DIGITAL MARKETING PROGRAMME

Marija Liatukaitė

THE FINAL MASTER THESIS

ŽAIDYBINIMAS MOBILIOSIOSE PROGRAMĖLĖSE: ĮSITRAUKIMO, PASIEKIMO BEI SOCIALINIŲ ELEMENTŲ POVEIKIS PREKĖS ŽENKLO LOJALUMUI	GAMIFICATION IN MOBILE APPLICATIONS: INFLUENCE OF IMMERSION, ACHIEVEMENT AND SOCIAL-RELATED FEATURES ON BRAND LOYALTY

Master thesis supervisor: doc. Elzė Rudienė

SUMMARY

VILNIUS UNIVERSITY BUSINESS SCHOOL

DIGITAL MARKETING STUDY PROGRAMME

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GAMIFICATION IN MOBILE APPLICATIONS: INFLUENCE OF IMMERSION, ACHIEVEMENT AND SOCIAL-RELATED FEATURES ON BRAND LOYALTY

Supervisor – doc. Elzė Rudienė

Master's thesis was prepared in Vilnius, in 2024

Scope of Master's thesis – 101 pages.

Number of tables used in the FMT – 21 pcs.

Number of figures used in the FMT – 3 pcs.

Number of bibliography and references – 148.

The growing challenge to reach consumers has led to brands exploring new practices that strive to engage customers and cultivate strong customer relationships. As a result of that, interest in gamification usage in a marketing context has rapidly grown in the last decade. Various studies have been conducted to analyze the influence of gamification features on customer brand engagement. However, very few scholars have researched the relationship between gamification and brand loyalty, using branded mobile applications. In addition to that, the results were conflicting due to the use of different gamified products or services as well as models, illustrating various variables and relations. The main aim of this work is to examine how gamification features in mobile applications positively influence brand loyalty through customer brand engagement, customer satisfaction and other related variables. The work consists of four main parts. The first part examines scientific literature, related to gamification conceptual foundations and components of brand loyalty. In the second part the research methodology, conceptual model and hypotheses are presented. The third part investigates the quantitative research results of the online questionnaire, using correlation, multiple regression, mediation and moderation analysis. In total 201 respondents participated in the survey.

The results showed a positive correlation between the three categories of gamification features and customer brand engagement, with social-related features having the highest influence on engagement. In addition to that, customer brand engagement positively affected customer satisfaction and intention to use the application. Lastly, both customer satisfaction and brand trust influenced brand loyalty. The conclusions presented in the work can be applied for digital marketing strategies in mobile applications and further gamification research studies.

SANTRAUKA

VILNIAUS UNIVERSITETO

VERSLO MOKYKLA

SKAITMENINĖS RINKODAROS PROGRAMA

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Darbo vadovas – doc. Elzė Rudienė

Darbas parengtas – 2024 m. Vilniuje

Darbo apimtis – 101 puslapis.

Lentelių skaičius darbe – 21 vnt.

Paveikslų skaičius darbe – 3 vnt.

Literatūros ir šaltinių skaičius – 148.

Augantis iššūkis pasiekti vartotojus paskatino ieškoti naujų marketingo praktikų, sudominančių vartotojus prekės ženklais bei puoselėjančių tvirtus santykius su klientais. Per pastarąjį dešimtmetį stipriai išaugo susidomėjimas sužaidybinimo panaudojimu marketingo srityse. Atlikta įvairių tyrimų, kuriuose yra analizuojamas žaidybinimo funkcijų poveikis klientų įtraukimui į prekės ženklą. Tačiau tik maža dalis studijų tiria santykį tarp žaidybinimo ir prekės ženklo lojalumo, panaudojant mobiliąsias programėles. Šie tyrimai rodo prieštaringus rezultatus dėl skirtingų sužaidybintų produktų ir paslaugų bei tyrimo modelių panaudojimo, iliustruojančių skirtingus kintamuosius ir ryšius tarp jų. Šio darbo pagrindinis tikslas yra ištirti, kaip žaidybinimo funkcijos mobiliosiose programėlėse veikia prekės ženklo lojalumą per klientų įsitraukimą į prekės ženklą, klientų pasitenkinimą bei kitus, susijusius kintamuosius. Darbas susideda iš keturių pagrindinių dalių. Pirmoje dalyje yra nagrinėjama mokslinė literatūra, susijusi su žaidybinimo konceptualiais pagrindais ir prekės ženklo lojalumo komponentais. Antroje dalyje yra pristatoma tyrimo metodologija, konceptualus tyrimo modelis bei hipotezės. Trečioje dalyje – pateikiami kiekybinio tyrimo rezultatai, gauti panaudojus koreliacijos, daugybinės regresijos, mediacijos bei moderacijos analizės internetinės apklausos duomenims tirti. Apklausoje iš viso dalyvavo 201 respondentas.

Rezultatai parodė pozityvią koreliaciją tarp trijų sužaidybinimo funkcijų kategorijų bei klientų įsitraukimo į prekės ženklą, iš kurių didžiausią poveikį turi socialiniai sužaidybinimo elementai. Taip pat, įsitraukimas į prekės ženklą pozityviai veikia vartotojų pasitenkinimą bei ketinimą naudotis mobiliąja programėle. Be to, tiek klientų pasitenkinimas, tiek pasitikėjimas

prekės ženklu turi teigiamą poveikį prekės ženklo lojalumui. Šiame darbe pateiktos išvados gali būti taikomos skaitmeninės rinkodaros strategijose, susijusiose su mobiliosiomis programėlėmis bei tolesniuose sužaidybinimo tyrimuose.

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INTRODUCTION

Gamification has gained more attention than ever before, reaching different fields and opening new possibilities and ways for enhancing daily processes, such as foreign language learning (Dehghanzadeh & Dehghanzadeh, 2020), teambuilding, banking and most importantly, cultivating brand loyalty and brand equity (Bicen & Senay, 2018; Costa et al., 2017). With the average number of 4,000 to 10,000 advertisements getting encountered by American consumers on daily basis (Flynn, 2023), it is no secret that marketing specialists and companies are exploring new techniques to capture one's attention as well as interest in the advertising products and services. In addition to that, brands are striving to establish one-of-kind experiences, using brand-related stimulus that would evoke behavioral responses (Xie et al., 2017). That way, unique experiences, associated with brands open up opportunities to nourish loyal and long-lasting relationships with customers which is "a powerful mechanism in building customer brand loyalty" (Khamitov et al., 2019). Furthermore, the growing interactivity in websites and mobile applications has gained a lot of attention in the literature. Studies show that interactivity on platforms is highly efficient for building relationships and shaping brand image (Voorveld et al., 2013). For this reason, there is a rapid growth in interactive and even "*gameful*" advertisements, brand websites and mobiles applications by adopting various gamification practices.

Needless to say, digital marketing field has implemented various gamification features creating new, fresh and unique promotions in order to build a strong brand that fosters a positive influence on company's sales, customer retention (NewsBank et al., 2018; Ribeiro et al., 2020) and encourages participation from both clients and suppliers (Sultan & Suhail, 2019). Previous studies on relation of gamification and branding have mainly examined gamification effect on customer brand engagement (Qian et al., 2022; Rather et al., 2023; Y. Yang et al., 2017), brand love (C.-L. Hsu & Chen, 2018c; Tsou & Putra, 2023) and gamification factors that influence repurchase intention (C. L. Hsu, 2023). In addition to that, some academics analyze the connection between gamification and brand loyalty, word-of-mouth and brand awareness (Habachi et al., 2023; Permana et al., 2021; Torres et al., 2022). On the other hand, studies emphasize that there is still a gap in gamification classification (Jaskari & Syrjälä, 2023). Furthermore, different gamification and brand loyalty models show inconsistency in researched models (Abou-Shouk & Soliman, 2021; Habachi et al., 2023; Mattke & Maier, 2021) as well as gamification features that have the highest level in cultivating brand loyalty differ due to respondents, researched products and applications. This is especially relevant in

Lithuanian market where consumers are constantly shifting towards the usage of new technologies that shape their daily habits, such as shopping, travelling and banking.

Topic relevance:

The rapidly changing consumers' needs and interest in companies that propose additional unique value to the product or service have greatly increased throughout the last decades (Burnett & Hutton, 2007), highlighting the importance of immersive, playful and engaging marketing formats. In numerous studies, gamification has been found to increase customer brand engagement (Rather et al., 2023; Y. Yang et al., 2017) and motivate customer participation with brands. Meanwhile, brand engagement is emphasized to be successful when it achieves consistent and frequent participation from customers (Dogbe, 2023). In addition to that, some studies position customer brand engagement as a mediator between gamification elements and brand loyalty (Abou-Shouk & Soliman, 2021; Xi & Hamari, 2020) while other academics include different components that correlate between the customer brand engagement and brand loyalty variables, such as customer satisfaction, brand love and brand trust (Bauer et al., 2020; Pradhana et al., 2022; Shahisa & Aprilianty, 2022). As brand loyalty describes the relationship between the brand and customer that is developed over time (Alan & Kabadayi, 2012), it is contradicting that only customer brand engagement would mediate the influence of gamification on brand loyalty. That is why, there are studies illustrating the connection in between engagement and loyalty with additional variables (Abou-Shouk & Soliman, 2021; Torres et al., 2022). On the other hand, many of these studies choose different elements, influencing brand loyalty which could have a strong impact on research results as well. Therefore, it remains unclear which elements are primary when mediating the effect between gamification features, customer brand engagement and brand loyalty.

Moreover, the empirical research on gamification integration using branded mobile applications in relation to nourishing brand loyalty has received a limited attention in European and Lithuanian market. In addition to that, Lithuanian scholars, such as Rimantas Gatautis and Elena Vitkauskaitė, concluded that gamification positively affected customer brand engagement in Lithuanian market (Gatautis et al., 2016; Vitkauskaitė & Gatautis, 2018). However, it was reported to be relatively weak and had study limitations as research did not specify the product / service market or brands with whom respondents interacted through gamified systems (Gatautis et al., 2016). Thus, there has been little studies over the last decade on gamification influence in Lithuanian context of digital marketing, especially researching the

effects on brand loyalty. For that reason, this study aims to research which gamification elements are the most effective in building loyalty between fitness wear brands, such as Nike, and Lithuanian customers.

Thesis problem – How the usage of gamifications elements (immersion, achievement and social-related features) in mobile applications influence Lithuanian consumers' engagement with the brand and cultivate brand loyalty?

Thesis aim – To examine how gamification features in mobile applications positively influence brand loyalty through customer brand engagement, customer satisfaction and other variables.

Objectives of the thesis:

1. Examine the concept and characteristics of gamification in digital marketing;
2. Define brand loyalty, components and its role in brand management;
3. Identify the influence of gamification on brand loyalty and their connection;
4. Evaluate how consumers perceive gamification in digital marketing and associate it with brand loyalty.

Research methods: Literature analysis – investigates topics, related to gamification and brand loyalty, based on thesis research goal, objectives and aim. **Quantitative research** – using a survey instrument and Nike Run Club mobile application as a case study to research how three categories of gamification features influence customer brand engagement, intention to use the mobile application, customer satisfaction and brand trust, and, finally lead to brand loyalty in the context of Lithuanian market.

Structure of the thesis: The Master thesis consists of 6 main parts, that start with introduction and finish with conclusions and recommendations. In the first chapter, the conceptual foundations of gamification, including *gamefulness*, *gameful experience* and gamification practices in various fields are analyzed. The second subchapter of the first chapter examines gamification in digital marketing, highlighting service marketing, different gamification integrations and technology acceptance model. The second chapter analyzes components of brand loyalty: brand engagement, customer participation, value co-creation, customer satisfaction, perceived value and brand trust. In addition to that, it emphasizes the benefits of strong brand loyalty on brand love and brand equity and examines what gamification features have been researched to be influencing brand loyalty. Based on literature

analysis, the 3rd chapter presents the methodology of empirical research, consisting of conceptual model, 9 hypotheses, a case study that is used to illustrate gamification, instrument and sample size. To test hypotheses, the 4th chapter presents results, analyzed using *IBM SPSS Statistics* software and *Hayes PROCESS macro*. The results are analyzed using Pearson Correlation, ANOVA, Multiple Regression, Moderation and Mediation calculations. The study includes 148 bibliography and other references, 21 tables and 3 figures.

Thesis limitations – the research is conducted in Lithuania, examining the research question from the perception of Lithuanians and foreigners, living in Lithuania. Therefore, the results can vary depending on the country, in which the survey is conducted. In addition to that, there can be differences based on the gamified product, service or system as well as the segment of audience.

1. THE CONCEPT AND CHARACTERISTICS OF GAMIFICATION

1.1. Conceptual foundations of Gamification

In the last decade, together with increasing computer games' popularity, the usage of game elements in different fields has grown worldwide. Truthfully, gaming elements adoption in non-game environments started even earlier. However, it became significantly more used once the term to describe it was invented.

The raising popularity of gaming components usage in non-game situations gave the opportunity for the game designer Nick Pelling to coin the word "gamification" after implementing these game-like interfaces for ATMs, vending machines and other electronic devices (Pelling, 2011). Since then, the coined word has received the usage approval from both academic fields and regular media. At the same time many academics have proposed a big variety of different definitions and descriptive explanations.

Table 1

Key definitions of Gamification

Gamification	Authors
"The application of game design ideas to non-game settings"	Deterding et al., 2011
"The process of enhancing a service with affordances for *gameful* experiences in order to support users' overall value creation"	Huotari & Hamari, 2017
"A method for enhancing the user experience of a service or system by introducing game-like aspects into the design of the service or system"	Mora et al., 2017

Source: compiled by the author based on Deterding et al., 2011; Huotari & Hamari, 2017; Mora et al., 2017

However, one thing that all of the studies have in common is referring to gamification as the process of enhancing services and systems by employing a variety of characteristics common to games (Hamari & Parvinen, 2016). This aligns with regular people view on gamification who perceive it as the usage of elements, common for games, such as levels, time challenges and achievements, in various applications and websites, often meant for e-shopping.

On the other hand, in the context of academics, the concept of gamification is often described differently by each researcher. Some academics refer to it as a "technological, economic, cultural, and societal developments in which reality is becoming more *gameful*"

(Hamari, 2019) and "the increased convergence of games and everyday life." (Hamari & Parvinen, 2016). That can be seen as gamification elements becoming a strong part of people's daily lives, services and systems consumption. In other words, it could be viewed as features that drastically ease up our daily processes as well as make different tasks more playful and exciting.

Moreover, other studies refer to gamification in a simpler way and emphasize that gamification is "the use of game design elements in non-game contexts" (Deterding et al., 2011). The intention of such game elements adaptation in various services and platforms is to bring more playfulness and fun to the real world without necessarily becoming an essential part of people's daily lives. That is emphasized by Kai Huotari and Juho Hamari as well who define gamification as the "process of enhancing a service with affordances for *gameful* experiences in order to support users' overall value creation" (Huotari & Hamari, 2017). They based this definition on the gamification's goal to cultivate *gameful* experiences rather than focusing on the set of gamification methods (Huotari & Hamari, 2017). Based on that, it can be assumed that gamification is rather one of the possible practices that can be applied in order to enhance the processes, generate unique experiences as well as increase user's engagement with the system, but is not required in order to generate a successful engagement.

The latter definition can be encountered in the most gamification studies, however, it is clear that both of them point to one thing. That is game elements appearing in unusual non-game contexts – often overlapping with the real world. In addition to that, the researcher and professor of gamification, Juho Hamari suggests that there are two different directions for gamification terminology. According to him, gamification can be divided into these two primary categories (Hamari, 2019):

1. Intentional gamification – the intentional transformation of any activity, system, service or product with mechanics found in games (Hamari, 2019);
2. Emergent gamification – the unintentional transformation of cultural and societal practices reminiscent of game practices.

The first category refers to the use of game mechanics and various elements, such as points, bonuses, leaderboards and badges in order to facilitate changes in human behavior (Hamari, 2019; Sanchez et al., 2020). In other words, the set of needed game attributes allows to create a game-like activity that furtherly helps to achieve various goals, such as affecting human behavior like habits or decisions.

The second category describes a more complex process that occurs as a result of increasing *gameful* interaction in everyday life (Hamari, 2019). Due to the increase, cultural and societal practices are transforming and becoming more similar to game and player practices. It focuses on the player experience and implements motivational affordances (Sanchez et al., 2020). As a result, society changes and game elements emerge more in our lives.

