



Gamification Elements in Food Delivery Applications

Exploring the Impact of Gamification Elements in Food Delivery Applications

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Abstract

In recent years, the integration of gamification elements into various industries has garnered significant attention for their potential to enhance user engagement, motivation, and loyalty. This research delves into the intersection of gamification and food delivery applications, aiming to explore the effects of four distinct gamification elements—leaderboards, countdown timers, achievements, and mystery boxes—on user behavior within the food delivery sector.

Motivated by the escalating competition in the food delivery market and the imperative for companies to innovate, this research analyzes the usage of these gamification elements to uncover their impact on user engagement, motivation, loyalty, and retention.

Using a quantitative research approach, an experimental survey methodology is employed to gather data from a diverse sample of food delivery application users. The structured questionnaire captures user perceptions and behaviors regarding gamification elements within the context of food delivery services.

The findings provide valuable insights into the effectiveness of gamification strategies in the food delivery industry, offering practical implications for companies seeking to optimize user experience and foster customer loyalty. Ultimately, this study contributes to the broader understanding of gamification's role in enhancing user interaction and satisfaction within digital platforms.

Keywords/tags (subjects)

Gamification, Food Delivery Services, User engagement, Customer loyalty, Leaderboard, Countdown timer, Achievement, Mystery box, Quantitative Research, User Behavior

Miscellaneous (Confidential information)

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1 Introduction

The introduction chapter aims to provide an overview of gamification and food delivery applications. The objectives and research questions of this study will be explained in detail. In addition, in this chapter, examples of how gamification elements are used in real life will be examined. Thus, it is aimed to better understand the effects and potential of use of the gamification approach in the food delivery sector. Finally, the structure of this thesis will be provided in detail.

1.1 Background

Gamification has become increasingly popular in recent years (Hamari, Koivisto, & Sarsa, 2014). There are many reasons why organizations are so interested in gamification. A few of them are as follows, increasing user engagement, increasing loyalty and motivation. Dozens of applications are released every year. In order for these applications to be successful in competition, many different methods are used. Of course, one of the most successful methods is gamification. It is an important part of digital business strategies as it has a way of motivating people digitally as well as overcoming cost barriers (Meulen, 2014). According to Huff puff (2013), 350 companies have published gamification projects since 2010. Name a few of these companies, Adobe, NBC Ford, eBay and more. Gamification started its life in marketing department in most organization but has moved to other areas (Brian Burke, 2014, p. 9). Gamification has become a promising tool, being applicable in many different sectors such as education, environment, health, business, marketing and advertising (García-Jurado et al., 2021). It is certain that we will see more of gamification in the future since it can be adapted to many areas. This popularity is not limited to companies or organizations. In the academic context, there is also an increase in popularity in articles published every year regarding gamification (Hamari, Koivisto, & Sarsa, 2014, Seaborn & Fels, 2015).

Another sector which became popular in recent years is definitely food delivery services. Especially during Covid-19, people avoided contact and many people preferred the online ordering method (Tran, 2021). According to a report by Statista(2021), the global revenue of the online food delivery market is forecast to reach \$1.22 trillion in 2024. This shows that food delivery applications have increased their popularity in recent years. Along with the increase in popularity, there was an

increase in the number of food delivery applications (Song et al., 2021). One of the biggest problems of companies is that users have alternatives. In other words, if you are disturbed by the service of a food delivery application, you can switch to another food delivery application with tin. This shows that competition requires companies to constantly improve themselves.

This brings competition between companies. Companies want to find innovative solutions to beat competition and increase positive feelings for customers (Karać & Stabauer, 2017). Gamification can be one of the innovative solutions. In this way, many companies found the opportunity to get ahead of their competitors. In this way, companies use gamification elements. There are many different gamification elements. You can even edit the existing elements to create a custom gamification element for your application. This study will focus on the implementation of 4 different gamification elements in the food delivery application.

1.2 Ethical Principles

Throughout this study, utmost care was taken to adhere to ethical principles, particularly in ensuring the confidentiality and privacy of the participants. Prior to data collection, participants were informed about the purpose of the study, and verbal consent was obtained to ensure their voluntary participation. Measures were implemented to anonymize and securely store all collected data, in accordance with the principles of confidentiality. Participant identities and personal information were kept confidential throughout the research process. The welfare and safety of participants were prioritized, and steps were taken to minimize any potential risks of physical or emotional harm.

1.3 Motivation for the Research

Today, technology has become very common. We can do almost all of our work over the phone. Thanks to the apps on our smartphones, we can send mail, check our health, play games, manage our daily lives and more. New apps are released every day. The biggest difference between the applications is the application designs. Let's consider two navigation applications. The main purpose of these 2 applications is to guide the user in the real world. The 1st application, for example, uses very complex colors, uses gamification elements that will confuse the user's direction, and has a

very bad design. The second app pays attention to color harmony, uses a car icon to show the user's location, and uses gamification elements to help the user use the app more easily. Many people will prefer the second application. This presents gamification as one of the few solutions to beat the competition between applications today. There are a lot of gamification elements. These elements are not just car icons in the navigation app. It is a kind of gamification element in the diaries where we analyze what we did that day every evening and write it down on paper. Many such gamification items can be counted.

So, going back to digital, why do companies prefer gamification items? What problems does he use these gamification elements to solve? First of all, we need to define the problem. For example, one of the common problems of many e-commerce companies/applications is not reaching enough users. One of the effective methods to reach more people is to advertise on social media and television. But advertising costs can be expensive after a while. Gamification can be effective here. You can add new users to your application with less cost. For example, many e-commerce sites/applications have a gamification item such as invite a friend, get 10% off or earn tokens. In this way, companies reach new people with the help of the user. The problem is solved to a certain extent. As seen in figure 1, in Wolt, a food delivery company, if you invite your friend, you will earn 4€ Wolt credits. With this gamification element, users are constantly bringing new users to Wolt.

