The use of Gamification to increase customer satisfaction and brand loyalty: The Nike case

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Abstract

This paper analyzes the opportunity for companies to adopt a gamified approach to increase the customer loyalty and the brand enjoyment. The purpose is to contribute to the literature and the definition of gamification, and to describe the opportunities available for companies operating in a B2C context.

Different typologies of gamification are analyzed and a systematic approach to understand the role of each participant in the gamification process to the overall value creation is showed. Practical examples of companies that leveraged gamification techniques shows the positive benefit gained.

The platform NikePlus is analyzed in detail, with the results of a survey and an analysis of the impact on the social media. The findings shows how is possible use gamification technique to increment the loyalty of the customers and the enjoyment of the product.

Keywords: Gamification, games, game design, customer satisfaction, service design, marketing
Introduction

Gamification, “the use of game design elements in non-game contexts” (Detering, et al., 2011) is a growing phenomenon and it is raising interest of companies all around the world.

It is currently used by leading companies to address motivational issues, in the selection process of employees and in the behavioral change, with the formation of new habits. In addition, it is used to increase the customer engagement and loyalty, supporting the overall value creation.

This work focuses this last aspect, particularly on the opportunities and challenges that companies faces in their relation with the customers, showing how adopting a gamification approach can increase the overall value delivered to their customers and subsequently the consumption of the product.

It will show how using a strategy that suit the product portfolio and the customer target it is possible increase the brand loyalty, the enjoyment in the usage of the product and the user engagement in sharing the experience. To do so it analyze different approaches that a company can adopt, explaining the differences in terms of connection with the customers and investments required.

A framework to understand gamification in a systematic way is presented, analyzing the structure of a gamified product and the different parts of it, showing that companies have different opportunities they can pursue with a gamification approach. However, it does not focus on the element of the game design, extensively analyzed in other works.

Different examples of success are presented, in particular the case of Nike Plus a platform that allows individuals to track their movements and
position, giving a feedback about the reaching of personal fitness goal and sharing the achievements with friends.

On chapter 1 a specific definition of gamification is given, examining the literature that exist in this field. A broader definition is analyzed and then another one, more relevant for the context of this work, is taken in account.

Chapter 2 shows the impact of gamification in a broad perspective, identifying the opportunities but also differentiating different use of it to solve different problems.

On chapter 3 a systematic view of gamification is developed, showing how different actors of the system interact with each other and how a company can use different approach to gather advantages from a gamification strategy.

Chapter 4 gives information about the strategy to adopt to gamify. Through examples and a critical approach gives ideas to spot the opportunities identified in the chapter 3.

Chapter 5 treats the Nike example and using the framework defined in chapter 3 shows the Nike platform, the history of NikePlus and the possible future for the platform. In addition, it uses results from a survey and a social media analysis to answer to the research question in a more subjective way.

To conclude, chapter 6 use all the consideration and the result of the analysis to derive the conclusion to the research question.
**Research Question**

In the last years there has been an increasing interest in gamification, although there is a limited literature and the terms did not became mainstream due to the novelty of the research field.

This research paper will describe the state of the art in the gamification field and investigate the opportunities, for a company point of view, regarding the introduction of gamified product as a way to increase the quality and quantity of the communication with consumers.

Many researches have been conducted regarding the link between business and gamification, for example about the interface design of mobile application, the usage of gamification in human resources management, the relationship between gamification and motivation, the management of platform and the usage of badges, the emotions that occurs using a gamified product.

However, this research wants to understand the company perspective in the introduction of a gamified product as a way to gather more information about the usage of a product. It will show how a business organization can leverage gamification to increase the brand loyalty, the enjoyment in the usage of the product and the user engagement in sharing the experience.

The research, based on a B2C perspective, could be useful both for goods producers and for service providers. The focus is on having a deep connection between the tangible world and the virtual one, gathering data from the first and allowing organizations to obtain data about the real usage of the product while increasing the loyalty of the customers.

This paper is divided in two parts:
The first part is a description of the general framework, the definition and the opportunity for a wide range of application of gamification tools with some examples of implementation by companies in different fields.

The second part explain how NIKE has implemented an effective strategy in this field with the NIKE+ platform and how the system works. The analysis is made using informations from a survey and an analysis of social media presence of the Nike users.

The link between gamification and new emergent technologies like wearable devices and big data surrounds the analysis and examples. The utilization of these technologies together with gamification is a big opportunity to improve the knowledge of the consumers by a company, allowing the final user to maximize the enjoyment during the utilization of the product.
Motivation

I have decided to carry out this research because I am interested both in management and in technology, so every topic that is the result of the intersection of these two field interest me in a particular way.

Moreover, this is a rather new field, with some highly interesting results from big companies like NIKE, Microsoft, Samsung, and many more. This is index of something new in the business practice. I wanted to study and devote my time not only to something valuable for my professional career but, more importantly, to a field that raise my curiosity and my interest.

The potential application of gamification is so broad that I needed to focus only on the creation of its external aspect i.e. the increase in motivation, loyalty and brand enjoyment, in a B2C context. I have done so not only because I think it is relevant for companies of every dimensions, but also because there are not many researches in the field.
1. **Definition**

The term gamification has been around since 2002, but it starts to gain popularity only after 2010. Although some of the results derived from the application of gamification technique are not new (ad example the idea of fidelity card in supermarket, or the addition of surprises in cereal boxes), the methodologies and the improvements derived from the research are relevant and quite different from anything else seen before.

Gamification is about “learning something from games to address real world challenges” (Werbach & Hunter, 2012). The importance of learning something from games is that people loves to play them and they are powerful in terms of creating motivation and engagement. This is relevant for companies because it helps to create a more engaging context around their products.

1.1. **The main definition in the literature**

The main definition of gamification is "the use of game design elements in non-game contexts" (Detering, et al., 2011). It is important to clarify each word of the definition in order to identify the differences between gamification and other similar terms.

First, there is a distinction between games and play: in the first case, we found a defined system, clear goals and rules. Sid Meier defined it in this way: "A game is a series of interesting choices" (Rollings & Morris, 2000, p. 38). In the case of play there is a freedom of acting, an “expressive, improvisational, even tumultuous recombination of behaviors and meanings” (Detering, et al., 2011); another definition is that “play is free movement within a more rigid structure” (Salen & Zimmerman, 2004, p. 304).

The game design elements are the tools that is possible to use to gamify, like leaderboards, badges, levels, points and avatars. None of them is
necessary for a product to be gamified, but virtually every gamified product uses some of these elements, naturally derived from the games user interface. The reason behind it is that the game design approach aims to create a fun and enjoyable experience; most of the time it results in the utilization of this tools, but simply adding a badge system to a product is not enough to have a gamified experience.