In this work, the focus is drawn to intentional gamification and how it correlates with facilitated changes. To understand the correlation between the usage of gamification features and cultivation of brand loyalty through its' characterized components, it is important to analyze the concept behind *gameful* experiences, types of gamification usage as well as distinguish gaming elements that are used to achieve the changes.

1.1.1. *Gamefulness* in gamified activities and *Gameful* experience

Gameful experience is a term that often appears when analyzing the gamification concept together with the quality of "playfulness". Although two might be considered synonyms, according to academics they refer to two different things that correspond with each other. In research works, playfulness denotes the experiential and behavioral quality of playing while *gamefulness* denotes the qualities of gaming, where explicit rules are presented (Deterding et al., 2011). The two qualities are differentiated by "playfulness" referring to the broader category while "*gamefulness*" relates specifically to games (Kamel et al., 2017). Furthermore, since gamification enhances non-game environments with game elements, *gameful* experience is unique quality that is evoked only through gamified systems (Bekk et al., 2022). Meaning that *gameful* experience is "the psychological consequence" (Eppmann et al., 2018) that can appear only within experiences when interacting with gamified systems.

In other words, *gamefulness* is an inherent characteristic of gamification (Eppmann et al., 2018) that determines the success of the gamified services when interacting with the user. That means, *gameful* experience plays an essential role in achieving a positive overall user experience of a service (Högberg et al., 2019). Moreover, this applies to a wide range of services that are not necessarily focused on gaming, but can have online retail or health context in which gamification integration enriches "the existing shopping process" (Milanesi et al., 2022) or fitness practices. In addition to that, Johan Högberg together with his fellow academics state that *gameful* experience creates stimulus for continued gamified service use and target behavior, that way creating the intended effect that lasts even after in the engagement

with a gamified service (Högberg et al., 2019). He highlights in his other study that post-game phase is even more important than the interaction with gamified service itself as depending on the concept, users do not always perform the target behaviors, such as purchasing products during the gaming phase (Högberg, 2019). Thus, brands must achieve these desired behaviors during the post-game phase, e.g. make the purchase after receiving a discount during the engagement with gamified application. To characterize a *gameful* experience, three fundamental components are differentiated:

1. Challenges & difficulty – the creation of challenges and difficulty to achieve the experiential goal of enjoyment. Challenges produce the motivation to play the game and create enjoyment. According to professor Bernard Suits "playing a game is the voluntary attempt to overcome unnecessary obstacles" (Suits, 2005);

2. Rules – players engage in a fictional conflict defined by rules and voluntarily accept them to achieve a desired state of affairs (Landers et al., 2019), such as clearing the challenge. As a result, the rules create challenges and difficulty for the players in which they voluntarily engage;

3. Goals – achievable goals that are constrained by challenges and rules. Such goals have to be sufficiently difficult but achievable in order to ensure that the player views the goal as a personal challenge (Högberg, 2019; Landers et al., 2019). Additionally, if the goal is trivial, it reduces the *gameful* experience. However, if the goal is too challenging, it diminishes the *gameful* experience (Landers et al., 2019). Therefore, it is one of the most essential components when creating a *gameful* system and has to be exceptionally balanced to motivate the user.

A clear understanding of *gameful* experience components enables the creation of games and gamified systems that successfully capture users' enjoyment and interest. As mentioned earlier, gamified services, products and systems that rely on gamification elements have the influence in changing user behavior. In addition to that, some studies emphasize the importance of post-game phase that initiates consumers to perform gamified system's desired target behaviors, such as purchasing, subscribing to channels or landing on company's website. Furthermore, there can be different types of gamification usage depending on the field and the desired changes in behavior. Regardless of further gaming elements they consist of, all of them should follow the three fundamental components – challenges & difficulty, rules and goals – in order to successfully create a *gameful* experience for users interacting with the system.

1.1.2. Overview of Gamification usage and real-life practices

The gamification elements are known to be used extensively in many different non-game environments and contexts. That includes any field from educational and medical to business and technological. In the last decade, the implementation of gamification has especially grown in education, creating new terms such as gamified learning and gamified teaching. Many new and unique practices have especially arisen during the worldwide pandemic Covid-19, resulting in further gamification development.

The used gamification elements in education may vary depending on the education goals of implementing the *gameful* system. However, all implementations follow these key elements: mechanics, dynamics, aesthetics, story and technology (Manzano-León et al., 2021; Zeybek & Saygı, 2023). With the help of the distinguished characteristics, goals, participation of the player in the environment and the game process, gamification in education is defined as creating a game-like environment for students and learners (Zeybek & Saygı, 2023). These game-like environments and gamified systems strive to motivate and promote student participation in the learning environment. That way, through the usage of gamification, the changes in their behavior are subconsciously induced, making the learning process easier for students.

For example, the gamification case in the Netherlands showed a positive impact on students' results through the pilot ran courses. A technical university has applied gamification elements in order to keep higher education students engaged and motivated. There were two gamification-based courses implemented in the tech program with a total of 450 students. The gamified approach has resulted in 75% of total students passing the courses on the first attempt. Moreover, there was a visible increase in longer attention spans and more positively perceived interactions during the course lectures (Iosup & Epema, 2014). As many teachers and lecturers are struggling with keeping students' attention nowadays, the case has shown that the usage of such technology in the education and application of features that are commonly close to young people due to their involvement in games can be a solution to changing their behavior in the academic sphere as well.

Moreover, the faculty member from Indiana University has also reported improved reactions from the students after introducing courses with game-like activities, such as earning points by completing quests, fighting monsters and crafting while progressing from level 1 which corresponds to a grade of F (Landers, 2014). Besides this, useful insights have been

found in other gamified education projects as well, creating more gamified learning services, such as the language learning mobile application "Duolingo" and the instrument learning app, called "Yousician". It is safe to state that gamified learning has an outstanding impact on students' motivation and progression in learning.

The medical field and applications, focusing on one's well-being have also gain a big share of attention, regarding gamified services. A lot of scientists are researching the medical area and how gamification contributes to it in a practical way. Gamification is and can be employed in different medical contexts, affecting both patients' and healthcare workers' behavior and forming healthier decisions. These behavioral decisions can be related to one's motivation to exercise, having a balanced nutrition, taking care of one's hygiene, measuring one's blood pressure and more (Pereira et al., 2014). Gamified applications that strive to affect these behavioral decisions work as a stimulation to improve and monitor one's health without users viewing it as health adherence.

For instance, the dietary application "Diet Coach One" created in Saudi Arabia has shown changes in the dietary scores, collected by participants (Altammami & Chatterjee, 2017). The gamified application presented two stages where the first one educated people in their adolescence on popular food ingredients and products. The second part of the app used game mechanics to check the user's knowledge of the information presented in the first stage. In addition, the second stage had a three days period (Altammami & Chatterjee, 2017), affecting teenagers' decisions through the presented information in a *gameful* way and motivating them to complete the stage here and now.

Moreover, the earlier mentioned gamified educational services use gaming features, such as points, leaderboards, levels, badges and challenges. These elements are also the "most common incentives in gamified healthcare applications" (Al-Rayes et al., 2022). Thus, it is visible that gamified services and products in medicine and education often share similar sets of features used in their gamified mobile applications and systems, along the three fundamental ones – challenges, rules and goals.

To summarize, the possibilities of adapting gamification in various fields are endless and can be already noticed by a big variety of different gamification practices. On the other hand, gamification implementation in both education and medicine is the most commonly analyzed practices in academic studies. Nevertheless, *gameful* experiences have proven to also bring new successful cases in digital marketing and company branding fields. Therefore, the

next chapter analyzes gamification in the framework of digital marketing and the ways of using it to achieve successful branding.

1.2. Gamification in Digital Marketing

The increased usage and development of e-commerce and mobile applications have opened new ways for advertising products and services to consumers. Together with the growing number of competitors, similar advertisement approaches and decreasing span of potential customers have challenged marketers to apply new technologies, concepts and shift towards e-marketing (Kasurinen & Knutas, 2018). With the move to the online presence, marketing specialists not only easily reach consumers in their daily used channels, such as social media and the search platforms but also have an opportunity to implement concepts that have an effect on consumer behavior, like purchasing decisions, perceived value or intention to use.

Customer engagement and loyalty are two of the main objectives for marketers' goals that lead to buyer retention as well as nourished relationships between the brand and customers. To generate engagement and loyalty, the participation of consumers is essential (Kasurinen & Knutas, 2018) and unsurprisingly, gamification and gamified services heavily rely on creating a *gameful* experience in which customers are engaged and at the same time voluntarily engage with the system. That is why, gamification is gaining a lot of attention from branding specialists. As a result of that, gamification provides the potential to create engagement with the brand that later can lead to return on investment, purchases and repurchases.

Effectively gamified service or brand application has the ability to attract the target audience "and then sustain it" (Thorpe & Roper, 2019), providing a clear opportunity for the brand to create enjoyment associated with the brand's image, products and services. Furthermore, as previously mentioned gamified services in other fields, so gamified digital marketing services also use the components of challenges, rules and goals. These are fundamental elements of gamified services and applications.

Once the goals are achieved, consumers are provided with benefits and unique experiences that are associated with the specific brand and cultivate a high level of enjoyment (C.-L. Hsu & Chen, 2018c). In the digital marketing framework, these benefits are often economic ones, like discounts, gift vouchers or tangible rewards, such as limited items that are traded in exchange for the customer's loyalty (C.-L. Hsu & Chen, 2018c). Most importantly,

besides the economic benefits, a *gameful* experience provides the audience with a positive consumer experience and highlights the unique added value of the product or services. Thus, creating a significantly deeper impression in the mind of customers.

It is especially important in the 21st century where it is not enough anymore to only create a product or provide a service in order to generate consumers' interest, purchase intention and nourish buyer retention. Countless companies create products that satisfy consumers' most basic physiological needs. Because of that, there is a strong competition between brands to be different, memorable and create additional value for their customers. That is why, only unique and engaging consumer experiences through different approaches such as emotional branding cultivate a connection with the brand on the sensual and emotional level (Akgün et al., 2013). The depth of relationship that nourishes the loyalty to the brand.

All in all, the emotional connection directly resonates with the gamification concept. According to academic sources, well-gamified services with successfully implemented gamification elements create a high emotional level of enjoyment. That is a key objective of successful gamification in digital marketing – to create a unique experience associated with the brand while bringing customers positive emotions, such as joy, happiness and feeling of achievement. Consequently, gamification contributes to digital marketing objectives for brands and further increases long-term brand success through engagement that leads to initiates the relationship between a brand and customer as well as further affects loyalty and brand love.

1.2.1. Gamification in service marketing

Service marketing is a type of marketing that focuses on strengthening and developing production value and customer relationship. This type of marketing does not apply only to advertising services that provide deeds, processes and performances (Zeithaml et al., 2010), such as banking, insurance or financial advices, but is prominent in marketing products as well (Hole et al., 2018). According to Yogesh Hole and his fellow co-authors, service marketing is "with or without a sale of a product, but with special performances and effort to satisfy the customer" (Hole et al., 2018). Therefore, it can be applied to products as well as "value-add for manufactured products" (Zeithaml et al., 2010) as long as special actions are taken to satisfy the consumer and to form a special relationship between the customer and the company.

The constantly changing marketing strategies show the essential element of adapting service marketing as even during the consumer's acquisition of physical goods, they are faced

with services by interacting with the company's website, customer service, store's or manufactory's environment, after purchase confirmation emails and other touchpoints. The seven Ps of marketing highlight that as well by dividing key marketing elements into – product, price, promotion, place, people, process and physical evidence (Zeithaml et al., 2010). As a result, the customer gets involved in the service process and forms a perception of the brand through his unique experience in participating in it.

Service marketing is rather an abstract phenomenon that occurs through purchasing products or services. It follows the customer journey when the consumer interacts with brand's touchpoints during the buying process. To distinguish components of service marketing, there are four characteristics emphasized by academics (Hole et al., 2018):

1. Intangibility – marks that services are intangible and cannot be touched, smelled, heard or viewed;
2. Inseparability – marks that service is received and consumed at the same time. As mentioned before, the consumer forms the perception on the brand the moment he interacts with the service, even such as personal assistance;
3. Variability (heterogeneity) – services quality is unique every single time it is performed and cannot be standardized. Thus, the satisfaction of the service often depends on the employee's and customer's interactions (Conaway & Garay, 2014);
4. Perishability – services cannot be reused or relocated.

As service marketing's main quality is to provide added values in ways that are intangible for the buyer (Conaway & Garay, 2014), so does gamification experiences as well. Therefore, gamification elements can be considered services that provide users the ability for co-production and value co-creation to evaluate before the purchase action is made. Scientists divide acquisition of the service into three main stages (Conaway & Garay, 2014):

1. Recognition of the need – the first stage occurs once consumers receive the information about the brand or a product;
2. Evaluation of options – in this stage potential buyers evaluate different information and compare the existing alternatives, depending on the gained information, previous experiences and the company's history;
3. Post-purchase – potential purchasers acquire the experience of the service and evaluate it.

According to Conaway and Garay, gamification strives to take users through these three stages and create unique and enjoyable experiences (Conaway & Garay, 2014). Consumer's positive encounters and evaluation is a needed quality to bond with the buyers and enhance his loyalty to the brand as well as initiate a word-of-mouth sensation. Thus, the usage of gamification enhances services "to support the user's overall value creation" (Hamari, 2015) and provide companies with new insights based on these co-created values.

As a result, there is a clear correlation between gamification and service marketing. Gamification can be perceived as one of service marketing tools that enhance unique experiences with customers. Meanwhile gamification provides intangible experiences that heavily depend on consumer participation and satisfaction, it holds a lot of possibilities for fostering deeper relationships between brands and their customers. Together with the implication of gamification in service marketing, specialists provide not only intangible services, but also unique and one-of-a-kind experiences that open up opportunities for value co-creation and service development.

1.2.2. Integrated gamification in branded digital marketing channels

The growing usage of e-commerce, social media and mobile applications has opened tremendous opportunities to implement gamification elements in any shape, type and media. From the brand's mobile applications and e-commerce websites to social media platforms and the brand's dedicated games. These platforms can be gamified by adopting different game features into marketing tools. Some of these most used and simplest approaches include:

1. Gamified loyalty programs – enable users to collect points on mobile applications of the brand or on the e-commerce website by completing challenges, such as using loyalty cards in the physical store, playing mini-games on the app or completing purchases (Milanesi et al., 2022). These gamification elements have been applied by big well-known companies, like coffee retailer "Starbucks". In 2014, Starbucks released an app where consumers are able to accumulate stars through repetitive purchases at the coffee store that later can redeemed for free drinks and food options (Chou, n.d.). Thus, increasing customer's brand loyalty and retention;

2. Spin-the-wheel games – enables users to try their luck and win random discount coupons, free items on their purchases or other prizes. It is majorly used gamified digital marketing tactic that easily gets consumers' attention and persuades users to engage with

the website. It is often seen during special season celebrations and big discount periods, such as Black Friday in order to temporary increase sales instead of create a *gameful* experience.

3. Catch-me games – another widely used gamification integration in e-commerce and digital marketing is the peek-a-boo game that motivates website and application players to win discounts by catching as many points or items as they can through a limited time (Ventoniemi, n.d.). It is a relatively simple gamification tactic that can increase sales on special seasonal occasions, such as Christmas or Easter seasons.

4. Score leaderboard games – finally, games, showing your position in the score leaderboard are especially perceived positively as it awakens consumers' competitive side. At the same time, people are more likely to share their results with friends and followers on social media channels (Ventoniemi, n.d.). This way generating traffic to the brand's website and word-of-mouth effect as well as creating a *gameful* experience for consumers.

The mentioned gamification practices in digital marketing can be successfully used to greatly increase short-term sales. However, in a long-term they often fail in creating intrinsic motivation when the user engages with the gamified service for more than just tangible rewards (Milanesi et al., 2022). Besides the short-term marketing strategies, gamification can be a great tool to enhance new product launches and strengthen brand's values for the long-run success (McDougall, 2014). With the right gamification strategy in mobile applications, an additional value associated with the brand name is created for consumers.

To contribute to that, previously done research on gamification and digital marketing show that games are the activity that evokes a genuine desire to engage with as well as provides the customer with tremendous enjoyment. In other words, intrinsic motivation can be developed through the use of gamification which correlates with brand loyalty (Milanesi et al., 2022). However, such marketing strategies should rely on the goal of increasing long-term brand loyalty, brand love and brand equity as well as customer engagement with the company and their satisfaction.

