

The Impact of Gamified 4Ps Marketing Mix Strategies on Teaching and Learning Effectiveness

*Yuslina Liza Mohd Yusof¹, Intan Syafinaz Mat Shafie², Nur Atiqah Akmal Binti Ramli³

^{1,2}Faculty of Business and Management, Universiti Teknologi MARA Selangor, Puncak Alam, Selangor, Malaysia

³Ministry of Tourism, Arts and Culture, Presint 5, Wilayah Persekutuan Putrajaya, Malaysia

Email: *yuslina641@uitm.edu.my, intansyafinaz@uitm.edu.my, atiqah.akmal@motac.gov.my

Corresponding Author: Yuslina Liza Mohd Yusof

Abstract: Significant advancements in teaching and learning tools have been made possible as a consequence of the incorporation of game design elements into the educational setting. In this particular study, every group of students must respond to all statements based on the Marketing Mix Board Game. This is done in an effort by the lecturers to establish a learning environment that is both interesting and interactive. 100 students were asked to fill out a questionnaire in order to gather information about their perceptions, levels of engagement, and overall satisfaction with the Marketing Mix Board Game. The Marketing Mix Board Game is specifically highlighted as an engaging and entertaining assessment instrument for the goal of reinforcing the concepts of the marketing mix. This is done in order to highlight the importance of the marketing mix in their studies and working life. As a result of the study that was carried out, it was discovered that the students who participated in the study indicated perceptions that are statistically insignificant concerning the use of gamification in teaching and learning settings. The students think that gamification is a method that may be utilized to integrate into the teaching and learning effectiveness inside the classroom in a way that is both pleasant and successful in terms of positive engagement. After considering this, the implementation of gamification could potentially assist students in acquiring a more profound comprehension of the marketing mix methodologies, which would ultimately result in enhanced student results and performance.

Keywords: *Gamified Marketing Mix, Teaching and Learning, Perception, Engagement, Satisfaction*

1. Introduction and Background

Gamification tools and technology have changed the way we learn over time and in different situations, putting more focus on learning through these methods than through traditional ones (Alabbasi, 2018). More students are less interested and focused on class because lecturers keep using traditional teaching methods, where they give lectures using slides or textbooks and students mostly listen and take notes (Munuyandi et al., 2021). The student participation in the planning, delivery, monitoring, and assessment of higher education programs is the subject of a comprehensive study that has been conducted (Scott, 2008). This effort includes conducting a study on the full experience of graduating from university, which encompasses more than just teaching in the classroom. In addition, comprehending students' perceptions and expectations in order to make them easier to comprehend, more aligned, and manageable by distinctive learning from teaching through the utilization of a variety of active learning methods rather than passive learning methods, and by encouraging total student participation.

The implementation of contemporary pedagogical strategies in higher education equips lecturers with multiple resources that enhance student engagement and motivation. Gamification enhances student engagement with learning by incorporating games and fostering competitiveness among colleagues. Gamification in education, particularly in addressing diverse topics and scenarios, can be characterized as a catalyst for fun and motivation, encouraging students to maintain their involvement with the subject to enhance both engagement and satisfaction (Aleksic-Maslac et al. 2017). Krunić et al. (2015) and Fotaris et al. (2016) stated that gamification employs the same aspects and perhaps more than non-game contexts in education to impact student behavior, to strengthen their desire to learn with enjoyment, enhance competitiveness, foster interpersonal interactions, and provide motivation. This demonstrates a compelling rationale for utilizing the advantages of gamification in education. Gamification has found widespread application in diverse subjects in higher education, including marketing, medicine, and theoretical contexts. Notably, gamification is increasingly being employed within educational settings to enhance student motivation and engagement, as evidenced by previous studies (Razali et al., 2020; Rahayu et al., 2022). Lo (2010) had stated that if educators want to become effective, less-than-optimal learning environments should be redesigned to include a variety of learning

activities and opportunities shown to foster achievement of the desired learning outcomes. Additionally, educators should provide evidence of student learning by assessing students' understanding and their demonstration of desired results.

It is crucial to be effective and deliberate while creating a teaching and learning environment that needs gamification. Some important things to think about are making sure that the gamification parts fit with the curriculum, using good instructional design principles, choosing game mechanics that are fun and suitable, managing time well, that often called "perseverance and playfulness", and dealing with possible problems that might come up during the design process. A lecturer may have already specified the course learning outcomes, assessment methods, and general educational objectives of the course. So, any gamification features that are included should not just be small additions; they should complement and build on these foundations. Gamification that works should assist students in reaching their learning goals by motivating them to grasp key subject information, get more involved, and connect what they learn with what they already know. Also, all questions should be made so that students can show that they have learned these things in a relevant way through gamification (Sylvester, 2024).