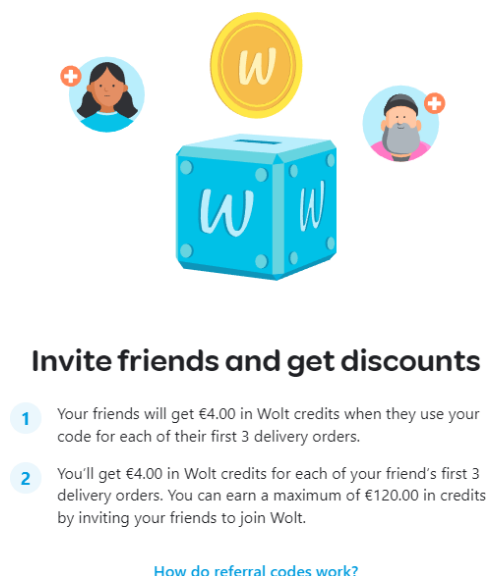


Figure 1: Invite Friends (Wolt, 2023)

Another problem is gaining user loyalty. Since users have so many alternatives today, companies try many methods to keep users loyal to them. Of course, this problem can be solved by gamification. The gamification element that local restaurants use to solve this problem is as follows; For example, a customer is given a card and has symbols or numbers from 1 to 10 on it. Each time the customer buys a meal, one of these symbols is stamped. If the customer reaches 10, that is, comes to the restaurant 10 times and buys food, the customer can eat a menu for free or win a different prize. As seen in the picture below, Ozaki sushi restaurant gives a lunch card to their customers. On the 10th visit, customers will be treated to a free lunch. It is a very effective gamification element. In this way, the restaurant can gain user loyalty.



Figure 2: Buy 9, get 1 free (Ozaki Sushi, 2023)

Like these examples, many problems that food delivery applications experience today can be solved. With gamification elements specially designed for food delivery applications, user participation and loyalty can be increased, or new users can be gained by increasing the interaction between users.

1.4 Objectives of the Research

This paper aims to analyze the current popularity of gamification and food delivery applications and to explore the advantages of integrating gamification elements into food delivery applications.

The main objective of the research is to determine the effects of different gamification elements on users in food delivery applications and to examine their effects on customer loyalty and engagement. In particular, analyzing the results of the surveys to be carried out with the customers and making suggestions constitute an important stage of this research.

1.5 Research Questions

This study seeks to explore following question:

How do different types of gamification elements, such as mystery box, countdown timer, achievements, and leaderboards, impact user engagement, motivation, loyalty and customer retention in food delivery applications?

To address this research question, this study will employ a quantitative method approach that combines survey data with food delivery application users.

1.6 Structure of the Thesis

In order to achieve the objectives, the structure of this thesis is divided into 5 sections. Firstly, the introduction chapter provides necessary background information and motivation of the research as well as introducing the research topic to readers. The theoretical chapter dives into relevant concepts, terminology, and the theoretical framework. This chapter will help readers to establish a conceptual framework for better understanding of research. The methodology and data analysis chapter explains the research methods and approaches employed in the study. It outlines how the data was collected, processed, and analyzed. The findings and discussion chapter provides the results and analysis of the gathered data from questionnaire.

Finally, the conclusion chapter summarizes the findings through the theoretical framework and highlights the main insights. After the conclusion chapter, references and other appendixes will be presented.

2 Theoretical Framework

This chapter delves into a comprehensive understanding of gamification, its application within the food delivery industry, and the specific gamification elements employed. Gamification, a term that has gained prominence in recent years, refers to the integration of game-like elements, mechanics, and principles into non-game contexts to enhance engagement, motivation, and participation. Within the realm of the food delivery industry, gamification serves as a strategic approach to incentivize user interaction, streamline processes, and foster customer loyalty. By exploring the nuances of gamification and its tailored implementation within food delivery services, this chapter aims to elucidate the fundamental principles and practical strategies driving successful gamified experiences in this dynamic sector.

2.1 Gamification

The term gamification was first used by Nick Pelling in 2002 (Kim, 2015, p. 5). But the history of gamification is not that close. From the past to the present, people have always tried to make existing tasks more interesting, motivating and even fun (Chou, p. 6). Different solutions have been found in the past to motivate people to learn new skills, not just challenging tasks. One of them is the solution found by the Boy Scouts of America. The Boy Scout of America movement was established in 1910 (Hunter, 2008). Scouts were helping their members to gain new skills in various fields. Each time a skill was acquired, members would earn a badge for that skill. The solution found was simple but effective. In this way, members worked more motivated to earn new badges, so they can learn new skills.

Kapp (2012) defines gamification thus: "Gamification is using game-Based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems." (p. 10). Karl M. Kapp made this definition in 2012. But promoting learning was used 115 years ago (Boy Scouts). Many examples like this can be given from history. Gamification was used at that

time to promote learning. But it did not enter the books under the name of gamification. The adoption of the term gamification took some time. The term gamification was adopted in 2010 as it is today (Werbach et al., 2012, p. 25). The term gamification entered Google trends at this time as well ("Google Trends," n.d.). After this time, many definitions have been made about gamification. Amy Jo Kim (2011) defines gamification as "Using game techniques to make activities more engaging and fun". Another accepted definition is by Werbach and Hunter (2012) " "use of game elements game-design techniques in non-game context" (p. 26). All of these definitions, which are similar to each other, are very valuable.

Gamification Examples

Gamification examples illustrate its versatility across various sectors, including Marketing, Education, and Health. These industries employ gamified strategies to enhance user engagement, motivate behavior, and achieve specific goals. In Marketing, interactive campaigns and loyalty programs utilize gamification elements like challenges and rewards to boost brand awareness and customer participation. Education platforms integrate game mechanics such as progress tracking and achievements to make learning interactive and effective. Meanwhile, in Health, fitness apps utilize gamified features such as challenges and social competitions to encourage physical activity and promote healthy behaviors. This subsection will provide concise examples of gamification's application in these areas, showcasing its effectiveness in driving engagement and facilitating positive outcomes.

Health

Health is one of the most important elements of our life. To protect our health, we may need to pay close attention to our food, the air we breathe, and our rhythm. As a matter of fact, it is the only thing that we do not realize when we are healthy, but we understand its value after losing it. In order to take care of our health, we diet, run, get regular doctor's examinations. But sometimes these habits can be difficult to acquire. Especially running. We listen to rhythm-boosting music while running or buy new running clothes to motivate ourselves. But sometimes these may not work. Companies are publishing applications that will help us at this point. To motivate users to be more physically active, developers gamify their fitness apps (Yin et al., 2022). One of the most well-known examples of these is the Nike Run Club. Nike released an application called Nike Run

Club in 2016 to motivate users to do sports. The most important feature of this fitness application, which has over 100 million users, aims to motivate users with gamification elements by using badges that can be earned through many different achievements and challenges by gamifying running. As can be seen in the picture, the application aims to motivate its users with new challenges every month. In addition, this application is a very important marketing tool for the brand.