For this reason, in contradiction to gamification creating unique and long-lasting experiences through engagement with users, it can be argued whether such game elements applications in order to achieve short-term goals are even considered to be a gamification. While catch-me and spin-the-wheel marketing campaigns increase the engagement of app users and website visitors, they are often solely used to increase company's sales. On the other hand,

these simple practices follow the three elements of *gameful* experience (challenges, rules and goals), thus they are still counted as gamification applications.

1.2.3. Intention to use gamified applications and TAM Model

Gamification usage in different digital marketing mediums, such as mobile applications, often provides brands with opportunities to develop a sustainable customer-brand relationship with its existing and potential customers (Qing & Haiying, 2021). The engagement with buyers nourishes opportunities to lead customers to brand loyalty in a long-term of usage. However, it would not be possible without ensuring buyer's intention to try the application out and cultivating the continuance use of gamified application.

Figure 1

Technology Acceptance Model (TAM)
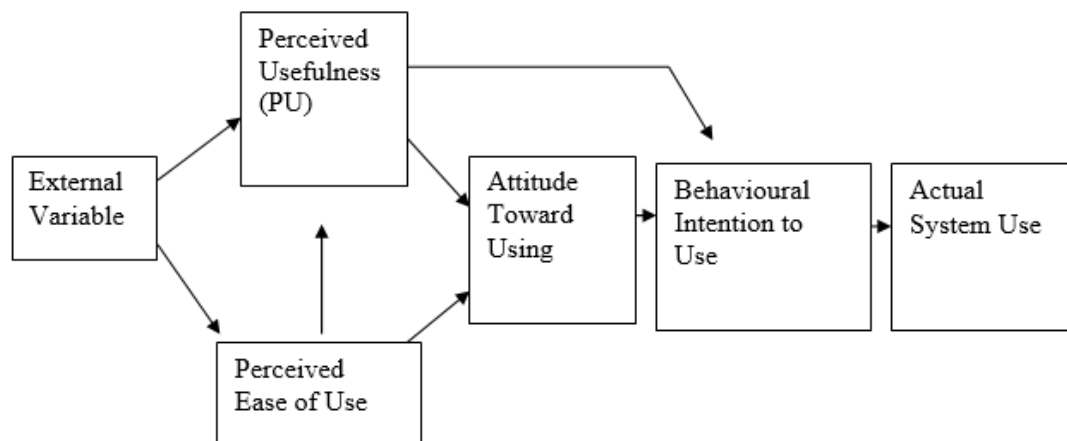
Source: (F. D. Davis, 1989)

Technology Acceptance Model, also known as TAM, was developed by Davis in 1989 (F. D. Davis, 1989). In the last several decades, the model has been successfully applied by many researchers when analyzing various technologies, including mobile applications and gamification elements in non-gaming environments (Aydınlıyurt et al., 2021; Bayır & Akel, 2023; Hamari & Koivisto, 2015). The model incudes two primary components:

- Perceived usefulness – user's "perception" that a particular technological application will enable them to perform the action better (K. Davis, 2022). For example, in terms of shopping, perceived usefulness can be identified as consumer's confidence that one or another technology will enable the buyer to experience a better purchasing process (Bayır & Akel, 2023);

- Perceived ease of use – the required effort by a user to use a specific technological system, such as mobile applications (Bayır & Akel, 2023; F. D. Davis, 1989). In other words, it illustrates how easy to use is the mobile application from the user's point of view. The less effort technology requires, the higher the chances are that consumers will have the intention to use the application.

The adoption of gaming elements in mobile applications can not only create unique experiences and emotions for the user. It can further influence the acceptance and continuance use of branded applications (Habachi et al., 2023). That is also supported by Baptista and Oliveira who state that for the intention to use technology, a balance between usefulness and fun is required (Baptista & Oliveira, 2019). Gamified applications often offer consumers the same processes, such as shopping or banking actions, but in better optimized, user-friendly and entertaining ways. Thus, gamification elements play an important role in both engaging users or even escalating the intention to use the applications as well as creating a value for the customers.

In addition to that, studies researching how gamification can influence the periodic use of systems, such as mobile applications and websites, apply different variables in their research models. For example, scholars Yang, Asaad and Dwivedi studying gamification effect in the marketing context use the two components of TAM model – perceived usefulness and perceived ease of use (Y. Yang et al., 2017). Meanwhile, Bayır and Akel include the other two TAM variables as well: attitude toward using and behavioral intention to use (Bayır & Akel, 2023). Other studies simplify the TAM model and emphasize the correlation only between user engagement and continued use intention as a result of gamification features providing a better-gamified experiences within branded applications (Bitrián et al., 2021; Habachi et al., 2023). Therefore, concept of TAM model is adjusted between various studies, with often focusing only on the frequent and long-lasting behavioral intention to use the gamified application.

In conclusions, technology acceptance model suggests that in order for the technology to be accepted, it has to satisfy two qualities from the perception of users: to be perceived useful, to be perceived ease of use. This also heavily applies to both gamified systems and mobile applications as they rely on user's intention to continuance use and engagement with them. Moreover, many gamification studies researching the intention to use the gamified application and perceived usefulness as well as perceived ease of use report the existing effect between the variables. Therefore, in many cases gamification features increase the system's level of

technology acceptance, cultivating motivation for the user to frequently use the gamified application.

2. GAMIFICATION IN RELATION TO BRANDING

2.1. The concept of Brand loyalty

The increasing challenges of engaging potential customers with marketing activities emphasizes the importance of integrating *gameful* designs in the branding context more than ever before. As already mentioned in the previous chapter, gamification has an ability to provide unique *gameful* experiences to the customer creating brand value that is directly associated with the company. The creation of interactive brand experiences is often labeled as the basis of any brand engagement development (Nobre & Ferreira, 2017). Further, that is an essential component of successfully building a brand presence and developing a brand loyalty and brand love relationship with its customers.

Brand loyalty is a measure that identifies the consumer's preference to buy specific brand's products over other available brands in the same product category. Additionally, it stimulates lower price sensitivity and indicates the effectiveness of the brand's marketing practices (Knox & Walker, 2001). Brand loyalty occurs over time when buyers are successfully using the brand's product for a very long time. As a consequence, they form a strong trust in the brand and view it more positively than the brand's competitors (Ishak & Abd Ghani, 2013). According to Jacoby who researched the conceptual definition of brand loyalty, there are 6 fundamental requirements when defining brand loyalty (Jacoby, 1971):

1. Behavioral response;
2. Expressed over time;
3. By some decision-making unit;
4. With respect to one or more brands out of a set of alternative brands;
5. A function of psychological processes (e.g. decision-making and purchase evaluation).

Consumers unintentionally form brand loyalty over time and it greatly influences their decision-making as they become less price sensitive to the brands that they are familiar with and have long-lasting positive experiences with. As a result, when making purchase decisions in a big assortment of products, the buyer's attention eliminates the products depending on familiarity with the brand as well as price and quality relationship. Moreover, brand loyalty also becomes an indicator of price sensitivity as it shows how loyal customers are when the brand is increasing or decreasing prices as well as how likely they are to switch to using products of the brand's competitors when changes in prices occur (Ishak & Abd Ghani, 2013).

To successfully enhance brand loyalty, there are several fundamental integrals that are necessary for building customers' trust and loyalty to the brand throughout the customer journey. Different models and researchers emphasize different elements that compose brand loyalty.

Professor Solem introduces a model in her research that focuses on the customer brand engagement (CBE) variable that leads to customer participation. Such customer participation correlates with brand satisfaction which later directly contributes to brand loyalty (Apenes Solem, 2016). Researchers Helmen-Guizon and Magnomi also recommend investing in strong brand engagement to instill brand loyalty intentions (Helme-Guizon & Magnoni, 2019). This correlation between engagement and loyalty is supported by other researchers as well. They affirm that "emotional engagement is a main mediator in establishing and deepening brand loyalty" (Huang & Chen, 2022). Moreover, there are also models that state the link between customer trust and brand loyalty. The first variable is brand engagement which leads customers to brand trust and attachment. As a result, it enhances brand loyalty and builds a better perceived brand image (Li et al., 2020; Palacios-Florencio et al., 2018). Furthermore, customer engagement also produces benefits, like repeated purchases and recommendations that are components of customer loyalty (Gao & Huang, 2021). Thus, it is suggested that customer brand engagement is a key component in cultivating relationships.

The reviewed studies show that customer engagement is the foundational stage of building brand loyalty. Between customer engagement and brand loyalty, there is no only one concrete mediating variable. Rather different academics research different elements, mediating engagement and brand loyalty. That includes components, like brand satisfaction, customer participation, brand trust and attachment. These elements act as a bridge between customer engagement and the desired result of engaged marketing practices – brand loyalty. In the next subchapters, each element, including customer engagement is reviewed more in details.

2.1.1. Customer brand engagement, Customer participation and Value co-creation

Customer brand engagement and customer participation often go hand in hand. While engagement without customer participation can be possible, it does not work the other way around or at least not in an effective way. Every participating customer is engaged with the brand and the greater the engagement is, the higher value is received by consumers (Gillis et al., 2018).

Co-created value can be described "as a shared, cooperative, simultaneous process of generating new value, both materially and symbolically" (Quach et al., 2020). It forges as a result of customers' interaction with the brand and can be produced through five co-created value dimensions (Agrawal & Rahman, 2019):

1. Personal – personal aspect of co-created value (e.g. self-esteem, influence, accomplishment);
2. Relational – connection between brand & customers, customers & customers;
3. Economic – exchange of economic values (e.g. discounts, special deals and lower prices);
4. Interactional – interpersonal communication of ideas and knowledge exchange (e.g. a contest in which you can win a special prize by submitting your best ideas);
5. Experiential – value that is created in the process as a result of co-creation, often seen as a reaction to co-creation through happiness, interest or joy.

Customer engagement acts as the mechanism to generate a co-created value between the brand and consumers. In order to achieve co-creation, companies require an enormous investment of time, willingness and resources from their consumers. In exchange for successfully achieving that, firms generate purchases, referrals and essentially customer feedback (Quach et al., 2020).

Besides the financial benefits, the feedback of customers can provide companies with new perceptions on their marketing efforts. In addition to that, the feedback as result of customer participation can be used to further co-develop desired products and services with the help of target customers and track down the pain points of customers. Thus, it plays a strong contribution to positive brand image and customer retention.

On the other hand, it can often be hard to facilitate brand participation in practice. The reviewed literature suggests that there are six motivators that can encourage customer participation. According to professors Freida C. Palma, Silvana Trimi and Soon-Goo Hong, the six elements and human needs include:

1. Affiliation – the need for belonging, acceptance and affiliation with others. When satisfying the need for affiliation, consumers are accepted into the brand's affiliated group. Often affiliate partners are given tangible rewards for their contribution and affiliation with the company. As a result, customers feel a sense of belongingness

and tend to view the company more positively, resulting in becoming brand's advocates and generating word-of-mouth (Palma et al., 2019);

2. Expertise – the need for appreciation and (often) tangible incentives in exchange for unique ideas and expertise (Palma et al., 2019). It is not a lie to say that sometimes customers know the brand better than the brand itself. Brand image is a result of how consumers perceive the brand based on their experiences and interaction with the company. That is why, sometimes it is very valuable to listen to the creative group of your customers and give them a platform to provide you with their unique expertise (Palma et al., 2019). Such expertise requests by the firm can be a big motivator to creative consumers who are searching for ways to contribute to their respected brands and gain personal benefits;

3. Expression – the wish for new experiences as a driver for self-expression and special ways to approach life. The internal motivator enables creative customers to step out of their comfort zone and come up with new experiences and innovative ideas. Companies that provide platforms, credibility, tangible rewards, full creative autonomy and a purpose tend to have the biggest motivator for these creative consumers who pursue intangible desires (Palma et al., 2019). As a result, the creative tools given by the brand are the most valuable motivator for them;

4. Recognition – the need for public acknowledgment of one's achievements. To raise interest in brand participation, companies can offer incentives, such as increased reputation among the community, position in the company as well as profit sharing for customer's contributions;

5. Community – the need for an active community with shared interests, values and work towards a unified goal and problem (Palma et al., 2019). Brands that work with such communities within specific areas of interest should provide the target audience with easy access, dialogue and the ability to listen and be listened by other community members;

6. Tangible reward – the benefit of gaining materialistic and monetary incentives is a big motivator to many customers who are willing to take part in participation (Palma et al., 2019). As noticed in the earlier five elements – tangible rewards are often a fundamental extra bonus along intangible rewards, that makes intangible rewards more attractive to customers.

The six motivators not only play the role of helping companies to strategically plan their co-creation strategies and resolutions. Additionally, it also helps to design from what angle the potential loyal customers will be approached in order to engage with them and strengthen brand loyalty as well as customer retention.

The relationship between customer participation and customer brand engagement shows how intense the individual's participation as well as connection with organizational brand activities are through brand engagement. According to the literature, participation of customers symbolizes a behavioral component in the interactive area. Meanwhile, customer involvement is "the cognitive, affective and (or) motivational component of customer engagement" (Nguyen Hau & Thuy, 2016).

Both customer participation and involvement construct customer brand engagement. Meanwhile, the constructed engagement affects key marketing elements – value, trust, affective commitment, word of mouth, brand community involvement and, of course, loyalty (Vivek et al., 2012).

Furthermore, brand loyalty is expressed through the psychological and behavioral components of loyalty. While customer brand engagement involves cognitive, emotional, behavioral and social components. Therefore, engagement cultivates unique experiences for each buyer. That way, building a strong connection with the brand that the customer associates with the engagement (Vivek et al., 2012). As emphasized before, the strong impression that brand leaves to potential customers through their interaction with brand's marketing efforts is one of the essential for further relationship development.

All in all, the more motivated customers are to participate in brand's offered platforms, the higher the chance is to create engagement and start the conversation with potential buyers. This conversation through customer brand engagement is a key to nourish a relationship. As a consequence, this is a primary reason why many academics highlight the correlation between brand loyalty and brand engagement in the big picture. Moreover, they acknowledge the importance of customer participation, involvement and value co-creation.

2.1.2. Customer satisfaction, Perceived value and Brand trust

Satisfaction is an essential component for brand loyalty while value and trust take brand further to developing a strong loyalty. The first element – brand satisfaction – can be labeled as the initial stage in the customer response to company's offering. Meanwhile, loyalty is a

matured stage in which a response comes after consumers have positive experience with the brand (Martišiūtė et al., 2010).

The usual touchpoints of attracting new customers follow a several stages through familiarity with the brand. An inexperienced customer that is not familiar with a product segment starts the selection process by judging products' benefits and how each product fits their preferences. On the other hand, experienced consumers instantly choose the brands they have satisfied experiences with (Torres-Moraga et al., 2008). The more customers are experienced with one or another product, the more they focus on the product's brand instead of options variety in different product segments, leading to brand trust and loyalty.

Furthermore, loyalty alone has the power to motivate customers to identify themselves with the brand or relate to the brand if it reflects their personality. As a result, loyal purchasers might subconsciously express their brand loyalty towards one or another company by purchasing products of the brand in a different product line regardless if they are familiar with that product segment or not (Torres-Moraga et al., 2008). That is why, the process of developing strong brand loyalty should be very important to every company.

Brand trust comes after the customer's positive satisfaction with the brand. However, trust itself is a much more complex component of brand loyalty as it symbolizes the established relationship between the customer and the brand. It is no surprise that trust plays an important role in brand loyalty as it is the basis in any existing relationship, whether it is between the business company and a consumer, business to business or family members, friends or partners (Delgado-Ballester & Luis Munuera-Alemán, 2005). While trust heavily depends on customer satisfaction, it also has the ability to affect satisfaction (Erciş et al., 2012). It is that way because customers who trust the brand tend to be more satisfied as well as are more open to committing to the brand.

Trust is generally defined as "the confidence that one will find what is desired from another, rather than what is feared" (Delgado-Ballester & Luis Munuera-Alemán, 2005). It symbolizes that one party will not exploit the other's vulnerability. In a brand context, trust is perceived as an expectancy for the brand to provide customers with specific quality products as well as present an honest, competent and consistent image. According to Delgado-Ballester and Luis Manuera-Alemán, brand trust has two types of dimensions (Delgado-Ballester & Luis Munuera-Alemán, 2005):

1. Reliability – the ability to fulfill the brand's promises to customers' needs;

2. Intentions – willingness to provide customers with solutions when problems arise.

As glimpsed from dimensions, brand trust does not evolve only around the product's functional performance and unique attributes. It goes deeper and makes brands take responsibility for their customers feeling safe and secure when interacting with the brand and its products or services (Ha & Perks, 2005).