The non-game context is important to differentiate a gamified product from a game. If the result is only the creation of a game for the customers, there is no gamification applied, because it is simply game creation. However, when it is applied in a non-game context, like in the case of NIKE+, it creates a platform that enables people to play not in a virtual world but in the real one. Nike and Temple Run (a game in which the player needs to escape from monsters, running and collecting items on the road), are both conceived to increase the willingness to play (i.e. run). However, in the Nike case the running is made in the real world, creating a benefit for the company. The purpose of both NIKE and the customers is to run more: for NIKE because this imply selling more shoes and technical outfit and for the customers because it means being healthier.
Figure 1: “Gamification” between game and play, whole and parts (Detering, et al., 2011)

Figure 1 represent were gamification is positioned according to the definition. On the vertical axis, there is the distinction between gaming and playing, seen before. On the horizontal one, there is the distinction between whole and parts intended as the experience perceived. Serious games, e.g. simulation tools, are examples of user interface gaming oriented as a whole. Serious game are designed without an entertainment purpose; the objective of these games is to help the player learn something or to simulate a real situation. On the playing side, there are toys and playful design.

In Figure 2, gamification is inserted in a wider perspective. In the trend of ludification of culture, are identified three main trajectories: “The extension of games (pervasive games), the use of game in non-game context, and playful interaction” (Detering, et al., 2011).
Although this definition is cited across all the literature that exist on the subject, for the sake of business context and especially in terms of customers perception in B2C context, it has been challenged, mainly because it is not able to identifies characteristics unique to games.

1.2. Gamification in a service marketing perspective

Huotari and Hamari redefined gamification in terms of service marketing experience as “a process of enhancing a service with affordances for gameful experiences in order to support user’s overall value creation” (Huotari & Hamari, 2012). This definition starts from the objective of gamification
instead of defining only the tools and it is particularly useful in a business context, like the one treated in this work.

Interestingly, in the Detering’s work, there is a critique to a previous work of Huotari and Hamari. In 2011 they defined gamification as a “service packaging where a core service is enhanced by a rule-based service system that provides feedback and interaction mechanisms to the user with an aim to facilitate and support the users’ overall value creation” (Huotari & Hamari, 2011). This definition appears too broad and unable to identify the relevance of game design technique in the process of gamification.

However, the definition of 2012 includes this characteristic and it is helpful to clarify the role of gamification in the marketing perspective. One important advantage of this definition is that, differing from the general one, it is independent to the perception of the users and that explain gamification as a process. This gives to the definition a higher level of objectivity, although the only definition of gameful experience given in the article is “an experience leading to gamefulness” (Huotari & Hamari, 2012).

Another interesting point carried out analyzing this definition is that it emphasize the risk of focusing in creating economic value throw a gamification design directly. On the contrary, gamification purpose is to create some gameful experiences that are enjoyed voluntarily by the customer. This then will contribute to the economic value creation thanks to the higher loyalty of the customers and the increased consumption of the products.

In fact, the process of gamification needs to be developed together with the product design, in order to have consistency between the overall value creation. Seeing gamification only as a service layer, as many software providers are selling it, only to add game elements to a product or a service
is not effective in terms of value delivered because it creates only a fake interface without a real integration with the product.

In addition, using software that offers a ready-to-use gamification program may lead to miss the importance of the systematic approach to the overall value creation. The process of gamification needs to be developed closely with the product and be part of a whole design of the customer experience.

A gamified product or service is one that uses a gamification approach to enhance the interactions between the product, the consumer and, indirectly, the company. Gamification is often associate to a digital service; although the vast majority of applications and examples are digital, this is not a requisite.

In the last years the range of application of these techniques grew and a lot of researches focused on the impact of gamification in different business functions, like motivation in HR, internal organization (using specific platforms and badges) and the emotions that occurs using a gamified product.

In this work, as mentioned above, the focus is on the value creation for consumers and the opportunities, for companies, to enhance the usage of a product, the loyalty of customers and the information about the product consumption. Therefore, in this work the definition used is the one of (Huotari & Hamari, 2012). In field different from the service marketing perspective the definition of (Detering, et al., 2011) is still valuable and useful to define gamification in a broader way.

To analyze the use of gamification to enhance an existing service or product, we need to develop a systematic view of it, able to let companies understand the different actor of the systems. This aspect is further developed in chapter 3.
2. The role of gamification in a business perspective

As said before, there are different opportunities that a company may embrace using gamification. From a company point of view, there are three main different perspectives: internal, external and behavior change. (Werbach & Hunter, 2012)

The Figure 3 represent a possible classification between the perspectives. The behavior change may be developed for the sake of employees (e.g. for promote a sustainability program) or for the individuals (e.g. for assist people in personal habit formation).

Examples of implementation on the internal perspective may regards gamified services to increase the productivity or as a HR tool.

![Organizational Benefit Diagram]

*Figure 3: Relationship between different gamification categories (Werbach & Hunter, 2012)*

Microsoft, ad example, used gamification as an internal way to motivate people in the code validation process. They developed a gamified platform to
ensure the quality of the localization in the user interface. This helped the validation of a huge amount of information and the employees “not only do it above and beyond their work responsibilities, but a large number of them described the process as enjoyable and even addicting” (Werbach & Hunter, 2012).

On the HR aspect, analyze the behavior in the game enables companies to understand the problem solving skills and the ability to analyze information of the candidate. For example, KPMG recently added a gamification in the recruitment process, allowing people to challenge others in an engaging experience. During an online recruiting conference, KPMG presented the motivations, declaring: “the ways in which applicants play these games, and then demonstrate these characteristics, can help line and HR managers gain insight from information regarding potential employees.” (Bodimeade, 2014)

The behavior change aspect, to be better analyzed, can be declined in two different aspects that however should overlap most of the time to be effective. In fact, if most of the people are internally motivated and therefore willing to change the behavior, the company will gain advantage from that. In that sense, gamification should be meaningful, thus defined: “Meaningful gamification is the use of game elements to help someone find meaning in a non-game context, and is therefore a tool to help people learn through changing their perspectives on life.” (Nicholson, 2012). The existing literature contains many contributions on this perspective, e.g. regarding how the user behavior is positively impacted by badges (Grant & Betts, 2013) and how gamification can provide motivational support (Blohm & Leimeister, 2013)

For the external perspective, the focus is on marketing, sales and customer engagement. The objective of this one is to “improve the relationship between businesses and customers, producing increased engagement, identification with the product, stronger loyalty and ultimately
higher revenue” (Werbach & Hunter, 2012). As said before, this is the perspective analyzed in this work.

It is important notice that all the different perspective may coexist in the overall gamification strategy of the company. Therefore, when a company decides to gamify should evaluate what is the problem they want to address and what is the best way to address it.
3. **A systematic view of Gamification**

The systematic definition of gamification introduced in 1.2 needs to be better schematized, in order to analyze different cases of application, defining the actors of the system and their role in the creation of a gamified experience.

![Diagram: A systematic view of gamification](image)

*Figure 4: A systematic view of gamification*

Without any gamification applied, the actors of the system are the company, i.e. the core service provider, and the consumers. Between them, there is an exchange of services and/or goods through the traditional channel.