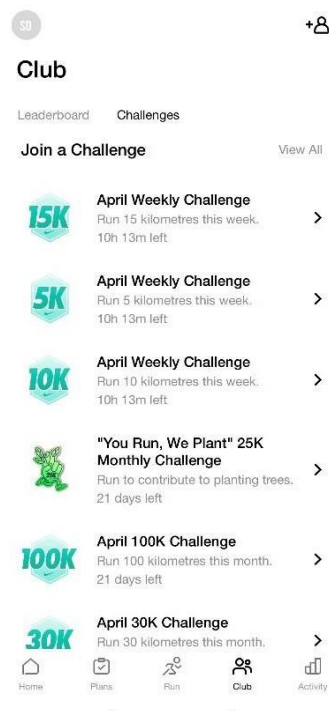


Figure 3: Challenge with Achievements (Nike, 2023)

Education

Education is as important as health in our lives. Humanity has trained itself for centuries to survive and develop. Afterwards, schools were opened, universities were opened. Continually, investments were made in education. With the development of technology, computers and the internet have entered our lives. Our access to information has become easier. Different generations were educated with different technologies. Today, students can access the information they want within seconds via the internet. So, can we use technology to increase student participation and motivation? The answer will be yes. Research shows that students concentrate better on lessons

and therefore perform better in gamified courses (Chen & Liang, 2022). As a matter of fact, developers have developed applications using gamification. If we give an example of one of these applications, it will be the Kahoot application.

Kahoot is an application where teachers can easily and quickly create multiple choice quizzes and quickly share the generated link with students. This allows students to use their phones for the purpose of learning and to engage in exciting competition with the rest of the class by answering questions in real time. This gamification application, which was developed to increase students' motivation and increase their participation in the lesson, aims to attract students' attention and make the education process more interactive with learning methods combined.

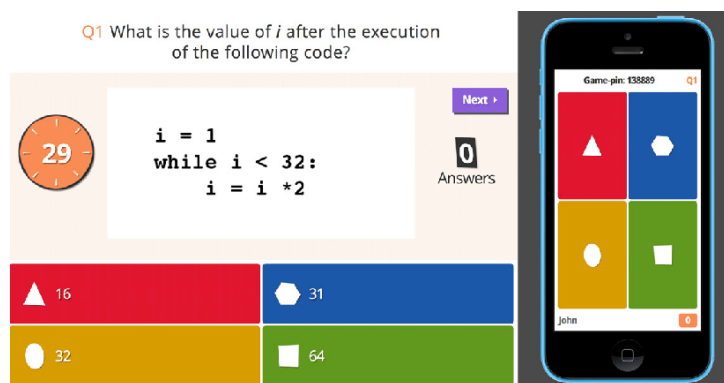


Figure 4: "Kahoot!" in-game screenshot (Fotaris et al., 2016)

Marketing

In the realm of marketing, gamification has proven to be an effective strategy for engaging consumers, building brand loyalty, and enhancing overall customer experience. Companies leverage gamification elements to create interactive and enjoyable marketing campaigns, encouraging customer participation and fostering a sense of connection with the brand.

One prominent example of gamification in marketing is the use of loyalty programs. Many businesses incorporate point systems, badges, and rewards to incentivize customers to make repeat purchases and stay loyal to their brand. For instance, Starbucks employs the Starbucks Rewards program, where customers earn stars for each purchase, leading to various levels of rewards and

personalized offers. This not only boosts customer retention but also turns the purchasing process into a more engaging and rewarding experience.

Social media platforms are another arena where gamification is widely employed for marketing purposes. Companies utilize challenges, contests, and interactive content to encourage user participation and promote their products or services virally. For instance, the popular photo-sharing app Instagram often features hashtag challenges and contests, encouraging users to create and share content related to a particular brand, thereby expanding its reach and creating a sense of community around the brand.

Moreover, mobile applications and online platforms frequently integrate gamified elements into their marketing strategies. These can include virtual badges, levels, and rewards for completing certain actions, such as making a purchase, referring a friend, or participating in a promotional event. This not only enhances user engagement but also serves as a powerful tool for data collection and customer profiling.

In conclusion, gamification in marketing goes beyond traditional advertising methods, offering innovative and interactive approaches to connect with consumers. By integrating game-like elements into their campaigns, companies can create memorable and enjoyable experiences that resonate with their target audience, ultimately leading to increased brand awareness, customer loyalty, and overall business success.

2.2 Food Delivery Services

The recent surge in popularity of food delivery applications has coincided with a proportional increase in competition within the industry. Particularly during the COVID-19 pandemic, when people were either unable or reluctant to dine out, there was a significant uptick in demand for food delivery services. It's worth noting that competition is a constant presence in this burgeoning sector, even as it continues to gain widespread popularity.

Brief history of Food delivery Services

Before delving into specific applications, it is essential to trace the historical roots of food delivery services, understanding how they have evolved over time. The fundamental goal of businesses has always been to identify customer needs and efficiently deliver on those requirements.

The origins of food delivery services can be traced back to 1785 when local farm owners initiated a milk delivery business (Pates, 2021). This marked the inception of one of the oldest recorded delivery services in the food industry, with daily milk deliveries left at customers' doorsteps. The concept evolved as technology advanced, transitioning to telephone orders in subsequent years. Local pizza restaurants, recognizing the demand for convenience, introduced their own delivery services, wherein customers could call and have their food brought directly to their doors. Although this model persists, it has diminished in popularity over time.

The advent of online platforms further revolutionized the food delivery landscape. Notably, PizzaHut, a prominent restaurant chain, established an online hub known as Pizzanet, facilitating online orders (Plano, 2014). The continual evolution of technology has now enabled us to manage almost everything through our smartphones, leading companies to develop dedicated food delivery applications.