Therefore, brand trust is an exceptionally important factor in building customer and brand relationships as it works as the basis of the relationship. Additionally, brand satisfaction plays an important role as well in contributing to the increase of trust. The more satisfied customers have the higher level of trust for the brand. Moreover, the literature analysis present insights of existing connection between the brand trust, customer satisfaction and brand loyalty. Therefore, two mentioned variables should be considered when analyzing different correlations that greatly influence brand loyalty.

2.1.3. Benefits of strong Brand loyalty on Brand love and Brand equity

The big variety of factors and brand touchpoints, such as engagement, customer participation, value co-creation, brand satisfaction and trust have a positive impact on developing strong brand loyalty. However, it is important to take a step to see the full view and understand why brand loyalty is so important to companies.

In the study analysis, it was already mentioned that the featured elements together with brand loyalty have the ability to influence consumers' purchase decisions. That resulting in higher retention rates (repeat purchases from already existing customers) and share-of-wallet (share of category spending that goes to a specific company (Cooil et al., 2007)).

In addition to that, strong brand loyalty also plays the role of mediation between brand love effect on brand equity. Studies have shown that formed loyalty through positive experiences and brand love leads to positive brand equity development (Sallam, 2015). Both brand love and brand equity are intangible variables that are harder to measure through brand loyalty and other components. Thus, it has especially gained a lot of attention from marketing academics in the last couple centuries.

As the emotion "love" includes many different variables, components and emotions, many researchers have faced challenges describing the phenomenon of "brand love". Researchers Batra, Ahuvia and Bagozzi urge that brand love should be described as a long-

term consumer-brand relationship. This definition has been reached after doing multiple interviews during the research in which many respondents defined brand love as a rather relationship than a feeling or emotion (Batra et al., 2012).

Additionally, brand love has also been described as "the affective feelings of a group of satisfied consumers" (Gumparthi & Patra, 2020). Studies show that satisfied buyers are loyal customers of a company, that resulting in brand loyalty (Gumparthi & Patra, 2020). Hence, brand loyalty and brand love go hand in hand, affecting each other through every positive brand touchpoint with the customer.

Meanwhile, other studies also approach a different aspect stating that brand love is possible as a result of customers viewing brands as individuals (Sallam, 2015). Thus, making it feasible for consumers to love the brand the way they love people. That also aligns with the fact that many companies put effort into creating strong brand personalities with a set of human characteristics (Azoulay & Kapferer, 2003). Thus, making brands look more human-like and personal to consumers.

Brand personalities are especially important for making brands relatable to customers. Through the brand's values, traits and image, consumers are able to better express themselves and their ideal selves (Bairrada et al., 2019). The term "self-congruity" refers to the comparison between product-user image and customer self-concept (Kang et al., 2015). In other words, if the person has certain characteristics, they are looking for products that match those characteristics. Self-concept describes an individual's perception of "self" in relation to various characteristics, like social class or profession (Kang et al., 2015). As a result, customers search for brands with personalities that complement their current or desired self-congruity. That way, brands form attachments and relationships with customers which consequently correlate with strong brand love and affective loyalty.

On the other hand, brand equity has been called one of the most crucial elements for the company in branding. However, its' definition and content have been debated for years with no common conclusion decided. Academics understand that "a powerful brand has high brand equity" (Emari et al., 2012). It arises through different elements, like brand loyalty, name awareness, perceived quality and strong brand association as well as other assets (Emari et al., 2012). In other words, it is the power that a brand name holds in consumers' minds.

Therefore, brand equity can be specified as customer-based brand equity, which symbolizes the "differential effect that brand knowledge has on consumer response to the

marketing of a brand" (Hem & Iversen, 2003). It is a mixture of all brand-related touchpoints and customer reactions to them, that define the overall value and power of a brand name in various contexts, like purchase decision-making processes. Although there is no one decided framework for brand equity, some researchers view brand equity as a compound of brand loyalty, brand image and brand awareness (Hem & Iversen, 2003). Others studies highlight four key dimensions – brand awareness, brand image, brand associations and perceived brand quality (Ebrahim, 2020). Viewpoints differentiate between academic studies, however, evidently, brand equity is a complex composite of key branding elements that come into the relationship between a customer and a brand.

Both brand love and brand equity are important objectives for companies when strategically planning their brand's goals and strategies. In addition to that, brand loyalty has a high connection with increasing both of these elements. Consequently, it is important to analyze how usage of gamification features further contribute to developing a strong brand loyalty through unique customer experiences and engagement with the brand. As it can forward result in positive change on the brand through increased brand love and brand equity.

2.2. Gamification as a tool to increase Brand loyalty

The analysis of academic and theoretical sources in the previous chapters has shown a clear link between brand engagement and brand loyalty as well as brand engagement and gamification usage. Many researchers urge the importance of gamification elements in relation to engagement, participation, experiences as well as unique value co-creation. To further evaluate this connection and the distant impact of gamification elements on brand loyalty, it is important to examine how gamification as the system increase brand loyalty and what features have the biggest influence in the perspective of nourishing deep relationships between brands and customers.

Several studies have analyzed whether gamification affects elements of customer journey stages, including customer's commitment to the brand, also known as brand loyalty. According to Habachi, Matute and Palau-Saumell, gamified applications lead users to an experience of pleasant outcomes fostering relationships between customers and the brand as well as affecting their loyalty towards the brand (Habachi et al., 2023). The previous research has empirically proven that this significant correlation is possible because of user's engagement in gamified systems. For example, Abou-Shoul and Soliman have confirmed in line with past study results that the adoption of gamification features significantly increases brand loyalty

through the mediation of customer brand engagement (Abou-Shouk & Soliman, 2021). Thus, brand engagement is a key variable that allows the influence of gamification to indirectly or partially increase brand loyalty.

Additionally, academics Jens Mattke and Christina Maier point out another important reason why gamification is so significant in fostering brand loyalty in mobile applications. According to their study, brands that use mobile applications rely on high brand loyalty in order to reduce churn rates (Mattke & Maier, 2021). Taken into consideration how many mobile applications get released every year and how many of the application projects fail after their launch, it is very important to not only target brand loyalty but also nourish the continuance intention to use the mobile application (Aydınlıyurt et al., 2021). Academics emphasize that separate categories of gamification elements as well as their frequent and infrequent use have a different effect on high brand loyalty (Mattke & Maier, 2021). That is why, to fully optimize the gamification in mobile applications, it would be recommended to use a mix of various features inherent to the gamification concept.

As the gamification concept includes a wide variety of elements that can be used to gamify the service, it is hard to analyze in depth each element's effectiveness. Researchers Adrian Vicenţiu Salcu and Carmen Acatrinei state – "the best games are not the ones that incorporate most of the elements, but those games which use the elements most effectively" (Salcu & Acatrinei, 2013). Therefore, this study analyzes both different features of gamification and further focuses on the selected ones.

The classification of gamification elements is approached differently by every researcher and there is no concrete one, that would be widely used and agreed upon by everyone (Jaskari & Syrjälä, 2023). In 2012, academics Werbach and Hunter proposed the pyramid hierarchy of gamification elements in their study. According to them, gamification can be divided into three main parts – dynamics, mechanics and components (Werbach & Hunter, 2012). Executing the three components enables to make the gamified service or other application into one cohesive, aesthetically enjoyable and playable system for the user.

Figure 2

Pyramid of Gamification elements

Dynamics
are the big-picture aspects of the gamified system that you have to consider and manage but which can never directly enter into the game.

Mechanics
are the basic processes that drive the action forward and generate player engagement.

Components
are the specific instantiations of mechanics and dynamics.
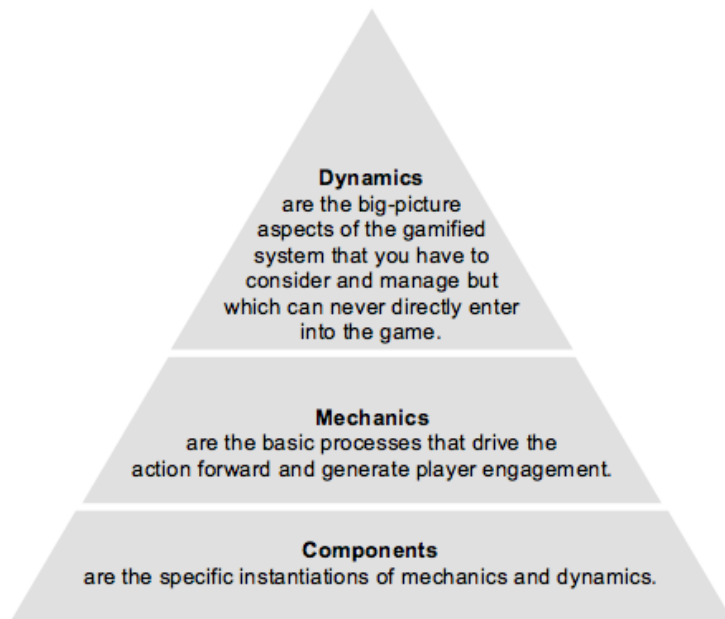
Source: compiled by Coccoli et al., 2015 based on Werbach & Hunter, 2012

However, it is valuable to mention that implementation of the game elements does not replace a service or a product with a game (Gatautis et al., 2016). The "dynamics" component provides the game with a "big-picture aspect". In other words, it is structure and framework, of the gamified system that includes the 5 conceptual elements of gamification that should be considered and managed when creating the system (Salcu & Acatrinei, 2013; Werbach & Hunter, 2012):

1. Constraints – limitations of the game;
2. Emotions – emotions that the game attempts to harness;
3. Narrative – the storyline of the game that connects all the parts;
4. Progression – clear objectives indicating one's progress;
5. Relationships – interactivity and social dynamics of the game.

The second component – mechanics – refer to processes, like challenges, competition, rewards and turns, that generate user's action (Werbach & Hunter, 2012). Several studies have also divided the main qualities of gamification into goals, rules, challenges and difficulty (Landers et al., 2019; Suits, 2005). However, each mentioned component can have several specific elements under their categories. The specific elements are rather considered to be game mechanics than conceptual components. Meaning, they execute the primary element by adding

physical constraints, rules and rewards in the system. These mechanics include the previously mentioned gamification characteristics, like leaderboards, competition, goals, time constraints, surprises, customization and levels.

Werbach and Hunter name them as components – the ground of the pyramid – that are "specific instantiations of mechanics and dynamics" (Gatautis et al., 2016; Werbach & Hunter, 2012). The pyramid of gamification elements is often applied by various researchers in their studies. On the other hand, it is also criticized for being too abstract and vague (Gatautis et al., 2016). Hence, there are many conflicting opinions among academics and researchers. Table 2 below presents different components assigned to the 5 elements of the game's dynamics.

Table 2

The categorization of Gamification elements

Dynamics	Components	Description / explanation of element	Source
Constraints	Time constraint	Limited objectives and limited rewards	(Jaskari & Syrjälä, 2023)
Progression	Rewards & Achievements, clear goals, progress bar, leaderboards, customization and levels	Units that indicate the user's progress by collected points, rewards, achievements, achieved goals, displayed ranks for comparison, etc.	(Jaskari & Syrjälä, 2023; Seaborn & Fels, 2015)
Narrative	Avatars, profiles and storytelling, new identities, role-playing of characters	Story-driven elements that enable the user to immerse into the gamified service.	(Jaskari & Syrjälä, 2023)
Emotions	Customization, freedom of choice, freedom to fail, storytelling, leaderboards	Elements that harness emotions, personal choices and motivations	(Jaskari & Syrjälä, 2023; Seaborn & Fels, 2015)

Continuation of Table 2

Relationships	Social sharing and gifting, competition & cooperation	Possibility to share your progress with friends (e.g. social media, messaging applications) and compete or cooperate with other users	(Jaskari & Syrjälä, 2023; Seaborn & Fels, 2015)

Source: compiled by the author on the basis of Gatautis et al., 2016; Jaskari & Syrjälä, 2023; Seaborn & Fels, 2015; Werbach & Hunter, 2012

On the other hand, Juho Hamari, an academic researching gamification in various contexts, such as marketing, together with his colleagues has adapted a different distinction for gamification categories, based on game mechanics as well as motivation related to game-design (Xi & Hamari, 2020). In accordance with that, researchers distinguish three primary dimensions of gamification features (Xi & Hamari, 2019a):

- Immersion-related features (such as avatar, customization, personalization, story);
- Achievement-related features (like badges, points, progress bars, levels and leaderboards);
- Social-related features (e.g. social network features, teams, cooperations).

This classification has been widely used by other studies researching gamification effect in various frameworks (Bitrián et al., 2020; Luarn et al., 2023; Qian et al., 2022). Besides that, Hamari together with his co-researchers have also studied the influence of these three gamification components on customer brand engagement, brand loyalty and brand equity (Xi & Hamari, 2020). Compared to the former pyramid model, these three categories match the three dimensions – autonomy, competence and relatedness – of intrinsic need satisfaction by Ryan and Deci (Ryan & Deci, 1985). Thus, it could potentially be easier to connect the three gamification features to customer journey stages, customer experience and marketing or mobile applications objectives.

All in all, there are many ways that gamification can be distinguished and categorized. Two of the consistently seen ones throughout different studies are the pyramid of gamification components and three types of gamification features. The categorized elements gamify the services and drive users to *gameful* experiences that occur while interacting with these elements and the overall gamification system (Wolf et al., 2018).

As a result, the usage of gamification features in mobile applications and other systems engages customers and increases their involvement with the brand, trust towards the products and services of the brand and builds a relationship, based on brand loyalty. Therefore, it is evident that there is a clear link between gamification as a tool to cultivate brand loyalty through the mediation of customer brand engagement.

3. METHODOLOGY OF EMPIRICAL RESEARCH

3.1. Conceptual model of research

The literature analysis revealed that the potential of gamification in both marketing and other fields has been analyzed before by various academics. Together with that, customer brand engagement and brand loyalty have gained a lot of attention from the usage of gamified services perspective. However, the relations between different variables often overlap and it is hard to determine which gamification elements have the highest influence.

In the analytical part, the following research was conducted, using theoretical background, methodology and online survey instrument with conditional situation. As a result, for the case study to illustrate questionnaire, Nike Run Club mobile fitness and running application was chosen as a primary gamification example in order to understand whether gamified brand applications engage potential customers and whether it has an influence on cultivating brand loyalty.

The purpose of the research: To determine how mobile applications, using gamification feature, engage Lithuanian consumers and influence brand loyalty.

Research object: Lithuanian customer's engagement in gamified applications and increase of brand loyalty.

The main research question is: How does the usage of gamification in mobile applications influence potential buyer's engagement and loyalty towards the brand?

Research method: Data collection and analysis method, using online survey. The sample size is determined by using the comparable researches method in which the sample size is based on the average number of 6 research samples, conducted in similar research field.

Research model

Many studies share that one of the key marketing efforts is cultivating long-lasting relationships with customers in order to boost high brand loyalty (Y. Yang et al., 2017). In addition to that, a strong brand loyalty further leads to various benefits for companies, such as strong brand equity and repurchase intention. Moreover, studies on customer brand engagement and brand loyalty in the gamification usage environment emphasize a significant correlation between customer brand engagement and customer satisfaction as well as the increase of brand loyalty (Abou-Shouk & Soliman, 2021; Torres et al., 2022; Xi & Hamari, 2019b). Based on these findings, the research model was proposed in conjunction with the aim of this empirical research.

The model pursues to evaluate the effect of gamification features' influence on customer brand engagement, customer satisfaction and, most importantly, brand loyalty. Therefore, the model of research consists of variables that through interaction lead to building brand loyalty. The three types of gamification features – immersion, achievement and social-related features, are presented as independent variables that influence customer brand engagement.

In addition to that, model involves the moderation and mediation effects. Perceived value moderates the relation between brand engagement and customer satisfaction. The brand trust acts as mediator between customer satisfaction and brand loyalty. Thus, the features of gamification lead to brand loyalty through these elements. The following figure demonstrates the graphical presentation of the model that has been used in this study (see Figure 3).