2. Literature Review

Perception: Gamification in education enhances and expedites the learning process and analytical thinking and is considered a focused teaching and learning strategy (Harman et al., 2014). The foundation is that students perceive the learning process as a game, rendering their cognitive engagement highly enjoyable. Given the contradictory results from other studies about students' perceptions of gamification in education, additional research is essential. Pilar et al. (2016) and Huotari and Hamari (2012) describe gamification as 'the process of augmenting the capacity to acquire experiences, depending upon the player's perception. Earlier investigations have mainly concentrated on students' views regarding the implementation of gamification in educational settings, particularly in language studies (Fithriani, 2021; Cruz & Guayara, 2021) and scientific disciplines (Hursen et al., 2019; Jones et al., 2019; Rahayu et al., 2022). For example, Fithriani (2021) and Jones et al. (2019) found that most of the people they talked to thought that using gamification tools like "Kahoot" to learn English and biology was a good idea. The results showed that adding gamification can make students more interested in learning and more motivated to do so. Pitoyo et al. (2020), Razali et al. (2020), Handoko et al. (2021), and Zainudin et al. (2023) all say that students like Quizizz and consider it to be a fun and interesting way to learn. Students think that gamification is a better way to teach than traditional methods, which makes them more interested in and excited about learning. At the same time, there are positive changes in behavior and more interaction in a competitive setting, which makes the learning experience more fun and motivating. Previous studies have shown that there are conflicting results about how students feel about gamification in learning when it comes to motivation and engagement. Rahayu et al. (2022) had examined students' impressions of gamification in the context of business, extending the exploration beyond language and science-related courses. Meanwhile, Lugo (2022) indicates that students' assessments of the course's general usability correlate with their satisfaction and learning outcomes and that a more coherent and structured course layout is linked to increased student satisfaction. Extensive research exists about students' experiences, appreciation, and perceptions of the educational processes in which they engage, along with the factors that shape their evaluations of these teaching and learning processes (Barbera et al., 2013). As a result, it is hypothesized that

H1: Perception significantly impacts student satisfaction in the context of a gamified 4Ps marketing mix

Engagement: Engagement reflects students' passion and emotional investment in learning activities (Alsawaier, 2018), especially in the domains of intrinsic motivation and cognitive engagement (Alsawaier, 2018; Rahayu et al., 2022). A crucial element of learning engagement is cognitive engagement, defined by students' persistent efforts to comprehend a subject and their long-term commitment to learning (Rahayu et al., 2022). A combination of robust motivation and elevated cognitive engagement yields an effective learning experience (Alsawaier, 2018). Students exhibit improved and enhanced engagement and comprehension when utilizing Quizizz, wherein the integration of established concepts with innovative concepts can be implemented in practical scenarios. The students participated in active inquiry and response with one another and the lecturer, collectively addressing problem-based case study topics. Quizizz has helped students think critically and take responsibility for their learning. (Zainudin & Zulkipli, 2023) Gamification in teaching and learning encourages behavioral, emotional, and cognitive engagement by making lessons more captivating and

interactive, allowing students to work together with their peers and explore the material in new and exciting ways. This method encourages students to work together to share knowledge and solve problems, which improves their social and communication skills. Gamification also changes the traditional role of teachers from just giving out information to being facilitators who help and improve the learning experience, creating a more student-centered and participatory classroom environment (Adipat et al., 2021). Pitoyo et al. (2020) did a study that shows that students are drawn to the competitive side of Quizizz, which encourages them to participate and think critically, which makes them much more excited. One of the best things about Quizizz is that it can connect what students learn in business classes to real-life situations. This conclusion parallels the results reported by Alsawaier (2018), which demonstrated that gamification promotes cognitive engagement. When students revisit previously addressed problems and independently address comparable issues, they exhibit cognitive engagement, actively participating in the processes of reasoning, interpretation, and application of knowledge pertinent to business principles. It is essential to recognize that not all gamification strategies have demonstrated efficacy in enhancing student motivation and engagement. Hanus and Fox (2015) indicate that students engaged in gamified learning sessions exhibited a decrease in motivation and engagement over time. As a result, it is hypothesized that:

