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# **Is Gamification Useful for Increasing Customer Feedback?**

**A case study based on people's perception of gamified elements.**

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## Abstract

When planning a feedback system for a startup company, a problem arose, which was “how do we motivate our customers to complete all the steps it takes to give feedback?”. The steps being, *see an email*, *answer the email* and lastly get redirected to a *feedback form* to optionally give more feedback. Therefore a case study was created, a study that investigated the effects of using *gamification* in e-commerce, with the objective to find out if gamification can be a useful tool to motivate customers to give feedback.

Emails and a feedback form were developed and gamified with the help of a game design framework, known as the *MDA-framework*. The framework helped to visualize the designer-to-user relationship. Surveys were subsequently created to collect quantitative and qualitative data regarding people's perception of the created emails and form. The results showed that a gamified feedback form was three times better perceived than a basic HTML-form when looking at the variables *fun*, *preferability* and *motivation/interest*. While gamification had great success with the forms, it had both negative and positive effects on the emails. Gamification showed great promise to be able to motivate customers to give feedback but offered no certainty, since the success is still dependent on the designer. The MDA-framework was shown to ease the process of developing a gamified form and designing emails that would motivate the users/receivers to answer them.

Finally, the study concluded that gamification can be a great tool to motivate both customers and users to give feedback in e-commerce and other organizations. Considerations should be taken, however, how gamification is applied since the qualitative analysis showed that even though people preferred the gamified elements it can give an unserious impression.

**Keywords:** Gamification; MDA-framework; E-commerce;

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# 1. INTRODUCTION

This case study has investigated the effects of using *gamification* as a tool in e-commerce to motivate customers to give feedback. The study was made by working alongside a startup company while building a feedback system, with the help of gamification techniques. The study used surveys to collect data, because the aim was to be able to quantify people’s perception of the gamified elements from the feedback system, by asking them questions. Because of this, the results come from people’s experience, not by tracking activity on a website. Both quantitative and qualitative data were collected to determine the impact gamification had.

The startup’s name is *Inkamisu* and they focus on helping people find a tattoo with a small design that suits them, book a time and pay for it, all within 5 minutes. Their slogan is “Small tattoo, big meaning, worth forever” [1]. The company wanted to implement a review system on their website. The system would allow the customers to give feedback after they completed a session with a tattoo artist. The motivation to create the system was to increase interaction, help the customer to make up their own opinion and peace of mind before booking with a tattoo artist. A big motivation from both a business and technological perspective was also to automate everything, to avoid manual handling. Figure 1 shows the steps that lead up to a customer being able to give feedback.

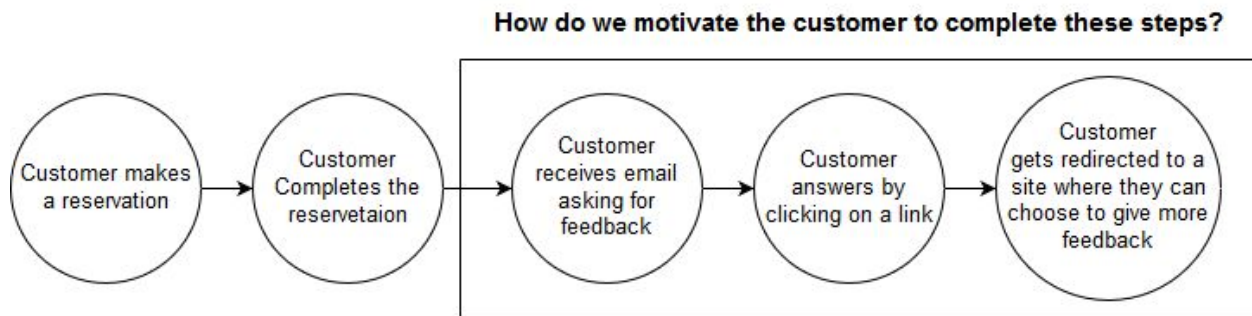


Figure 1: The flow of giving feedback

The problem that arises is, “how do you actually motivate the customers to complete all these steps?”. Therefore this study came to life, the research about if gamification could be used as a tool to help motivate customers or even users to give feedback.

So a great part of this study was conducted while implementing a review system, but what about gamification, what is it? Well one of the leading author and pioneers in the industry, Yu-kai Chou, says that “*Gamification is the craft of deriving all the fun and addicting elements found in games and applying them to real-world or productive activities.*”[2]. In Yu-kai Chou’s book “*Actionable Gamification - Beyond Points, Badges and Leaderboards*” he is very keen to refer gamification as “*Human-Focused Design*”. This is since it is a design process that optimizes for human motivation, instead of just putting the focus on efficiency. This study will, however, refer it to as *gamification* to avoid confusion. We will dive much more into what gamification entails in section 1.2.