As described in Figure 4, when a gamified service is added to the core offering, a third actor, i.e. the gamification provider, enter in the system.
The flow of informations regarding the gamified service is different from the core service offering, with the gamification provider that play a role of interconnection between the core service provider and the consumers.

Each part of the system has a different role and may be different depending on the objectives the company wants to pursue. The following of the chapter describe each part of the system and the role that each plays in the service delivery.

3.1. The Core Service Provider

On the core service provider level (i.e. the company), for the marketing service perspective, the creation of perceived value for the customer is the main driver of success and the usage of gamification techniques can wide the supplied needs, increasing the customers’ loyalty and the brand awareness. Moreover, in most of the gamified services, the added social level helps the creation of viral marketing throw word of mouth and peer-to-peer interactions.

A company should think of way to gamify its products not only to maintain a competitive advantage but mainly because it is a way to add new level of enjoyment in a product and especially because it creates a new opportunities of connecting with customers, through the exchange of information that happens inside the gamification provider.

The information gathered through these services are created directly using the product, so are particularly relevant because not mediated. For some companies, like in the case of Nike that is discussed in this work, this may lead to collect an incredible amount of information regarding the usage of a product. This helps company to deliver the right offer to the right customer, reducing the expenses in market research and obtaining a direct connection with the users of the product.
3.2. **The Consumers**

On the consumer’s level, the decision to use the gamified service of a product should be voluntary. The participation in a game makes a lot of sense for the customers because it creates more fun and enable them to connect with friends and other members of the network that utilize the same product, creating an environment in which they may want to perform better. This suffer from the limits and the advantages of a network, where it may be difficult create the initial user base but then each users has a lock-in effect due to the time and resources invested being part of the community.

This willingness to enjoy the gamified aspect of a product increases the usage opportunity and the emotional appeal related to the product.

In this framework, the consumer is already using the core service or goods provided by the company, so the new gamified layer of value creation is going to create a deeper interaction with a customer that is already involved. If there is a social connection external to the platform, is then possible that non-consumer starts using the platform, increasing the opportunity for a company to reach these new potential customers.

In this sense, the adoption of these platform follows the Rogers’s curve for innovation, so a company should focus on the innovators and early adopter and then use them to move to the majority of the population.

3.3. **The Gamification Provider**

The gamification provider can be either internal or external from the company point of view. The difference is both in cost of implementation and maintenance and in the degree of control that is possible to apply to the information that transit across it.
The choice to use an internal or external provider depends on the resources of the company and on the characteristics of the core services/goods offered, as well as the business model of the organization.

One risk in the process of development is that the gamified service may “distract too much from a core offer” (Blohm & Leimeister, 2013) and therefore the company needs to define the right way to offer this kind of services and the degree of gamification that should be implemented in the organization. The choice of the gamification provider impact on the investment needed to implement a gamification strategy.

3.3.1. Internal Gamification Provider

Use an internal infrastructure makes sense for companies that are well structured and that have a wide customer base because it is possible to control the information flow and to own the data created by the customer. An example of that is the Nike+ platform that enable people to share their daily sport and activity achievement with friends and other users of the platform. Nike built the infrastructure collaborating with Apple and it included not only the web service to share information, but also the technical devices needed as a way to interact with the platform.

Creating an internal infrastructure to provide the gamified experience is difficult and expensive. Moreover, it needs to attract a critical number of users to be effective. Therefore, only companies with a relevant number of customers and specific needs should adopt this way.

A dedicated platform specifically designed for the purpose of the company is very effective and able to create an experience unique and difficult to emulate from competitors, creating a competitive advantage for the company that first succeed in its implementation.
3.3.2. **External Gamification Providers**

On the other hand, an external infrastructure allows small businesses to provide a gamified experience to their customer using an external tool and without investing a lot of money in the construction of the infrastructure. An example of that is the usage of foursquare by small shops, restaurants, bars, etc. They use an external service to increase the perceived value by the customer. The degree of control is lower when using a third party provider, and become even lower when customers act as a provider for themselves or for other customers.

It is very difficult for a company to monitor and incentivize behaviors of customers on channels not directly controlled. Although this activity creates values for the customers, most of the time is not easily scalable and replicable for a wider audience. For this reason, a company should neither block nor incentivize these behaviors; however, they should monitor them to discover interesting applications and usage from the early adopters of this technology.

The interesting thing, from a company point of view, is to utilize a third party provider to maintain an average degree of control but with a minimum investment.

In this framework and accordingly to the definition described above, foursquare is not a gamified service but an infrastructure that enables other companies to add a gamified layer to their offer. For example, restaurant, pub and local activities can use the infrastructure of foursquare to add a layer of gamification to their service.

In the standard definition (cf. 1.1) Foursquare is defined as a gamified service on itself and used as example of a successfully gamified product (Detering, et al., 2011). In this context, it is a provider and can gamify a core service offering.
3.3.3. **Examples of gamification provider**

The Figure 5 is adapted and integrated from (Huotari & Hamari, 2011) and explicit some examples of gamification provider, describing all the actors in the system described by Figure 4, page 21.

<table>
<thead>
<tr>
<th>Core Service</th>
<th>Enhancing Service</th>
<th>Gamified Service</th>
<th>Gamification Provider</th>
<th>Tipology of Gamification provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoes selling</td>
<td>Activity tracking platform</td>
<td>Users can share their progress and increase their motivation doing physical activity in the real world</td>
<td>Core service provider</td>
<td>Internal</td>
</tr>
<tr>
<td>Restaurant</td>
<td>Local badges in Foursquare</td>
<td>Customers who check in at least three times</td>
<td>Foursquare</td>
<td>Third party</td>
</tr>
<tr>
<td>Clothing store</td>
<td>Loyalty program offered through Facebook deals</td>
<td>Customers who check in regularly using Facebook Places are offered reductions</td>
<td>Clothing Store and Facebook</td>
<td>Hybrid</td>
</tr>
<tr>
<td>Sports bar</td>
<td>Drinking Game</td>
<td>Deciding to incorporate a drinking game watching a sport match</td>
<td>Customer him/herself</td>
<td>Customer-driven</td>
</tr>
<tr>
<td>Coffee House</td>
<td>Tip offered through Foursquare</td>
<td>Adding a quest-like tip to other customers while they are waiting in the coffee</td>
<td>Another customer and Foursquare</td>
<td>Customer-driven</td>
</tr>
</tbody>
</table>

*Figure 5: Examples of gamified services with different gamification providers. Adapted from (Huotari & Hamari, 2012)*

All these examples shows that there is not only way to gamify in the external perspective, and that each company should focus on the best strategy to tackle the specific issue.

