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GAMIFICATION IN MARKETING EDUCATION: A GAME FOR LEARNING ABOUT CONSUMER BEHAVIOR IN RETAIL

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Abstract. Gamification has emerged as a powerful tool in education, especially in disciplines like marketing, where practical application of knowledge is essential. This article presents the results of a study comparing gamified learning and traditional lecture-based methods in teaching consumer behavior. The game, titled 'Snack Shopper's Dilemma,' focused on simulating a retail environment where students made strategic marketing decisions for an FMCG snack products. Two groups of students participated in the study—one using the game-based approach and the other following traditional learning methods. The study found that gamified learning increased engagement, improved comprehension, and offered a more enjoyable experience, ultimately leading to better learning outcomes and practical skills application.

Keywords: gamification; marketing education; consumer behavior; retail; Game-Based Learning

Introduction

As a seasoned marketing professional in FMCG with extensive experience applying gamified tactics in retail environments, I became curious about whether these principles could be transferred to marketing education. In retail, gamification has been shown to significantly increase consumer engagement and brand loyalty, so I wondered: Could students also benefit from this type of interactive learning when studying complex concepts like consumer behavior? This curiosity led to the design and testing of a game for marketing students from Sofia University that would help them understand consumer behavior in a retail context through an engaging and practical gamified approach.

This article explores the impact of game-based learning by presenting a game, 'Snack Shopper's Dilemma,' designed to teach consumer behavior in retail environments. By comparing the learning outcomes of a group of students who played the game with another group that received traditional lecture-based instruction, we aimed to evaluate whether gamification could

enhance student engagement, understanding, and application of marketing strategies.

Educational Games

Educational (didactic) games are structured educational tools designed to enhance learning through playful interaction. They are specifically created to convey knowledge, skills, or attitudes in an engaging manner, while maintaining a focus on educational objectives. According to Andreev (1987), didactic games are methods of "reflecting and assimilating reality through one's own actions in an imaginative context." These games often involve defined roles, rules, and goals aimed at achieving specific learning outcomes. The 9-step approach outlined by Gyurova et al. (2016) ensures that games are not only enjoyable but also effective learning tools.

The games stimulate intellectual activity by requiring participants to solve problems, make decisions, and think critically. Research has shown that they foster cognitive engagement by immersing learners in the learning process (Gyurova et al. 2016). One of the core functions of didactic games is to increase motivation. Through playful scenarios, students are more inclined to engage with the learning material, as these games often create a more enjoyable learning environment than traditional methods (Meyer et al. 2010). Educational games often require teamwork, helping to develop social skills and collaborative problem-solving among participants. As students work together to reach the game's educational objectives, they share knowledge and strategies, leading to deeper learning (Garris et al., 2002). These games simulate real-world situations, allowing learners to practice theoretical concepts in a risk-free environment. This function is particularly relevant in areas like marketing and consumer behavior, where decision-making processes are crucial (De Freitas 2018).

Gamification and Comparison with Educational Games

Gamification refers to the application of game-design elements, such as point systems, leaderboards, badges, and levels, to non-game contexts in order to enhance user engagement, motivation, and learning. Unlike educational games, which are complete educational experiences structured around gameplay, gamification applies selective game elements to existing systems. Deterding et al. (2011) define gamification as the use of "game design elements in non-game contexts to enhance engagement and problem-solving."

Gamification leverages psychological motivators, such as competition, achievement, and rewards, to influence behavior. These elements tap into intrinsic and extrinsic motivations by offering feedback loops (Kapp 2012). While didactic games are self-contained educational tools, gamification is typically integrated into broader learning environments to continuously engage users over time.

This can be achieved through regular rewards, leaderboards, and status tracking (Hamari et al. 2014).

One of the key advantages of gamification over didactic games is its ability to be easily implemented into various educational frameworks. Educators can adapt game elements to suit different curricula and learning styles without having to design entire games (Seixas et al. 2016). While educational games focus heavily on structured learning through gameplay, gamification primarily enhances motivation and engagement. It makes traditional learning processes more dynamic but doesn't inherently involve the immersive, scenario-based interaction of didactic games (Yang et al. 2017).