Figure 3

Conceptual model
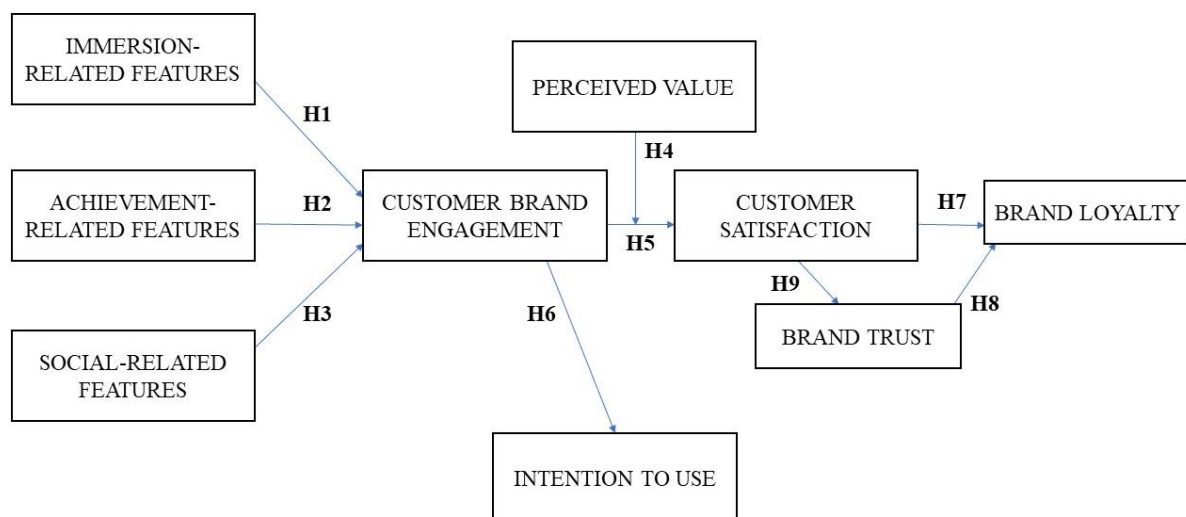
Source: compiled by the author

3.2. Hypotheses development

The association between Gamification features and Customer brand engagement

Gamification has a wide range of elements and features that are constantly evolving and changing with technology evolvement. Many researchers differently categorize gamification elements and do not agree on one main categorization. There is a visible pattern in classifying the dimensions of features by immersion, achievement and social interactions nourishing elements proposed by Juho Hamari, who has researched gamification impact in marketing on several occassions (Xi & Hamari, 2019b).

Hamari Juho has concluded the three categories based on studies, researching gamification elements. The immersion-related features include such gamified elements, like avatar, personalization and story. Achievement-related features reference to badges, points, progress bars, leaderboards and levels. Finally, social interaction-related features are focused on competition, team and social network features (Xi & Hamari, 2019b). In addition to that, since then, several researchers have adapted this categorization – immersion, achievement, social features – in their own research projects, including studies on possible gamification effect on customer brand engagement (Alvi, 2022a; Willis & Tjhin, 2021). That is why, this study applies the 3 types of gamification categorization in the context of brand loyalty as well.

Additionally, many primary gamified attempts, such as loyalty programs, tend to neglect these challenge, social and interactivity aspects that gamification offers and rather focuses only on rewards, like discounts and free products (Tobon et al., 2020). The companies using only reward system create a short increase in the profit, on the other hand, they miss out on long-term customer's loyalty. As Habachi, Matute and Palau-Saumell state, "an app cannot exert its total influence unless customers continue to use the branded app in the future" (Habachi et al., 2023).

Moreover, the three researchers – D. Bettiga, M. Mandolfo and G. Noci also state that it has already been proven that gamification affects the hedonic value of an activity, which works as a predictor for continued engagement intention (Bettiga et al., 2022). Therefore, the implementation of all the mentioned feature aspects can greatly increase customer engagement with the brand and enable brand interaction with customers. This way, offering customers experiential benefits creates a desire for consumers to use the application and maintain the relationship with the brand (Habachi et al., 2023; Kunkel et al., 2021). Thus, the following three hypotheses are developed based on Nannan Xi and Juiho Hamari research (Xi & Hamari, 2019b) and other studies:

H1: Immersion-related features have a positive impact on Customer brand engagement.

H2: Achievement-related features have a positive effect on Customer brand engagement with the brand.

H3: Social-related features have an impact on Customer brand engagement.

Customer brand engagement influence on Customer satisfaction with the brand, Perceived value and Intention to use the branded application

It is defined by researchers, that customer brand engagement is a level of "a customer's physical, cognitive and emotional state that leads to interaction, vigour, dedication and

absorption, which, in turn, affect the individual's purchase intention, brand loyalty and preferences" (Habachi et al., 2023). Once mobile applications with the help of gamification elements engage customers, the engagement drives customer experience towards variables that are essential for brand loyalty. These variables include perceived value and customer satisfaction.

Various studies have highlighted the direct significant relationship between customer brand engagement and customer satisfaction (Susanti et al., 2021). Researcher Razmus states that the generated personal investment in the brand achieved through customer brand engagement leads to greater satisfaction (Razmus, 2021). Therefore, gamified application users who show a high level of customer brand engagement are assumed to have a higher level of satisfaction.

Moreover, studies share that for a long time customer satisfaction was considered as a direct consequence of customer brand engagement (Brodie et al., 2011). In addition to that, there are studies that perceive customer satisfaction as a mediator between customer brand engagement and brand loyalty (Susanti et al., 2021). As mentioned earlier, users who spend a long timeframe engaging with the brand's gamified application or other media have a tendency to be more satisfied with the brand. That directly leads to users being more loyal to one specific brand due to their earlier satisfied experiences and high level of engagement. That is why, the significant connection between these variables allow customer brand engagement to influence brand loyalty more consistently and with bigger effect.

Some researchers state that through engagement, users perceive the value of the gamified application which based on their respective experiences further influences customer satisfaction (Torres et al., 2022). On the other hand, several studies find perceived value to have an influence on customer satisfaction (Chen & Lin, 2015; Hosseini & Rezvani, 2021). According to Torres, Augusto and Neves, perceived value is expected to influence customer satisfaction as it is connected to gamification's experiences (Torres et al., 2022). That complements the findings of Shahisa and Aprilianty that customer satisfaction is a combination of buyer's perception on the product or service, which can be understood as perceived value, and actual experience (Shahisa & Aprilianty, 2022). Although, perceived value can be seen as one of the constructs determining brand's image and close relationship in a long run, various studies still examine different possible relationships between perceived value and other elements. These ties include customer satisfaction, brand engagement, brand loyalty and others. Hence, this study proposes a different angle of perceived value as a mediator between customer brand engagement and customer satisfaction.

Furthermore, this study also suggests that brand engagement can influence customer's intention to use the application. When talking about applied gamification elements to a mobile application, its customer engagement and the intention to use the app, it is important to take into consideration the TAM model (also known as the Technology Acceptance Model). Many researchers have successfully applied the TAM model previously in order to predict the behavioral intention to use various technologies (Y. Yang et al., 2017). Including a variety of gamified applications.

While customer brand engagement is mostly connected to nourishing brand loyalty, Salma Habachi together with two other researchers state that brand engagement can also "increase user's intentions to continue using gamified technology" (Habachi et al., 2023). That is because the knowledge that customers gain about the brand through mobile applications works as a motivation to increase their app usage (Qing & Haiying, 2021). In other words, engaged users who experience positive feelings about using the brand application feel the motivation and intention to continuously use the branded app. Therefore, the following three hypotheses are proposed:

H4: The impact of Customer brand engagement on Customer satisfaction is moderated by Perceived value.

H5: Customer brand engagement has a relation with Customer satisfaction.

H6: Customer brand engagement influences the Intention to use the app.

Brand loyalty as the result of gamified applications

Brand loyalty defines the commitment to repetitively buy products from the same brand despite the market offering a broad product selection of other brands. In simpler words, loyalty describes the intention to buy the same brand as a consumer's primary choice when making their purchase decision (Xi & Hamari, 2019a). Customer brand engagement is seen as a distinct element from loyalty, that mediates the customer's journey towards the loyalty, through in-between variables, such as trust and satisfaction (Kunkel et al., 2021). The greater engaged are the users, the higher chances are to develop a strong loyalty through satisfaction with engaged brand as well as built trust over the time.

According to researchers Hsu and Chen, satisfaction is a dominant factor when transforming "the initial consumption and purchase to post-purchase phenomena such as re-patronage and brand loyalty" (C.-L. Hsu & Chen, 2018c). It can also be identified as a sentiment that emerges after customer's intervention with brand's products, services or additional channels. It is understood as the evaluation between actual perception and

consumer's expectation (Shahisa & Aprilianty, 2022). Thus, it can either lead to satisfaction or dissatisfaction. The former one motivates buyers to repurchase from the brand and advocate it among their peers and social networks (Shahisa & Aprilianty, 2022). That way, leading existing customers to develop deeper relationship with the brand and become loyal.

In addition to that, the perceived value is also stated to be capable of influencing brand loyalty (Igau et al., 2013). Although, researchers did not confirm "a significant role of perceived value in creating loyalty", however, they pointed out the need to enhance perceived value in order to influence customer satisfaction (Igau et al., 2013). Perceived value can help to boost brand satisfaction which in return increases brand loyalty. Additionally, several studies support that customer satisfaction has a significant effect on brand loyalty (Hosseini & Rezvani, 2021; Pradhana et al., 2022; Shahisa & Aprilianty, 2022).

Moreover, the other element – brand trust – builds extremely valued relationships for companies, seeking to create a long-lasting connection with their loyal customers. The commitment, also known as brand loyalty, strives to maintain those valued relationships (Chaudhuri & Holbrook, 2001). Therefore, loyalty is a process of nourishing relationships, produced by brand trust (Alan & Kabadayi, 2012).

According to Chia-Lin Hsu and Mu-Chen Chen, brand trust reduces uncertainty and allows customers to rely on a brand in vulnerable environments (C.-L. Hsu & Chen, 2018a). In addition to that, it was found that customer's trust in a brand strengthens if it matches their expectations after usage (Lau & Lee, 1999). Thus, the significant influence of customer brand engagement on brand trust could be considered. However, other studies also approach the possible connection between customer satisfaction and brand trust. Richard Chinomona and his colleagues point out that customer satisfaction indicates their belief that brand delivers good quality products or even exceeds it which in a long run can lead to brand trust (Chinomona et al., 2013).

Besides that, the research of Pratminingsih, Lpuringtyas and Rimenda has also showed a strong correlation between customer satisfaction and brand trust among other studies (Pratminingsih et al., 2013). Hence, customer satisfaction can work as a bridge between customer brand engagement and brand trust. Furthermore, a study by Ehsan and Hossein Rezvani emphasizes that both trust and satisfaction have gained attention as elements, increasing brand loyalty. However, there is still a lack of studies exploring their "synergistic impact" on brand loyalty, through the process of mediation (Hosseini & Rezvani, 2021). As a result, the final three hypotheses are constructed:

H7: Customer satisfaction has a positive effect on Brand loyalty.

H8: Brand trust has a significant relationship with Brand loyalty.

H9: Brand trust mediates action between Customer satisfaction and Brand loyalty.

3.3. Nike's gamified running application "Nike Run Club"

To confirm hypothesis that were developed after theoretical literature analysis through quantitative research, the gamified application of well-known sport brand, Nike, was chosen as a case study. The active lifestyle wear brand was picked for two primary reasons below:

- Has a gamified application, "Nike Run Club", that involves a wide range of gamification elements;
- Brand is well-known among Lithuanian consumers.

Nike Run Club application allows runners to track their progress, such as time, average running pace, average heart rate, calories and such (*Nike Run Club App*, n.d.). Additionally, the Nike Run Club adapts different gamification elements, like Achievements and Time challenges that stimulate users' motivation to keep running. Additionally, Points, Personalization, Community and Leaderboards ensure that runners have fun during runs and connect with their friends, families and fellow runners (*5 Gamification Examples That Make Nike Run Club a Top Running App*, n.d.). That way, increasing user engagement and ensuring social aspect as well as loyalty towards the brand. Researcher Chih-Wei Lin and her fellow research colleagues state that Nike Run Club is "being designated, fun, and easy to use" (Lin et al., 2020), making it a perfect and preferred application for the majority of runners.

As Nike Run Club incorporates a wide range of gamification elements, it is used as a case study in the questionnaire. With the help of case study, the online survey measures relationship between different variables, using regression, correlation and other analysis. In the next subchapter, the research instrument and measurement model are introduced.

3.4. Instrument and data collection

3.4.1. Research instrument and measurement model

To test the connection between defined constructs, the quantitative online questionnaire method was chosen for the data collection. This decision was supported by previously conducted empirical researches related to gamification, brand engagement, brand loyalty and intention to use (Gatautis et al., 2016; C. L. Hsu, 2023; C.-L. Hsu & Chen, 2018b; Rather et

al., 2023; Xi & Hamari, 2019a). Additionally, online questionnaire allows the researcher to collect data at the high speed and easily analyze the data.

All parts of questionnaire, besides demographical and geographical questions, involved the seven-point Likert scale with Matrix layout (Roopa & Rani, 2012). This type of questions involved grading answers from 1 (very unimportant, strongly disagree) to 7 (very important, strongly agree).

For demographical and geographical questions, close ended questions format was used. Additionally, 3 of 5 demographical / geographical questions offered "Other" option that allows respondents to type in their own response. These question formats ensured that the data is well organized and suitable for results analysis.

To ensure ethics of research, survey results were collected only from respondents who are over 18 years old. In addition to that, the introduction of survey informed potential respondents about the aim of the survey and provided the researcher's contacts in case the respondent would have additional questions regarding the research or a survey. Moreover, all answers were anonymous and confidential. Finally, survey answers were used only to analyze research goals and purpose.

The online questionnaire consisted 11 Matrix type of questions and 5 closed ended questions with 3 having the option to choose "Other" and write in your own answer. The questions were categorized into five blocks based on the constructs and measurement model. These parts included:

1. Questions on three categories of gamification features;
2. Questions on customer brand engagement;
3. Questions on perceived value, customer satisfaction and brand trust;
4. Brand loyalty related questions;
5. Demographic questions – age, gender, city, achieved education level and occupation.

The first part evaluated people perception on gamification features in Nike Run Club application. To fairly evaluate each gamification element in Nike gamified running application, respondents were shortly introduced to the app and requested to carefully skim through the page of Nike Run Club and pay attention to the elements that the app offers. That way, participants were able to learn more about the application and form an opinion on its offerings and mechanics. Additionally, respondents were able to see images of application design, mechanics and elements in both survey and presented website page.

After respondents got familiar with a gamified mobile application, they were requested to evaluate each feature, their perception on customer brand engagement and intention to use

the application. Moreover, to examine their relationship with the brand, respondents were also asked to evaluate brand related elements, such as perceived value, satisfaction, trust and finally loyalty. The following table presents the research's measurement model and measurement scales (see Table 3).

Table 3

Measurement model of empirical research

Construct
Immersion-related features (IRF)
IRF1: The importance of interacting with a personal profile.
IRF2: The importance of interacting with personalized coaching plans and brand Membership Pass.
IRF3: The importance of interacting with guided runs.
IRF4: The importance of interacting with training plans.
Source: (Xi & Hamari, 2019a)
Achievement-related features (ARF)
ARF1: The importance of interacting with achievements.
ARF2: The importance of interacting with points/scores.
ARF3: The importance of interacting with status bars/achievement progress bars.
ARF4: The importance of interacting with profile levels.
ARF5: The importance of interacting with leaderboards/rankings.
ARF6: The importance of interacting with increasingly difficult time challenges.
ARF7: The importance of interacting with tangible rewards (e.g. products, discounts).
Source: (Xi & Hamari, 2019a)
Social-related features (SRF)
SRF1: The importance of joining other runners' challenges.
SRF2: The importance of interacting with friends.
SRF3: The importance of creating your own challenges.
Source: (Xi & Hamari, 2019a)
Customer brand engagement (CBE)
Social CBE
SBE1: I would feel cooperative toward other members in [App].
SBE2: I would join other members' and friends' time challenges in [App].
SBE3: The club community in [App] would be helpful to my improvement and motivation.
SBE4: [App] supports social interaction between runners (Sharing achievements, etc.).
Cognitive CBE
COBE1: Dealing with [Brand] through a gamified fitness app would get me to think about [Brand].
COBE2: I would think about [Brand] a lot if I dealt with it through the gamified fitness app.
COBE3: Dealing with [Brand] through the gamified fitness app would stimulate my interest to learn more about it.

