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THE IMPACT OF GAMIFICATION ON CONSUMER ENGAGEMENT AND BRAND LOYALTY IN DIGITAL MARKETING STRATEGIES FOR EDUCATIONAL SERVICES

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Highlights

- Gamification is shown to increase user engagement on educational platforms only when its design is consistent with learners' psychological needs.
- Immediate feedback and point-based mechanisms emerge as the most effective and stable drivers of user satisfaction and continued platform usage.
- The study empirically demonstrates that the effect of gamified engagement on brand loyalty is indirect and mediated by user satisfaction.
- The findings reveal a clear gap between high short-term engagement and weak long-term brand advocacy, evidenced by a negative Net Promoter Score.
- A practically oriented framework is proposed to guide the integration of gamification into the digital marketing funnel of educational services.

Abstract.

Introduction: The application of gamification in digital marketing is widely recognized for its ability to engage and motivate audiences through interactive, game-like elements. This approach is particularly relevant in the highly competitive educational services sector, where institutions increasingly rely on gamification to differentiate their offerings, attract attention, and foster deeper connections with students and parents. Despite its growing adoption, not all gamification mechanisms are equally effective, and their contribution to long-term marketing outcomes remains uneven. This study addresses this gap by examining how specific gamification elements influence consumer engagement and how such engagement subsequently shapes brand loyalty in digital educational platforms.

Methods: The research adopts a mixed-methods design that integrates quantitative and qualitative approaches. Quantitative data were collected through a survey of 300 users of educational services, while qualitative insights were obtained from case studies of three leading educational platforms—Duolingo, Khan Academy, and Coursera. The empirical analysis combines descriptive statistics, correlation analysis, and partial least squares structural equation modeling (PLS-SEM) to assess the relationships between gamification mechanisms, user engagement, satisfaction, and loyalty.

Results: The findings demonstrate that gamification significantly enhances consumer interaction by creating motivating user experiences, but only when game mechanics are strategically aligned with users' psychological needs. Immediate feedback and point-based systems emerge as the most effective drivers of satisfaction and repeated usage, whereas other elements show mixed effects. A positive relationship is identified between gamified engagement features and higher levels of customer retention and brand loyalty. At the same time, the results reveal that some educational services fail to adequately identify user gains and alleviate key user pains, which limits the transformation of engagement into sustained advocacy, as reflected in a negative Net Promoter Score.

Discussion: The study contributes to marketing theory by clarifying the role of gamification in facilitating the transition from short-term engagement to enduring brand relationships. It highlights that gamification is not a universal solution but a strategic instrument whose effectiveness depends on thoughtful design and alignment with user needs. From a practical perspective, the research offers an evidence-based, user-centric framework to guide marketers in educational services in implementing gamification more effectively within the digital marketing funnel, thereby enhancing both engagement quality and long-term brand loyalty.

Keywords

Gamification, consumer engagement, brand loyalty, digital marketing, educational platforms.

JEL classification: C51, C83, M31.

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Introduction

In recent years, due to rapid digital transformation the integration of e-learning platforms has become increasingly prevalent in educational institutions, acting as a modern complement or alternative to traditional teaching methods. The onset of the Covid-19 crisis has accelerated this shift, prompting higher education institutions to swiftly transition from face-to-face to online teaching and resulting in the development of various online courses and diverse LMS platforms [1]. As part of the current digital trend in education, the global EdTech market, valued at \$138.39 billion in 2025 [2], is set for strong growth driven by widespread adoption of digital learning platforms and the rise of remote work and education [2]. However, this dynamic environment also fosters high competition among EdTech providers, as companies strive to differentiate through technology, content quality, and accessibility to capture a share of the rapidly expanding market.

Except for the intense competition, the key challenges facing modern education are often attributed to students' lack of engagement and motivation to actively participate in the learning process. Currently, educators grapple with maintaining learners' attention, potentially leading to disengagement from online learning. Moreover, students exhibit diverse learning styles and paces, posing a challenge for educators to meet individual needs and provide effective feedback. One potential solution to address this issue involves introducing rewards and recognition for students' efforts and accomplishments. This approach is rooted in the utilization of game elements to enhance the learning experience [1; 3].

Gamification is a relatively recent term that refers to the gaming aspects used in various contexts that ordinarily do not involve them, including learning, to foster more beneficial learning experiences [4]. Students are eager to try different technologies to support their learning, primarily because they are proficient with mobile technology and enjoy using games and apps designed for such devices [4]. However, despite the growing popularity and potential benefit of gamification, its effectiveness in improving academic performance remains uncertain. The previous empirical literature has produced mixed results. Some studies have reported positive effects of gamification with varying effect sizes, while others have found no effects [3]. These conflicting results make it difficult to draw conclusions about the

effectiveness of gamification in enhancing learning outcomes and, consequently, the desire to continue using educational services.

The goal of the study is to analyze gamification specific impact on the relationship between engagement and long-term brand loyalty within the educational services sector. Being theoretically significant, the research contributes to the Body of Knowledge in digital marketing, consumer behavior, and educational technology by linking gamification mechanics to established loyalty models. Practical significance of the research is to provide actionable insights for marketing managers, product developers, and educators in designing more effective and loyalty-driven digital marketing strategies.

Research Objectives:

- To identify the most effective gamification mechanics for driving user engagement in educational digital platforms.
- To analyze the relationship between gamification-induced engagement and the development of brand loyalty.
- To develop a framework for integrating gamification into the digital marketing funnel for educational services.

Research Questions:

RQ1: Which gamification elements (e.g., points, progress bars, social leaderboards) are most effective at increasing user engagement metrics (time spent, lesson completion, return visits) in educational apps/websites?

RQ2: To what extent does the engagement driven by gamification translate into increased brand loyalty, measured through Net Promoter Score (NPS), customer lifetime value (LTV), and repeat purchases?

RQ3: What are the potential pitfalls or negative consequences of poorly implemented gamification in an educational context?

Literature Review

A rigorous theoretical framework is essential in the design and analysis of gamification and engagement strategies to ensure scientific validity of the study.

Self-determination Theory (SDT). Self Determination Theory is one of the fundamental psychological theories which distinguishes between two types of motivation, extrinsic and intrinsic. Intrinsic motivation is viewed as superior to extrinsic one. It is tied to interest in the task and the feeling of enjoyment while engaging in it, regardless of external rewards. Three Basic Psychological Needs make it more probable that intrinsic motivation for the task will be developed: *competence, relatedness and autonomy*. *The need for competence* is satisfied when an individual feels effective and capable while completing their task. Conversely, competence frustration is tied to failure and inadequacy. *The need for autonomy* is satisfied when an individual experience personal freedom while performing their task and involves authorship/attribution of ideas and their realization in practice. Autonomy frustration occurs when an individual feels controlled, pressured or

conflicted about how a task should be performed (or whether it should be performed at all). Finally, *the need for relatedness* is satisfied when an individual feels meaningful connection to others, and it is frustrating when feelings of loneliness or alienation occur. The self-determination theory also postulates that satisfaction and frustration of needs are not mutually exclusive. Frustration requires the perception of an active threat to a psychological need [5].

