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## **GAMIFICATION APPROACH IN SUSTAINABLE E-LEARNING METHOD**

***Annotation.** This paper aims to address various teaching methods to teach the subject effectively. The learning curriculum should involve participation from both the learner and the teacher. Teaching is not a one-sided endeavor. The instructors' primary duties extend beyond simply imparting knowledge; they also entail that the students understand what has been taught. Different courses require different teaching methods. For. eg. Management education needs to use case study methods, business simulations, management games, etc. Therefore, researchers have discussed different teaching methods, especially gamification.*

***Key words:** learning, gamification, teaching, e-learning*

***Анотація.** Ця стаття спрямована на розгляд різних методів навчання для ефективного викладання предмету. Навчальна програма повинна передбачати участь як учня, так і вчителя. Навчання – це не одностороння справа. Основні обов'язки інструкторів виходять за межі простого передачі знань; вони*

*також передбачають, що учні розуміють те, що викладається. Різні курси вимагають різних методів навчання. Наприклад, Управління освіти потребує використання методів кейсів, бізнес-симуляцій, управлінських ігор тощо. Тому дослідники обговорюють різні методи навчання, особливо гейміфікацію.*

**Ключові слова:** *навчання, гейміфікація, електронне навчання*

**Introduction.** In general, the term «Industrial Revolution 4.0» refers to a shift-like work that emphasizes data management technologically advanced industrial work systems, communication, and improvements in work efficiency relating to human contact. The main requirement of organizations in their corporate decision-making processes is data, which is supported by systems with limitless processing capability. The quality of a university's graduates is now the main determinant of its success rather than its enrolment numbers. Universities must be able to respond to challenges to address technological advancements and competition in the world of work in the age of globalization in order for a country to successfully navigate the 4.0 industrial revolution. Due to its ability to influence participants' behaviors through applications of its techniques in the most different circumstances, gamification has become extremely popular in recent years. It would appear that it is increasingly penetrating educational settings and circumstances, which is encouraging more frequent research in this area of study. Making learning more interesting for students is actually a major problem among educational experts.

**The article aim.** This article aims to study the gamification approach in the method of continuous e-learning to enhance experiential learning.

**Research Results.** The major trends in recent educational technology-based learning are video-based learning, social learning, mobile learning, and gamification. Among these four, gamification is found to be engaging and motivating the learners in the initial school-level education. The same response may be possible in graduate education too, especially in the current technology-enabled learning era. Most of the researchers explored that more willingness exists towards digital and online games

among youngsters and if this gaming approach can be incorporated with learning methodology, the interest to learn and knowledge acquisition of the learners can be improved.

#### *A. Blended learning*

In order to get around a few of the problems with traditional educational methods, blended learning has become more and more popular. Students must put in their own effort and assume responsibility for their learning; individuals cannot just take in information by listening to lectures.

#### *B. Gamification*

Utilizing gamification is yet another important strategy while giving the student's PM classes. The teachers create game scenarios to provide a setting for the students analogous to the real world and address issues utilizing soft skills and technical expertise (PM knowledge areas). The fundamental idea is to get students to play games. To teach students practical abilities including goal-setting, communication, teamwork, leadership, and team management putting into practice the knowledge areas that have been theoretically explored. Many methods, including leader boards, Gamification uses prizes, levels, and points to keep players interested the students were inspired.

#### *Examples of Gamified platforms for learning:*

Socrative, Edmodo, Kahoot Quiz, Mentimeter, Padlet, Flubaroo, Google forms, Ed puzzle, etc.

#### *Elements of Game-Based Learning.*

The major components of gamification design are:

1. Game Mechanics covering learning and assessment activities.
2. Visual Aesthetics with virtual designs of the course content.
3. Narrative designs with sound and action for interactive learning.
4. Incentive system with rewarding points to encourage the learners to continue the game.
5. Content to enhance the knowledge of the gamified learning modules.

6. Points to award, Visual badges, a Leadership board to highlight best performers, levels to identify the learning stage, Feedback to guide, self-assessment, timing, repetitiveness and frequency of learning are the other elements to reinforce learning [8].

