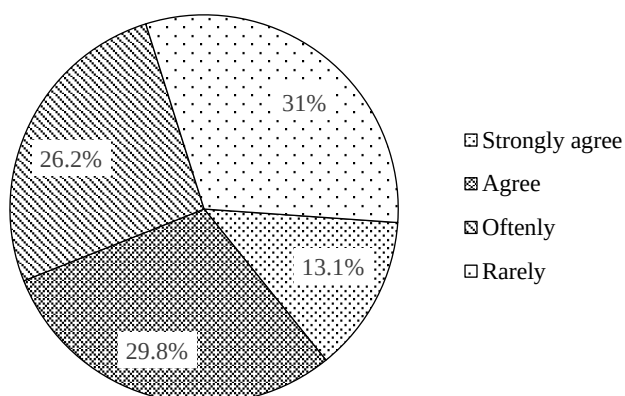


Figure 8. Do you feel any physical or mental health issues/challenges of online education as well as depending too much on gadgets? (84 Responses).

29.8% of students felt mental or physical health challenges after using laptops for a long time.

Physical and mental health of students was a real concern during the time of pandemic. The longer duration of using laptops and mobile phones to attend online classes had a negative impact on the back and lumbar spine. Uncomfortable sitting increases stress on the spine and causes pain. The prolonged use of mobile phones can cause upper back pain and strain injury. Even the teachers and faculty also get stressed out during that time. They were worried about their jobs, which also led to stress.

LEGAL RESPONSES CONCERNING QUALITY EDUCATION: HEALTH-WELLNESS

It can be an emotionally and physically taxing job to work in law enforcement. It is common knowledge that safety, career longevity, and job performance are all strongly correlated with health and fitness. The establishment of higher education-based coursework in criminal justice programmes that emphasise the development of healthy behaviour patterns and physical fitness has not been sufficiently studied. A health promotion programme that incorporated several aspects of wellbeing, such as physical fitness, exercise principles, good eating behaviours, goal planning, and stress management, involved college students. Results showed that a college-based health promotion course can successfully prepare criminal justice graduates who are physically fit and prepared for the police academy and who have a basis in healthy lifestyle.

Mental illness differs from general health in that, under some conditions, sufferers may not be able to make their own decisions. People who are suffering rarely have access to proper medical care because their family try to conceal it out of shame. Estimates place the number of people with depression at around 300 million, or 4.4% of the world's population. According to a study by the National Institute of Mental Health and Neurosciences, depressive episodes in the past and present affect 1 in 40 and 1 in 20 Indians, respectively. Unfortunately, despite the significant burden of mental health problems, they are still little recognised in emerging nations like India (Figure 9). The previous Mental Healthcare Act 1987, which had been heavily criticised for failing to recognise the rights of a mentally ill person, has been repealed by the new Mental Healthcare Act 2017.

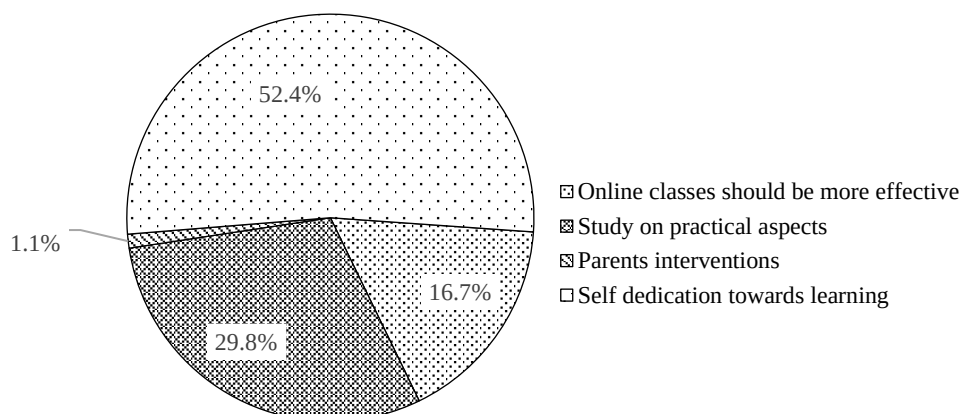


Figure 9. What are the possible solutions to cope up from gamification/online content? (84 Responses).

52.4% of students agreed that self dedication of students are most important to cope up from gamification.