H2: Engagement significantly impacts student satisfaction in the context of a gamified 4Ps marketing mix

Satisfaction: In this study, student satisfaction refers to “the learning experience.” One of the most important roles of an educational institution is to offer relevant learning experiences to the students. In the study conducted by Aleksic-Maslac et al. (2017), 67% of students expressed satisfaction with gamification, rating it a score of 5. Moreover, the students articulated their favorable perceptions of gamification in the classroom, as it allowed them to engage with their lectures through enjoyable games, thus offering supplementary motivation. Student satisfaction is a subjective assessment by students regarding the degree to which the learning environment facilitates academic achievement. Elevated student satisfaction signifies that intensive pedagogical approaches effectively promote cognitive engagement in teaching and learning. Key factors in student satisfaction may pertain to the roles of lecturers and students, which could be fundamental to student learning (Lo, 2010). Students expressed high satisfaction with Quizizz due to its motivational and interactive features. Consequently, it is imperative that the primary gamification elements, namely points, incentives, leaderboards, and varying difficulty levels, are closely associated with enjoyable experiences. Reward points cultivate competitiveness and achievement, while prizes like power-ups offer rapid feedback and reinforce successes. The questions, categorized by difficulty, can inspire students to challenge themselves and engage more profoundly with the learning content (Zainudin & Zulkipli, 2023). Student satisfaction is complex, requiring students to subjectively evaluate the diversity of their expectations and educational experiences. Interaction, particularly between lecturers and students, is the vital determinant of perceived learning results. The proficient utilization of synchronous and asynchronous tools has resulted in enhanced engagement (Baber, 2020). The study by Adipat et al. (2021) examines the enhancement of students' educational experiences through the integration of gamification with academic material. Well-constructed educational games incorporating themes like curiosity, challenge, and control may foster an immersive atmosphere that promotes active engagement, problem-solving, and teamwork. Students perceive gamification favorably because of its participatory characteristics and its correlation with their everyday experiences. Gamification markedly improves student engagement, promotes independent inquiry and collaborative learning, and converts lecturers into facilitators of knowledge. Additionally, students express greater pleasure with their learning when games offer rapid feedback and monitor progress. Despite problems such as high equipment expenses and diminished physical activity, the motivational and educational advantages of gamification render it a potent instrument for improving perception, engagement, and happiness in the educational process.

3. Research Methodology

The group of 100 students engaged in the Marketing Mix Board Game as an instructional activity, particularly for those who have studied the marketing mix. Five classes are engaged, each containing four groups and consisting of 5 students per group. The classes were chosen according to the students' prior instruction on the marketing mix; hence, cluster sampling was employed to choose the sample for this study (Mohd Yusof, 2025; Putra Priyatmojo, 2021). The entire classes were selected as the sampling units (clusters), rather than randomly selecting individual students from all classes. The questionnaire has been adapted from Bencsik et al. (2021) and Putra Priyatmojo (2021), with 18 questions: 7 items designed to evaluate student perception, 5

items concentrating on student engagement, 5 items assessing student satisfaction, and one open-ended question. This study employs a 4-point Likert scale, with strongly agree (4) as the highest rating and strongly disagree (1) as the lowest. This methodology seeks to attain a profound comprehension and a holistic perspective on students' perceptions, engagement, and satisfaction about gamification in the context of learning marketing mix strategies via the Marketing Mix Board Game.

4. Results and Discussion

Mean and standard deviations: By presenting the overall mean and standard deviations for all statements, the quantitative data on students' perceptions, engagement, and satisfaction in learning marketing mix using the Marketing Mix Board Game were provided. Overall, the results for the overall mean were clustered around the values of 3.59 and 3.76, which indicated that the students agreed with the statements while they were participating in the Marketing Mix Board Game. The overall standard deviation for students' perception, engagement, and satisfaction indicates that the data were grouped around the mean with the values of 0.43, 0.367, and 0.398, respectively.

Table 1: Overall Means & Standard Deviation for Students' Perception, Engagement and Satisfaction

Variables	Total Sample, N	Mean	Standard Deviation
Perception	100	3.5986	.43202
Engagement	100	3.7640	.36667
Satisfaction	100	3.7460	.39884

The results displayed in Table 2 were about students' perceptions; seven items were developed to assess students' insight into participating in the Marketing Mix Board Game activity and their comprehension of the marketing mix aspects. Students are expected to comprehend and be directed by clear goals and purposes, while also acquiring enjoyable, practical, and useful experiences related to the lessons. In conclusion, the three highest means of 3.69, 3.68, and 3.67 indicate that students perceive the Marketing Mix Board Game, an interactive learning tool, as positive, providing valuable knowledge and an enjoyable experience.