#### *Gamification and e-learning.*

Mistakes are typically recoverable in games since players may usually start again or play again. This opportunity for failure encourages experimentation among students and raises engagement levels. Gamification should not be confused with computer-based learning or programming, despite the fact that some interpretations do so to highlight how well the theory fits with emerging technologies. The core of gamification is not technology, but rather a variety of learning environments and a decision-making and reward system designed to boost motivation and engagement in the learning process. A model of four possible learning goals of games was brought out, it included communicative, affective, and cognitive learning outcomes as well as cognitive learning outcomes, which they separated into knowledge and cognitive skills. Another important finding is that in order to successfully integrate games into learning environments, it is crucial to gain a better understanding of the tasks, activities, skills, and operations that various game genres can provide. Additionally, it is important to consider how these might align with the desired learning outcomes.

#### *Learners (players) classification in gamification teaching.*

In teaching, the main task for the teachers is to categorize the learners and facilitate them to learn and upskill their knowledge from their current level to the next possible level.

Studies determined the classification of learners in gamification as below:

- *Explorer*: View, explore, vote, rate, curate, review, express, share, greet.
- *Achiever*: Win, challenge, create, show off, compare, taunt.
- *Socializer*: Like help, comment, give, tease, express, share, greet.
- *Killer*: Harass, hack, cheat, heckle, taunt, tease [3], [5].

*Gamification toolbox for designing game-based learning Gamification tool box for designing game based learning, (Werbach and Hunter, 2012) [10].*

*Dynamics:* Dynamics are elements that do not appear directly in the gamification environment, but that are visible in the big picture.

Major dynamics are emotions (curiosity, competitiveness, frustration, happiness), constraints (limitations or forced trade-offs), narrative (a consistent, ongoing storyline), relationship (social interactions generating feelings of camaraderie, status, altruism), progression (the player's growth and development).

*Mechanics:* Mechanics are the basic processes that enable users' engagement. Major mechanics are a challenge (puzzles or other tasks that require effort to solve), competition (one player or group wins, and the other loses), chance (elements of randomness), acquisition (obtaining useful or collectible items), feedback (information about how the player is doing), rewards (benefits for some action or achievement), turns (sequential participation by alternating players), transactions (trading between players, directly or through intermediaries), win states (objectives that make one player or group the winner-draw and loss states are related concepts).

*Components:* Components can be referred to as more significant states of mechanics and dynamics.

Major components are achievements (determined objectives), badges (visual representations of achievements), avatars (visual representations of a player's character), collections (sets of items or badges to accumulate), boss fights (especially hard challenges at the culmination of a level), content unlocking (aspects available only when players reach objectives), combat (a determined battle, typically short-lived), leaderboards (visual displays of player progression and achievement), gifting (opportunities to share resources with others), points (numerical representations of game progression), levels (denied steps in player progression), social graphs (representation of players' social network within the game), quests (predetermined challenges with objectives and rewards), virtual goods (game assets with perceived or

real money value), teams (determined groups of players working together for a common goal).

*Advantages to students in using gamification teaching methods.*

- Easier achievement motivation to encourage learning (Jayalath, 2020) [4].
- Teacher as a learning centre for the students engaging the learners to refer, recollect, respond and attend the assessments (Papp and Theresa, 2017) [7].
- Promoting problem-based and experiential learning (Smiderle et al., 2020) [9].
- Maximize learning and positive attitude in learning (Krause et al., 2015) [6].
- Orient learners towards freedom of choice and liberty to fail for gaining knowledge.

*Advantages to teachers.*

- Effective way to communicate, engage and evaluate learners and increase the relationship between instructor and learner (Briffa et al., 2020) [3].
- Supports the teacher in teaching complex courses, and facilitates systems thinking (do Amaral and Fregni, 2021) [1].

**Conclusion.** This article has emphasized the different methods to teach subjects. The advancement of technologies can be a great help for teachers to make learning richer for the students. Gamification is one of the most effective methods in higher educational institutions across the globe. Hence, the researchers are suggesting that faculty members adopt various teaching methods for their effective teaching.

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