Since 2012, major players in the food delivery industry, including FoodPanda, Deliveroo, Wolt, Gloovo, and primarily DoorDash, have introduced their services and applications. The trajectory of online food distribution has been consistently upward since its establishment, with the market anticipated to reach a projected volume of US\$1.92 trillion by 2029 (Statista, n.d.).

This historical overview showcases the transformation of food delivery services from traditional milk deliveries to the current era of mobile applications, reflecting a continuous adaptation to technological advancements and evolving consumer preferences. The staggering growth of the online food delivery market underscores its enduring popularity and its pivotal role in the modern culinary landscape.

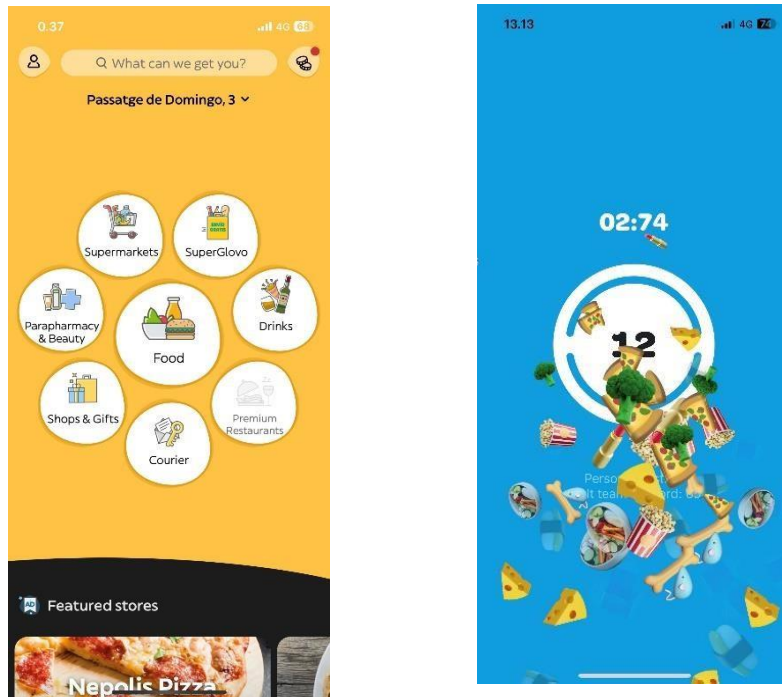


Figure 5: Food Delivery Services Using Gamification elements (Glovo&Wolt, 2023)

2.3 Gamification Elements

The Gamification Elements section introduces 4 different selected gamification elements. 100s of gamification element can be written. And more can be created by anyone. Once you understand the logic behind, it's easy to create one. So why there are so many of them? The reason behind of it, is because gamification is a highly adaptable concept that can be tailored to suit a wide range of purposes and audiences. Each gamification element serves a specific function and can be used to address different objectives within a gamified system. For example, points systems may be effective for encouraging participation, while badges can incentivize specific behaviors or achievements.

Each of the gamification elements below is included in the survey of this thesis. While each gamification element is explained, it will be explained why these elements were chosen in this research.

Leaderboards

It is a gamification element that is frequently used to increase competition in games and is used by some companies to increase the motivation or participation of both employees and users/customers. Usually, most people don't need an explanation on how to use it. Basically, we see names listed in order and a score next to each name (Zichermann et al., 2011). It is also widely used today. Many people had the opportunity to see the leaderboards in their school life. Those who scored well in the test were in the top ranks, while those with bad scores could find a place in the lower ranks. So, what encouraged the students more? By observing the scores of his classmates before and after him, the student can predict how much better he should do in the next exam, predicting that he will be ahead of his classmates. Such gamification elements are widely used today to encourage students to study more.

So, is it only used in schools? Sales teams have also used leaderboards for some time to create competition (Marczewski, 2018). With this competition, companies both increased their sales and gained new customers. Such gamification elements may show similarities among themselves, but the results may differ. According to Zichermann and Cunningham (2011) "Leaderboards are mostly tools for creating social incentive, rather than disincentive."(p. 50). For leaderboards, we can say that it is the most effective gamification element that can be used for social incentive.

Countdown Timer Offers (On days when low demands)

The countdown timer is a gamification element that is only valid for certain short periods of time and provides exclusive discounts, rewards or earnings to users or customers during that time. Companies or organizations use this element frequently. The best example would be Black Friday. In the Black Friday event, technology companies offer special discounts and special promotions to their customers in order to increase their sales and brand value (Saura et al., 2019). This event is popular around the world and usually takes place on the last Friday of November. But it may differ from country to country. This activity, which usually takes 24 hours, can be extended according to the intensity. That's how countdown timer gamification element take its place in Black Friday event. This gamification element is beneficial both in sales and in increasing brand value. Customers will not be able to have the exclusive discounts next day, therefore customers feel the pressure to buy their needs in this certain time. As a matter of fact, some customers can wait to buy the

products they need on Black Friday. Countdown Timer is an important gamification element that companies can use to stay ahead of the competition.

So how does this element will work in the food delivery application? First of all, we said that companies use this element to increase their sales. Another thing is companies can use this element to promote their undersold brands or new brands that customers don't give a chance. On the other hand, food distribution companies can use this element to highlight new restaurants and encourage customers to try new products. On some weekdays, when sales are low, such gamification elements can be useful.

Achievements

Another gamification element in the food delivery application is the "Achievement" element. This element of ours, which provides the user with the feeling of following the process closely and winning as a result, is used by some companies under the name of loyalty program. It may seem a little more complicated to use than other gamification elements. Technically, a few tasks are given to the user, provided that they are completed within a certain time. When each of these tasks is completed, the user can observe his own progress from the process tracking bar. By completing these tasks, the user earns various rewards. These rewards can be discount code, free distribution, and super products. In this way, it is aimed to increase user loyalty and the user's sense of winning.

Mystery Box

Our final gamification element is the Mystery Box element. In the context of gamification of food delivery applications, the inclusion of a "Mystery Box" element adds an additional layer of engagement and excitement for users. The main feature of this element is that it offers users the chance to win special offers through random selection.

The application of this element is as follows, the user is presented with 4 closed boxes and is asked to select 1 box. Each of these boxes contains exclusive offers. The user selects 1 box and it is left to the user's choice whether to use the offer or not. The Mystery Box element creates a sense of anticipation and excitement in the user, encouraging more frequent interaction with the application.