In the following paragraphs, some ideas are developed in order to successfully identify the most effective strategy.
4. **Identify the right strategy to gamify**

Defining a strategy to implement a gamified service that suits in the best way not only the objectives of the company and the business model but also able to deliver value to the customers in an effective way is not an easy task. The specificities of the business needs to be taken into consideration, as well as the characteristic of the customer base, to understand if the consumers are willing to adopt technologies and services that are designed to increase the overall value proposed but that may require an investment in terms of time and money.

Assuming all the pros and cons described in chapter 3.3, two characteristic that are able to give a guidance are:

- The experience provided in the overall value creation, described as exclusive or unique vs standard or common to other similar services. Ad example a dedicated platform will be more difficult to imitate than the simple creation of a foursquare profile from a local company.

- The degree of external socialization required for the gamified service be effective. For external socialization is intended the sharing of information outside the boundaries of the infrastructure. Ad example if the systems bases most of the motivation on the social support of friends, it would be necessary connect the service with platforms in which these people are present.

Depending on the business, it would better to introduce one typology of service provider or another. Different examples of the implementation are illustrated in the Figure 5 that shows how it is possible to create user experiences extremely different among themselves but with the common characteristic of being a gamified experience with the objective of increase the overall value proposed by the company.
The area of low external socialization and standard experience, as said before, it is not very effective in the creation of economic value. However, all the other three strategies can be effective.

The internal solution is a way to provide to the customers a unique experience, difficult to replicate. The customer base is specific, easy to identify and with uncommon needs. Therefore, the exchange of meaningful information happens inside the platform.

The third party solution is the classic strategy of a follower: when other competitors develop a gamified product, the easiest and fastest way to replicate some of the advantages is to use the same or a similar third party gamification provider, offering a standard experience to the customers but a high degree of external socialization. It suits businesses when the product
consumption is a status symbol and this increase the willingness of customers to publish information in external network to increase their personal brand value. This solution, also, is particularly relevant for companies where the platform should be a standard, in order to reduce the entrance cost for the customers.

The last option is more complicate and expensive but may be very effective if there are both opportunities to create a unique experience and gain advantages from the external socialization. It combines the benefit of the internal and third party solution. In the case of Nike the company started, in partnership with Apple, with an internal strategy and then developed the connection with external channels to address a bigger part of the population, after the successful adoption from early adopters.

4.1. **What can be gamified**

Every service that involves a B2C exchange *can* be gamified, but not everything *should* be gamified. Services similar to the one described here as gamified has been around since a lot of time, think for example of fidelity card of supermarket or fidelity plans of airplane companies: in this services, the objective is to collect points in order to unlock features and bonuses. However, usually this kind of systems were not exploiting all the possibilities offered by new technologies and were not creating an environment which utilize the higher possible number of the gamification techniques.

In recent year, the increase interest in big data analysis helped these companies discover new way to use the adopted system. For example, a supermarket can creates a profile of each customer, thanks to the identification provided by the fidelity card, to create targeted offers. It is also possible estimate the buying habits, reducing buffers and creating a more efficient system.
It does not make sense to add every possible game elements offered by the traditional literature, but in most of the cases it is possible to identify new ways to increase the customer perceived value, slightly changing the infrastructure. An important aspect of a gamification process is that should avoid the utilization of standardized packages, because it should be a process that creates new layers of interaction, each of them strictly linked to the product itself.

Gamification is effective in particular when comes to change the users behavior or the consumption habits. A company should try to introduce some simple layer of gamification and then track the performance, in order to establish if it is successful or not.

Luckily, generally it is rather easy to monitor the performances and adapt the implementation strategy with the new information collected, because most of the gamification systems use information technologies in the delivery of the service.

4.2. Examples of successful implementation

The one that follows is a list of some of the implementation of gamification technique in the company offering.

1. Samsung Nation: launched in 2011, the objective of Samsung was to increase the website traffic and the product reviews posted by users in the corporate website.
   To do so they created a loyalty program that enabled users to get rewards (in terms of badges and Samsung products) for being active in the community.
   The results were a 500% increase in products review, 66% increase in visitors and 300% more comments. (Rosenbaum, 2012) (Swallow, 2012)
Welcome to Samsung Nation!
A fun and easy way to get to know Samsung with multiple chances to win free products!

Samsung Nation is an exciting social rewards program where you earn badges, move up the ranks, and have fun discovering everything Samsung.com has to offer. Unlock badges and level up just by visiting, reviewing products, watching videos, and participating in user-generated Q&As. Plus, you can see what others are doing in real time and even uncover a few surprises along the way.

Additionally, when you participate in specific activities like registering a product or submitting a review on Samsung.com, you’ll be entered into our sweeps for chances to win Samsung products!

Figure 7: Samsung Nation, www.samsung.com/us/samsungnation/

2. Verizon Wireless: Like Samsung Nation, they used a badge system to incentivize the commenting of articles and their sharing on the social media.

On average, the ones who used the system spent 30% more time on the website than the ones that did not use the service. The gamified platform was used by 50% of the total users. (Takahashi, 2012)

Figure 8: The Verizon Wireless platform, (Takahashi, 2012)

3. Teleflora, a U.S. Florist service, gamified the experience of the website in order to induce people spending more time on it and sharing it on the social media.
The referral traffic from Facebook grew by 105% and the friend recommendations raised the conversion rate by 92%. (Moth, 2013)

![Teleflora Leaderboard](image)

Figure 9: Teleflora Leaderboard, (Moth, 2013)

4. Autodesk 3D Max created a storyline to involve users in the trial phase, in order to help them learn how to utilize the software. The trial usage increase was 54%, with a 29% increase in channel revenue per trial. (Lane, 2013)

![Autodesk 3D Max Trial interface](image)

Figure 10: Autodesk 3D Max Trial interface, (Lane, 2013)

5. Pepsi used gamification technique to gather data regarding the campaigns performance, allowing people to scan a QR code in the store and obtaining special redemption and discounts.
The system collected on average 1,500 scans per week (over a 14-weeks trial). There was an uplift in Sales of Pepsi by 20% over the pilot period (PerformanceIN, 2014)

![Image](http://www.swipestation.co.uk/)

**Figure 11: The SwipeStation unit, [http://www.swipestation.co.uk/](http://www.swipestation.co.uk/)**

4.3. **The future of Gamification**

The debate on the concept of gamification is divided between people who look at it as a fad that will eventually finish and the ones who think that in the next 10-20 years gamification will shape a new way to work and interact among people and between companies and consumers.

A report released (Anderson & Rainie, 2012) tried to identify what can be the future of gamification, interviewing business owners and companies manager from different fields. However, the result is not definitive:

- 42% agreed with the statement that “by 2020 gamification will not be implemented in most everyday digital activities for most people”. (Anderson & Rainie, 2012)
- 53% agreed with the opposite statement: “by 2020, there will have been significant advances in the adoption and use of gamification. “ (Anderson & Rainie, 2012)
This is probably caused by the fact that gamification is still a new concept and the structured application of it started only some years ago, so it is difficult to estimate the impact that will have on the economy.