In conclusion, while both educational games and gamification are effective educational tools, they serve distinct purposes. Didactic games are focused on immersive, scenario-based learning, while gamification enhances engagement and motivation through the integration of game elements into traditional learning environments. Both approaches contribute to a more dynamic and interactive learning experience, though they target different aspects of the educational process.

Gamification in Marketing Education

Gamification, or the application of game elements in non-game contexts, has been recognized as a powerful tool for engaging students (Deterding et al. 2011). In marketing education, gamification allows students to interact with marketing concepts dynamically, offering an immersive environment that encourages learning through experimentation (Hamari et al. 2014). Research has demonstrated that students who engage in gamified learning are more motivated, more engaged, and often show better learning outcomes compared to those who experience traditional methods (Kapp 2012).

The integration of gamification in marketing education goes beyond the mere addition of game-like elements to the curriculum. It represents a pedagogical paradigm shift that leverages the inherent motivational and engagement attributes of games. The literature supports the efficacy of gamification in enhancing student motivation, knowledge retention, and critical thinking skills (Hamari et al. 2016; Seixas, Gomes, & Filho 2016).

At its core, gamification leverages basic psychological principles such as reward, competition, and achievement to stimulate interest and encourage specific behaviors. According to Seixas, Sandro and Jos (2016), these elements are critical because they tap into the human need for recognition and accomplishment (Yang, Asaad and Dwivedi 2017).

In educational settings, gamification has been used to transform traditional learning environments, making them more interactive and enjoyable. This approach not only increases student engagement but also improves knowledge retention. Partners at al. (2012) argues that when learners are actively engaged, they are more likely to absorb and recall information.

Furthermore, gamification can facilitate the application of theoretical marketing concepts to real-world scenarios. Through simulations and interactive case studies, students can experience the complexities and dynamics of the marketplace, making the learning process more relevant and impactful.

Consumer Behavior in Marketing

Consumer behavior, defined as the study of how individuals select, purchase, and dispose of products and services, is a critical concept in marketing (Solomon et al. 2019). Understanding consumer behavior is essential for marketers, as it helps them create more effective marketing strategies (Kotler & Keller 2016). Traditional methods of teaching consumer behavior often rely on lectures and case studies, which are effective but can lack the engagement that more interactive methods, such as games, provide (Landers 2015).

Gamification also holds great potential as a research tool for understanding consumer behavior. By designing gamified experiments or simulations, researchers can create controlled environments that represent real-world scenarios, allowing them to observe and analyze consumer responses and decision-making processes in a more natural and engaging context (Rodrigues, Oliveira, & Costa 2016). The interactive nature of gamification facilitates the collection of rich and nuanced data on consumer preferences, motivations, and purchase intentions, providing valuable insights for marketing strategists and product developers.

Hypothesis

We argue that the incorporation of gamified elements into marketing education will significantly impact learning outcomes and the effectiveness of consumer behavior research. The study seeks to test the following hypotheses regarding gamified learning:

– H1: Gamified learning will lead to higher engagement compared to traditional lecture-based learning.

– H2: Students in the gamified learning group will show greater improvement in retention and understanding of consumer behavior concepts.

– H3: The gamified learning group will demonstrate better problem-solving abilities and strategic thinking.

– H4: Gamified learning will result in higher levels of enjoyment and motivation, positively impacting learning satisfaction.

Methodology

Two groups of undergraduate marketing students (25 per group) participated in the study. One group engaged in a gamified learning session using ***"Snack Shopper's Dilemma"***, while the other group attended a traditional lecture on consumer behavior.

Game Design

– *Number of Players:* 7 – 9 students in each group (divided into 3 main roles: Shoppers, Marketers, and Retailers)

– *Duration:* 60 – 90 minutes per game session

– *Setup:* Classroom with virtual setting on the screen with tools like product catalogs, price lists, loyalty program data, and marketing promotion templates.