2.4 Rationale Behind the Selection of These Elements

The Gamification Elements section introduces four distinct gamification elements, each selected for its specific functionality and relevance within the surveyed research. The rationale behind choosing these elements lies in their efficacy in addressing various objectives within gamified systems. For instance, the Leaderboards element fosters competition, proven to motivate both employees and customers, as evidenced by its widespread use in educational and sales contexts. This social incentive aspect, highlighted by Zichermann and Cunningham (2011), underscores its effectiveness in driving engagement. Similarly, Countdown Timer Offers capitalize on urgency to prompt immediate action, exemplified by events like Black Friday, demonstrating its utility in boosting sales and enhancing brand value. In the realm of food delivery applications, this element can spotlight undersold or new brands, driving customer exploration and purchases during low-demand periods. Furthermore, Achievements offer users a structured path to rewards, fostering loyalty and a sense of accomplishment. Finally, the Mystery Box element adds an element of excitement and anticipation, encouraging frequent interaction through the allure of exclusive offers. Each of these elements was chosen not only for its functionality but also for its potential to enhance user engagement and drive desired behaviors within gamified systems.

3 Research

In the realm of food delivery services, user engagement, motivation, loyalty, and retention are vital for business success. This section focuses on investigating how gamification elements impact these key aspects. Through a quantitative research approach and experimental survey design, this study aims to uncover insights into user behavior and perceptions. By employing structured data collection methods and ensuring ethical considerations, the research endeavors to provide valuable insights applicable across the food delivery service industry.

3.1 Methodology

The core objective of this study is to explore the impact of gamification elements on user engagement, motivation, loyalty, and customer retention within the context of food delivery services. To address this pivotal research question comprehensively, this chapter provides a detailed overview of the methodological framework employed. This includes a discussion on the chosen research approach, the rationale behind the selected research design, the methods utilized for data collection, and the procedures adopted for data analysis. By delineating the methodological underpinnings of this study, it aims to provide transparency and insight into the rigorous process employed to investigate the influence of gamification elements on various aspects of user behavior within the food delivery industry.

3.2 Research Approach: Quantitative Method

In this study, a quantitative research approach is adopted. Quantitative research involves the systematic collection and analysis of numerical data to identify patterns, relationships, and trends. The utilization of statistical methods allows for objective and measurable insights into the impact of gamification elements on user behavior in food delivery services.

Quantitative research is chosen for its ability to provide a structured and replicable framework, enabling the generation of statistically significant findings. This approach facilitates the quantification of variables and the identification of patterns that contribute to a more comprehensive understanding of the phenomena under investigation (Creswell & Creswell, 2017).

3.3 Research Design: Experimental Survey Approach

The overall research design is experimental, employing a survey methodology to gather data. A survey is deemed appropriate for capturing a broad range of responses related to user engagement, motivation, loyalty, and customer retention in the context of gamification elements within food delivery services.

The selection of the survey design is justified by its efficiency in collecting data from a diverse sample, allowing for the examination of relationships between variables. This approach aligns with the research questions, as it enables the exploration of users' perceptions and behaviors within the targeted food delivery service context.

3.4 Data Collection: Instruments and Procedures

The data collection instrument for this study is a structured questionnaire designed using Office Forms. This questionnaire is specifically tailored to capture user opinions on gamification elements, engagement levels, motivational factors, loyalty, and retention within the context of food delivery services. The development process of the questionnaire involved meticulous attention to validity and reliability measures to ensure the accuracy and consistency of the data collected.

Ethical considerations in data collection encompassed ensuring participant anonymity and obtaining informed consent. Participants were informed about the purpose of the study, their rights, and how their data would be used prior to completing the questionnaire.

The data collection process involved distributing the online survey via Office Forms to a representative sample of users. Efforts were made to ensure diversity in demographics and usage patterns among the survey participants. The utilization of Office Forms facilitated efficient data collection while adhering to ethical guidelines and maintaining participant confidentiality.

By specifying that no specific food delivery services or brands were involved in the survey, this section underscores the generalizability of the findings and emphasizes the focus on gamification elements within the food delivery service industry as a whole.

4 Data Analysis and Findings

The following section undertakes a detailed analysis of data acquired through a survey examining the influence of gamification elements on user engagement, motivation, loyalty, and customer retention within the realm of food delivery services. This research endeavor seeks to elucidate the ways in which gamification strategies contribute to enriching user experiences and nurturing customer relationships within the dynamic landscape of this industry.

4.1 Data Analysis

In this chapter presents the analysis of data collected through a structured questionnaire administered to participants with experience using food delivery services. The survey aimed to assess users' perceptions of various gamification elements employed by food delivery platforms, as well as their effects on user engagement, motivation, loyalty, and retention. By examining the responses of 35 participants after excluding one due to random answers, the study seeks to elucidate key insights into the effectiveness of gamification strategies within the food delivery service context.

1. What is your gender?

[More Details](#)

Woman	16
Man	17
Non-binary	1
Prefer not to say	1



Figure 6: Respondents based on gender

The survey's first question on gender reveals a relatively balanced distribution among respondents, with 16 women, 17 men, 1 non-binary individual, and 1 participant preferring not to disclose their gender. This inclusive representation allows for a comprehensive examination of diverse perspectives within the context of food delivery services.

2. Age

[More Details](#)

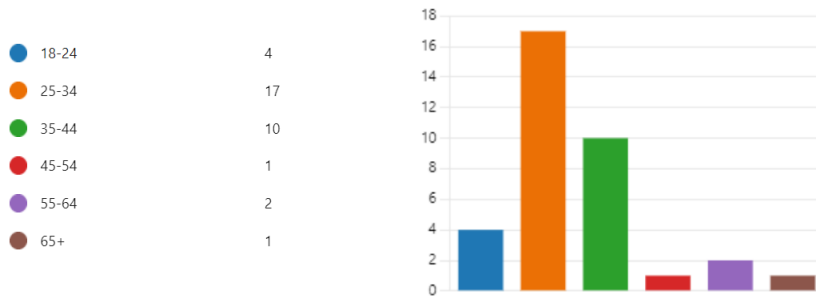


Figure 7: Respondents based on age

The age distribution of survey participants indicates a varied representation across different age groups. Among respondents, the majority fall within the 25-34 age bracket, comprising 17 individuals. Additionally, there are 4 participants aged 18-24, 10 aged 35-44, 2 aged 55-64, and 1 each in the 45-54 and 65+ age categories. This diverse range of ages within the sample ensures a comprehensive exploration of perspectives on gamification elements and user engagement in the food delivery sector, allowing for nuanced insights into age-related preferences and behaviors.