Continuation of Table 3

Emotional CBE
EBE1: I would feel very positive about dealing with [Brand] through the gamified fitness app.
EBE2: Dealing with [Brand] through the gamified fitness app would make me happy.
EBE3: I would feel good when I deal with [Brand] through the gamified fitness app.
EBE4: I would feel proud to deal with [Brand] through the gamified fitness app.
Source: (Sangroya et al., 2021)
Intention to Use (INT)
INT1: I can see myself using Nike Run Club on a regular basis.
INT2: I would frequently use Nike Run whenever I go for a run.
INT3: Assuming I have access to a mobile phone, I would intend to use the Nike Run Club.
INT4: Given that I have access to a mobile phone, I predict that I would use Nike Run Club.
Source: (Habachi et al., 2023)
Perceived value (PV)
PV1: This brand always represents very good products.
PV2: This brand is one of quality.
PV3: The products within this brand are quality products.
PV4: The products of this brand are always useful.
PV5: With this brand, I have products that go with my necessities.
PV6: When I buy this brand, I receive what I need.
Source: (Vera, 2015)
Customer satisfaction (CS)
CS1: I am very satisfied with this brand.
CS2: Choosing this brand is the right option.
CS3: This brand exceeds my expectations.
CS4: I think this brand has many desirable features.
Source: (Torres et al., 2022)
Brand trust (BT)
BT1: I would trust this brand's gamified fitness application.
BT2: I trust that this gamified fitness application delivers quality service as promised.
BT3: I trust that the quality of this gamified fitness application service is always continuous and consistent.
BT4: I trust that this gamified mobile fitness application delivers the service as promised in its advertisements.
Source: (C.-L. Hsu & Chen, 2018a)

Continuation of Table 3

Brand loyalty (BL)
BL1. I consider myself to be loyal to [brand].
BL2. I enjoy purchasing from [brand].
BL3. I will not buy other brands if [brand] is available in the market.
BL4. I would advise other people to buy [brand].
Source: (Habachi et al., 2023).

Source: compiled by the author

Methods and statistics for data analysis

The methods used for statistical analysis of quantitative data was reliability, correlation, multiple regression, mediation and moderation. Data was analyzed using *IBM SPSS Statistics* and *Hayes PROCESS macro*.

3.4.2. Research sample size

The sample size has been calculated, using non-statistical method, called "comparable researches". Based on past research works, the sample size was calculated taking the average number of sample sizes from 6 researches (see Table 4) in the similar gamification and marketing research field. As a result, the calculated research sample size was N = 181 respondents. Due to the limited time and resources when conducting the research, participants were selected using non-probability, convenience sampling design that describes selecting respondents at hand in events, streets or virtual venues (Vehovar et al., 2016). The questionnaire was presented in English due to the chosen mobile application not being available in Lithuanian languages and being focused on younger generations. Thus, survey respondents were Lithuanians or foreigners, living in Lithuania.

Table 4

Average sample size using comparable researches method

No.	Author	Type of Questionnaire	Sampling	Sample Size
1.	Torres et al., 2022	Online questionnaire	Non-probability	229
2.	Oliveira et al., 2021	Online questionnaire	Non-probability	203
3.	Al-Zyoud, 2021	Questionnaire	Non-probability	232

Continuation of Table 4

4.	Sreejesh et al., 2021	Questionnaire	Non-probability	215
5.	Chan, 2023	Questionnaire	Non-probability	124
6.	Bettiga et al., 2022	Online questionnaire	Non-probability	87
Average sample size				**181**

Source: compiled by the author

To ensure that the scope of research includes only Lithuania as well as is ethically acceptable, a couple of requirements for respondents had to be met. Respondents who did not meet requirements were removed from research data and were not analyzed further. These conditions included that:

1.   Respondents are over 18 years old;

2.   Respondents are Lithuanians or living in Lithuania.

Finally, respondents are reached out, using online communication platforms: *Facebook*, *Instagram*, *Discord* and through university's email platform, *Outlook*. The next chapter presents results of empirical research.

4. RESULTS OF EMPIRICAL RESEARCH

4.1. Descriptive statistics

Research data was collected using online survey from November 13th till November 29th. During data collection phase, 201 responses were collected in total from respondents. All 201 questionnaires were fully completed due to survey including only mandatory questions. However, 6 responses were excluded in the final data analysis due to incorrect responses in demographical questions or lack of respondent's engagement in the survey. These questions had several answers, including the option "Other" to type in a personalized answer. Thus, only data from 195 of 201 responses was included in research data analysis.

The demographics of survey respondents are presented in Tables 5, 6 and 7. The majority of respondents were aged between 23 to 27 years (44.6%). Additionally, 62.1% of respondents were females while 37.9% identified themselves as males.

Table 5

Demographics of respondents: Gender

Gender	Percent, %
Female	62.1
Male	37.9

Source: compiled by the author

Table 6

Demographics of respondents: Age

Age group	Percent, %
18 – 22	24.6
23 – 27	44.6
28 – 32	23.1
33 – 40	3.1
Over 40	4.6

Source: compiled by the author

Additionally, besides age and gender, respondents were asked to identify the cities they are living in (see Table 7). Majority of respondents (63.6%) are based in Vilnius, followed by a small percentage in Kaunas, Klaipėda, Šiauliai and Panevėžys. 1% of respondents were from smaller cities, Mažeikiai and Sidabravas.

Table 7

Demographics of respondents: Cities

City	Percent, %
Vilnius	63.6
Kaunas	17.9
Klaipėda	10.3
Šiauliai	5.1
Panevėžys	2.1
Mažeikiai	0.5
Sidabravas	0.5

Source: compiled by the author

Moreover, majority of respondents were individuals with at least a bachelor degree (39%). It was followed by high school graduates (26.2%), Master's graduates (21%) and people who have achieved 12th grade or less. Among the graduates and people with achieved high school grades or 12th grade and less as well as bachelor degree and master degree, 22.6% were students and 28.7% were working students. 46.2% were employed / self-employed individuals.

Table 8

Demographics of respondents: Achieved education level

Achieved education level	Percent, %
12th grade or less	12.3
High School graduate	26.2
Bachelor degree	39
Master degree	21
PhD degree	1.5

Source: compiled by the author

Table 9

Demographics of respondents: Occupation

Occupation	Percent, %
A student	22.6
A working student	28.7
An employee/Self-employed	46.2
Unemployed	2.6

Source: compiled by the author

4.2. Reliability analysis

Reliability analysis was conducted for all 10 statements of constructs, using SPSS. The internal consistency of each scale was calculated, using Cronbach's alpha. The internal consistency was higher than 0.9 Cronbach's Alpha in majority of constructs' statements. These scales are achievement-related features, brand loyalty, brand trust, customer-brand engagement, customer satisfaction, intention to use and perceived value. That means, Cronbach's alpha in these scales was excellent.

Additionally, reliability analysis indicated lower internal consistency in immersion-related features and social-related features. The Cronbach's alpha in these scales followed by 0.863 which is considered good and 0.782 – acceptable Cronbach's Alpha. Therefore, both constructs were accepted for further hypotheses testing.

Table 10

Summary of reliability statistics

Construct	Cronbach's Alpha	N of items
Immersion-related features	0.862	5
Achievement-related features	0.909	7
Social-related features	0.782	3
Customer brand engagement	0.926	11

Continuation of Table 10

Perceived value	0.932	6
Customer satisfaction	0.916	4
Brand trust	0.924	4
Brand loyalty	0.904	4
Intention to use	0.946	4

Source: compiled by the author

4.3. Hypotheses testing

In this chapter, 9 hypotheses on gamification features relation to brand loyalty were tested to measure the association between variables in each hypothesis, illustrated in the research model. In order to test H1, H2 and H3 hypotheses, the correlation analysis between independent and dependent variables was used.

The correlation shows the relationship between two variables where whenever one variable increases, the other one does as well. To determine whether the Pearson's or Spearman's correlation analysis should be used, it was important to measure the normality. Thus, the normality of Immersion-related features, achievement-related features, social-related features and customer brand engagement was checked, using SPSS. The Skewness of Achievement-related features showed -1.035 which is outside of the normality. However, graphs of histogram, normal and detrended Q-Q plots were roughly distributed symmetrically. Thus, the Pearson's correlation analysis was applied.

H1: Immersion-related features have a relation with Customer brand engagement.

H1: accepted. There is positive relation between immersion-related features with customer brand engagement. Pearson's $r = 0.54$, $p < 0.001$. A coefficient of 0.54 indicates a positive, yet moderate relation between immersion-related features and customer brand engagement. That means, a higher level of immersion-related features increases customer's engagement with the brand when interacting with gamified applications.

H2: Achievement-related features have a positive relation with Customer brand engagement.

H2: accepted. Achievement-related features have a positive relation with Customer brand engagement. Pearson's $r = 0.62$, $p < 0.001$. The correlation between the later variables is moderately positive, just like the relation with immersion-related features. Thus, the increasing rate of achievement-related features positively affects customer brand engagement as well.

H3: Social-related features have a positive link with Customer brand engagement.

H3: accepted. There is a positive link between social-related features and customer brand engagement. Pearson's $r = 0.61$, $p < 0.001$. The two constructs have a positive but moderate relation as well. The higher rate of social-related features boosts customer brand engagement.

Table 11

The results of Pearson's correlation analysis with customer brand engagement as dependant variable

		Constructs		
		IRF	**ARF**	**SRF**
r	**CBE**	0.54	0.62	0.61
p **value**		<0.001	<0.001	<0.001

Source: compiled by the author

The findings of correlation analysis between the three independent variables of gamification and customer brand engagement are congruent with the previously conducted studies (Jami Pour et al., 2021; Xi & Hamari, 2019b). The results show that gamification elements have a direct link with customer brand engagement in brand applications. Additionally, the rule of thumb allows to interpret that all three correlation results are moderately positive (Mukaka, 2012). That means, the strength of correlation between variables is neither weak, nor strong. However, it is there, which can influence the continued engagement with the brand, increase user satisfaction as well as lead to brand loyalty (Bettiga et al., 2022; Jami Pour et al., 2021). As gamification includes a wide range of elements that in the long run can affect the customers' relationship with the brand and openness to loyalty, it is useful to analyze which category of elements has the highest influence on customer brand engagement. For this reason, additional analysis to determine the influence of independent variables on customer brand engagement was done, using regression analysis.

Additional regression analysis

The correlation analysis has shown that every independent variable – immersion-related features, achievement-related features, social-related features – have a correlation relationship with the dependent variable, customer brand engagement. To determine which of the three independent variables have the strongest influence on customer brand engagement, an additional ANOVA and regression analysis were done.

Table 12

The results of the ANOVA test with multiple regression

Model		Sum of Squares	*df*	Mean Square	*F*	*p*
1	Regression	135.878	3	45.293	65.344	<0.001[b]
	Residual	132.389	191	0.693		
	Total	268.267	194			
a. Dependent Variable: CBE						
b. Predictors: (Constant), SRF, IRF, ARF						

Source: compiled by the author

The ANOVA test showed $p < 0.001$ which allowed doing regression analysis further. Results of regression have presented that all three predictors have an influence on customer brand engagement. $r^2 = 0.507$, $F(3) = 65.344$, $p < 0.001$. Surprisingly, social-related features ($t = 5.448$, $p < 0.001$) have the biggest influence on customer brand engagement. However, while achievement-related features ($t = 5.047$, $p < 0.001$) does not have a highest effect on customer brand engagement than the other social – related features, it is very similar and almost on the same level as social one. Thus, showing that both social and achievement focused features are very important when creating a gamified application. Such social mechanics include interaction with friends and fellow players, ability to join their created time challenges on Nike Run Club as well as creating your own challenges, that you are able to share with fellow branded app users. Achievement-related features involve achievements, points, progress bars, levels, leaderboards, increasingly difficult time challenges and, of course, tangible rewards, like free products, discounts and others.

Immersion-related features ($t = 2.310$, $p < 0.022$) have the lowest impact on customer brand engagement. That might be the result of immersion-related features in Nike Run Club focusing on app-related personalizations, such as profiles, coaching plans, memberships, training plans and guided runs that deliver an important value to the user. However, not specifically focus on motivating the user's intention to continue using the application and immerse in the gamified experience itself.

Table 13

The Coefficients of multiple regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	Colinearity Statistics	
		b	Std. Error	Beta			Tolerance	VIF
1	**(Constant)**	0.956	0.264		3.617	<0.001		
	IRF	0.136	0.059	0.154	2.310	0.022	0.583	1.715
	ARF	0.307	0.061	0.344	5.047	<0.001	0.558	1.793
	SRF	0.299	0.055	0.343	5.448	<0.001	0.650	1.537
a. Dependent Variable: CBE								

Source: compiled by the author

Similar results can be also seen in Juho Hamari and Nannan Xi's research which stated that both achievement-related features and social-related features have a strong association with customer brand engagement (Xi & Hamari, 2019b). While both H3 and additional regression analysis supported strong relation and influence of social-related features on customer brand engagement, that contradicts some research projects. For instance, in some hypotheses testings, other researchers have rejected social features' effect on customer brand engagement, especially on emotional and behavioral dimensions (Alvi, 2022b; Permana et al., 2021). Such results can be influenced by specific social-related features in gamified applications.

For example, goals stimulated by social features, like level or goal progression with teamwork could lead to higher customer brand engagement within the application. That way, the social aspect of the branded gamified app would be more engaging and important to users. However, as of now branded gamified applications do not replace social networking apps. Further, although the regression analysis showed a strong influence generated by social-related features, its importance is still not clear.

Identically, immersion-related features had a significantly weaker relationship with customer brand engagement (Alvi, 2022b; Xi & Hamari, 2019b), unlike the other two constructs. The weakness of immersion-related features is also supported by researchers Permana, Handayani and Pinem who confirm that immersion-related features do not affect the emotional dimension of customer brand engagement (Permana et al., 2021). On the contrary, achievement-related features are the only ones that have a connection with all dimensions of

brand engagement (Permana et al., 2021). Meaning that gamification elements, like achievements, points, progress bars or tangible rewards can play a crucial part when striving to successfully implement gamification in marketing.

H4: The impact of Customer brand engagement on Customer satisfaction is moderated by Perceived value.

H4: rejected. The moderation was examined using PROCESS for SPSS (PROCESS model 1). The 1st step of testing examined the relationship between Customer brand engagement and customer satisfaction. The test showed that customer brand engagement influence on customer satisfaction is significant. $r^2 = 0.6614$, $F(3, 191) = 124.3900$, $p < 0.000$.

Table 14

Results of moderation analysis. Summary of model

r	*r^2*	**MSE**	*F*	*df1*	*df2*	*p*
0.8133	0.6614	0.5803	124.3900	3.0000	191.0000	0.0000

Source: compiled by the author

Following that, the interaction term between customer brand engagement and perceived value was added. However, the significance ($p = 0.7842$) was rejected as p value was higher than 0.05. Thus, the testing was not continued. As a result, hypothesis that the relationship between customer brand engagement and customer satisfaction is moderated by perceived value was rejected.

Table 15

Results of moderation analysis. Interaction of variables

	Coeff	*se*	*t*	*p*	**LLCI**	**ULCI**
Constant	4.6233	0.0617	74.9535	0.0000	4.5016	4.7449
CBE	0.2113	0.0596	3.5432	0.0005	0.0937	0.3289
PV	0.6953	0.0559	12.4482	0.0000	0.5851	0.8055
Int_1	- 0.0085	0.0312	- 0.2743	0.7842	- 0.0700	0.0529

Source: compiled by the author

Various studies indicate that perceived value "significantly influences" customer satisfaction (Chen & Lin, 2015; Hosseini & Rezvani, 2021; Torres et al., 2022). However, there are also studies confirming perceived value as a mediator between customer satisfaction and brand loyalty (Z. Yang & Peterson, 2004). On the other hand, Igau and his colleagues state that

customer satisfaction plays the role of a mediator between perceived value and brand loyalty (Igau et al., 2013). It can be noticed that perceived value is often examined from different relations with other variables.

Although hypothesis testing showed that perceived value does not mediate the relationship between customer brand engagement and customer satisfaction, the contradicting results in studies suggest that perceived value and customer satisfaction have a relationship. Additionally, it can be suggested that there is a gap in research that needs to further examine the relationship between perceived value and customer satisfaction.

H5: Brand engagement has a relation with Customer satisfaction.

H5: accepted. There is a positive relationship between customer brand engagement and customer satisfaction. Pearson's $r = 0.62$, $p < 0.001$. The results of Pearson's correlation analysis showed that there is a moderate positive relation between customer brand engagement and customer satisfaction. It indicates that the more engaged consumers are with the brand, the more their satisfaction increases.