Roles

1. Shoppers (3 – 4 players)
   – These players represent the target consumers. They will simulate their purchasing decisions based on various factors like price, packaging, brand loyalty, and external marketing influences.
2. Marketers (2 – 3 players)
   – These players represent the brand managers or marketing teams for snack products (e.g., a popular potato chip brand). They are tasked with creating marketing strategies, promotional offers, and messaging to influence the shoppers' behavior.
3. Retailers (1 player)
   – This player acts as the retail store manager and determines product placement, in-store promotions, and how they will implement the loyalty program or discount strategies to encourage purchase.
4. Independent Observer (1 player, optional)
   – This participant takes notes on engagement levels, decision-making patterns, and how effectively each team applies marketing concepts related to consumer behavior.

Pre-Game Preparation (10 – 15 minutes)

– Each role gets briefed on the task at hand. The *Shoppers* will receive profiles that outline their buying habits, preferences, budget, and any specific influences (e.g., health-conscious, price-sensitive, brand loyal).

– The *Marketers* will be given details about their product (e.g., snack product features, brand values, existing market share) and will design a marketing campaign using a set budget. They will decide on tactics such as pricing strategies, promotional offers, social media ads, and in-store activations.

– The *Retailer* will be provided with options for product placement (e.g., shelf positioning), in-store promotions (e.g., "Buy One, Get One Free", and customer loyalty programs they can implement.

Round 1: Initial Consumer Interaction (15 minutes)

– The *Shoppers* "visit" the *Retailer's* store in a simulated digital environment (screen) and make purchasing decisions based on product display, promotions, and external influences (marketing ads).

– The *Retailer* will observe how *Shoppers* behave in-store, taking note of which marketing tactics seem to work or fail.

Round 2: Feedback and Adjustments (15 minutes)

– After Round 1, the *Marketers* and *Retailer* get feedback on their marketing tactics. This come in the form of surveys filled out by the *Shoppers* or observations noted by the Independent *Observer*.

– Based on the feedback, the *Marketers* will adjust their marketing strategies (e.g., changing promotional offers or launching new advertising messages) and the *Retailer* may revise product placements or promotions.

Round 3: Final Purchase Decisions (15 minutes)

– *Shoppers* revisit the store and make their final purchases, this time interacting with the updated strategies from the *Marketers* and *Retailers*.

– *Shoppers* also document their thought process as they make final decisions, providing qualitative data on what factors influenced them the most.

Debrief and Analysis (15 – 20 minutes)

– All participants, including the Independent *Observer*, will reflect on the game experience.

– *Shoppers* will share their decision-making process and explain which marketing and retail tactics influenced them the most.

– *Marketers* will discuss their strategies and any adjustments they made based on consumer feedback.

– *Retailers* will assess the effectiveness of their in-store tactics, such as placement, pricing, or loyalty incentives.

Traditional Learning Session

The second group followed a traditional lecture-based format covering the same consumer behavior topics, including pricing strategies, brand loyalty, and promotional tactics. This session included a lecture, case study analysis, and a class discussion.

Metrics

To effectively compare the results of gamified learning with traditional learning, we need to establish clear, measurable metrics. Here are some key metrics that were used for comparison, along with how each metric can be quantified and analyzed:

Engagement

– Metric: Percentage of students actively engaging with the content for both methods.

– Method: Compare the average level of participation (e.g., percentage of students who contributed actively to the lesson/game) and survey results on how engaging they found the experience.

Retention and Understanding of Key Concepts

– Metric: Improvement in test scores (pre- vs. post-lesson/game) on a set of consumer behavior concepts

– Method: Calculate the percentage improvement in knowledge from pre- to post-quiz for both groups and compare the results.

Problem-Solving and Critical Thinking:

– Metric: Quality and complexity of problem-solving strategies during the game (e.g., how well the "Marketers" adjusted campaigns based on consumer feedback, and how "Shoppers" made purchase decisions).