It is discussed not only the adoption rate but also the opportunity of adoption: the critics say that gamification is a way to control the behavior and this can be made for the good but also for the bad. The Economist, ad example, said, “gamification is really a cover for cynically exploiting human psychology for profit” (Shumpeter, 2012). On the other hand, gamification proponents dismantled the theories of the detractors, pointing out data and arguing that gamification is already a successful business practice: “since the beginning of the gamification industry in 2010, over 350 companies have launched major gamification projects. These include consumer brands like MLB, Adobe, NBC, Walgreens, Ford, Southwest, eBay, Panera and Threadless among others. For B2B companies Oracle, SAP, Jive, Cisco, Pearson and Salesforce, gamification has emerged as a key element in their consumerization of the enterprise strategy” (Zichermann, 2013).

The advance of wearable devices, big data, and internet of things, as well as the widespread distribution of smartphones, will surely play an important role on the diffusion of these technologies among customers and companies.

One concern regards the privacy: the management of information collection and distribution needs to be aware of the increasing sensibility among the consumers on this problematic.

To summarize, the phenomenon is still recent and is related to a number of technologies that will change very fast in the future. It is important to point out that the detractors of gamification never cite data about its unsuccessful implementation, while the more enthusiastic in this field demonstrate that big and small companies successfully implemented it, with interesting results.
Every company should evaluate how it is possible apply a gamified approach to increase the value provided to the customers. There is no magic success formula because every business is different from the others; therefore, each strategy should be developed taking into account the specificities of the organization and of the competitive arena.

For most of the companies gamification represent a way to be innovative and gain a first mover advantage against competitors. In addition, if gamification is applied correctly the customers will gain benefit from it, ultimately increasing the economic value for the company.

Small companies, thanks to their direct relationship with the customers, may be able to use gamification in creative and innovative ways and this can represent a great opportunity to face the competition against bigger companies.
5. The NIKE Example

The case analyzed is one of the first examples of gamification. This chapter outline the characteristics of the Nike platform, using the systematic view developed before. Survey results are then presented and commented, in order to answer to the research question. In the end, there is the analysis of twitter data, to understand the impact of the hybrid gamification strategy on the presence on social media and on the word of mouth generated by customers.

5.1. Overview of the Nike platform

The Nike example is an example of external gamification, with internal service provider. In this case, Nike collaborated with Apple for the creation of the service; therefore, both the companies were involved in the value creation and in the information flow. After the initial implementation, the company developed connection with existing social network, moving from an internal to a hybrid strategy.

Using the scheme described by Figure 4 and in chapter 3, it is possible summarize the Nike+ Platform. The systematic view includes both Apple and Nike as actor, because they developed the platform together, gaining both advantages and creating a higher value for the customer. In addition, this helped in the creation of a lock-in effect.
The NikePlus infrastructure now integrates different devices. The most relevant are showed in Figure 13. The devices connects to the Nike+ software infrastructure in different ways. Nowadays most of the connection are provided by Apple iPhone and iPod that receive informations from the Nike sensor and then deliver them to the NikePlus website.

The history of these devices is explained in the next paragraph, as well as a deeper description of the platform and the motivation that led Apple and Nike collaborate in the creation of an ecosystem for runners and sportive people.
Figure 13: The Nike+ Devices

5.1.1. The history: from the iPod to the Fuelband

Nike started the introduction of a gamified experience back in 2006, with a collaboration with Apple that introduced for the first time Nike + iPod Sport Kit, a system that enabled the iPod Nano to be connected with a sensor placed in the shoes, allowing the tracking of activities. iPod Nano was very successful among the runners because it integrates a solid state memory that did not suffer, like the hard drive of the previous iPod, from rapid movements that happens when running.
Nike used the fact that most of the runners used the iPod to listen music while running, to improve the pace of the run and to create a more enjoyable experience. With the collaboration with Apple it was possible create a direct connection, for the first time, with the customers when they were using the Nike products.

The sensor was able to collect data like the time of the workout, the distance traveled and using these informations the pace of the run and the calories burned. The data were then uploaded on the Nike website when the iPod was connected to the computer, allowing the users to have a clear overview of the performances over time.

The data were shared with other runners and this helped the creation of a specialized social network of runners, all sharing the same passion and the goals achieved.

The product innovation is an example of value co-creation, in which all the actors in the system gains advantages:

- Nike creates a deeper connection with the runner community, endorsing a product that were successful and without further investment in research and development and in marketing of the innovation.

- Apple creates a trust connection with a huge part of the customer base, increasing the barriers to enter for competitors and creating a brand loyalty, also learning about these customers.

- The customers were able to obtain a new function in a single device, making the utilization of the system very convenient.

The results were interesting, even if it is difficult to calculate the exact impact of the Nike+ platform: “Nike reported a 10% increase in sales for its second quarter to $3.8 billion, compared to $3.5 billion for the same period
last year. Net income for the period rose 8% to $325.6 million. In the U.S., footwear sales gained 8% for the quarter, while apparel sales in the U.S. grew 10%.” (Mahoney, 2006).

During the second quarter conference call, Nike said that "In less than 6 months Nike+ users have logged more than 3 million miles [...] and there are over 3 million Plus-ready shoes in the global marketplace” (Mahoney, 2006)

After two years since the introduction of Nike+ in August 2008, 800,000 runners logged on the platform to run a 10K race, organized by Nike to promote the platform, spread across 25 cities. (Greene, 2008)

On the same year, Nike launched the SportBand, and a Kit for the gym, able to collect cardio information from most of the equipment brand in the U.S. gym market.

By November 2008, Nike had sold 1.3 million Nike+ Sport Kit and 500,000 Nike+ SportBand. Even if the total sales of the technical equipment accounted only for $56 million over a total sales of $18.63 billion, the non-financial results were really interesting, with an increase in market share from 48% in 2006 to a 61% in 2008 (in the U.S. market) (Greene, 2008).

In the subsequent years, the collaboration between the two companies provided a seamless integration between the products and the opportunity to connect the devices also to the iPhone.

On 2010, Nike released the Nike+ GPS app (now called Nike + Running), allowing people to track their fitness activity using the built-in GPS in the iPhone. On 2012, the app was updated and able to track the activity without external equipment but only using the accelerometer in the iPhone or in the iPod Touch. However, most of the people prefer use it with another device, to increase the precision of the information collected.
On 2011, Nike launched, in collaboration with TomTom, a SportWatch, integrated with the Nike iOS app and able to track the daily activities. (Vogel, 2011)

On 2012, a Nike+ Fuelband was announced, and the preorder was sold-out within 4 minutes (Foster, 2012). That year Nike Equipment grew 18% in revenue. On 2011, there was a decrease of 1%. One year after the introduction of the Nike+ FuelBand, Nike shared some stats about the utilization. “The 11 million users of the community have earned more than 409 billion total fuel points. That translates to enough energy for one person to run 44.1 million marathons” (Laird, 2013). The Nike+ Fuel is a proprietary universal unit of measurement, used to track different physical activities and translate everything in a single indicator.