3. What is your occupation?

[More Details](#)

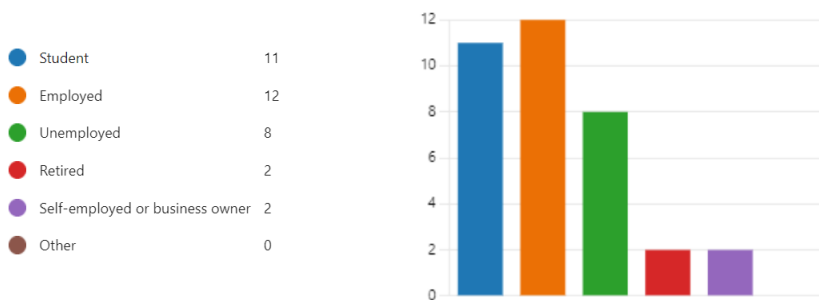


Figure 8: Respondents based on occupation

The data on occupational demographics underscores a multifaceted representation within the surveyed cohort. Among the participants, 12 individuals are actively employed, 11 are pursuing academic endeavors, 8 are currently seeking employment opportunities, 2 have retired, and 2 are engaged in entrepreneurial ventures or self-employment. This diverse spectrum of occupational statuses offers an extensive framework for analyzing the potential impacts of varying professional

roles on perceptions and behaviors concerning gamification elements and user engagement within the food delivery industry.

4. How often do you order from Food Delivery Services?

[More Details](#)

● Daily	0
● Once a week	7
● Several times a week	3
● Once a month	10
● Several times a month	5
● Rarely (less than once a month)	7
● Never tried before	3

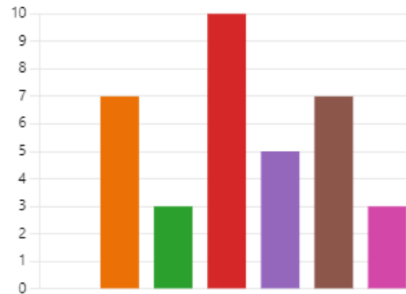


Figure 9: Usage frequency of Food delivery services

The range of behaviors exhibited by survey participants in their frequency of ordering from food delivery services is noteworthy. None of the respondents indicated ordering on a daily basis, with the most prevalent frequency being once a month, as reported by 10 participants. Seven respondents stated they order either once a week or rarely (less than once a month), while five participants noted ordering several times a month. Moreover, three individuals reported ordering several times a week, while another three mentioned they have yet to try food delivery services. This diverse array of ordering frequencies offers valuable insights into the varying degrees of engagement with food delivery platforms among survey participants, thereby enhancing our understanding of the factors influencing user behaviors and preferences pertaining to gamification elements.

5. How long have you been using Food delivery services?

[More Details](#)

● Less than one Month	0
● Less than six Month	4
● 6-12 months	7
● More than 12 Month	21
● Never used before	3



Figure 10: Duration of usages of Food delivery Services

The duration of utilizing food delivery services among survey respondents underscores a notable level of experience within the studied cohort. Notably, none of the participants reported using food delivery services for less than one month. Four individuals indicated a usage duration of fewer than six months, while seven mentioned utilizing these services for 6-12 months. The majority of respondents, comprising 21 individuals, reported using food delivery services for more than 12 months, indicating a significant level of sustained engagement with these platforms. Additionally, three participants mentioned they have yet to use food delivery services. This diverse distribution of usage durations provides valuable insights into the varying degrees of familiarity and experience with food delivery platforms among survey respondents, thereby enriching the analysis of factors influencing user engagement and satisfaction, particularly concerning gamification elements.

6. What kind of rewards or incentives do you think would be most effective in encouraging more frequent or first-time use of food delivery services?

[More Details](#)

Discounts on future orders	11
Free delivery	12
Exclusive deals or promotions	7
Points or rewards redeemable f...	4
Other	1



Figure 11: Encourage method for the first time use of food delivery services

Insights gathered from the survey reveal a spectrum of perspectives regarding the most efficacious rewards or incentives for stimulating increased frequency or initial adoption of food delivery services. Predominantly, 12 participants advocate for free delivery as the most potent incentive. In addition, 11 respondents endorse discounts on subsequent orders, while 7 express a preference for exclusive deals or promotions. Four individuals propose points or rewards redeemable for prizes or gift cards as effective motivators, whereas one participant suggests alternative incentives. This diverse array of preferences underscores the significance of offering a broad range of

rewards and incentives tailored to the diverse needs and preferences of users, ultimately augmenting user engagement and satisfaction with food delivery platforms.

7. How important is the ability to earn and redeem points or rewards in your decision to use services?

[More Details](#)

● Extremely important	10
● Somewhat important	11
● Neutral	10
● Somewhat not important	2
● Extremely not important	2



Figure 12: Importance of earn and redeem points

The importance of the ability to earn and redeem points or rewards in the decision to use food delivery services varied among survey respondents. A significant portion, comprising 10 individuals, considered it extremely important, while an almost equal number of respondents, 11, deemed it somewhat important. Ten participants expressed a neutral stance on this aspect, indicating no strong inclination either way. On the other hand, two respondents each regarded the ability to earn and redeem points or rewards as somewhat not important and extremely not important. This spectrum of perspectives underscores the varying degrees of importance attributed to rewards programs in influencing user decisions regarding the utilization of food delivery services.

8. **Countdown Timer**

How likely would you be interested in using a discount or promotional offer, similar to the one displayed on the right(or below), during off-peak hours (such as between 2pm-4pm on Mondays) when orders are typically lower? Please keep in mind that this offer would only be available for a limited time.