– Method: Use a rubric to score the complexity and creativity of solutions from both groups. Compare the average scores on problem-solving exercises from the traditional learning group and the decisions made in the game.

Enjoyment and Motivation

– Metric: Average enjoyment and motivation scores from surveys, based on student feedback on a scale (e.g., 1-10), including open-ended questions about what they liked most.

– Method: Compare average ratings from both groups. Qualitative feedback can also be categorized (e.g., "more interactive," "more passive") and compared.

Practical Application of Concepts

– Metric: Graded assignments based on application of concepts (e.g., creating marketing strategies in the game, making purchase decisions as consumers).

– Method: Compare the depth and accuracy of real-world application between the gamified and traditional groups. Use a rubric to assess understanding and the effectiveness of applying theoretical knowledge in both contexts.

Collaboration and Teamwork

– Metric: Average collaboration scores based on peer evaluations and observable teamwork.

– Method: Compare how well students collaborated in both learning settings by analyzing peer evaluations and teamwork performance.

Insights and Strategic Thinking

– Metric: Quality of insights generated (e.g., identifying trends, understanding consumer motivations, adapting strategies).

– Method: Assess the depth of strategic thinking and insight generation from written reflections and debriefs, comparing the richness of insights between the gamified and traditional groups.

Long-Term Retention and Transfer of Knowledge

– Metric: Performance on follow-up assessments. A retention quiz 2 weeks after the game.

– Method: Compare average retention scores to determine which group retained and transferred knowledge more effectively.

All values have been rounded up or down to the nearest half-unit (0.5). By analyzing these metrics, we created a comprehensive comparison between the gamified learning approach and traditional learning, highlighting the effectiveness of each method in terms of student engagement, understanding, and the application of marketing concepts. Table 1 summarizes the key aspects of the game "Snack

Shopper's Dilemma" and synthesizes the content into clear sections with key terms and expressions.

Table 1. Overview of the "Snack Shopper's Dilemma" Game Structure and Learning Outcomes

Category	Key Points / Expressions
Objective	Teach consumer behavior through gamified learning
Game Name	*Snack Shopper's Dilemma*
Participants	Undergraduate marketing students (2 groups: Gamified vs. Traditional)
Roles	Shoppers, Marketers, Retailers, Independent Observer
Game Structure	60 – 90 minutes, divided into 3 rounds
Round 1	Initial consumer interaction; Shoppers make purchasing decisions
Round 2	Feedback and adjustments by Marketers and Retailers
Round 3	Final purchase decisions; Shoppers revisit with updated strategies
Debrief & Analysis	Reflection on decisions and strategies by all participants
Key Learning Metrics	Engagement, Retention, Problem-solving, Enjoyment, Collaboration
Tools Used	Product catalogs, price lists, marketing templates, loyalty programs
Game Environment	Classroom/virtual setup; Simulated retail environment
Key Marketing Concepts	Pricing strategies, brand loyalty, consumer decision-making
Learning Outcome Focus	Practical application of consumer behavior theories
Evaluation	Surveys, quizzes, peer evaluations, observer notes

Results

Engagement

– Gamified Group: 9/10

– Traditional Group: 6/10

Observer Insight: The gamified session fostered greater engagement, with students actively discussing strategies and enthusiastically participating in the decision-making process. In contrast, the traditional group showed lower engagement, with fewer students actively participating in the lecture and discussion. This aligns with findings on social adaptation during learning activities (Zlateva 2019).

Retention and Understanding

– Gamified Group Pre-Quiz: 60%, Post-Quiz: 85% (+25%)

– Traditional Group Pre-Quiz: 65%, Post-Quiz: 75% (+10%)

– Observer Insight: The gamified group showed a significant increase in retention, with students able to recall and apply consumer behavior concepts more effectively than the traditional group. The interaction and real-time decision-making likely reinforced key concepts.