## **1.2 Theoretical Background**

### **1.2.1 Gamification**

To give more perspective to the quote from Yu-kai Chou that given regarding what gamification is that was introduced in section 1, the definition from the Oxford Dictionary is,

*“The application of typical elements of game playing (e.g. point scoring, competition with others, rules of play) to other areas of activity, typically as an online marketing technique to encourage engagement with a product or service. ‘gamification is exciting because it promises to make the hard stuff in life fun’”* [7].

By looking at the quotes, it can be seen that both have something in common. What they both have in common is that they describe gamification as a method to make something more fun or motivating for users to do certain actions. Gamification does not mean that you make something into a game. According to [12] which suggests a definition that describes it as that you take what makes games fun and engaging from their design and then apply it to something that is related in a non-game context.

In section 1.2.3 and 1.2.4 two frameworks is explained to further assist in the comprehension of what gamification or game design entails. Section 1.2.4 also explains the framework that the study used to gamify the feedback system that was built.

### **1.2.2 E-Commerce**

According to [8, 9], e-commerce is the transaction of buying or selling electronically on the Internet. It is usually conducted on the World Wide Web, it can also use email as technology. There are three different areas of online shopping: electric markets, online retailing and online auctions.

### **1.2.3 Octalysis Framework - A Gamification Framework**

According to [3, 4] Octalysis is a Gamification Framework created after years of research and study by Yu-kai Chou regarding gamification. It consists of 8 Core Drives and has White Hat and Black Hat gamification, Figure 2 shows the Octalysis Framework.

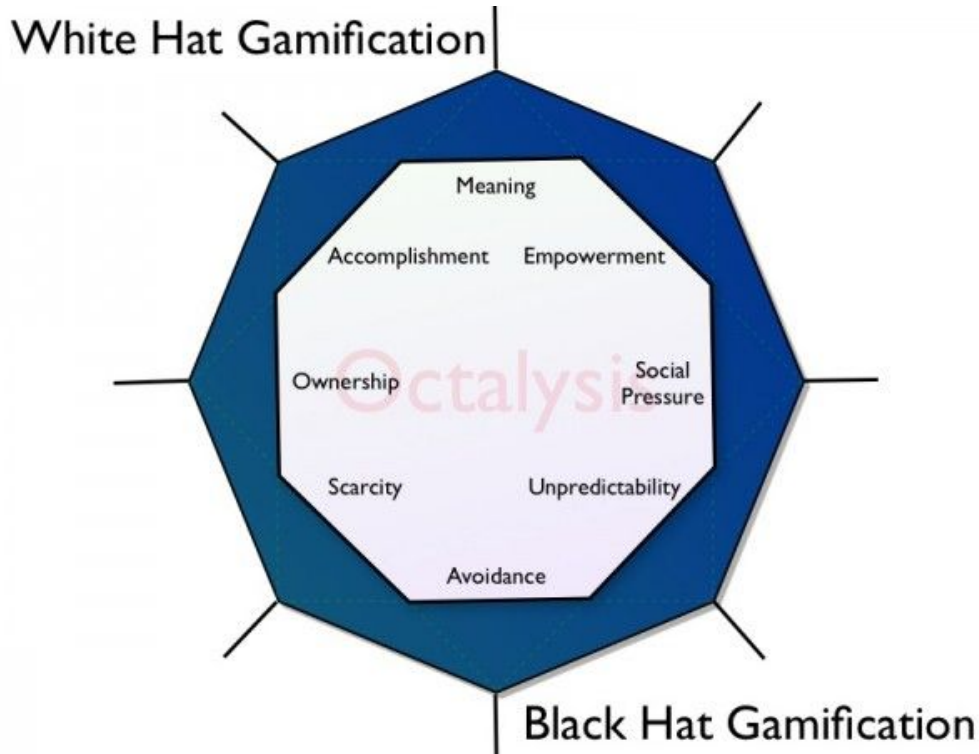


Figure 2: Octalysis framework

## Core Drives

Octalysis consists of 8 Core Drives, which according to [3, 4] are:

### 1. Epic Meaning & Calling

This Core Drive is where a user thinks that he is apart of something greater than himself, or that he's destined to do something. An example can be a person spending a lot of his free time maintaining a forum or helping a community grow. Also the feeling of being lucky at the beginning of a game (calling).

### 2. Development & Accomplishment

This Core Drive *"is the internal drive of making progress, developing skills, and eventually overcoming challenges."* [3]. It is important that when you are receiving badges or trophies that there was a challenge, else it is not meaningful to the user.