The Hooked Model

The Hooked Model was developed in 2014 by Nir Eyal who highlighted 4 stages of the hooked model: trigger, action, variable reward, and investment. *Trigger (internal or external)* is the prompt that initiates the user's behavior. External triggers are things like notifications, emails, or calls to action which may be frequently used by educational services involving gamification, while internal triggers are things like feelings, emotions, or thoughts. The next step, *action* can be any behavior that the user performs, such as clicking on a link, opening an app, or playing on a platform. The easier the action is to perform, the more likely the user is to do it. The third step in the model is the *variable reward*. This is where the user receives a benefit or satisfaction from completing the action. The reward should be unpredictable, so that users feel a sense of anticipation or excitement each time they perform the action. The final step in the Hooked Model is *the investment*. This is where the user puts something into the service, making it more likely that they will continue to use it in the future. The more invested the user is in the product, the more likely they are to continue using it, and the more difficult it becomes for them to switch to an alternative. The theory behind the Hooked Model is that by understanding the four stages of habit formation and how they relate to user behavior, educators can create products that are not only engaging but also habit-forming [6].

Customer Engagement Theory

Engagement is multidimensional – comprising cognitive, emotional, and behavioral dimensions. This statement has been widely discussed and supported in academic literature on Customer Engagement Theory. This conceptualization is particularly attributed to studies by researchers such as Brodie et al. (2011), Vivek et al. (2014), and Hollebeek and Chen (2014), who argue that each dimension contributes distinctly to the overall engagement construct [7].

Affective (emotional) engagement includes the dimensions of valence and arousal. Further affective outcomes include satisfaction, positive attitudes, enjoyment, immersion and flow. *Behavioral engagement* includes positive behavioral outcomes such as engagement and participation, social collaboration and teamwork and measurable performance improvements. *Cognitive engagement* contributes to a variety of learning outcomes, most of which are cognitive in nature. Studies report on significant improvements in critical thinking, creative thinking, knowledge acquisition and content understanding and perceptual skills. However, certain mixed results suggest that only the combination with affective and

motivational outcomes leads to cognitive learning outcomes that result in successful academic performance improvement [7].

Brand Loyalty Models. To generalize the impact of customer engagement in marketing, it should be said that one of the primary reasons for the growing importance of customer engagement in digital marketing is the profound impact it has on brand perception. Engaged customers are active participants who interact with a brand's content, share their experiences, and provide feedback. When customers feel engaged, heard, and valued, they are more likely to trust the brand. This trust lays the foundation for brand loyalty and advocacy. Engaged customers become brand advocates, promoting the brand to their social circles. This organic word-of-mouth promotion can significantly enhance a brand's reach and credibility. Moreover, customer engagement is a vital driver of customer retention. Engaged customers are more likely to remain loyal and continue their relationship with the brand [7].

Marketing researchers have conceptualized loyalty as consisting of two core components: attitude and behavior. *Behavioral loyalty* means consumers repurchase behavioral or intension of specific brand. *Attitudinal loyalty* means consumers' sense of specific products or service. Bowen and Chen (2001) describe three approaches for the evaluation of customer loyalty: behavioral measurement, attitudinal measurement, and composite measurement. Attitudinal loyalty is primarily measured through survey-based instruments that assess customers' psychological and emotional connections to a brand. Key measures include identification with the brand, affective and continuance commitment, trust, and repurchase intentions. Tools such as Net Promoter Score (NPS), Customer Satisfaction (CSAT), and Customer Effort Score (CES) are also used. Behavioral loyalty is measured through observable metrics like repeat purchase rate, purchase frequency, average transaction value, and engagement indicators such as website visits or social media interaction [8]. Together, these measurement approaches provide a comprehensive understanding of customer loyalty, capturing both the emotional commitment (attitudinal loyalty) and actual repeat behaviors (behavioral loyalty) essential for effective loyalty management and strategy development [9].

Gamification in Marketing. In the past few years, gamification has emerged as a trend within business, and, specifically, in the context of marketing. Marketers' enthusiasm for gamification has been driven by the observation that games engage people and that this engagement is sustained over time. There is, therefore, an inherently positive perspective on the use of game design elements in marketing [10]. The review of existing studies on gamification in such market sectors as retail and fitness reveals its contribution to business. Research on gamification in grocery retail [11] demonstrates that combining game elements with store or brand goals can enhance customer motivation, entertainment, and interaction, ultimately increasing brand strength and ROI. These game elements satisfy users' needs for autonomy, socialization, competence, and learning, creating a better overall experience.

Conversely, a study on impacts of gamification on the fitness industry [12] highlights potential drawbacks such as stress from competition, reduced intrinsic motivation due to reliance on external rewards, and possible negative effects on mental health. Participants might also view gamified exercise as less authentic, which can hinder long-term behavioral change.

Key game mechanics. The selection and design of game mechanics in gamification applications depend on the specific context and objectives of the system. Several game elements are commonly utilized in gamification, including feedback, leaderboards, points, badges, challenges and immediate responses. In this study, the following game elements were identified and categorized according to related literature [1; 11]:

PBLs:

Points: Points are earned upon successfully completing tasks or reaching milestones, reinforcing progress and achievements.

Badges: Badges are earned spontaneously after a certain period or upon accomplishing specific goals, these elements can be collected and exchanged for rewards serving as a powerful motivator.

Leaderboards: Leaderboards provide visual representations of individuals' achievements, enabling players to assess their performance and compare themselves to others. Leaderboards can be absolute (rankings of top performers) or relative (a player's position relative to a selected group of peers).

Others:

Challenges: Challenges or tasks represent engaging and attainable objectives within the gamification framework. By presenting students with challenging yet achievable tasks, challenges serve as strong motivators for learning.

Feedback: Instant feedback highlights students' mistakes or areas for improvement, allowing them to make immediate corrections and enhance their learning experience.

Avatars: Avatars function as personalized digital representations of users, visually embodying their participation or progress and allowing for self-expression and deeper engagement. Avatars increase the sense of belonging and presence, making the gamified experience more compelling and socially interactive.

By understanding the different game elements and their roles in gamification, educators and designers can make informed decisions when implementing gamified systems. The careful selection and integration of game mechanics can enhance student engagement, motivation and overall learning experience [12].

Gamification in Education (Gamified Learning). Analyzing educational approaches, it can be inferred that the literature on gamification in education demonstrates its strong potential for improving learning outcomes and student motivation inside the classroom or learning product. The study on the English language learning [13] demonstrated that gamification significantly enhances language proficiency and motivation. The experimental group using gamified

learning scored notably higher on post-tests than the control group, indicating cognitive and affective benefits. Another study conducted with undergraduate students from three private universities in Manila [14] found that educational gamification considerably improved student engagement, motivation, and academic performance. Both quantitative test scores and qualitative feedback revealed that students viewed gamified instruction as enjoyable and effective, aligning with previous research that highlights increased active participation in gamified environments.

The Research Gap. When synthesizing the existing literature on recent gamification studies in marketing and education, it is possible to identify that a comprehensive study linking gamification in marketing and user onboarding of educational services directly to brand loyalty is currently missing. Such a study would demonstrate how game elements in learning satisfy psychological needs, leading to repeat use, advocacy, and higher lifetime value. Bridging this gap would guide education providers in leveraging gamification not only for learning gains but also for long-term marketing success by creating deeper, loyal customer relationships.