On August 2013, Nike claimed to have more than 18 million global members in the Nike+ Ecosystem (Nike, 2013)

5.1.2. The connection with the real world

The most important feature to create the economic success of this gamified experience is that it involved a strong relation with the real world. Instead of having a virtual reality were people used to run, with the Nike+ platform real running needs to be performed. The gamified layer here is on the stats regarding the physical activity, which enables people to create an engaging experience sharing the information with friends but also having a personal overview on their physical activity. All this data are collected in an easy to use platform that using a lot of gamification technique (like badges, leaderboard, etc.) allows people to sustain the motivation and to reach every day new goals.
This translates in an increase of running equipment, and the fact of using a Nike platform every time the consumers do a workout influence the buying behavior.

Nike is very good in creating this connection, for example launching spread events involving people all around the world in a single event where the connection between people is made only using the Nike platform, like they did in 2008 (Greene, 2008).

The creation of this connection is mandatory for a successful gamification strategy because is the way for a company to monetize the increase in the involvement of the customers. The social support provided by the platform and by the interaction with friends is used to incentivize the creation of collective events, real matches between runners or to support collective goals. The platform enables also to discover common path used by other runners, increasing the social support of peers.

An example of connection with the real world took place in Paris: before the inauguration of the store in Saint-Michel, a giant countdown (Figure 14) was set-up showing kilometers instead of minutes. The aim was to involve people in the opening of the new store, increasing therefore the connection between runners and the store.
The massive amount of data collected from users surely provide Nike an incredible amount of information to support important decision, like setting up a new store. Nevertheless, allowed also Nike to create a better ecosystem of companies around these informations. In January 2013 Nike opened the access to these data, with an “online portal [that] allows authenticated developers to access "activity data" from users of the Nike+ Fuelband and Nike+ Running services, including their GPS location, distance run (or walked), pace, calories and goals achieved” (Clarke, 2013). This new information allowed developers to create new application around the Nike+ Platform, like Loselt (www.loseit.com), a website to help people track and lose weight.

5.1.3. The future of the platform

On April 2014, unexpectedly, Nike announced that would stop the creation of new wearable devices, blocking the launch of new products after the FuelBand SE and focusing only maintaining the Nike+ infrastructure on a software side.
The official reason was that Nike wanted to avoid the competition from the sector of wearable devices that will probably become intense in the near future. (Statt, 2014)

The launch of the Nike+ Platform and the opening of it allows Nike to maintain a control on the platform, while at the same time allowing other innovative companies to produce the future devices. In this way, Nike will maintain the control of the ecosystem, avoiding the strong competition of other companies.

Given the past collaboration with Apple and the fact that Apple declared interest in the wearable devices, there is probably another collaboration on the horizon, with a clever division of the work. Nike is a shoe producer company and the core competencies are in the innovation of shoes materials and design. Nike will probably be able to maintain the interest in the gamified platform, while at the same time avoiding investing too much in the devices themselves.

In the future Nike will probably be the core of an ecosystem with the Nike+ service at the center, allowing other companies to create value for the consumers while at the same time enabling Nike to maintain a high degree of control on the information.

The most important thing to control will be the branding of the platform, which is the bridge to the core business. From an innovation point of view, this may resound as a wasted opportunity to invest in a growing business, because of the early adopter advantage that Nike had on all the competitors.

5.2. Questionnaire analysis

As said in the research question, the objective of the research is not only to show how a company can create a gamified experience but also how this experience creates a better engagement, increasing loyalty from the
customers. It is not possible declare causation between the use of gamification and this impact on the customer in a statistical point of view with this work. However, in order to have some empirical evidence of the correlation I developed a questionnaire backed up with some interview with users of Nike+.

To back up the considerations in some critical point of the analysis, I made one-to-one interview with some of the users that answered the questionnaire in order to have a specific feedback on unclear results.

5.2.1. **Methodology**

To gather the needed information I conducted a survey among 151 people over a one week period. 56% of them are not Nike+ users, while 44% are using the Nike+ platform.

I have collected participants through social media, inside my personal network and within groups of people related to fitness and Nike communities. I also shared the survey in some heterogeneous groups, in order to reduce the bias.

I structured the questionnaire in two parts: the first one was equal for everyone, while the second one changed if the participants said that he/she was a Nike+ user or not. To avoid biased answer I did not mentioned Nike in the first questions, and I have not indicated that the second part changed accordingly to the previous given questions.

I duplicated a couple of questions, formulating them in different ways, to be sure that the participants were consistent across the answers. I used some control questions to identify possible clusters of users (professional runners or prosumer vs occasional runners).

The complete questionnaire is in the Appendix 1.
The general questions related to:

- Frequency of the sport activity and the importance of these factors while buying a sport equipment
- Perception of the Nike brand perception and the utilization of the products
- Demographics (age and location)

For the users of the platform the questions regarded:

- The weekly usage of the platform
- Devices used in the platform
- Motivation for the use
- Appreciation of the platform

For the people who do not use Nike+ the questions regarded:

- The awareness of the platform and the channel
- Motivation for the non-usage

It is important notice that the data are based on a non-random sample; therefore, a margin of error cannot be computed. The results are not projectable to any population other than the people who answered to the survey.

5.2.2. Results

The average age of the surveyed people is rather low (Figure 15) and distributed in the range 20-40. The distribution of users and non-users does not show any relevant cluster that may show a strict correlation between age and utilization of the service Nike+.

The gender of the population (Figure 16) shows that both male and female utilize the service Nike+, without a real difference. It also shows that overall in the population there are more woman than man, but this difference
is not really big and given that the percentage of users inside each gender group is the same does not creates problem for the analysis.

![Figure 15: The age distribution of population divided by users and not of Nike+](image)

![Figure 16: The gender distribution of the population divided by users and not of Nike+](image)
The general buying behavior, described in Figure 17, does not depend on the fact that the people who answered to the survey are or not a Nike+ user. This guarantee that, on average, the sample of the survey is composed by people with a similar buying behavior.

![Figure 17: Importance of these factors when buying Sport Equipment](image)

However, inside each subgroup, there is a quite high variability, as showed in Figure 18. This variability, globally lower for the Nike+ users (except for the price), indicate a difference in the consistency of the importance rating for the two groups.

To summarize the Nike+ users on average express similar importance of attribute as the non-users, but with less variability. This difference may be indicator that the people who become Nike+ users are more determined (and willing to invest) and therefore behave in a similar way when shopping technical sport products.
Figure 18: Standard Deviation of the importance in buying decision

The Figure 19 shows that members quite active form both the subgroups, (on average they exercise 2.5 times each week). This confirm the data interpretation made in the previous pages and shows again that the two subgroups are comparable in terms of sport activity. It is important notice that the answer described before were made without a mention of Nike in the questionnaire.