### 3. Empowerment of Creativity & Feedback

This Core Drive is when a player is involved in a creative process where they try to figure things out and can try different tactics. Examples can be painting and Legos, where a game-designer does not need to add new content often since the user is getting feedback by the result of the painting.

#### **4. Ownership & Possession**

This Core Drive is where users are motivated due to a sense of ownership. According to Chou, *“When a player feels ownership, she innately wants to make what she owns better and own even more.”* [3]. The more time spent on something, such as editing your profile, you would feel more ownership toward your profile.

#### **5. Social Influence & Relatedness**

This Core Drive is the elements that drive people socially, such as acceptance, companionship, mentorship, social responses, also envy and competition.

#### **6. Scarcity & Impatience**

This Core Drive is the drive when you want something but only because you can not have it. An example can be games that have appointments such as “come back in 30 minutes to collect your reward” - *“the fact that people can’t get something right now motivates them to think about it all day long”* [3].

#### **7. Unpredictability & Curiosity**

This Core Drive is often a harmless desire to decipher what will occur next. Since you do not know what will occur, the curiosity will be stuck in your head.

#### **8. Loss & Avoidance**

This Core Drive is based on avoiding that something negative occurs. A description from [10], *“Even new opportunities that are perceived as fading away can exhibit a form of Loss & Avoidance. If people do not act immediately on this temporary opportunity, they feel like they are losing the chance to act forever.”*.

### **White Hat & Black Hat Gamification**

In Chou’s book [4] the concept of White and Black Hat gamification is described as a part of the Octalysis Framework. They exist in different Core Drives, White Hat Core Drives are for example Core Drive 1, 2 and 3. While Black Hat Core Drives are Core Drive 6, 7 and 8.

According to [10] *“White Hat Core Drives are motivation elements that make us feel powerful, fulfilled, and satisfied. They make us feel in control of our own lives and actions.”*. While Black Hat Core Drives is the contrast, it makes people feel obsessed, addicted and anxious. Black Hats can be very strongly motivating but they clearly can leave the users with a bad feeling since these emotions are not that pleasant. In [4] Yu-kai Chou explains that most companies think that it is quite obvious that White Hat Gamification has a clear advantage over Black Hat. They are mostly right according to him, but Black Hat can create a sense of urgency that White Hat cannot.

### **Disclaimer**

Octalysis was used for educational purposes and comparisons in this study. It was not used while implementing gamification on the feedback system.

## 1.2.4 MDA Framework - A Game Design Framework

The MDA framework helps people analyse games and visualize the designer-to-user relationship. It breaks down games into three pieces, being *mechanics*, *dynamics* and *aesthetics*.

- **Mechanics:** Is the piece that is regarded as “the foundation”. It contains the rules for all fundamental actions the player can do in the game.
- **Dynamics:** “describes the run-time behavior of the mechanics acting on player inputs and each others’ outputs over time”[11]. Which in short means that this is the piece of the mechanics that the user can view. For example, when the player presses send, a feedback message is shown, thanking the user.
- **Aesthetics:** “describes the desirable emotional responses evoked in the player, when she interacts with the game system.”[11]. The MDA Framework helps people with providing a vocabulary containing 8 types of Aesthetics types, it is not limited to 8 however in practice. These types can be combined or used separately. The 8 Aesthetic types are the following:
  - **Sensation** (pleasure)
  - **Fantasy** (make-believe)
  - **Narrative** (drama)
  - **Challenge** (obstacle to overcome)
  - **Fellowship** (social)
  - **Discovery** (uncharted territory)
  - **Expression** (self-discovery)
  - **Submission** (pastime)

Each of these pieces can be seen as different views of the game, while still being linked together. The designer has a different perspective than the player. The player's experience begins with aesthetics and from that perspective, the aesthetics give character and sets the mood. The player sees the aesthetics which is created from dynamics, which comes from mechanics. While the designer sees it as that the mechanics create dynamic actions, which lastly leads to the aesthetics. Figure 3 demonstrates this.

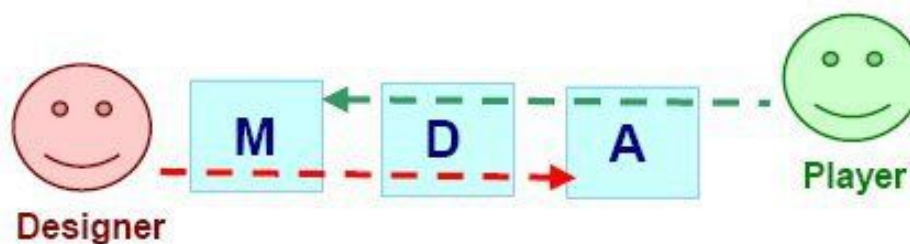


Figure 3: Designer and player perspective

The MDA-framework insists on thinking through both perspectives, if the designer wants the player to have a good experience, rather than just focusing on the function. This study sees a resemblance with this focus on the experience of the user from the Octalysis Frameworks “Human-Focused Design-principle”, that was explained in section 1.2.3. [11]