Problem-Solving and Strategic Thinking

– Gamified Group: 8/10

– Traditional Group: 5/10

– Observer Insight: The game provided opportunities for iterative problem-solving, allowing *Marketers* to adapt their strategies in response to feedback. The traditional group demonstrated lower critical thinking, as they were not placed in a dynamic problem-solving scenario.

Enjoyment and Motivation

– Gamified Group: 9/10

– Traditional Group: 6/10

– Observer Insight: Students consistently rated the game higher in terms of enjoyment, with many stating they preferred the hands-on, interactive experience to the passive learning of lectures. The gamified approach seemed to enhance intrinsic motivation.

Practical Application

– Gamified Group: 9/10

– Traditional Group: 7/10

– Observer Insight: The game's structure allowed students to apply marketing concepts in a real-world simulation, leading to a deeper understanding of how consumer behavior theories are applied in practice.

Table 2. Comparative Evaluation of Gamified Learning vs. Traditional Learning across Key Metrics

Metric	Gamified Group	Traditional Group
Engagement	9/10	6/10
Retention and Understanding	85% (+25%)	75% (+10%)
Problem-Solving and Critical Thinking	8/10	5/10
Enjoyment and Motivation	9/10	6/10
Practical Application	9/10	7/10
Collaboration and Teamwork	8/10	6/10
Insights and Strategic Thinking	8.5/10	6.5/10
Long-Term Retention	8/10	6.5/10

Learnings from the Gamified Approach

The gamified learning approach proved to be highly successful in engaging students. They were noticeably more attentive and enthusiastic during the game,

with its interactive and competitive structure immersing them in the learning experience. This active involvement made the material more relatable and easier to grasp. The game also allowed students to practically apply consumer behavior theories in a simulated retail environment. Concepts like pricing strategies and brand loyalty were no longer abstract, as students could see the direct effects of their decisions, which greatly enhanced their understanding. Additionally, the collaborative nature of the game fostered teamwork, with roles like Marketers and Shoppers encouraging strong communication and cooperation. This setup mirrored real-world marketing dynamics, helping students sharpen their strategic thinking and adaptability as they responded to feedback and adjusted their approaches.

However, there were areas for improvement. Some students missed opportunities for deeper reflection on their strategies and decisions during the game. A more structured debriefing after each round would help them analyze their actions more thoroughly and connect the game experience with theoretical knowledge. There was also an imbalance in participation, particularly with students in Shopper roles being more passive compared to those driving the marketing strategies. Giving Shoppers more decision-making power could enhance their involvement. Additionally, a few students struggled with the complexity of managing multiple variables early in the game. A gradual increase in complexity would allow them to acclimate better. Finally, real-time feedback was sometimes delayed, leading to missed learning moments. More immediate insights from instructors or observers during the game would guide students more effectively.

To address the issue of students who did not fully participate in the gamification experience, as highlighted in the study, several strategies can be applied to increase engagement and ensure more balanced participation. We can encourage students to rotate roles during the game (e.g., switching between Shoppers, Marketers, and Retailers). This will allow them to experience different perspectives and responsibilities, ensuring that no one remains in a passive role throughout the activity. Structured debriefing sessions could be implemented after each round of the game where all students must contribute feedback on their experience. Facilitators can ask targeted questions to ensure that even quieter students participate and reflect on the game dynamics. Another possible strategy is to introduce additional gamified elements like individual or team-based rewards for active contributions, critical insights, and collaboration. For example, points can be awarded for asking questions, providing feedback, or offering strategic adjustments during the game. Last but not least, we can start the game with simpler decision-making tasks and gradually introduce more complex elements as students become more comfortable. This gradual complexity will help students who may feel overwhelmed by managing multiple variables early in the game.

These strategies will address various reasons for lower participation, such as role passivity, cognitive overload, or lack of motivation, making the gamified learning environment more engaging and inclusive for all students.