Research Methodology

Methodological foundation of the research consists of qualitative and quantitative phases to capture both detailed insights and broader trends in user engagement and brand loyalty in educational platforms.

Phase 1: Qualitative - This phase entails conducting case study analyses of three prominent educational platforms - Duolingo, Khan Academy, and Coursera - aimed at identifying gamification strategies gathering insights into user sentiment.

Phase 2: Quantitative - In the following phase, a cross-sectional survey will be conducted to gather primary data from current and former users of educational services. A purposive non-probability sampling method will be used, with a target sample size of 300 participants.

Findings and Discussion

The qualitative research involves a detailed content analysis of app features, user reviews, and discussions within user communities to examine how gamification is both applied and received by learners using Duolingo, Khan Academy, and Coursera.

Table 1. App features analysis of Duolingo, Khan Academy, Coursera

Platform	Main Subjects	App Features	Most Used Feature	Free Access Features	User Base	Average Daily Users
Duolingo	Languages (40+)	Streaks, points, badges, challenges, feedback, personalized messages, notifications, leaderboards, levels	Language streaks	All language courses and practice	50 million monthly	14 million
Khan Academy	Math, Science, History, SAT Prep	Points, badges, streaks, levels, leaderboards	Interactive exercises	All lessons, quizzes, progress tracking	120 million worldwide	18 million
Coursera	University courses (variety)	Badges (limited), levels (of course completion)	Video lectures	Lectures, readings (no certificate)	Over 100 million registered	6 million

Source: compiled by the authors based on [16; 17]

Answering the research question about gamification elements effectiveness, streaks - tracking the number of consecutive days a user engages with the app - are one of Duolingo's most effective tools. In Khan Academy, badges and levels are awarded for completing tasks, giving users a sense of accomplishment. Coursera's visual progress bars and badges best represent learners' advancement through courses, providing great progress-tracking feedback. As for engagement translation into brand loyalty due to gamification, Duolingo is most heavily gamified to increase daily engagement and retention, having more than one fourth of monthly users opening the app daily, Khan Academy uses some gamification elements, while Coursera relies largely on course completion incentives due to its formal academic focus, falling short of motivating users daily. It can be inferred that the more gamified the app is, the more frequently it is used.

As for the quantitative research, the survey was carried out among 300 respondents: former users of educational platforms (48.7%) and current users (51.3%). The vast majority of them are students (91.7%), others are schoolchildren, office workers, and parents. Consequently, the age of the target audience is mainly 18-25 (86.3%), followed by those who are under 18, 26-35, and 36+, with 11.7%, 1.7%, and 0.3% respectively.

Table 2. User reviews analysis of Duolingo, Khan Academy, Coursera

Platform	Motivational Structure	Free Version	Feedback	Advertising	Achievable Learning Level	Quality Provided
Duolingo	a game-like environment, encouraging daily use	free version, but ads or paid subscription to premium features	immediate feedback during exercises	aggressive marketing tactics, with constant prompts to upgrade	useful for beginners/casual learners, but limited for deeper mastery	poor customer support (AI), doubts about its effectiveness in teaching practical language skills
Khan Academy	clear goals and mastery, focus on efforts and self-pace	100% free (non-profit)	immediate AI feedback from the system and detailed one from instructor	no specific marketing orientation	based on progress, from early education to advanced study	suitable for structured learning and covers a broad curriculum
Coursera	a mix of goal-setting, social learning and certification incentives	free content, but paid certificates	AI-assisted grading: fast feedback and instructor rubrics	universities' offerings	deeper academic learning but less oriented toward casual or language learning	access to actual university course content across diverse subjects

Source: compiled by the authors based on [18;19;20;21]

The following Fig.1 presents educational services, chosen by the respondents, whereas Fig.2 illustrates the general frequency of usage. It is worth mentioning that the surveyed are mostly familiar with Duolingo as an educational platform (81%). Additionally, 48.7% of the respondents used some services earlier, though the others are highly engaged currently, using gamified platforms every day (20.1%) and several times a week (13%), which characterizes the reached audience as significantly engaged.

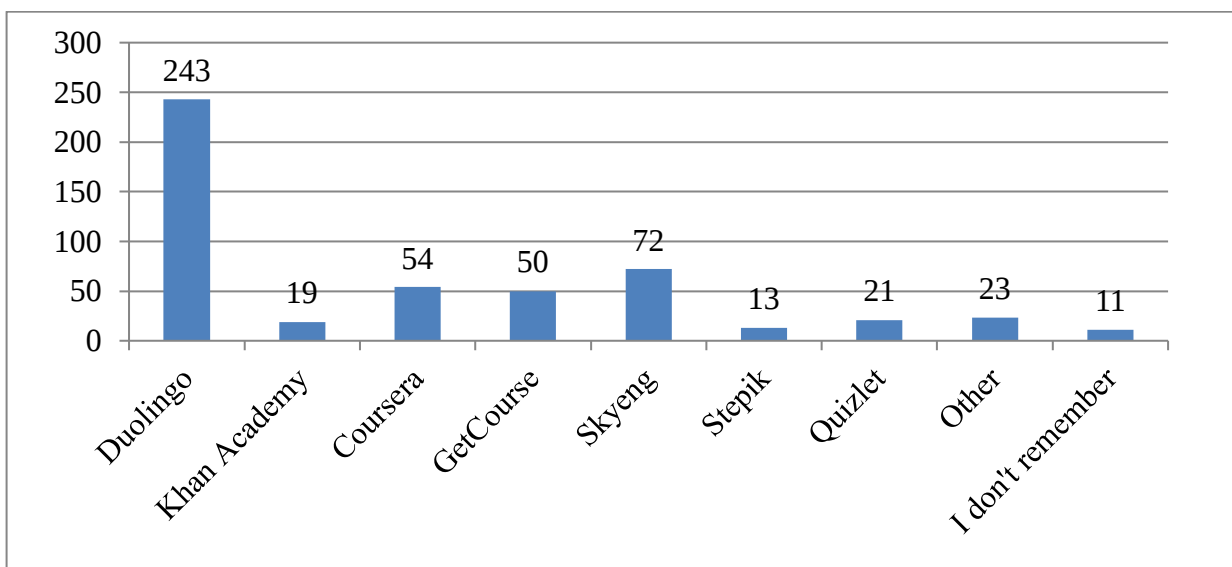


Fig. 1. Used educational services (number of responses)
Source: compiled by the authors

