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RESEARCH ARTICLE

SWOT ANALYSIS OF GAMIFIED LEARNING

Shalini Shrivastav¹ and Dr. Pallavi Dubey

1. Research Scholar at Dayalbagh Educational Institute

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Abstract

In the Present scenario, Gamified learning has become extremely popular, revolutionizing education by incorporating gaming aspects into traditional teaching-learning setting. Gamified learning improves and promotes students' learning by utilizing interactive elements like leader boards, rewards, badges, points; evoking aesthetic sense, joy, excitement during learning. This approach fosters active participation, boosts retention and cultivates a sense of achievement, making it a valuable tool in modern education. The objective of this paper is to examine the SWOT analysis of Gamified learning, exploring its (Strength, Weakness, Opportunities and Threats). Strength of Gamified learning lies in its ability to enhance engagement, knowledge retention and motivation. However, Challenges include potential distractions, misinterpretation and the risk of over simplifying complex subjects. Opportunities includes adaptability for various subjects and personalized learning experiences, while threats involve potential over-reliance on gamification and the need for continuous updates to keep content relevant. Thus, this paper focuses on the overall analysis of Gamified learning.

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Introduction:-

The knowledge landscape is rapidly changing across the world. Over the next ten years, India will have the highest proportion of young people in the entire world. Education in today's era is one of the strongest weapon. Quality based education is the best way to develop the rich talent of our nation. It helps children to think critically and develop a better perspective about the world. Education will play an effective role if it will be more qualitative, systematic, desirable, life skill based and lifelong. There are many recommendations have been given by NEP 2020 for improving the quality based education. NEP 2020 suggests that focus of education should not be developed cognitive aspect only but ethical, social and emotional aspects also be considered equally. Today's Education is based on creative and innovative way of learning rather than rote learning. Education would be more practical and fun based so that the students take interest and eager to learn new things. There are various new and innovative methods have introduced in education system like Using Artificial Intelligence in Education, Art integration based learning, Inquiry based learning, Gamified learning, Blended learning, Fun based learning, Cloud computing based teaching etc. There are many more other methods that are fulfilling the today's need of society but among all of these methods gamified learning becomes more popular in classroom teaching.

Gamified Learning:-

Gamified learning often referred to as game-based learning or gamification of education, is an innovative approach to teaching and learning that incorporates elements of games and game design into educational activities. It seeks to engage learners by making the learning process more enjoyable, interactive and motivating. In Gamified Learning, educational content is presented in a format that resembles games, with features such as challenges, rewards, competition and storytelling. These elements are strategically integrated to enhance the learning experience and achieve specific educational objectives. Gamified learning has gained popularity from kindergarten to higher education and corporate training programs. It capitalizes on the inherent human inclination to play and compete, making it an effective tool for improving students' engagement and knowledge retention. The use of gamified learning can take many forms, from digital educational games and simulations to classroom activities that incorporate game-like elements. It has the potential to make learning more immersive, interactive and fun based, ultimately leading to better educational outcomes. NCERT NISHTHA also talk about that "Children can learn a wide range of skills and develop attitudes and values that will serve them well in the future when digital play and gaming are incorporated into the classroom. Learning can take many forms, such as improving fine and gross motor skills, learning cause and effect relationships, problem solving, sharing, and compromising, learning how to play with others, fostering creativity and imagination, and—above all— realizing one's independence and positive self-worth."

Several studies have been conducted on Gamified learning. These researches are:-

A Systematic Mapping Study: Effects of Gamification on Students' Learning, Tambuwal, N.I., Yusuf, A., Hasaan, A. (2023), The aim of this study was to how does gamification help to improve students' learning. In this study, total 43 articles have collected from different sources i.e. Scopus, science direct and Jstor. The research employed Quantitative method, which includes surveys and experiments, is the most used method. Furthermore, the most frequently utilized game dimensions in an educational setting include visual status, social interaction, quick feedback, choice freedom, and failure freedom. Although the majority of the results were good, the overall picture was mixed, indicating that gamification enhances learning.