Table 2: The Level of Students' Perception (Adapted from Badrolhisam et al, 2019)

Statements	Rank	Results	
		Mean	Standard Deviation
I believe this board game activity will help me gain valuable knowledge and skills in marketing	1	3.69	.465
I think this activity will be relevant and beneficial to my marketing studies	2	3.68	.469
I anticipate enjoying this interactive learning experience	3	3.67	.473
I am excited to participate in the marketing mix board game activity	4	3.66	.590
The goals and purpose of this marketing mix board game activity are clear to me	5	3.65	.470
I feel confident in my understanding of the relevant chapters before playing the game	6	3.55	.716
I feel ready to engage in strategic decision-making during the board game activity	7	3.49	.577

In Table 3, the students must choose the statements presented in the Likert scale regarding their engagement with the gamified 4Ps marketing mix utilizing the board game. This section presents five statements designed for students to select if they concurred with on the Marketing Mix Board Game activity, which was an engaging and exciting experience that effectively met its objectives. Additionally, it is important to ascertain whether the activity was entertaining and if the students would agree to recommend it as a valuable enhancement to their marketing studies. In conclusion, the two highest means of 3.81 and 3.78 indicate that students express positive engagement with the Marketing Mix Board Game, which they enjoy; the games were participatory, and they would recommend them to others.

Table 3: The Level of Students' Engagement (Adapted from Badrolhisam et al, 2019)

Statements	Rank	Results	
		Mean	Standard Deviation
I enjoyed participating in the marketing mix board game activity	1	3.81	.394
I would encourage the marketing mix board game activity to other students	2	3.78	.416
The board game activity was highly engaging and interactive	3	3.77	.423
The objectives of the marketing mix board game activity were successfully achieved	4	3.74	.441
I gained valuable knowledge about relevant chapters from the board game activity	5	3.72	.451

The results shown in Table 4 were regarding student satisfaction. Five items were developed to assess student satisfaction after they participated in the Marketing Mix Board Game. The statements included an assessment of whether the Marketing Mix Board Game activity offered a satisfactory and suitable educational experience, functioning as an engaging and effective method for acquiring marketing knowledge while encouraging efficient team communication. In conclusion, the two highest means of 3.79 and 3.77 indicate that students are satisfied with the Marketing Mix Board Game, as the activity was a beneficial and satisfying educational experience.

Table 4: The Level of Students' Satisfaction (Adapted from Badrolhisam et al, 2019)

Statements	Rank	Results	
		Mean	Standard Deviation
I am satisfied with the complexity of the game, which was manageable	1	3.79	.409
I am satisfied with the overall experience of playing the marketing mix board game	2	3.77	.423
I am satisfied with the time spent playing the marketing mix board game, which was worthwhile	3	3.75	.435
The marketing mix board game activity was an enjoyable way to learn about marketing	4	3.72	.451
I am satisfied that the game fostered efficient communication within my team.	5	3.70	.482

Analysis of Variance: The ANOVA table summarizes the results of a multiple linear regression analysis conducted to assess the impact of student satisfaction in the context of a gamified 4Ps marketing mix. The regression table indicates that the model significantly explains the variability in the dependent variable. The F-statistic of 160.630, accompanied by a p-value of 0.00, underscores the statistical significance of the overall model. The ANOVA results indicate that the regression model is significantly effective in explaining the impact of students' satisfaction within a gamified 4Ps marketing mix.

Table 5: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.096	2	6.048	160.630	.001
Residual	3.652	97	.038		
Total	15.748	99			

Multiple Regression Analysis: The multiple regression analysis presented in Table 6 examines the impact of students' satisfaction in the context of a gamified 4Ps marketing mix. The findings indicate that the students' perception and engagement exhibit varying levels of significance in students' satisfaction. The unstandardized B value for perception is B = 0.019, suggesting an insignificant impact of student satisfaction within a gamified

4Ps marketing mix, contributing merely 0.019 when controlling for other factors. The standardized beta coefficient of $\beta = 0.20$ indicates a small effect, while the t-value of $t = 0.40$ and p-value of $p = 0.69$ suggest that this perception is statistically insignificant. This suggests that students' perceptions might not impact their satisfaction regarding a gamified 4Ps marketing mix. Their initial perception reflects a limited confidence in comprehending the relevant chapters before the activity, coupled with a willingness to participate in the marketing mix board game.