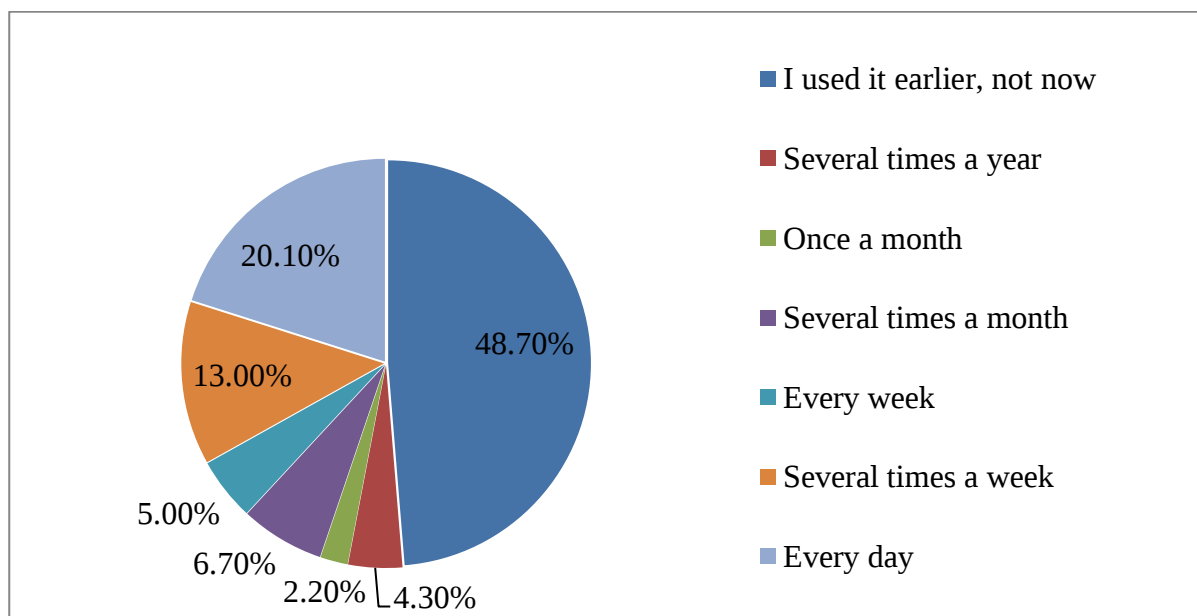


Fig. 2. Frequency of educational platforms' usage (%)
Source: compiled by the authors

It can be seen from Fig.3 that, when it comes to identifying the most effective gamification elements for driving user engagement in educational digital platforms, points were found to be highly engaging for the majority of users (63%), while badges did not influence engagement of the relative majority of them (27%), though motivating almost 43% of the respondents. Obviously, feedback showed the best results in engagement with more than 70%. Furthermore, leaderboards appeared to be quite attractive for ambitious users with more than 45%, but demotivating for those who do not stand for competition with others. Challenges were found to trigger

rather controversial reaction, exerting positive influence on the engagement in 42% of the users though. In addition, avatars were found not appealing for most of the respondents, not being a key to personalized experience.

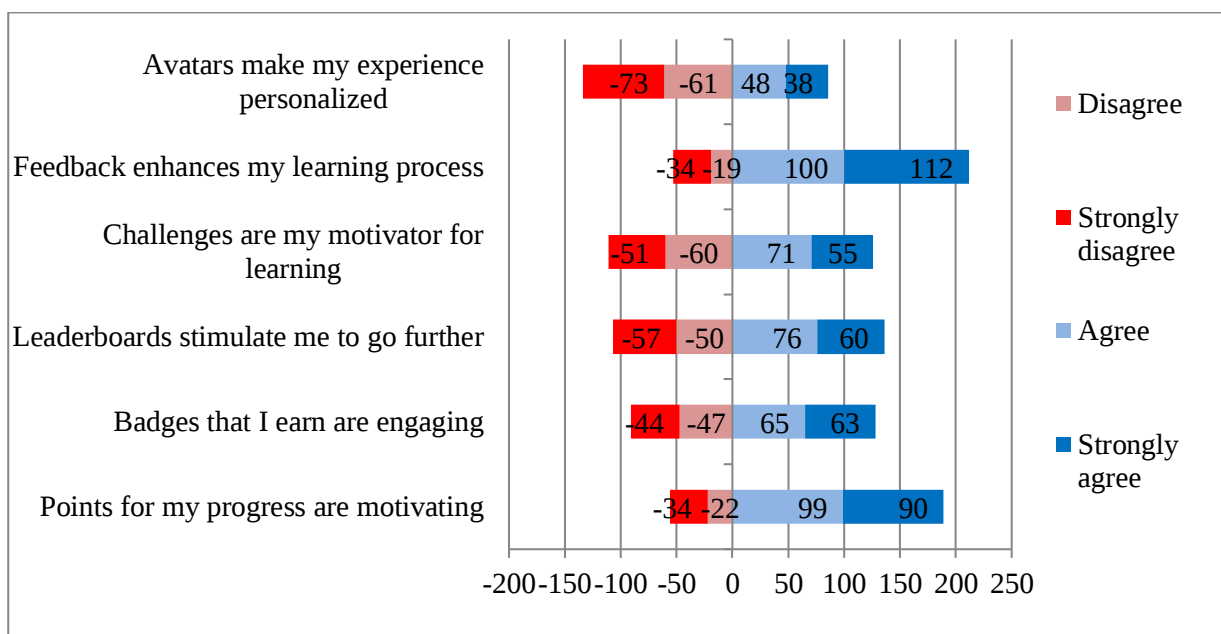


Fig. 3. Likert scale analysis (number of the respondents)

Source: compiled by the authors

Based on Table 3 the customer satisfaction (CSAT) score indicates a moderately positive experience, suggesting room for improvement. The Customer Effort Score (CES) is high, reflecting that customers generally find interactions easy and convenient. However, the Net Promoter Score (NPS) is negative, indicating challenges in customer loyalty and advocacy. Reuse intention is moderately positive, aligning with the CSAT trend.

Table 3. Consumer engagement analysis

Metrics	Mean	Standard Deviation	Result
Customer Satisfaction Score	3.56	0.196854208	58.33
Customer Effort Score	4.47	0.263780719	89.33
Net Promoter Score	6.74	0.692297807	-10.3
Reuse Intention	3.66	0.201997182	62.33

Source: compiled by the authors

Formulas used:

$$CSAT = \left(\frac{\text{number of "satisfied\&very satisfied" responses}}{\text{total number of responses}} \right) \times 100\%$$

$$CES = \left(\frac{\text{number of "easy\&very easy" responses}}{\text{total number of responses}} \right) \times 100\%$$

$$NPS = \%Promoters - \%Detractors$$

$$RI = \left(\frac{\text{number of "likely\&very likely" responses}}{\text{total number of responses}} \right) \times 100\%$$

Based on gamification elements and satisfaction correlation analysis, Fig. 4 provides a clear prioritization framework for educational platforms development and marketing resources to maximize user engagement and brand loyalty. The X-axis used Pearson's correlation with overall satisfaction, while the Y-axis used the average user rating for each element.