The Effect of Gamification on student learning outcomes in Educational Environments. Huang, R., Ritzhaupt, D. A., Soomer, M., et.al (2020), The current study shows the results of a meta-analysis that included empirical and quantitative studies on the effects of gamification on student learning outcomes in formal educational settings. In this study researcher employed 14 different game design elements and these game design elements laid different effects on students' learning outcomes. Thus, the findings shows that gamification has shown mixed effect on overall performance on students' learning outcome.

A Systematic Review of Gamification and Game-Based Learning as Cooperative Learning tool. Franco, F.I., Caviedes, M., et.al (2023), In Present scenario, many innovative methods are used in teaching-learning process. Among all of them cooperative learning works like a effective tool along with game based or gamification learning. Cooperative learning tool promotes socialization, group work, leadership skill and discussion. The PRISMA technique is used to present a systematic review. Using the databases SCOPUS, WoS, and ERIC, 20 articles published between 2012 and 2021 were selected. The findings demonstrate how the cooperative model, gamification, or game-based learning enable the development of social, emotional, and intellectual competencies in enjoyable environments that stimulate creativity.

Gamified Learning for Higher Education. Cudney.A.E, Subhash.S (2018), The purpose of this study is to classify and determine the applicability of gamified learning methods in higher education. It helps to divert traditional classroom teaching towards digital classroom learning. Digital learning environment helps to create an interactive classroom along with game elements, which promotes effective teamwork, communication and also promote competition. This study offers a thorough analysis of the literature on gamification in higher education, game-based learning systems, and frameworks that incorporate game design aspects. To choose the articles for this review that dealt with gamification in education, a thorough search of databases was undertaken.

Table 1.0 showing strengths, weaknesses, threats and opportunities of gamified learning

S Strength	W Weaknesses	O Opportunities	T Threats
<ul style="list-style-type: none"> ➤ Increase Motivation and Engagement ➤ Instant feedback ➤ Tailored Educational Routes ➤ Encourages Healthy Competition ➤ Enhances Attendance and Engagement ➤ Encourage Cooperative Learning ➤ Increase Self-Esteem and Confidence 	<ul style="list-style-type: none"> ➤ Distracting Learner ➤ Concerns about Equity ➤ An excessive focus on rewards ➤ Not Appropriate for Every Subject ➤ Needs a lot of preparation 	<ul style="list-style-type: none"> ➤ Enhancement of Technological Abilities ➤ Emphasis on collaboration and teamwork ➤ Increase focus and productivity ➤ Assessment of self learning 	<ul style="list-style-type: none"> ➤ Failure to Fulfill Learning Objectives ➤ Lacking of Involvement and Interest ➤ The Game is Considered as a Break from Learning ➤ Loss of Personal Accountability for Task Completion as a result of Team Accountability

Strength of Gamified Learning

Increase Motivation and Engagement:-

The higher degree of students involvement in gamification offers its most important benefits. People are inherently drawn to games, and when these components are incorporated into the curriculum, students frequently find the material more engaging.

Instant Feedback:-

Instant or immediate feedback is a common feature of gamified platforms. Students can tell right away if they answered a question or finished a challenge correctly. Students can use this immediate feedback to identify potential areas of error and modify their approach accordingly.

Encourages Healthy Competition:-

Students' sense of competition might be encouraged by leaderboards and scoring systems. This healthy competition can motivate pupils to work harder and make sure they fully understand the material.

Tailored Educational Routes:-

A lot of gamified systems adjust to the speed at which students study. The platform can modify the difficulties if a student does well in one area but finds it difficult in another, ensuring a customized learning experience.

Enhances Attendance and Engagement:-

The excitement of games can render lessons more attractive. Learners may be more motivated to show up and get involved when they anticipate a gamified experience.

Encourage Cooperative Learning:-

Group involvement is the goal of many gamified events. This encourages cooperation as students work together to accomplish shared objectives, creating a feeling of belonging and accomplishment.

Increase Self-Esteem and Confidence:-

Students can feel a sense of success when they accumulate points, badges and top on a leaderboard, Even if they are modest, these accomplishments can increase their self-esteem and confidence.