Analyzing the answers regarding Nike, it is noticeable that the Nike+ users tend to rely more in general on brands. Moreover, they bought Nike more than the non-user and they express a higher satisfaction regarding the Nike products.
What clearly prove the thesis is the results showed in Figure 20 and Figure 21; they show the product utilization of the Nike shoes and the Nike clothing accessories. The shoes segment is the one in which the distinction between the two groups is more evident. The difference between shoes and clothing is relevant because traditionally the advertising of the Nike+ service is strongly related to the shoes, while the positive results of the clothing accessories shows that the brand loyalty is extended over the single advertising and is able to increase the utilization of the product across all the Nike offering.

It is important notice that in both the charts the value showed is the percentage of people answers within the category, in order to avoid misinterpretation due to the different percentage of people using Nike+ and not. Therefore, the total sum of the percentage amount at 200%.
The results shows that half of the NikePlus users use only Nike shoes when exercising. The result is particularly relevant because nowadays it is possible use the Nike platform with every shoes.

*Figure 20: Utilization of Nike shoes during exercise*
The subgroup of Nike+ user normally use the platform using the GPS app in an iOS device (Figure 22); this account to the half of the users and it is important because it is probably one of the factors that influenced the decision to stop the development of new accessories (cf. 5.1.3).

During the individual interview with some of the users appears that is important be able to track the activity only with the phone, because allows them to save money and to avoid having another device to take care of. In addition, the ones that said that, are the ones who uses the Nike+ service only when running and not as a fitness tracker for all the daily activities.

Focusing on the reasons for using the Nike+ service (Figure 23), and pointing out that was possible for the users to express more than one answer, it is evident that are predominant internal factors (like the ability to increase motivation and to track the daily fitness activity). The survey sample is therefore less interested in the sharing features of the product. This is a

Figure 21: Utilization of Nike clothing during exercise

Do you use Nike Clothing when you exercise?

<table>
<thead>
<tr>
<th></th>
<th>Non Nike+ User</th>
<th>Nike+ User</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>60,00%</td>
<td>20,00%</td>
</tr>
<tr>
<td>Yes, but I have also other brands' clothing</td>
<td>30,00%</td>
<td>50,00%</td>
</tr>
<tr>
<td>Yes, I have only Nike clothing</td>
<td>0,00%</td>
<td>10,00%</td>
</tr>
</tbody>
</table>
critical point, because for Nike it is a relevant way to create work of mouth and to raise consciousness about the product outside the group of actual users.

**Figure 22: Devices used with Nike+**

**Figure 23: Reasons for using the Nike+ service**
It is interesting the Figure 24, because no one said that it is funny use the Nike+ service. This seems to be in contrast with the idea that the gamification should increase the customer involvement because it is funnier and interesting. Fun is a relevant aspect of game playing. During the personal interview, I asked Nike+ users about this aspect and they said that even if the application is fun to use, it is not “funny” in itself. Therefore, it was a bad choice of words in the questionnaire that caused the zero answer.

For what concerns the non-users, most of them never heard about the platform (Figure 25 and Figure 26). This is clearly a problem of awareness in the marketing of the product. Probably the problem is accentuated by the fact that as saw in Figure 23 the sharing features are not really used. In addition, most of the participants were European and Nike has a lower market penetration in EU than in the U.S.
To conclude and summarize the result of the interview, there are clear evidence of the correlation between using the Nike+ device and the increase in the product usage and the brand loyalty. It is possible interpret this in different way:

- There is no causal relation between the two aspects;
- Being part of Nike+ increase the loyalty and the brand enjoyment.
- Being a loyal Nike customer increase the possibility to know about Nike+ and use it.

Based on the interview made, the first option does not makes sense because most of the people found a relationship between the two aspects and
directly related them in a causal connection. The second option makes sense with the other data regarding the historical success, with the increase in the market share after the introduction of the Nike+ platform (cf. 5.1.1). However, surely, there is something true in the third option, and this is compatible with the data showing that most of the people did not know about the Nike+ platform. Therefore, probably a mix of aspects needs to be taken into account to explain the correlation. Further researches may find clearer evidence of the cause-effect relation.

5.3. Social media analysis

To try to understand how Nike leverage the user base on the general social media I analyzed 280,000 tweets in a one week timeframe (from April 28 2014 to May 5 2014) to understand some characteristic of the users and the usage of the product.

5.3.1. Methodology

I used a software\textsuperscript{1} to download tweets in a local database and then analyzed them. I analyzed tweet corresponding to two different search queries:

- “#NikePlus”: The first one took in consideration only the tweets with the hashtag #nikeplus. These are for the 90% tweets generated automatically from the device at the completion of a workout or at the achievement of a goal.
- “Nike”: The second one took in consideration all the tweets mentioning “nike” excepted the one with the hashtag #nikeplus

\textsuperscript{1} Plus One Social, beta version. http://plusonesocial.com/
Due to the limitation of the hardware and the high amount of tweet retrieved from the second query, I had to limit the analysis of the second query only to three days (from May 2 to May 4)

5.3.2. Results

As said, the results timeframe is different for the two queries (Figure 27). However, the results presented here are based on average value or presented in different charts; therefore, this difference is taken into account and does not invalidate the results. On average, the #NikePlus messages counts for 1/7 of all the tweets regarding Nike.

![Figure 27: Amount of tweets collected for the analysis](image)

Based on the location indicated by the user on the twitter profile it is possible to draw a map of the location of the Nike service around the word. The Figure 28 and Figure 29 represent the Europe and America. The service shows peak of users also in Brazil, India, Japan and Indonesia but they are not presented in this thesis.
The two charts are based on 21% of the users because not everyone has a valid data point regarding the position. As said, the aim is only to provide a general idea of the users’ location. It is also important notice that the location are based only on people who uses twitter as a social network to share the stats, therefore differences between countries may be caused to the different adoption rate of Twitter and not of Nike+.

Figure 28: Nike+ users geolocation in Europe for #nikeplus
Figure 29: Nike+ users’ geolocalization in the U.S. for #nikeplus

Figure 30: Source of tweets for #nikeplus

The Figure 30 confirms the results of the survey showed in Figure 22, and even if it is expected because of the measurement tool (it is easier have a
connection to twitter from the iOS app) it is a confirmation that the survey sample is coherent with a broader audience. The sources showed in Figure 30 are the one that are directly related to a Nike+ device/application. They account for the 83% of the dataset.

Moving the focus from the tweets to the users, it is interesting notice that only the 15.8% of the users compare in both the two queries. Having the connection with the social network allows Nike to increase the social presence with a minimum effort. For example, the 67.000 users of the Nike+ platform identified in this research have globally more than 40 million follower.

It interesting notice that, as shown in Figure 31, the user base of Nike is more active than the average on Twitter. The data utilized as a benchmark are of 2012 and based on the 80 million of people active on Twitter the last 30 days before making the statistics.