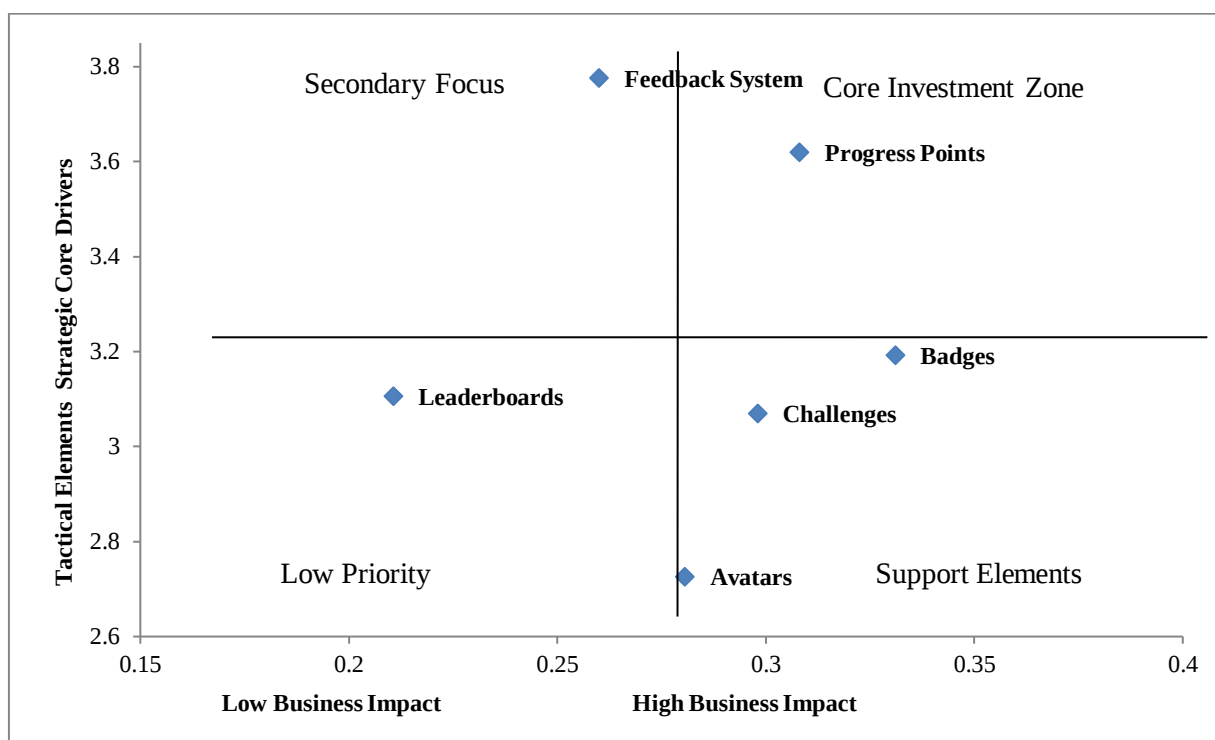


Fig. 4. Gamification Element Strategic Priority Matrix

Source: compiled by the authors

As for the relationship between gamification-induced engagement and the development of brand loyalty, it can be inferred that Fig.5 visualizes the relationships between the gamification elements, user perceptions, and loyalty outcomes, based on the survey results. Path Coefficients (β) have standardized values between -1 and +1. A value of 0.45 means a one standard deviation increase

in "Gamification" leads to a 0.45 standard deviation increase in "Satisfaction". Significance is interpreted as:

*** = Highly Significant ($p < 0.01$)

* = Significant ($p < 0.05$)

The analysis clearly shows that points, badges, and challenges are the most strategic gamification elements. They are strong drivers of satisfaction and loyalty. Moreover, elements like leaderboards and feedback provide good value and can enhance engagement but are not the primary motivators on their own. While not a gamification element itself, CES is a critical factor. It directly improves CSAT, meaning even the best gamification will underperform on a clunky platform.

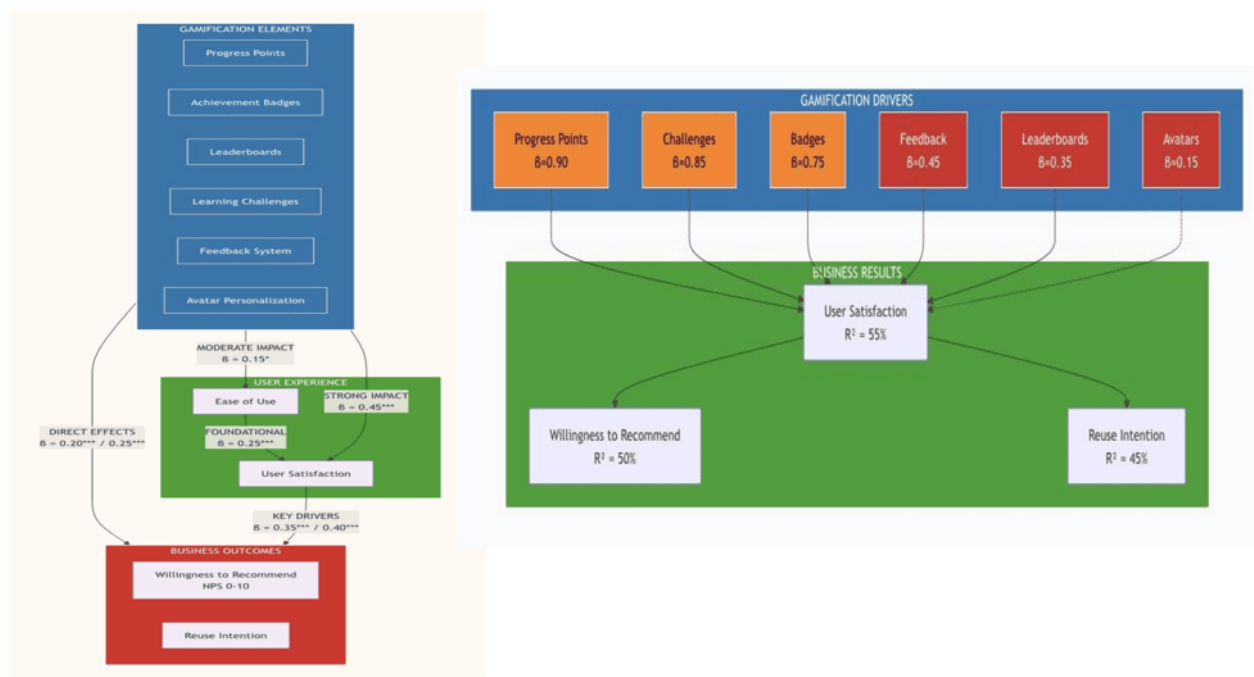


Fig. 5. PLS Model of consumer engagement

Source: completed by the authors in the program Smart PLS

According to Fig.6 and Fig.7, the pitfalls of poorly gamified educational services are mostly not structured educational approach, not personalized experience and lack of feedback, which makes users lacking in learning progress, bored and demotivated in turn and leads to quitting usage as a result. Moreover, consumers would like to see professional learning methodology, convenient interface and intense use of gamified elements in an ideal educational platform, based on Fig.8. The survey results on gains confirm the insights from the qualitative analysis.