Weaknesses of Gamified Learning:-

Distracting Learner:-

Games can be entertaining, but they can also be distracting. Inadequate implementation could cause students to concentrate more on the game than the learning, which would lower academic results.

Concerns about Equity:-

The availability of technology varies across students. There may be equity concerns when gamification is used in classrooms where not all students have equal access to resources, giving some students an unfair advantage.

An excessive focus on rewards:-

A possible drawback of gamification is an excessive dependence on outside incentives such as badges or points. Students may risk for losing sight of the true learning objectives if they get overly preoccupied with obtaining these incentives.

Not Appropriate for Every Subject:-

Although gamification can be beneficial for many disciplines, but some other courses may not be well suited to a game-like approach. Traditional teaching techniques may work better in these situations.

Needs a lot of Preparation:-

Creating a gamified curriculum can be a time-consuming task for teachers. To design a successful gamified learning experience, one must have a thorough understanding of both the subject matter and game mechanics.

Opportunities of Gamified Learning:-

Enhancement of Technological Abilities:-

With the help of interactive digital tools, problem-solving techniques and experiential learning, gamified learning improves students' technological proficiency like it develops programming and coding skills, learn about emerging technologies, enhance digital literacy etc.

Emphasis on collaboration and teamwork:-

Gamified learning that integrates cooperation and teamwork boosts student engagement, enhance problem solving skills and gets them ready for real-world teamwork.

Increase Focus and Productivity:-

By establishing a stimulating, organized and goal oriented learning environment, gamified learning increases focus and productivity. Some elements support improved learning outcomes i.e. manage cognitive stress of learner, improve skill acquisition and learning power, improve attention and decision making skill.

Assessment of self learning:-

Gamified learning helps to measure achievement and tracking performance of learner and it also assist students' strength and weakness. In gamified learning, personal accomplishment is measured by points and scoring systems, ranking and leaderboard, quizzes, real world skill application , badges, certification etc.

Threats Of Gamified Learning:-

Failure to Fulfill Learning Objectives:-

Gamified learning can be effective way to engage students, but it can also lead to failure in achieving learning objectives, if not implemented correctly.

Here are some reasons why gamification might hinder learning outcomes:

1. Focus on rewards over learning
2. Superficial Engagement
3. One-size-fits-all approach
4. Inconsistent learning pace

The Game is Considered as a Break from Learning:-

If the Game is considered a break from actual learning rather than part of it, this can lead to disengagement from the core educational objectives. In another word we can say that if game is not meaningfully tied to learning outcomes, students may see it as entertainment rather than an educational tool.

Lacking of Involvement and Interest:-

Gamified learning is known to increase involvement and interest of the learners but in some cases, it can lead to vice-versa.

There are various reasons for lacking of involvement and interest are given below-

1. Overuse of Extrinsic Motivation
2. Repetitive or Unchallenging Game Design
3. Technology or Accessibility Issue
4. Not Appealing to All Learning Styles

Loss of Personal Accountability for Task Completion as a result of Team Accountability:-

Gamified Learning usually includes team based learning such as group challenges, cooperative missions and shared rewards. While teamwork can be beneficial, it can also lead to loss of personal accountability for task completion.

There are some reasons that how Gamified learning reduces personal identification and accountability:-

1. Unequal Participation in Group Work
2. Social Loafing
3. Blurred Responsibility
4. Overemphasis on Team Competition

Conclusion:-

Gamified learning presents a dynamic and engaging approach to education, offering strengths such as increased motivation, personalized learning experiences and improved retention. However, it also comes with weaknesses including high implementation cost, potential distraction of learner, not fit for all subject, required pre preparation etc. In the same way, opportunities in gamified learning are measured self learning, focus on productivity, global accessibility and so on. Threats such as over reliance on rewards, privacy concern, loss on individual identification etc. To be concluded, researcher suggests that for maximizing the benefits of gamified learning, educators and organizations must strike a balance between entertainment and educational value, ensuring that game mechanics enhance rather than detract from learning objectives. With strategic planning and continuous improvement, gamified learning can revolutionize education and training, make learning more effective and engaging in the digital age.

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