Table 16

The results of Pearson's correlation analysis with customer satisfaction as dependant variable

		Construct
		CS
r	**CBE**	0.62
p **value**		<0.001

Source: compiled by the author

The findings on the relation between customer brand engagement and customer satisfaction align with previous studies, examining their relationship. Evi Susanti, Mila Rafik and Tina Melinda along with other academics have found that customer brand engagement has a direct effect on brand satisfaction (Susanti et al., 2021). Customer satisfaction can be seen as a mediator that allows customer brand engagement to indirectly influence brand loyalty. That is one of the key connections in marketing as loyalty enhances customer retention.

H6: Customer brand engagement influences the Intention to use the app.

H6: accepted. Customer brand engagement is associated with intention to use the app. Correlation analysis found that the relation between customer brand engagement and intention

to use the mobile application is significant, Pearson's $r = 0.58$, $p < 0.001$. The r coefficient of 0.58 indicates a moderate positive relation between variables. Thus, higher level of customer brand engagement is linked to an increase of intention to use application when gamified elements are used.

Table 17

The results of Pearson's correlation analysis with intention to use as dependant variable

		Construct
		INT
r	**CBE**	0.58
***p* value**		<0.001

Source: compiled by the author

Salma Habachi, Jorge Matute and Ramon Palau-Saumell imply that customer brand engagement partially mediates the relationship between the unique *gameful* experience, inherent to gamified systems, and behavioral intentions (Habachi et al., 2023). On the other hand, Tarute also revealed that customer brand engagement facilitates the positive influence of continuous usage of mobile applications (Tarute et al., 2017). This is also in line with another research supporting that achievement, progression, immersion and social-related elements of gamification promote user engagement that subsequently leads to continued use intention (Jami Pour et al., 2021). Meaning that successfully implemented gamification features can greatly increase engagement with the branded application as well as strongly contribute to continued usage of the application. That way, brands have a greater chance to interact with their potential buyers and foster a long-term relationship which eventually can lead to purchases, repurchases and brand advocacy.

H7: Customer satisfaction has a positive effect on Brand loyalty.

H7: accepted. Correlation analysis shows a significant relation between customer satisfaction and brand loyalty, Pearson's $r = 0.72$, $p < 0.001$. According to the rule of thumb, the relationship between the two variables is high positive. That means, the increase in customer satisfaction significantly boosts the rise of consumer's loyalty towards the brand.

The result of the research is in line with the prior study's findings in gamification context (Hosseini & Rezvani, 2021; Pradhana et al., 2022; Shahisa & Aprilianty, 2022). Hosseini and Rezvani found that customer satisfaction directly affects brand loyalty (Hosseini & Rezvani, 2021). The direct relation between these constructs is supported by both previous

projects and this study. However, according to Hosseini and Rezvani, the direct link between the two constructs is not more effective than customer satisfaction on brand loyalty through the mediation of brand trust (Hosseini & Rezvani, 2021). While this research rejected the mediation between customer satisfaction and brand loyalty by brand trust, it would be recommended to further analyze this relation.

Table 18

The results of Pearson's correlation analysis with customer satisfaction and brand loyalty

		Construct
		CS
r	**BL**	0.72
***p* value**		<0.001

Source: compiled by the author

On the other hand, Chia-Lin Hsu and Mu-Chen Chen also reported that satisfied customers have a positive impact on brand love which in turn positively impacts brand loyalty as well (C.-L. Hsu & Chen, 2018c). Additionally, other studies highlight that while customer satisfaction has a clear effect on brand loyalty, brand love has a greater influence on loyalty (Torres et al., 2022). At the same time, both studies support the relation between customer satisfaction and brand love which allows possibilities of further testing customer satisfaction's impact on brand loyalty through the mediation of brand love.

All in all, some researchers report an indirect influence of satisfaction on brand loyalty while others support a direct relation between these variables. That aligns with H8 findings and represents the importance of customer satisfaction when considering the increase of brand loyalty as a primary marketing goal. Combining the results from prior studies and this research results, the higher customer satisfaction is, the greater brand loyalty is. Thus, for companies using gamified applications to nourish long-term relationships with their customers and app users, successful gamification implementation could be a great tool to increase brand loyalty over time.

H8: Brand trust has a significant relationship with Brand loyalty.

H8: accepted. There is a low positive relationship between brand trust and brand loyalty. Pearson's $r = 0.49$, $p < 0.001$. Thus, the relation between the two variables exists, however, it is relatively low. In other words, brand trust does not remarkably enhance brand loyalty. The result is presented in Table 19.

Table 19

The results of Pearson's correlation analysis with brand trust and brand loyalty

		Constructs
		BT
r	**BL**	0.49
p **value**		<0.001

Source: compiled by the author

The results of the research are consistent with previous findings. Several studies have found brand trust to have significant ties with brand loyalty in both gamification and non-gamification frame of references (Fathorrahman et al., 2020; Hosseini & Rezvani, 2021). For example, Arjun Chaudhuri and Morris B. Holbrook have concluded that brand trust especially contributed to purchase loyalty and attitudinal loyalty (Chaudhuri & Holbrook, 2001). According to them, this kind of influence further impacts market share and relative price, creating a connection between brand trust and the market performance angle of brand equity. On the other hand, other studies have found contradicting results that brand trust does not significantly influence brand loyalty. Surprisingly, the only ties between these constructs were validated by young consumers (Nawaz et al., 2020). However, this might be connected to researchers' focused market field and repeating the same research in different market and segment might lead to not contradicting results.

Taking into consideration previous studies and the results of this research, brand trust has a significant, low positive relation to brand loyalty. It increases consumers' loyalty to the brand but is not one of the major elements. That proposes new hypotheses as brand loyalty describes a unique relationship between the brand and consumers, based on their trust, satisfaction, love and perceived value.

H9: Brand trust mediates action between Customer satisfaction and Brand loyalty.

H9: rejected. A bootstrapping method was applied using SPSS Process Macro to measure whether brand trust mediates the relationship between customer satisfaction and brand loyalty. The first part of testing, using regression analysis showed that customer satisfaction (independent variable) is a significant predictor of brand trust (mediator), $r^2 = 0.40$, $F(1, 193) = 129.6$, $p < 0.001$ ($b = 0.796$, $t = 11.38$, $p < 0.001$).

The results of the second regression analysis with brand trust (mediator) concluded that customer satisfaction is a significant predictor of brand loyalty (dependent variable), $r^2 = 0.51$,

$F(2, 192) = 102.8$, $p < 0.001$ ($b = 0.826$, $t = 10.4$, $p < 0.001$). That means there is a significant direct effect between customer satisfaction and brand loyalty. However, brand trust does not mediate the indirect effect between the two mentioned variables as it is not significant ($b = 0.796$, $t = 1.01$, $p = 0.31$).

Table 20

Results of statistical mediation analysis using the sobel test and hayes SPSS process macro

Variable / Effect	*b*	*SE*	*t*	*p*	95% Confidence Interval	
CS →BT	0.641	0.056	11.38	<0.001	0.530	0.752
CS→BL	0.826	0.079	10.41	<0.001	0.670	0.983
CS→BT→BL	0.796	0.078	1.01	0.31	0.756	0.998
Effects						
Direct	0.826	0.079	10.42	<0.001	0.670	0.983
Indirect	0.051	0.059			-0.061	0.173
Total	0.877	0.061	14.3	<0.001	0.756	0.998

Source: compiled by the author

The hypothesis testing showed that the brand trust does not mediate the relationship between customer satisfaction and brand loyalty. However, some studies investigated the connection between customer satisfaction and brand loyalty through the mediation of brand trust. A previously conducted study by Hosseini and Rezvani showed that trust is more effective than satisfaction in brand loyalty (Hosseini & Rezvani, 2021). In addition to that, according to their study, customer satisfaction has a bigger impact on brand trust as well, creating a stronger brand loyalty through mediation (Hosseini & Rezvani, 2021).

Other research done in non-gamification examination has supported the role of brand trust as a mediator between customer satisfaction and brand loyalty as well. According to Fathorrahman, Puspaningrum and Suyono, the main purpose of marketing is to develop an intense brand relationship with customers. This relationship is supported by building brand trust, which as Fathorrahman and fellow researchers found does not have a full mediation, only partial (Fathorrahman et al., 2020). On the other hand, several studies have tested brand trust as an independent variable that has a relation with brand loyalty along customer satisfaction rather than a mediator between the latest two. According to these studies, brand trust directly and positively increases brand loyalty (Andervazh et al., 2013; Başer et al., 2016). This is supported by H9 as well.

Moreover, as mentioned before, other studies have also examined that brand love is a possible mediator between customer satisfaction and brand loyalty (C.-L. Hsu & Chen, 2018c; Torres et al., 2022). Thus, the aspect of brand love and its connection with customer satisfaction and brand loyalty in the context of gamification could be further researched.

In future studies, it could be advisable to test the mediation between customer satisfaction and brand loyalty using cross-sectional questionnaire designs. That is because questions related to this mediation process were answered in a similar window of time. Thus, it is hard for the transmitted effect to be shown in such a kind of questionnaire design. Additionally, as mentioned before, the ties between constructs affecting brand loyalty should be revised.

The results of H1 – H9 hypotheses are presented in Table 21 (see Table 21). It presents conclusions of all 9 approved and rejected hypotheses in this research.

Table 21

Hypotheses results

Hypothesis	Results
H1: Immersion-related features have a relation with Customer brand engagement.	Accepted
H2: Achievement-related features have a positive relation with Customer brand engagement.	Accepted
H3: Social-related features have a positive link with Customer brand engagement.	Accepted
H4: The impact of Customer brand engagement on Customer satisfaction is moderated by Perceived value.	Rejected
H5: Customer brand engagement has a relation with Customer satisfaction.	Accepted
H6: Customer brand engagement influences the Intention to use the app.	Accepted
H7: Customer satisfaction has a positive effect on Brand loyalty.	Accepted
H8: Brand trust has a significant relationship with Brand loyalty.	Accepted
H9: Brand trust mediates action between Customer satisfaction and Brand loyalty.	Rejected

Source: compiled by the author

To summarize, there were 9 hypotheses tested in the research in total. From 9 of them, 7 hypotheses were approved and 2 – rejected. All three categories of gamification features – immersion, achievement and social – correlate with customer brand engagement. To the

surprise, social features have the highest level of influence, along achievement-related features while immersion has the lowest one. Customer brand engagement affects both customer satisfaction and intention to continuance use the application. In addition to that, the mediation analysis has shown the direct effect between customer satisfaction and brand loyalty. The more satisfied customers are and the higher is their trust for the brand, the more brand loyalty increases. Meaning that gamification features influence brand loyalty throughout the model.

4.4. Discussion

In digital marketing and mobile applications, gamification is presented as a potentially valuable asset when building relationships between brands and their customers. The empirical research of this study aimed to test the research model to understand how the three categories of gamification features influence brand loyalty in the context of mobile applications, using "Nike Run Club" as a case. The results showed positive significant connections between displayed variables in the model as well as rejected some speculated relationships. The analysis included the three categories of gamification features, customer brand engagement, customer satisfaction, brand trust and others.

First of all, this study provides empirical evidence of a significant correlation between all three categories of gamification features and customer brand engagement (H1, H2 and H3 were accepted). Additionally, based on multiple regression, it was evident that social-related features and achievement-related features have the highest influence when increasing user engagement with the brand. With social features being the most influencing factor, it can be interpreted that people who engage and find common interests through the community, accommodated by a specific brand, are more willing to engage with the brand as well. Surprisingly, yet in line with previous studies, immersion-related features, such as personalization, customization and profile, seem to have the lowest effect on customer brand engagement (Xi & Hamari, 2020). This can be explained by the fact that customization in gamified systems does not induce the same emotions, e.g. excitement or anticipation, as in traditional game contexts, where players often can create their own characters. Moreover, as Juho Hamari and Nannan Xi emphasize, immersion-related features in gamified mobile applications contribute more to the social aspect by allowing users to display their information and achievements in their customized profiles, which can be viewed by other app users (Xi & Hamari, 2020). Thus, instead of immersing themselves in unique experiences with the brand, it becomes a part of the social factor.

Although, the perceived value does not moderate customer satisfaction (H4 was rejected), research results have confirmed that engaged customers with the brand tend to develop a higher satisfaction towards the brand and its products or services (H5 was confirmed). This relation is also supported by other studies, examining the connection in the framework of banking institutions (Susanti et al., 2021). On the other hand, there are not many studies investigating the relationship between the two variables when being influenced by gamification. Thus, this study provides new insights into gamification and customer satisfaction, assisted by branded applications. To further identify the effectiveness of gamification on customer satisfaction, it would be recommended to research which gamification features have the highest effect on each component of customer satisfaction.

Moreover, hypothesis 6 (H6 was accepted) has supported the previous academic research, concluding that customer brand engagement assisted by gamification elements influences consumers' intention to use the branded application (Bayır & Akel, 2023; Habachi et al., 2023). Along with that, together with other studies, results highlight that the implementation of gamification not only increases intention to use the application but also fosters intentions of regular and continuance mobile app usage (Bitrián et al., 2021). This is especially relevant to the practical execution of gamification elements as many mobile applications struggle to retain a consistent or even growing user base. Therefore, gamifying the app can motivate users to continue interacting and using the mobile application.

Both hypotheses 7 and 8 revealed a significant correlation between customer satisfaction, brand trust and brand loyalty (H7 and H8 were confirmed). It means that the more customers are satisfied and trust the brand, the higher their loyalty is towards one brand in the specific market segment, offering various alternative options. This is also backed up by academics Hosseini and Rezvani and others, who found that in the long-term customer satisfaction and brand trust transform into brand loyalty, and even brand equity (Hosseini & Rezvani, 2021). On the other hand, some academics highlight that customer satisfaction and brand loyalty decrease if the level of utilitarian and hedonic values goes down (Pradhana et al., 2022). Thus, the negative or passive experience with the gamified application can further reject the relationship between the brand and its' customers. As a result, gamified applications should always be updated and ensure that they provide a consistent flow throughout the customer's journey.

Finally, while the last two hypotheses confirmed the correlation between the variables, the mediation of brand trust between customer satisfaction and brand loyalty was rejected (H8 was declined). That disputes Hosseini and Rezvani's research which found a strong link between customer satisfaction and brand loyalty, when being mediated by brand trust (Hosseini & Rezvani, 2021). The conflicting results can be affected by differences in research methods and execution. In addition to that, respondents interacted with brand trust and brand loyalty questions in a very small period of time. Thus, to better evaluate the mediating effect, a cross-sectional questionnaire could be implemented in order to get a deeper understanding how the mediating effect is transmitted. In addition to that, there are studies demonstrating that rather than mediating customer satisfaction and brand loyalty, brand trust correlates with customer brand engagement and brand loyalty (Andervazh et al., 2013; Başer et al., 2016). Therefore, the adjustments between these variables in the model could be proposed for future studies.

Limitations

All in all, this study provides insights and a general overview on how different gamification features influence variables, that contribute and influence high brand loyalty. The study faced various limitations, such as the data collection period was short and time-bound as well as there were limited resources to access respondents. Additionally, the lack of well-known gamification applications in the Lithuanian market limited options for a case study. That could have affected respondents' immersion with the survey as well as limited their understanding and personal relation with gamified applications. For future studies, it would be recommended to explore different research methods and products. Lastly, to investigate the moderating effects of demographical user characteristics, such as results distribution based on gender, age or cities, to gather a deeper understanding of gamification and brand loyalty correlation.

CONCLUSIONS AND RECOMMENDATIONS

In this thesis, a literature and scientific sources analysis was conducted together with empirical research on gamification and brand loyalty connection as well as influence in mobile applications. Based on literature analysis and received results during hypotheses testing of empirical research, there are several primary conclusions:

1. The analysis of literature has showed that while researchers agree on gamification terminology (game elements implementation in non-game environments) and *gameful* experience meaning, the classification of gamification elements is still very inconsistent among studies. However, majority of studies apply the pyramid model of gamification elements or categorize using the three categories of features – immersion, achievement and social;

2. Based on literature analysis, gamification is seen to be used in different contexts, such as digital marketing, education, employee management, tourism and medical fields. In digital marketing alone, gamification can be applied in many various ways, from implementing simple reward systems in the existing channels, such as spin-the-wheel games on websites to fully optimized mobile applications, using all three categories of gamification features in order to create a *gameful* experience;

3. The overview of literature analysis narrowed down important components to building brand loyalty. The key elements include customer brand engagement, perceived value, customer satisfaction and brand trust;

4. In line with the literature analysis and hypotheses, the empirical research has shown a correlation between the three categories of gamification related features and customer brand engagement. Additionally, based on results social-related features and achievement-related features have the highest influence on increasing customer brand engagement, followed by immersion-related features;

5. Perceived value does not moderate the connection between customer brand engagement and customer satisfaction based on the research results. However, the higher level of customer brand engagement enhances customer satisfaction. That means, engaged users through the brand's channel, such as mobile applications, are more likely to be satisfied with the brand;

6. Customer engagement with the brand correlates user's intention to use the gamified application as well as has a positive effect on a continuance to use the application

in the future. Thus, the implementation of gamification features can positively decrease application's churn rates.