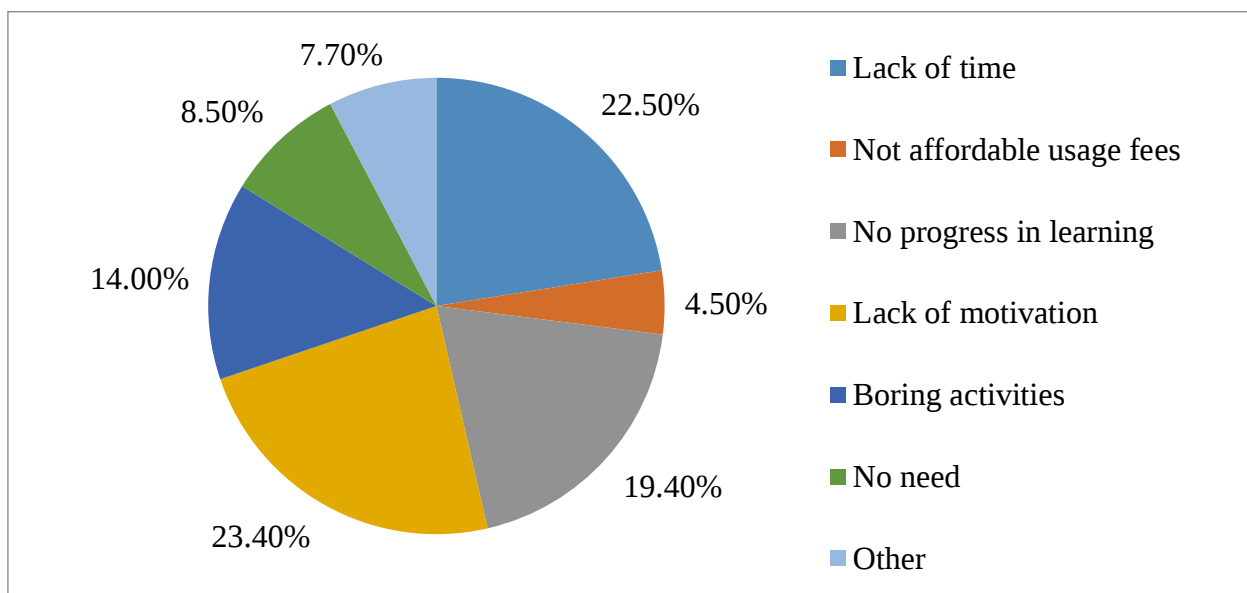


Fig. 6. Reasons for quitting usage (%)

Source: compiled by the authors

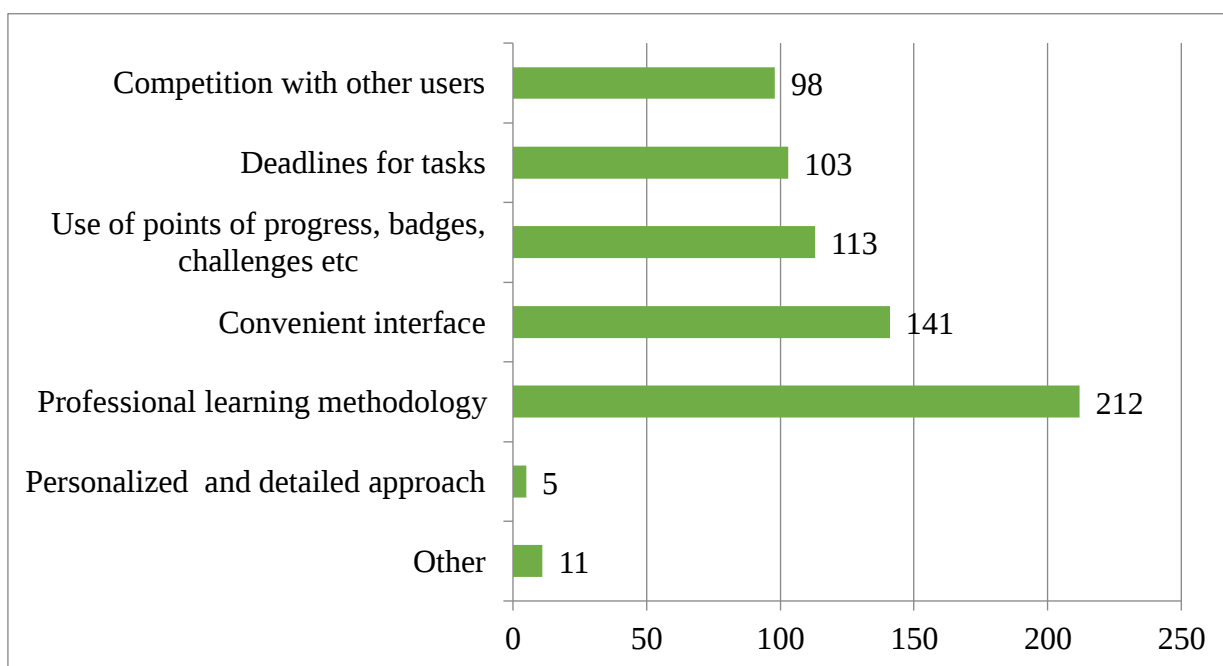


Fig. 7. Consumer pains (number of responses)

Source: compiled by the authors

The survey and qualitative data clearly show that not all gamification mechanics are equally effective. Their success can be directly explained by how well they satisfy the three Basic Psychological Needs outlined in Self-Determination Theory (SDT): Competence, Autonomy, and Relatedness.

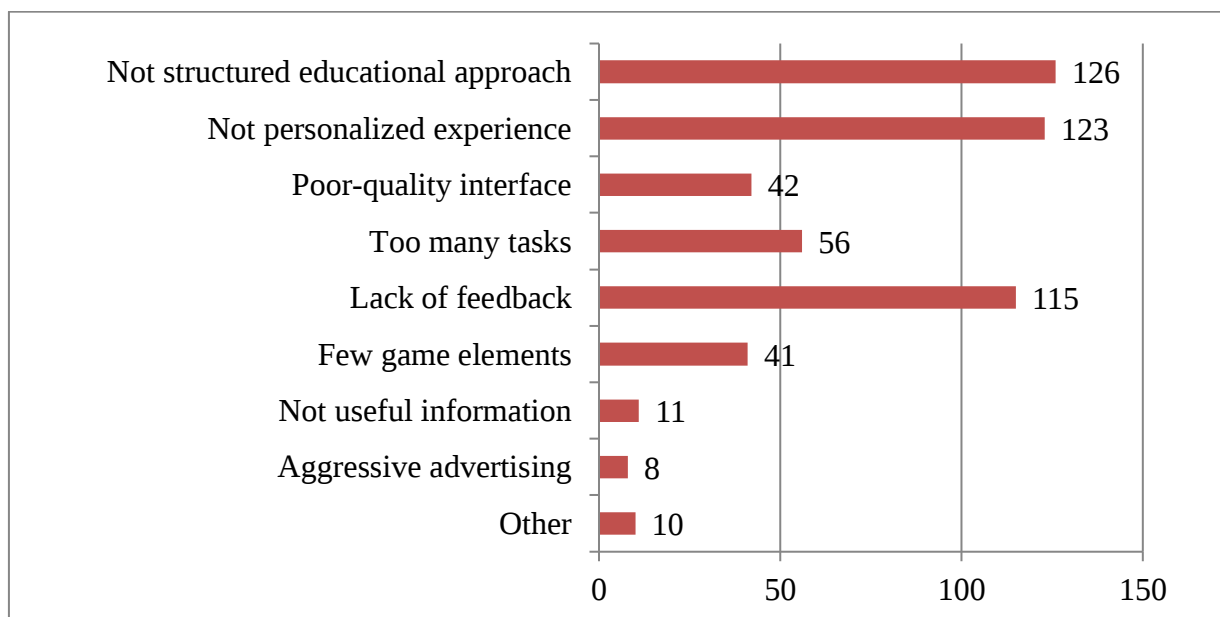


Fig. 8. Consumer gains (number of responses)

Source: compiled by the authors

High-Performing Mechanics:

- Feedback (70% engagement): The top-rated element directly fulfills the need for Competence. Immediate feedback tells users they are effective, helping them track their progress and correct mistakes. This creates a direct loop between action and improvement, making the user feel skilled. The PLS model further validates that feedback provides significant value by enhancing satisfaction.