Students' engagement has an unstandardized B value of $B = 0.95$, indicating that for each unit increase in engagement, there is an expected increase of 0.95 in satisfaction, while holding other factors constant. The standardized beta coefficient of $\beta = 0.88$ indicates a strong impact, suggesting that student engagement is a significant factor. The t-value of 17.45 and p-value of 0.00 indicate strong statistical significance. This highlights that engagement significantly influences student satisfaction within a gamified 4Ps marketing mix. Gamification in teaching and learning enhances behavioral, emotional, and cognitive engagement by promoting active participation, peer collaboration, and dynamic exploration through interactive and immersive experiences.

Table 6: Summary of Multiple Regression Analysis

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients B	t	Sig.
(Constant)	.071	.297		.239	.812
Perception	.019	.047	.020	.400	.690
Engagement	.959	.055	.881	17.455	.000

Open-Ended Question: The open-ended findings in Table 7 provided further insights into the experiences that students had with the Marketing Mix Board Game activity. Students are required to answer, "Describe your experience during the Marketing Mix Board Game in the class." This is the only open-ended question that has been developed. The responses were presented in addition to the quantitative results that were reported in the previous table section. Several of the students emphasized particular areas that they found to be particularly fascinating, such as the elements that involved strategic decision-making and real-world scenarios they encountered.

Other students made suggestions for enhancements, such as the inclusion of a wider variety of case studies and directions that were more understandable. These qualitative findings supplement the quantitative data by indicating not only what the students felt but also the reasons why they felt that way. This provides a crucial finding for assessing the overall teaching and learning effectiveness for the students. Because of the open-ended feedback, game-based learning tools need to undergo constant improvement in order to better accommodate the requirements of a wide range of learners.

Table 7: Summary of Open-Ended Question

Theme	Descriptions
Fun and Engagement	Students overwhelmingly described the activity as "fun," "exciting," and "enjoyable." Words/phrases: "so fun," "funnnn," "exciting," "entertaining," "delightful," "best experience."
Knowledge and Learning Enhancement	Many students reported improved understanding and knowledge retention of marketing concepts. Comments like: "gain more knowledge," "help understand chapters," "learned more about marketing," "concepts came to life."
Teamwork and Collaboration	Students highlighted the importance of group interaction and team dynamics. Comments included: "shared ideas," "worked together," "teamwork is important," "bond with classmates."
Motivation and Emotional Experience	Affective responses such as happiness, pride, and reduced stress were common. Phrases: "I felt so happy," "nervous but happy," "release tension," "memorable," "proud."

Game Design Feedback	A few students gave constructive criticism about how to improve the game. Example: "Should have more time," "put questions on numbers," "got out of control due to excitement."
Inclusivity and Participation	Missed At least one response reflected non-participation but still perceived value. Insight: "I didn't attend but saw the video – it looked effective and exciting."

5. Recommendations

Marketing Mix Board Game uses a game-based learning approach that greatly and completely increases the participation of both students and teachers. This game gets people involved by combining the 4Ps of marketing with interactive questions. This turns theoretical ideas into an interesting and interactive experience. The competitive nature of the board game keeps students' attention and motivation up, turning learning into a fun challenge. Students worked in groups, for instance, to decide how to price a product launch, which sparked lively debates and made everyone excited. The gamified approach encourages intrinsic motivation (Scot, 2008; Glover, 2013; Kangas et al,2017; Rivera & Garden, 2021) by letting students actively participate instead of just passively taking in information. Students should ask short questions about marketing plans or make choices that will help them beat other teams in releasing products. Also, using digital tools or mobile apps (Kangas et al,2017) to make things more interactive for students who are good with technology.

The Marketing Mix Board Game helps people learn and teach by using methods like active recall, gaining knowledge, and critical thinking. Students must use their knowledge of basic marketing concepts to answer questions, solve case-based problems, and make choices that will affect the success of their team. This process not only brings together what students learn and teach, but it also links theory and practice (Sylvester, 2024). The design of the Marketing Mix Board Game makes it easier for students to connect information from different chapters, which helps them learn and remember what they learned for a long time. So, the lecturers need to improve the question bank so that it fits with the goals of the course and includes the levels of Bloom's Taxonomy. Add a short debrief after each round to explain why the right answers were given. This will help reinforce the teaching and learning goals right away.