** The promotion shown in the picture is for a medium size pizza menu with a 50% discount, exclusively available between 2pm-4pm on Monday of this week only. You can't access after the countdown is completed. **

[More Details](#)

● Very likely	7
● Somewhat likely	16
● Neither likely nor unlikely	7
● Somewhat unlikely	2
● Very unlikely	3

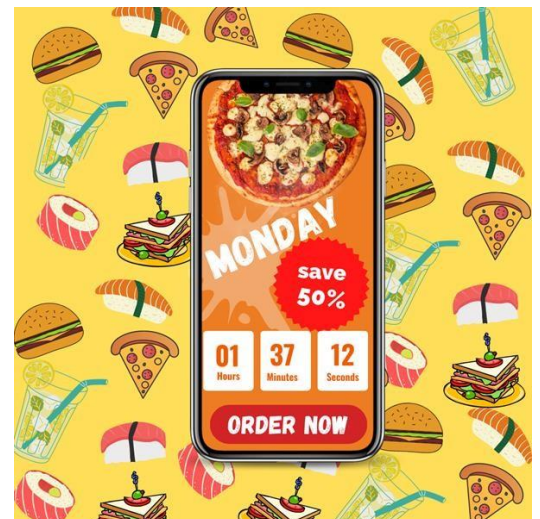


Figure 13: Countdown timer

Survey respondents provided varied responses regarding their likelihood of being interested in using a discount or promotional offer, such as the one described, during off-peak hours when orders

are typically lower. Seven participants expressed a high level of interest, stating they would be very likely to utilize such an offer. Meanwhile, 16 respondents indicated they would be somewhat likely to do so. Seven individuals expressed neutrality on the matter, neither leaning towards likelihood nor unlikelihood. Two participants stated they would be somewhat unlikely to take advantage of the offer, while three respondents expressed a very unlikely inclination. This range of responses reflects differing levels of interest and engagement with promotional offers during off-peak hours, highlighting the potential effectiveness of such strategies in influencing user behavior.

9. Mystery Box

Based on the mystery box mini game shown in the image on the right (or below), where you can choose one out of four boxes, each containing a special discounted menu item, how likely would you be to purchase the menu item in the box you selected?

[More Details](#)

Very likely	11
Somewhat likely	7
Neither likely nor unlikely	10
Somewhat unlikely	2
Very unlikely	5



Figure 14: Mystery box

Responses from participants unveiled a spectrum of inclinations regarding their propensity to purchase the menu item featured in the mystery box mini-game. Eleven individuals articulated a significant interest, expressing a strong likelihood of purchasing the menu item contained within the box they selected. Seven respondents conveyed a moderate inclination towards making the purchase, whereas 10 individuals maintained a neutral stance, exhibiting neither a proclivity nor reluctance. Two participants disclosed a slight reluctance, indicating a somewhat unlikely predisposition to purchase, while five respondents expressed a considerable hesitancy towards the purchase. This diverse range of responses delineates varying levels of interest and engagement with the mystery box promotion, implying potential efficacy in attracting certain users, while others may exhibit less enthusiasm towards participation.

10. **Leaderboard**

The menu shown in the image on the right(or below) includes many different items and is priced at 20€, with a portion of the proceeds going towards charity. Additionally, if you choose to pay more than the menu price, you have the opportunity to donate charity and see your name on the leaderboard.

Given these features, would you be interested in buying this combo menu to support the charity cause?

[More Details](#) [Insights](#)

● Yes, definitely	3
● Yes, somewhat	7
● Neutral	12
● No, not really	10
● No, not at all	3

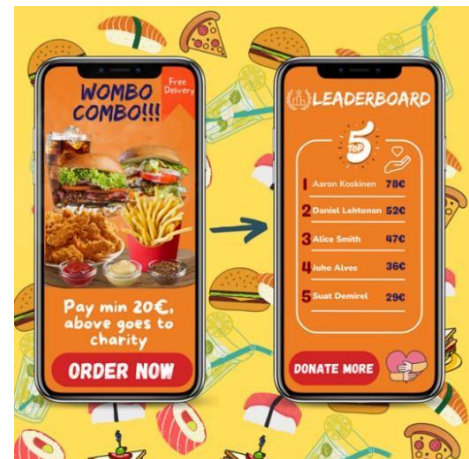


Figure 15: Leaderboard

Survey respondents provided diverse insights regarding their interest in purchasing the combo menu to support the charity cause, considering its features such as the option to donate and see their name on the leaderboard. Three participants expressed a strong interest, stating they would definitely buy the combo menu. Seven respondents indicated they would be somewhat interested in doing so, while 12 individuals expressed neutrality on the matter. Ten participants stated they would not be particularly interested, while three respondents expressed no interest at all in purchasing the combo menu to support the charity cause. This range of responses highlights varying degrees of willingness to engage with the charity aspect of the promotion, indicating potential effectiveness in appealing to certain segments of users while others may be less motivated by this feature.

11. Based on the previous question regarding donating a portion of the proceeds to charity, would you prefer to have the option to choose which charity to support?

[More Details](#)

● Yes, definitely	10
● Yes, somewhat	9
● Neutral	10
● No, not really	2
● No, not at all	4



Figure 16: Charity support

Survey participants demonstrated a range of preferences regarding the option to choose which charity to support when a portion of the proceeds is donated. Ten respondents expressed a strong

preference, stating they would definitely like to have the option to choose the charity. Nine participants indicated they would somewhat prefer this option, while 10 individuals expressed neutrality on the matter. Two respondents stated they would not particularly prefer having this option, while four participants expressed no preference at all. This varied response suggests that providing the choice of charity may enhance user engagement and satisfaction for some individuals, while others may not prioritize this feature as strongly.

12. Achievements

The image on the right(or below) shows an example of completing tasks in the app, which results in earning a reward. Would you be interested in participating in this type of monthly program?

[More Details](#)

● Yes, definitely	4
● Yes, somewhat	6
● Neutral	11
● No, not really	7
● No, not at all	7



Figure 17: Achivement

Among the surveyed individuals, there exists a diverse spectrum of interest levels regarding participation in a monthly program where completing tasks within the application leads to earning rewards. Four participants expressed unequivocal interest in engaging with such a program, while six respondents indicated a moderate level of interest. Conversely, 11 individuals remained neutral, exhibiting neither a strong inclination nor disinclination towards participation. Seven respondents conveyed a lack of particular interest, while another seven participants expressed no interest whatsoever in partaking in this type of monthly initiative. This array of responses underscores the varying motivations among users: while some may find the prospect of earning rewards through task completion appealing, others may exhibit diminished interest in participating in such programs.