- Points (63% engagement): Points satisfy Competence by quantifying achievement and making improvement visible. They also tap into the Hooked Model's "Variable Reward" – users are driven to accumulate points, an unpredictable reward in terms of the final score, which creates anticipation. Furthermore, points can support Autonomy by allowing users to choose how to earn them (e.g., through different activities).

Moderately-Performing Mechanics:

- Badges (~43% motivated): Badges support Competence by symbolizing mastery of a specific skill. However, their mixed results indicate they are prone to "pointsification" – a superficial use of game elements. If badges are awarded for trivial tasks or do not represent a genuine achievement, they fail to satisfy the deeper need for competence and can feel patronizing, undermining intrinsic motivation.

- Challenges (~42% engagement): Challenges directly support the need for Competence. Overcoming a difficult task provides a sense of mastery. However, their controversial reaction likely stems from Autonomy and Competence frustration. If challenges are too hard, mandatory, or not aligned with the user's skill level, they cause feelings of inadequacy, leading to demotivation.

Low-Performing Mechanics:

- **Leaderboards:** Leaderboards primarily address Relatedness (through social comparison) and Competence (by showing one's standing). However, they are a double-edged sword. For highly competitive users, they can be motivating. For others, they actively cause Competence frustration by highlighting their inferiority and can undermine Relatedness by fostering a sense of unhealthy competition or alienation.

- **Avatars:** According to the survey, avatars fail to create a personalized environment. This means they did not effectively support Autonomy (the freedom to express one's identity) in a way that felt meaningful to users.

The user journey from gamified action to subscription renewal maps across four stages, integrating the Hooked Model, Customer Engagement Theory, and Brand Loyalty Models.

1. **Gamified Action (Behavioral):** A trigger (internal/external) prompts app use. Completing an action (e.g., a challenge) satisfies the user's need for *Competence*.

2. **Emotional Connection (Affective):** A variable reward (points, feedback) follows, triggering a positive emotional response (achievement) and fostering a positive attitude.

3. **Emotional Investment (Cognitive):** Accumulated achievements represent a user investment. The PLS model confirms this gamification-driven satisfaction directly increases loyalty, shifting user perception to seeing the platform as an effective tool.

4. **Loyal Behavior (Attitudinal & Behavioral):** Consistent need-fulfillment builds attitudinal loyalty (trust, satisfaction), measured by CSAT and Reuse Intention. This ideally converts to behavioral loyalty (subscription renewal) when prompted. The study's negative NPS (-10.3), however, indicates a critical failure at this final stage for many users, suggesting earlier engagement is not being sustained.

The data highlights several critical pitfalls of poorly implemented gamification, which align perfectly with the warnings in the literature review.

Pointsification and Over-emphasis on Extrinsic Rewards: The moderate performance of badges and the failure of avatars demonstrate the risk of pointsification—slapping game-like elements onto a product without a deeper strategy. When platforms overrely on extrinsic rewards like points and badges without linking them to genuine learning and competence, they risk undermining intrinsic motivation. Users might focus on "gaming the system" to earn rewards rather than on the inherent joy of learning. The qualitative analysis of Duolingo notes doubts about its effectiveness for "deeper mastery," suggesting its heavy gamification may not fully support intrinsic motivation for fluency.

Poor Structure and Lack of Personalization (Autonomy & Competence Frustration): The top consumer pains were "not structured educational approach" and "not personalized experience." This directly relates to SDT: a lack of structure leads to Competence frustration; users do not know how to progress effectively and

feel lost. A lack of personalization violates Autonomy; users cannot learn at their own pace or follow paths that interest them.

Aggressive Marketing and Notifications (Autonomy Frustration): The literature warns that poorly executed gamification can alienate customers. The survey and qualitative data confirm this: users explicitly state that "aggressive notifications and advertising should be avoided." Constant prompts to upgrade or re-engage are experienced as external pressure, actively frustrating the user's need for Autonomy and breaking the immersive, self-directed experience that gamification should create.

To implement gamification in educational marketing it is crucial to provide a detailed framework, using the empathy map and mapping mechanics to stages on the customer journey map.

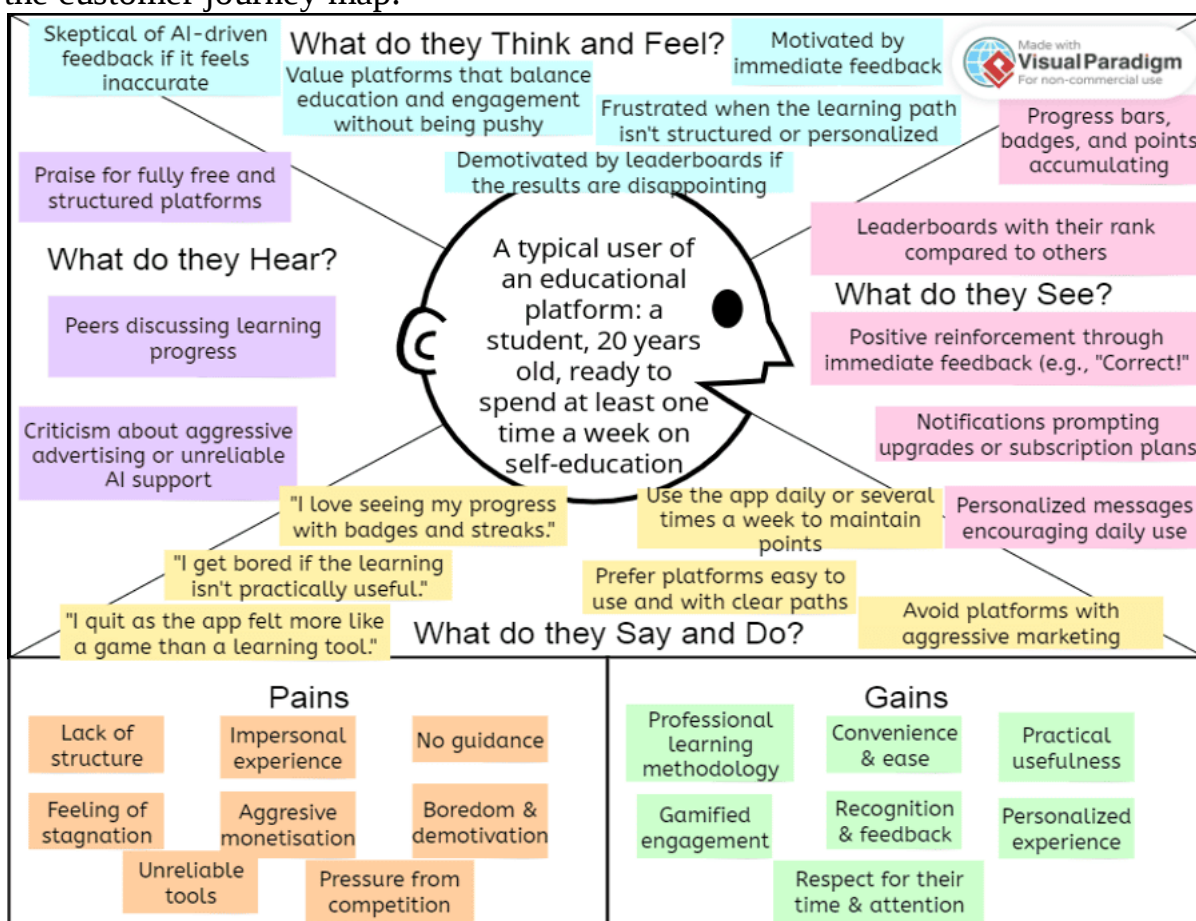


Fig. 9. The Empathy Map

Source: compiled by the authors in the program Visual Paradigm

Based on Fig.9, the typical user is "a Pragmatic Learner" who seeks efficient and respectful self-education free from manipulation and pressure. They are motivated by tangible progress and practical utility but their trust is fragile due to a great number of pains. The Customer Journey Map (Fig.10) demonstrates a user-centric approach to build a successful educational platform. Gamification is used not