7. As expected, customer satisfaction has a positive influence on brand loyalty. Thus, the higher is customer's satisfaction with the brand, the more it enhances their loyalty towards one trademark. On the other hand, contrary to some studies, the results of empirical research showed that this connection is not mediated by brand trust.

8. Brand trust has a positive correlation with brand loyalty, meaning that while it does not mediate customer satisfaction, it still influences the increase of brand loyalty. Therefore, brand trust is considered as one of needed components, along customer satisfaction for brands to build a loyal relationship with its' customers.

The researched study topic has proposed various findings that both verified and contradicted previous studies on gamification connection with building brand loyalty. Based on gained insights, these are the key proposed recommendations for digital marketers and companies, implementing gamification in their channels:

1. The conducted research focused on insights from Lithuanian consumers, using gamified fitness (running) mobile application as a case study. Therefore, the results can vary when applying this research to different contexts. For companies considering usage of gamification, it is recommended to further collect data and analyze how their target audience perceive gamified apps and which features have the highest influence on audience's engagement;

2. Social-related features (community, team, competition, etc.) and achievement-related features (badges, levels, leaderboards, progress bars, etc.) have the highest influence on customer brand engagement. However, to ensure the positive consistent user experience with gamified mobile applications, it is recommended to put into practice all three categories, including immersion-related features, such as customization, personalization, story and profile;

3. For companies, using mobile applications, it would be highly recommended to analyze customer journey in the mobile app and narrow down user's pain points. Application of gamification elements in those pain points can help with simplifying processes and enhancing users' excitement and motivation to continuously use the application. That way, ensuring a stable and increasing retention rate;

4. For digital marketing specialists, focusing on increasing brand loyalty, it is recommended to divide the goal into several phases with smaller objectives, including

components that build brand loyalty, such as the increase of customer brand engagement, then customer satisfaction and brand trust.

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ANNEXES

Annex 1

Online questionnaire for empirical research. Lithuanian Consumers engagement in gamified applications and increase of Brand Loyalty

Dear respondent,

I am Marija, last year Digital Marketing Master degree student of Vilnius University Business School. I am currently conducting research on the consumers engagement with the brand's gamified applications (gamification - the usage of game elements in non-gaming environments, e.g. language learning app "Duolingo") and how it affects brand loyalty.

By conducting this survey, I aim to understand how interactive game elements in brand applications engage potential customers and whether it increases their satisfaction, trust and brand loyalty. The survey is made for Lithuanians over 18 years old. All data is anonymous, confidential and will be used only for Master thesis research purposes.

If you have any questions regarding the research or a survey, please contact via marija.liatukaite@vm.stud.vu.lt

Thank you for your time!

Nike Run Club - a fitness & running app, that connects gamification elements, such as timed challenges, leaderboards, personalized coaching plans, ability to share achievements and progress with friends, and even a chance to win a pair of Nike shoes.

1. Please proceed to this link → https://www.nike.com/nrc-app.

2. Skim through the page of the Nike Run Club app to learn more about the mobile application.

3. Please pay attention to the elements that Nike Run Club app offers.

A notice - The link takes you to a new tab, please go back to the previous one to continue the survey after scrolling the page.

1. How important to you is interaction with these following features when using a gamified brand fitness application? *1 - Very unimportant; 2 - Unimportant; 3 - Slightly unimportant; 4 - Neutral; 5 - slightly important; 6 - Important; 7 - Very important.*

	1	2	3	4	5	6	7
Personal profile	○	○	○	○	○	○	○
Personalized Coaching plans	○	○	○	○	○	○	○
Personalized brand Membership Plan	○	○	○	○	○	○	○
Guided Runs	○	○	○	○	○	○	○
Training Plans	○	○	○	○	○	○	○

2. How important to you are the following achievement related features when using a gamified brand application*? 1 - Very unimportant; 2 - Unimportant; 3 - Slightly unimportant; 4 - Neutral; 5 - slightly important; 6 - Important; 7 - Very important.*

	1	2	3	4	5	6	7
Achievements	○	○	○	○	○	○	○
Points/Scores	○	○	○	○	○	○	○
Status bars/Achievements progress bars	○	○	○	○	○	○	○
Profile levels	○	○	○	○	○	○	○
Leaderboards/Rankings	○	○	○	○	○	○	○
Increasingly difficult Time Challenges	○	○	○	○	○	○	○
Tangible rewards (e.g. products, discounts)	○	○	○	○	○	○	○

3. If you were to use Nike Run Club, would you agree with these statements about yourself?
   1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
I would feel cooperative toward other members in Nike Run Club.	○	○	○	○	○	○	○
I would join other members' and friends' challenges in Nike Run Club.	○	○	○	○	○	○	○
The club community in Nike Run Club would be helpful to my improvement and motivation.	○	○	○	○	○	○	○
Nike Run Club would support my social interaction with other runners (Sharing achievements, etc.).	○	○	○	○	○	○	○

4. If you were to use Nike Run Club, would you agree with these statements about yourself?
   1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
Dealing with Nike through a gamified fitness app would get me to think about Nike.	○	○	○	○	○	○	○
I would think about Nike a lot if I dealt with it through the gamified fitness app.	○	○	○	○	○	○	○
Dealing with Nike through the gamified fitness app would stimulate my interest to learn more about it.	○	○	○	○	○	○	○

5. If you were to use Nike Run Club, would you agree with these statements about yourself?
   1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
I would feel very positive if I dealt with Nike through the gamified fitness app.	○	○	○	○	○	○	○
Dealing with Nike through the gamified fitness app would make me happy.	○	○	○	○	○	○	○
I would feel good when I deal with Nike through the gamified fitness app.	○	○	○	○	○	○	○
I would feel proud to deal with Nike through the gamified fitness app.	○	○	○	○	○	○	○

6. Do you agree with these statements about brand Nike? 1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
This brand always represents very good products.	○	○	○	○	○	○	○
This brand is one of quality.	○	○	○	○	○	○	○
The products within this brand are quality products.	○	○	○	○	○	○	○
The products of this brand are always useful.	○	○	○	○	○	○	○
With this brand, I have products that go with my necessities.	○	○	○	○	○	○	○
When I buy this brand, I receive what I need.	○	○	○	○	○	○	○

7. Do you agree with these statements about brand Nike? 1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
I am very satisfied with this brand.	○	○	○	○	○	○	○
Choosing this brand is the right option.	○	○	○	○	○	○	○
This brand exceeds my expectations.	○	○	○	○	○	○	○
I think this brand has many desirable features.	○	○	○	○	○	○	○

8. Do you agree with these statements about brand Nike and Nike Run Club fitness application? 1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
I would trust this brand's gamified fitness application.	○	○	○	○	○	○	○
I trust that this gamified fitness application delivers quality service as promised.	○	○	○	○	○	○	○
I trust that the quality of this gamified fitness application service is always continuous and consistent.	○	○	○	○	○	○	○
I trust that this gamified mobile fitness application delivers the service as promised in its advertisements.	○	○	○	○	○	○	○

9. Do you agree with these statements about brand Nike? 1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
I consider myself to be loyal to Nike.	○	○	○	○	○	○	○
I enjoy purchasing from Nike.	○	○	○	○	○	○	○
I will not buy other brands if Nike is available in the market.	○	○	○	○	○	○	○
I would advise other people to buy Nike.	○	○	○	○	○	○	○

10. Would you agree with these statements about yourself and your intention to use Nike Run Club? 1 - Strongly disagree; 2 - Disagree; 3 - Somewhat disagree; 4 - Neither disagree, nor agree; 5 - Somewhat agree; 6 - Agree; 7 - Strongly agree.

	1	2	3	4	5	6	7
I can see myself using Nike Run Club on a regular basis.	O	O	O	O	O	O	O
I would frequently use Nike Run Club whenever I go for a run.	O	O	O	O	O	O	O
Assuming I have access to a mobile phone, I would intend to use the Nike Run Club.	O	O	O	O	O	O	O
Given that I have access to a mobile phone, I predict that I would use Nike Run Club.	O	O	O	O	O	O	O

11. Gender

○ Female

○ Male

○ Other: _____

12. Age

○ 18 - 22

○ 23 - 27

○ 28 - 32

○ 33 - 40

○ Over 40

13. City

○ Vilnius

○ Kaunas

○ Klaipėda

○ Šiauliai

○ Panevėžys

○ Other: _____

14. Achieved education level

○ 12th grade or less

○ High school graduate

○ Bachelor degree

○ Master degree
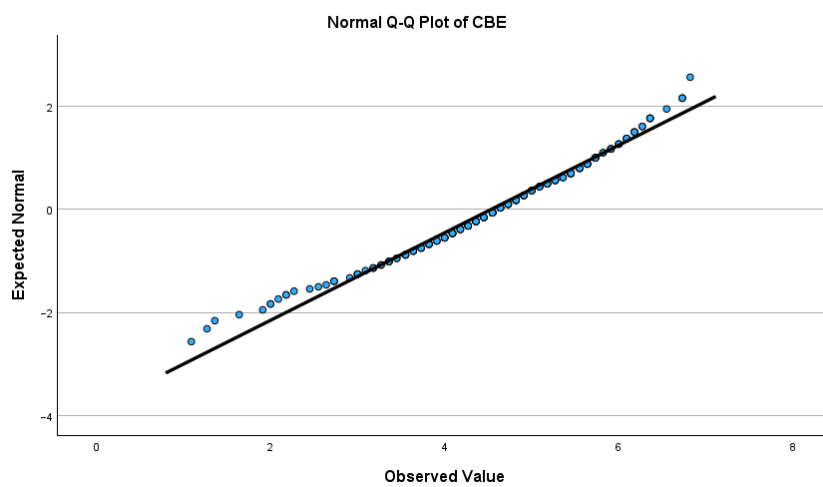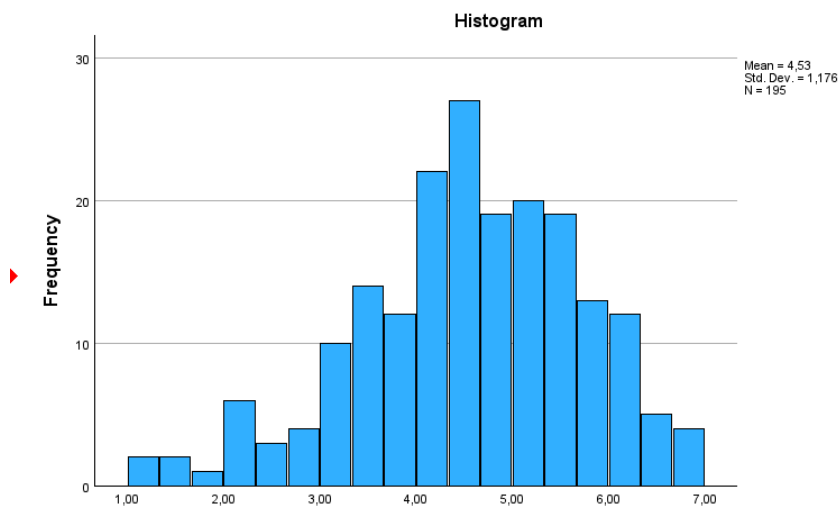
○ PhD degree

○ Other: _____
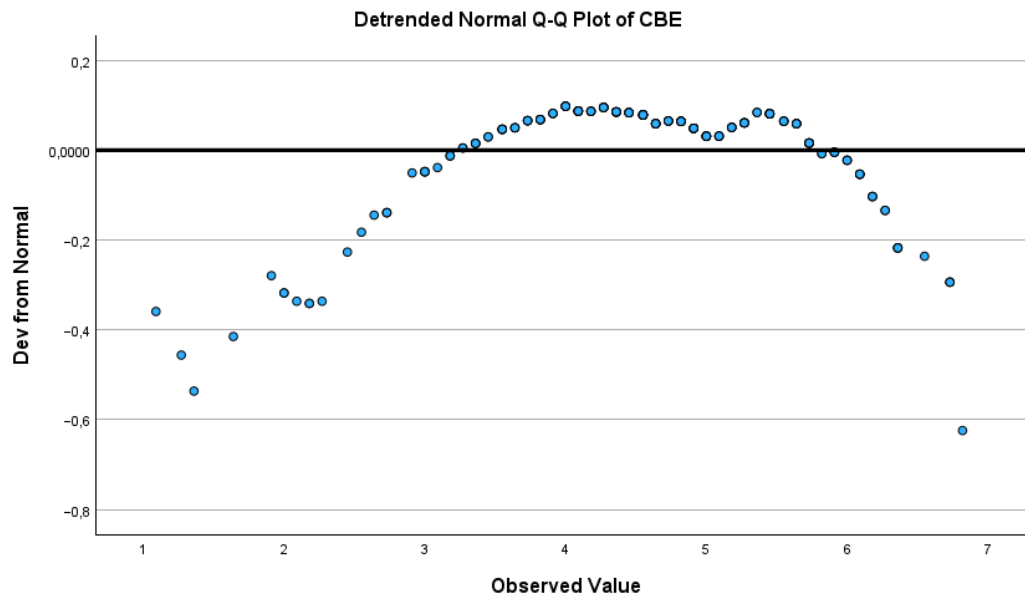
15. Occupation

○ A student

○ A working student

○ An employee

○ Unemployed

○ Other: _____

Annex 2

Customer brand engagement Normality test and Multiple Regression analysis

CBE

Histogram

Mean = 4,53
Std. Dev. = 1,176
N = 195

Normal Q-Q Plot of CBE

Detrended Normal Q-Q Plot of CBE

Descriptive Statistics

	Mean	Std. Deviation	N
CBE	4,5330	1,17593	195
IRF	4,784	1,3343	195
ARF	4,9522	1,31524	195
SRF	4,6991	1,34839	195

Correlations

		CBE	IRF	ARF	SRF
Pearson Correlation	CBE	1,000	,539	,624	,609
	IRF	,539	1,000	,608	,514
	ARF	,624	,608	1,000	,544
	SRF	,609	,514	,544	1,000
Sig. (1-tailed)	CBE	.	<,001	<,001	<,001
	IRF	,000	.	,000	,000
	ARF	,000	,000	.	,000
	SRF	,000	,000	,000	.
N	CBE	195	195	195	195
	IRF	195	195	195	195
	ARF	195	195	195	195
	SRF	195	195	195	195

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,712[a]	,507	,499	,83255

a. Predictors: (Constant), SRF, IRF, ARF
b. Dependent Variable: CBE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	135,878	3	45,293	65,344	<,001[b]
	Residual	132,389	191	,693		
	Total	268,267	194			

a. Dependent Variable: CBE
b. Predictors: (Constant), SRF, IRF, ARF

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	,956	,264		3,617	<,001		
	IRF	,136	,059	,154	2,310	,022	,583	1,715
	ARF	,307	,061	,344	5,047	<,001	,558	1,793
	SRF	,299	,055	,343	5,448	<,001	,650	1,537

a. Dependent Variable: CBE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	IRF	ARF	SRF
1	1	3,898	1,000	,00	,00	,00	,00
	2	,039	10,027	,88	,03	,01	,37
	3	,037	10,311	,10	,46	,09	,59
	4	,026	12,150	,02	,51	,90	,04

a. Dependent Variable: CBE

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1,6985	6,1084	4,5330	,83690	195
Std. Predicted Value	-3,387	1,882	,000	1,000	195
Standard Error of Predicted Value	,060	,257	,113	,038	195
Adjusted Predicted Value	1,5315	6,0926	4,5336	,83842	195
Residual	-2,14003	2,39149	,00000	,82609	195
Std. Residual	-2,570	2,872	,000	,992	195
Stud. Residual	-2,581	2,971	,000	1,005	195
Deleted Residual	-2,15739	2,55845	-,00061	,84738	195
Stud. Deleted Residual	-2,620	3,034	,000	1,011	195
Mahal. Distance	,004	17,503	2,985	2,910	195
Cook's Distance	,000	,154	,007	,015	195
Centered Leverage Value	,000	,090	,015	,015	195

a. Dependent Variable: CBE

Histogram

Dependent Variable: CBE

Mean = 3,02×10^-15
Std. Dev. = 0,992
N = 195