13. Which of the following gamification elements do you find **MOST** engaging in food delivery services?

[More Details](#)



Figure 18: Most engaging gamification element

In the examination of gamification elements deemed most engaging in food delivery services, participants showcased diverse preferences. The Mystery Box element garnered favor from eleven individuals, while eight respondents leaned towards the Countdown Timer. Six participants found Leaderboards most captivating, whereas four identified Achievements as the standout feature. Furthermore, six individuals opted for "Other," implying the existence of alternative gamification features beyond the surveyed options that they find particularly compelling. This breadth of preferences underscores the significance of providing a diverse array of gamification elements to accommodate the varied interests and inclinations of users, thereby elevating their engagement with food delivery platforms.

14. Which of the following gamification elements do you find **LEAST** engaging in food delivery services?

[More Details](#)



Figure 19: Least engaging gamification element

In assessing perceptions of gamification elements least engaging in food delivery services, respondents' viewpoints varied significantly. Four individuals pinpointed the Mystery Box as the least engaging element, while five highlighted the Countdown Timer. Eight participants found the Leaderboard to be the least captivating feature. A substantial proportion, totaling 14 individuals, deemed Achievements as the least engaging aspect. Additionally, four respondents opted for "Other," indicating potential alternative gamification features not covered in the survey that they

consider unengaging. This breadth of perspectives underscores the importance of accommodating diverse user preferences when integrating gamification elements into food delivery platforms.

15. Do you believe that gamification elements improve the overall user experience in food delivery services?

[More Details](#)



Figure 20: User insights on gamification elements

Survey participants shared their beliefs regarding whether gamification elements improve the overall user experience in food delivery services, with varying degrees of agreement. Seven individuals strongly agreed that gamification elements enhance the overall user experience, while 15 respondents somewhat agreed with this statement. Ten participants expressed neutrality on the matter, neither agreeing nor disagreeing. Three individuals somewhat disagreed with the notion that gamification elements improve the user experience, while no participants strongly disagreed. This overall positive perception suggests that the majority of respondents recognize the potential of gamification elements to enhance user experiences in food delivery services, albeit to varying extents.

16. Would you recommend a food delivery service with gamification elements to others?

[More Details](#)

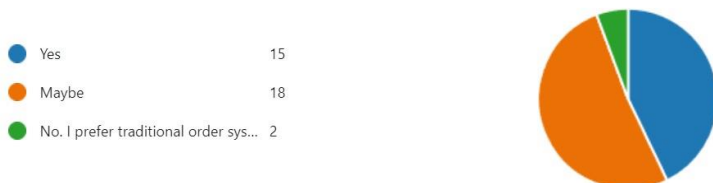


Figure 21: User recommendation of food delivery services with gamification elements

Insights gleaned from the survey shed light on the likelihood of recommending a food delivery service integrated with gamification elements, showcasing a spectrum of perspectives among participants. Fifteen individuals articulated a readiness to recommend such a service, signaling a positive

inclination towards sharing their experiences with others. Moreover, 18 respondents conveyed a potentiality for recommending the service, suggesting a willingness to endorse it based on diverse considerations. However, two participants expressed a preference for conventional order systems and conveyed a disinclination to recommend a food delivery service with gamification elements. This array of responses underscores the varying levels of enthusiasm and reservations among users regarding the recommendation of gamified food delivery services to others.

17. How likely are you to try a new restaurant or cuisine based on gamification elements (such as challenges or rewards) in a food delivery service?

[More Details](#)

Very likely	8
Somewhat likely	18
Neither likely nor unlikely	5
Somewhat unlikely	2
Very unlikely	2



Figure 22: New restaurant

Insights from the survey offer perspectives on the likelihood of trying a new restaurant or cuisine prompted by gamification elements within a food delivery service, showcasing a spectrum of interest among participants. Eight individuals expressed a strong inclination towards exploration and experimentation, indicating a high likelihood of trying new options. Furthermore, 18 respondents conveyed a moderate level of interest, expressing a somewhat likelihood of exploring new options driven by gamification elements. Conversely, five participants maintained a neutral stance, exhibiting neither a strong inclination nor disinclination towards trying new options. Two individuals indicated a slight reluctance, while another two expressed a significant hesitancy towards such exploration. This array of responses underscores varying levels of openness to trying new restaurants or cuisines facilitated by gamification elements, with some participants demonstrating more adventurous tendencies than others.

5 Conclusion

In conclusion, the comprehensive analysis of data collected from a survey investigating the impact of gamification elements on user engagement, motivation, loyalty, and customer retention within the food delivery services industry provides valuable insights into the dynamics shaping user behaviors and preferences. The study explored various demographic factors, ordering patterns, preferences for rewards and incentives, engagement with gamification elements, perceived impact of these elements on user experiences, and likelihood of recommending and trying new options.

The findings highlight the diverse nature of user preferences and behaviors within the food delivery services landscape. Participants exhibit varying levels of engagement, with factors such as gender, age, occupation, ordering frequency, and duration of usage influencing their interactions with gamification elements. While some users are highly motivated by incentives like free delivery and discounts, others prioritize aspects such as earning and redeeming points or rewards. Additionally, there is a range of interest in promotional offers and gamification features, with preferences for specific elements like the mystery box or charity support varying among participants.

Despite differing opinions on the most engaging gamification elements and the extent to which they enhance the overall user experience, the majority of respondents recognize the potential of gamification strategies to positively impact user engagement and satisfaction within food delivery services. This suggests that effective implementation of gamification elements tailored to diverse user preferences can contribute to fostering long-term loyalty and customer retention.

Moving forward, food delivery platforms can leverage these insights to refine their gamification strategies, offering a more personalized and engaging experience to users. By continuously monitoring user feedback and adapting their approaches accordingly, platforms can stay attuned to evolving consumer preferences and industry trends. Ultimately, the successful integration of gamification elements holds significant promise for enhancing user experiences and driving sustainable growth within the food delivery services sector.

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