for its own sake and contributes to business metrics: the stages Awareness and Consideration may well increase trial sign-ups, being top-of-funnel growth. Conversion stage is likely to boost paid subscription rates (revenue). Moreover, Loyalty stage is expected to improve CSAT and Reuse Intention. In addition, the stage of Advocacy is supposed to directly target and improve NPS, resulting in brand strength. However, it can be noted from Fig.11 that platforms struggle with creating advocates. The leak in the customer path happens between Act and Advocate, primarily due to unmet needs, which leads to user churn [22; 23].

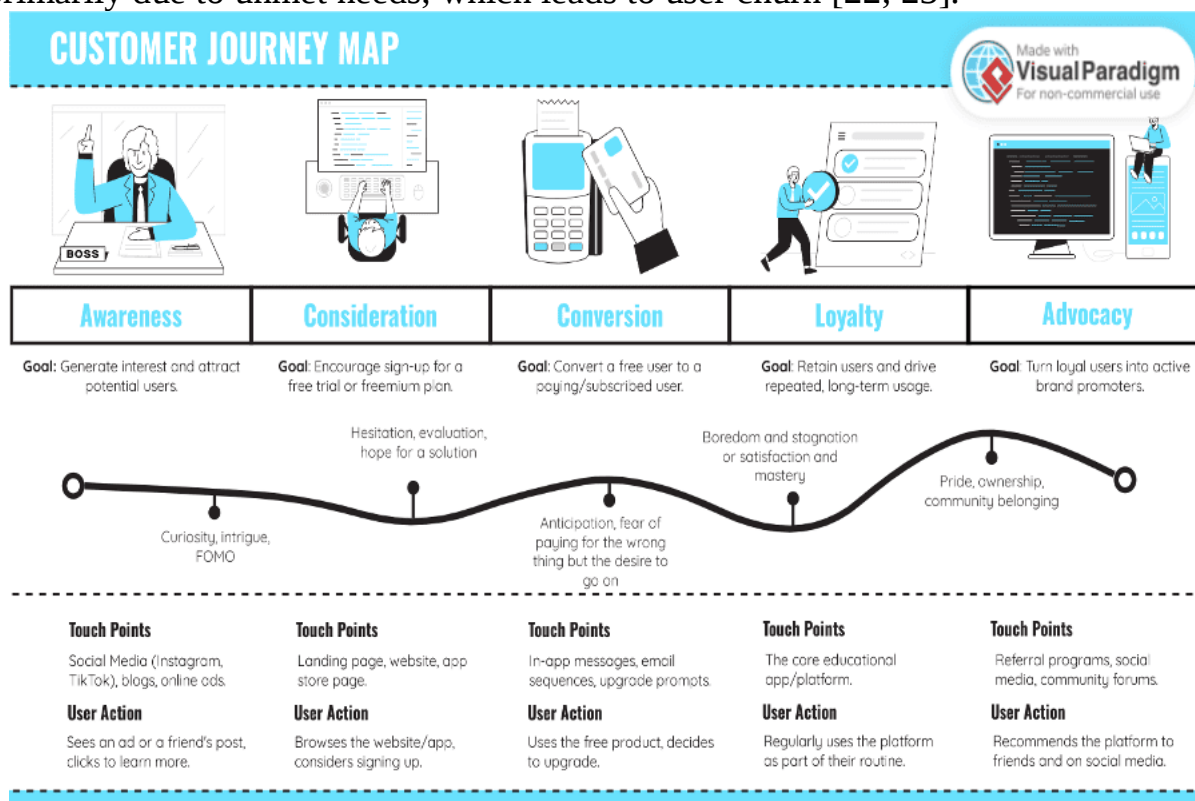


Fig. 10. The Customer Journey Map

Source: compiled by the authors in the program Visual Paradigm



Fig. 11. A5 Kotler's Model

Source: compiled by the authors in the program Visual Paradigm

Conclusion

The central thesis of this study is that gamification requires a strategic approach to effectively translate user engagement into long-term brand loyalty. The literature review established a robust theoretical foundation, integrating Self-Determination Theory, the Hooked Model, and Customer Engagement Theory. This synthesis highlighted that the potential of gamification lies not in the mere application of game-like elements but in their capacity to satisfy fundamental psychological needs.

The findings conclusively demonstrate that gamification is not a universal remedy. Its effectiveness is highly contingent on the strategic selection and implementation of specific mechanics. Key results indicate that elements like immediate feedback and points are the most powerful drivers of engagement. In contrast, mechanics such as leaderboards and avatars showed mixed or low effectiveness. A central finding of this research is the clear, yet complex, pathway from gamification-induced engagement to brand loyalty. The developed PLS model visually confirms that gamification drives satisfaction, which in turn fosters loyalty. However, the negative Net Promoter Score uncovered in the survey serves as a critical reality check. This loyalty gap is primarily attributed to significant pitfalls: a lack of a structured educational approach, insufficient personalization, an over-reliance on superficial extrinsic rewards ("pointsification"), and aggressive marketing tactics that erode user trust and autonomy. The practical frameworks developed – the Empathy Map, and the Customer Journey Map – provide actionable

tools for marketers and product developers. They illustrate how to align gamification mechanics with the user's emotional journey and pain points, contributing directly to key business metrics like subscription renewal and advocacy.

To sum up, the findings powerfully illustrate that successful gamification in educational platforms is not about using the most elements, but about using the right elements thoughtfully. The most effective strategies are those that satisfy deeper psychological needs for competence and autonomy, create a genuine emotional connection through feedback and meaningful progress, and are built upon a foundation of a usable and well-structured educational product, turning the educational platform into a trusted mentor.

To build upon the findings of this study, several avenues for future research and deeper exploration can be recommended. First, longitudinal studies may well be conducted to track the evolution of gamification's impact on engagement and loyalty over time, revealing whether its effects are sustainable or subject to habituation. Second, cross-cultural comparative research could uncover how cultural dimensions influence the perceived effectiveness of different game mechanics. Furthermore, as educational technology advances, investigating the role of Artificial Intelligence in creating dynamically personalized gamification experiences presents a critical frontier. Finally, future work should differentiate the impacts of gamification across diverse educational sectors, such as vocational training versus hobby-based learning, to develop more nuanced and context-specific frameworks. Pursuing these directions will significantly deepen the understanding of how to harness gamification for long-term success in the evolving EdTech landscape.

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