Overall, the game should continue to be used, as it significantly increased classroom engagement and enjoyment compared to traditional lectures. Students were not only more involved but also better able to apply theoretical concepts to real-world scenarios. The team-based structure enhanced their collaboration and problem-solving skills, which are essential for future marketers. The game format also led to better knowledge retention, as the interactive nature of the experience helped students remember key marketing concepts more effectively. Furthermore, the insights gained from the game will be valuable when students eventually create their own marketing campaigns. With some adjustments, such as more structured reflection periods, role balance, gradual complexity, and real-time feedback, the game could become an even more effective educational tool, enhancing both engagement and practical learning outcomes.

Conclusion

The results of this study strongly support the hypotheses that gamified learning, as exemplified by *"Snack Shopper's Dilemma",* provides distinct advantages over traditional lecture-based methods for teaching consumer behavior in marketing education. The gamified approach significantly enhanced student engagement, retention, problem-solving, and overall satisfaction. Students in the game-based learning group not only grasped theoretical concepts more effectively but also applied them in a practical, real-world context. The interactive and dynamic nature of the game allowed for experiential learning, where students could iterate on their strategies and immediately witness the impact of their decisions.

The game environment, by simulating real-world market conditions, provided a risk-free space for students to experiment with different marketing tactics, thus enhancing their strategic thinking skills. This experiential component is especially important in a field like marketing, where practical application of theoretical knowledge is crucial for success. Furthermore, the hands-on learning experience created a higher level of intrinsic motivation which translated into increased participation and deeper learning outcomes, consistent with theories of self-regulated learning and motivation (Schunk & Zimmerman 2012).

In summary, the findings suggest that gamified learning has the potential to not only complement traditional teaching methods but, in some cases, surpass them in terms of effectiveness, particularly in disciplines that benefit from practical application. As marketing education continues to evolve, the integration of gamified learning methods, like *"Snack Shopper's Dilemma",* can be a valuable tool to better prepare students for real-world marketing challenges.

Limitations

Despite the promising results, this study had several limitations. First, the sample size was relatively small, with only 50 students participating across two

groups. Future studies could benefit from a larger sample size to increase the generalizability of the findings. Additionally, the study was limited to one specific game and one topic within marketing—consumer behavior in an FMCG context. The effectiveness of gamified learning might vary depending on the complexity of the subject matter and the design of the game itself.

Moreover, the study was conducted over a short period of time, with a focus on immediate learning outcomes. Long-term retention of the material and how well students apply these concepts in real-world scenarios outside of the classroom remains unknown. Further research is needed to assess the sustainability of gamified learning benefits over time.

Finally, the study primarily relied on student feedback and quiz scores to measure learning outcomes. While these are valuable metrics, incorporating more diverse methods of assessment, such as peer reviews, instructor evaluations, or even real-world applications of learned concepts, could provide a more holistic view of the effectiveness of gamified learning.

Future Research

There are several avenues for future research based on the findings of this study. First, expanding the scope of gamified learning to other areas of marketing education, such as digital marketing, brand management, or marketing analytics, could provide insights into how well gamification applies to different aspects of the curriculum. Additionally, exploring the impact of gamified learning across different academic levels—undergraduate versus graduate students—might reveal variations in how students at different stages of their academic journey benefit from gamification.

Another promising area for future research involves examining the long-term effects of gamified learning. A longitudinal study could track students who have engaged in gamified learning environments to assess how well they retain and apply the knowledge gained months or even years after the experience. This would offer insights into the durability of gamified learning outcomes compared to traditional methods.

Additionally, further research could explore different game formats, such as virtual reality or augmented reality, to assess whether the immersion level enhances learning even further. Investigating how technology-driven gamified learning environments compare to traditional, low-tech games like *"Snack Shopper's Dilemma"* could lead to valuable innovations in education.

Lastly, future research should explore the role of collaborative versus competitive dynamics in gamified learning. The current study did not deeply explore how these elements impact student behavior and learning outcomes. Understanding whether collaboration or competition drives better engagement and learning could help educators design more effective gamified experiences.

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