Organized group roles and interactions with other players make collaborative learning (Camilon et al, 2021; Yu, 2021; Mathur et al, 2024) the most important part of the gamification. Students work together in groups to think about and agree on marketing mix strategies, which helps them improve their ability to work together and communicate. Members take turns being team leader, researcher, and spokesperson, which ensures that everyone has an equal say. Active discussion helps students understand what they are learning, work through different points of view, and improve their skills. It is a good idea to have structured reflection sessions where each team member has to give feedback or make a contribution to make sure that all points of view are heard.

This Marketing Mix Board Game has a very positive emotional effect (Kangas et al, 2017) on students. It creates a pleasant and helpful learning environment that helps people relax. Using Marketing Mix Board Games as a teaching method is unique, which makes students more interested and excited, and brings the class together. Positive feelings, like being engaged and happy about getting the right answers, make the experience more effective for teaching and learning. Students often say they feel more energized and connected to the subject, which shows that the board game helps them think more deeply about the marketing concept and feel more connected to it. Instead of focusing on competition, it is better to focus on teamwork by giving points for things like "best collaboration" or "most innovative strategy," as well as points for individual successes.

The Marketing Mix Board Game is successful because it is well-organized and makes sense. Each round has a time limit, which makes students think quickly and work well together. A structured question bank that is organized by topic helps make sure that the questions are in line with the learning outcomes and do not repeat themselves. It is suggested that you let people choose their difficulty levels based on how well they do in the group. Give teachers instructions on how to help students and suggestions on when to change the pace based on their needs and energy levels.

This Marketing Mix Board Game has been carefully designed to meet a wide range of needs and educational settings. The questions go from multiple choice to open-ended, which lets students with different learning

styles take part in a meaningful way. The teachers are clear and easy to understand, so all students can understand the game, no matter how much they already know. Suggested that students who are not present should also be accommodated through makeup sessions or other activities that help them meet the learning goals. This all-inclusive plan makes sure that everyone has equal access to educational outcomes and helps everyone feel like they belong. There have been steps taken to make sure that all students can play the game. These steps include clear instructions and a variety of question types to fit different learning styles (Sunitha, 2021; Marthur et al, 2024; Benosa et al, 2024). When students have trouble with language, they often have trouble with how questions or terms are formed. Give students vocabulary cards or a glossary of important marketing terms. Also, make sure that students who can't be there or who are far away can fully participate and benefit from the experience by offering an online or offline version of the game.

Conclusion

The outcomes of this study highlight the transformative potential of gamification, notably through the utilization of gamified 4Ps marketing mix strategies on teaching and learning effectiveness by using Marketing Board Games, in the process of improving the learning experience of students. Despite the fact that the views of gamification among students did not demonstrate a direct influence that was statistically significant on satisfaction, the findings of the study demonstrated a substantial positive association between student engagement and satisfaction. This highlights the fact that the effectiveness of gamification tactics is more significantly dependent on the level of student participation than it is on the attitudes or initial expectations of the students. A dynamic, fun, and collaborative learning environment is created through the use of the board game format, which contributes to a better grasp of the notion of the 4P marketing mix. Students shared their viewpoints that not just demonstrating passion and motivation while playing the game, but also obtaining a greater understanding of marketing mix strategies, linking academic content with real-world applications.

This is a significant achievement for the students. Consequently, this highlights the significance of experiential learning approaches that encourage critical thinking, decision-making, and collaboration among individuals. In addition, qualitative feedback indicates that the game encourages positive feelings, a sense of belonging, and constructive dynamics within the team. These affective benefits make a major contribution to the total learning experience, which suggests that emotional engagement has to be taken into consideration alongside cognitive outcomes when assessing the success of teaching.

Having said that, this study also draws attention to areas that require more development. Interactive design and continual development are crucial for sustaining relevance and inclusivity, as indicated by suggestions such as better instructions, broader case studies, time modifications, and improved question quality. These suggestions imply that it requires continuous improvement. The goal of these enhancements should be to suit a wide range of learning styles, levels of comfort with technology, and verbal abilities among students.

In conclusion, the gamified 4Ps marketing mix strategies are an effective instructional instrument that encourages learning that is centred on the student, stimulates engagement, and enhances satisfaction. Lecturers can transition from a passive learning model to an active learning model by including game elements that are linked with the teaching and learning into the delivery of the course. This transition will result in an increase in the level of knowledge retention and practical understanding. To ensure that gamification tactics in business and marketing education have the greatest possible educational impact, future implementation should place a priority on purposeful design, continual feedback, and flexibility.

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