The computation of average values is influenced by the presence of users highly popular. Therefore, I also calculated the median values, in order to have a better value for the comparison. There are no recent data on median values for all the twitter customer base, but the 2013 informations regarding the average numbers of followers are comparable with the one quoted in the table, therefore the statistics of 2012 should not be really different from actual reality.

<table>
<thead>
<tr>
<th></th>
<th>Number of users</th>
<th>Average Followers</th>
<th>Average Statuses</th>
<th>Median Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>#NikePlus</td>
<td>67.039</td>
<td>612</td>
<td>6.288</td>
<td>120</td>
</tr>
<tr>
<td>Nike</td>
<td>138.534</td>
<td>1.967</td>
<td>14.854</td>
<td>280</td>
</tr>
<tr>
<td>Twitter active Users</td>
<td>80 million</td>
<td>235</td>
<td>188</td>
<td>31</td>
</tr>
</tbody>
</table>

*Figure 31: Comparison of Users' Activity. Global twitter stats from (Bash, 2012)*
To summarize, the informations regarding the devices usage are compatible with the one derived from the survey I conducted. The relevance of the presence on Twitter is demonstrated by the high involvement showed by the users of the platform. The fact that they allows their devices to post on Twitter (given that they are really active) means that they believe this information is valuable.

However, the survey results regarding the knowledge of the platform from non-users seems to be against this interpretation. As explained before, the possible justification is a bias in the surveyed people and the usage of Twitter.

The impact on the social media and the fact that only a small part of the Nike+ users are talking about Nike independently means that allowing these external connections, Nike gained presence on twitter and the tweets are about reaching new goals and improving the sport activity, therefore are positive and may convince other people to try the platform.
6. **Conclusion**

Gamification is a relevant business trend and it is important for every company understand how it is possible apply it to the organization. Although the amount of academic articles is limited, the debate around the definition and on the utility of this technique is raising interest in the traditional media. This work, after having identified different opportunities for company to invest in gamification, focus on the external aspect explaining the systematic view and the element of the system.

Some company will find useful use it as an internal resource, for example to increase employees motivation and some of them, like in the case described in this research, will use it as a tool to support the customer overall value creation. In the case of Nike and in the cases described in 4.2, this was successful and helped the company to create a stronger connection between the brand and the sport activities.

The survey conducted showed a strong indicator that the use of the gamified platform and the amount of product consumption of the brand are related. The social media analysis, even if limited to twitter, show that there is a high number of high quality users that participate in the discussion about Nike. The analysis showed also that the ability to share results obtained using the platform to users outside the platform is currently used by users all over the world.

These findings, consistent with the hypothesis, shows with some quantitative data that these innovations are useful for a company as well as the customers. In addition, the framework provide opportunities for companies of different size, allowing them to leverage an external gamification provider, reducing the amount of money and of customer needed for the implementation.
6.1. **Limits of the research**

The main limitation is based on the lack of structured data about this kind of projects. In addition, successful implementations are vastly publicized, while unsuccessful ones are not showed and this cause a biased image of gamification. Learning from failures would be interesting in order to understand in details the impact of different factors in the process of implementation.

Other recent researches tried to develop an approach to analyze different cases, the results are compatible with the findings of this paper: “gamification provides positive effects, however, the effects are greatly dependent on the context in which the gamification is being implemented, as well as on the users using it” (Hamari, et al., 2014).

Another limitation is that the survey pool is not statistically representative of the all population. However, the comparison between the group of users and the group of non-users show that they behave in a similar way when purchasing something and in the exercise habit. Therefore, even if limited, the results are internally consistent.

In addition, the analysis of social media confirmed some of the hypothesis made analyzing the information gathered from the survey. Use twitter data, again, is not representative of all the population, but it is helpful to understand the impact on the social network aspect. However, analyzing the real communication on the customer level is better founded than using only company advertising informations.

6.2. **Recommendations**

It would be interesting to analyze the case of utilization of external gamification provider to validate the findings of this work. Comparing the benefit between different gamification strategies and across different sector
would be helpful to find limits of the application of these techniques. The analysis of failure would be helpful to better understand the determinant of success.

Enforcing the analysis just proposed with a statistical analysis would increase the trustworthiness of the results.

Moreover, this paper limits the analysis to the external context. It would be interesting analyze all the spectrum of opportunities for companies in the application of Gamification to their businesses. Another point of interest is to analyze the impact of Gamification in companies operating in a B2B environment.

6.3. Management Issues

The gamification trend is gaining interest in many companies. Emergent technologies like wearable devices, internet of things and big data, as well as the widespread presence of smartphones will be driver for the implementation of gamified products across a wide range of industries. This paper provide a classification, to help them identify the better strategy to introduce these technologies. It provides also economic justification for its adoption and show how it is possible use external gamification provider to reduce the infrastructure investment. However, it is important take advantage from these opportunities creating a strict connection with the company’s product, avoiding the utilization of platform not created or personalized for the real needs of the company.

The findings are not definitive and difficult to generalize without further analysis, but the overall trend is clear and every business manager should evaluate the feasibility of the introduction of a gamified product.
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8. **Appendix: Questionnaire**

**Common Questions**

**How many times per week do you do sport activities?** *

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**How important do you think is a brand when you buy sport accessories?** *

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very unimportant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How much important are these factors when you buy sport accessories?** *

<table>
<thead>
<tr>
<th></th>
<th>1-Not important</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5-Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The influence of family, friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical specification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Do you agree with "I rely on the brand"?** *

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>
How often have you bought Nike product in the past? *

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Do you use Nike Shoes when you exercise? *

- Yes, I have only Nike shoes
- Yes, but I have also other shoes
- No

Do you use Nike technical clothing when you exercise? *

- Yes, I have only Nike clothing
- Yes, but I have also other brands' clothing
- No

Based on your own experience, how would you rate your satisfaction with the Nike products*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Are you a NikePlus User? *

This means having a NikeFuelband or utilize the NikePlus platform with other devices
In which country do you live now? *

Please indicate your age *

Please indicate your sex *

Questions only for the NikePlus User

How many times per week do you use NikePlus? *

1  2  3  4  5  6  7

How do you use the NikePlus service? *

• With an Shoe Pod
• With the GPS of the iOS running app
• With a SportBand or FuelBand
• With a SportWatch
• With another device
• Without a Device

Why do you use NikePlus? *

Please indicate the main reasons

• To increase motivation
• To share progresses with friends
• To track daily fitness activity
To have a virtual trainer

Other: [ ]

With which one of this affirmation do you agree? *

I like using the platform
It is funny to use it
It helps me exercise better
I am proud when I reach my goal

Questions for non-user of NikePlus

Have you ever heard about NikePlus from *

Advertising
Social Network
Friends & Family
Internet (except social network)
Never heard about it
Other: [ ]

Why are you not using it? *

I've never heard of it
I don't like technical stuff
I don't think it worth the price
I am using other products
I think is not useful
Other: [ ]