CONCLUSION

This paper instruments for information and communication technologies (ICT)-supported instructional practices used in online universities help students enhance their collaboration skills. Data from 930 online students at the Open University of Catalonia, along with partial least squares route modelling estimate techniques, were used to draw three main conclusions from the study. First, gamification, mixed reality, and social media use in a socio-technical online learning setting directly explain collaboration skills. Second, other ICT-supported pedagogical practises (media content, wikis, open educational resources, personal webpages, personal clouds, and sharing files with classmates and lecturers on the cloud) are insignificant when compared to the use of games, mixed reality, and social media for the development of collaborative skills.

REFERENCES

1. Mohamad, S.N.M., Sazali, N.S.S., & Salleh, M.A.M. (2018). Gamification approach in education to increase learning engagement. *International Journal of Humanities, Arts and Social Sciences*, 4(1), 22–32.

2. Bârsan, G., Năstăsescu, V., & Bârsan, V.A. (2017, June). Simulation and Gamification in e-Learning Technical Courses. In *International Conference Knowledge-Based Organization* (Vol. 23, No. 3, pp. 7–10).
3. Khaleel, F.L., Ashaari, N.S., Wook, T.S.M.T., & Ismail, A. (2017, November). Gamification-based learning framework for a programming course. In *2017 6th International Conference on Electrical Engineering and Informatics (ICEEI)* (pp. 1–6). IEEE.
4. Bele, J. L., Bele, D., & Debevc, M. Gamification as a method for increasing e-learning motivation.
5. Vijayakumar, S. (2020). Gamification through Moodle to enhance vocabulary learning. *Journal of Critical Reviews*, 7(13), 3108–3111.
6. Keyes, M., & Johnstone, R. (2004). Changing legal education: rhetoric, reality, and prospects for the future. *Sydney L. Rev.*, 26, 537.
7. Rhode, D.L. (2012). Access to justice: an agenda for legal education and research. *J. Legal Educ.*, 62, 531.
8. Law, D.C.S. (2010). Quality assurance in post-secondary education: Some common approaches. *Quality Assurance in Education*.
9. DeNysschen, C.A., Cardina, C., Sobol, J.J., Zimmerman, B., & Gavronsky, A. (2018). Health, wellness, and fitness training: A pilot study on preparing physically fit and police academy-ready graduates. *International Journal of Police Science & Management*, 20(1), 66–79.
10. Pizzi, M.A. (2014). Promoting health, wellness, and quality of life at the end of life: hospice interdisciplinary perspectives on creating a good death. *Journal of Allied Health*, 43(4), 212–220B.
11. Bradshaw, C.P., Williamson, S.K., Kendziora, K., Jones, W., & Cole, S. (2019). Multitiered approaches to school-based mental health, wellness, and trauma response.
12. Koehler, D. (2017). Effects of a three day train-the-trainers law enforcement wellness course on officer reported well-being (Doctoral dissertation, The Wright Institute).
13. Labossiere, S., & lane, C.G. (2017). Health, Wellness, and Society.
14. Bond, L., Patton, G., Glover, S., Carlin, J.B., Butler, H., Thomas, L., & Bowes, G. (2004). The Gatehouse Project: can a multilevel school intervention affect emotional wellbeing and health risk behaviours?. *Journal of Epidemiology & Community Health*, 58(12), 997–1003.
15. Lewallen, T.C., Hunt, H., Potts-Datema, W., Zaza, S., & Giles, W. (2015). The whole school, whole community, whole child model: A new approach for improving educational attainment and healthy development for students. *Journal of School Health*, 85(11), 729–739.
16. Roffey, S. (2012). Pupil wellbeing—Teacher wellbeing: Two sides of the same coin?. *Educational and child psychology*, 29(4), 8.
17. Caponetto, I., Earp, J., & Ott, M. (2014, October). Gamification and education: A literature review. In *European Conference on Games Based Learning* (Vol. 1, p. 50). Academic Conferences International Limited.
18. Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review*, 32(1), 77–112.
19. Hamari, J. (2007). Gamification. *The Blackwell Encyclopedia of Sociology*, 1–3.
20. Kiryakova, G., Angelova, N., & Yordanova, L. (2014). Gamification in education. *Proceedings of 9th International Balkan Education and Science Conference*.
21. Martínez-Cerdá, J.F., Torrent-Sellens, J., & González-González, I. (2018). Promoting collaborative skills in online university: Comparing effects of games, mixed reality, social media, and other tools for ICT-supported pedagogical practices. *Behaviour & Information Technology*, 37(10–11), 1055–1071.
22. Kirange, S., Sawai, D., & Director, I. M. (2021). A Comparative Study Of E-Learning Platforms And Associated Online Activities. *The Online Journal of Distance Education and e-Learning*, 9(2).