## **1.3 Purpose & Value and Scope**

### **Purpose & Value**

The purpose of this report was to investigate and see if gamification is a useful tool to motivate customers/users to give feedback. The investigation also sought to provide new data and examples for other studies regarding gamification. New examples with the focus on perceptions from people instead of “page hits” or tracking the results after implementing gamification somewhere. Also to provide examples with a focus on e-commerce and especially gamification as a way to get feedback from customers/users. In other words, it was meant to see if gamifying the flow shown in Figure 1 is a good idea and perceived well by people.

Therefore the value of this investigation is that it will provide more data and examples regarding gamification. It will also bring value to people who are interested in motivating their customers to give feedback or complete certain actions. The value that it also will provide is examples for people looking to implement gamification. The quantitative and qualitative data gathered will be able to help with looking at what works and what does not work, regarding this study's examples.

### **Scope**

This study will answer if gamification is a useful tool to motivate customers/users to give feedback. It will answer it by developing a gamified feedback form, gamified e-mails with the help of gamification literature found and the MDA-framework.

It focuses on people’s perception of gamified elements, instead of tracking the results by implementing it on an online website and collecting data. This is because the study wanted to understand why and how by actually asking people questions, instead of coming to the conclusion “yes it works, since we achieved what we wanted!”. This means that the study was not based on tracking results from real life at the e-commerce site of the company where this study was conducted at. Instead, surveys based on the feedback form and emails created were used to collect data regarding how people experienced the gamified elements.

## 2. Questions to be Answered

This is a case study. The objective of this study was to see if gamification can be a good tool to motivate customers or users to give feedback. This study did not focus on tracking activity or results on a website, instead, it focused on collecting data on how people experienced gamified elements connected to a feedback system that was built.

The study tried to overcome a challenge, which was to motivate a customer or user to complete all steps it takes to give feedback. The steps being, *see an email*, *answer the email* and lastly get redirected to a *feedback form* to optionally give more feedback. These steps are referred to as *the feedback flow* in this study. Therefore the feedback flow was studied while developing a system for it. So the study's research questions are connected to a gamified feedback system, or rather a gamified feedback flow. The flow is divided into different pieces, which are *email* and *feedback form*. Since the research questions are connected to the feedback flow they will together answer the objective of the study. RQ1 is connected to the feedback form, while RQ2 and RQ3 are connected to the design of the email.

The study was broken down into different research question explained earlier which are:

**RQ1:** What effects does a gamified feedback form have compared to a basic HTML-form?

**RQ2:** Is the effect of using gamification to motivate a user to answer an email negative or positive?

**RQ3:** Which of the eight type of Aesthetics from the MDA-framework is preferable to use to motivate a user to answer an email?

There are many documented scenarios showing that gamification can have a positive effect. For example, there are multiple scenarios explained in Chou's book [4], where gamification either increased activity on a website or achieved the desired outcome. But it can also depend on what is being implemented since the process of the design needs to be thoughtfully carried out with respects to the environment. A report from 2013, conducted a one and a half year long field experiment, which gamified a peer-to-peer trading service by implementing badges and concluded the following "*Although, we may hypothetically find that gamification increased the retention of users and other usage activities, it would still be unknown whether users experienced gameful or playful experiences.*" [15]. Therefore since this study focused on the perception of participants and not activity or retention of users, the expected outcome was that gamification would be perceived by survey participants in a positive way. The participants should perceive the gamified emails and feedback form as gameful, fun and motivation to answer or complete them should be increased.

### 3. Method

This study used surveys to collect a mix of qualitative and quantitative data, but the main focus was to collect quantitative data. As mentioned in section 2, this is a case study and the collected data emerged from peoples experiences and thoughts of gamified elements. A gamified feedback system was, therefore, built and implemented at a startup company. Building the system was the preparation for the surveys, since during this phase the design of emails and creation of the feedback form occurred, which represents the gamified elements.

The surveys showed pictures of the designed emails and videos of the feedback form in action, asking how participants perceived them. Later when analysing the data, the main focus was on the quantitative data. This was to be able to answer the research questions with the perception of the developed form and designed emails by people. Both of the surveys collected data were analysed separately and was later used to come to a conclusion regarding the objective of the study. The surveys were sent out to the email list of Blekinge Institute of Technology with the goal to get as many responses as possible for each survey.

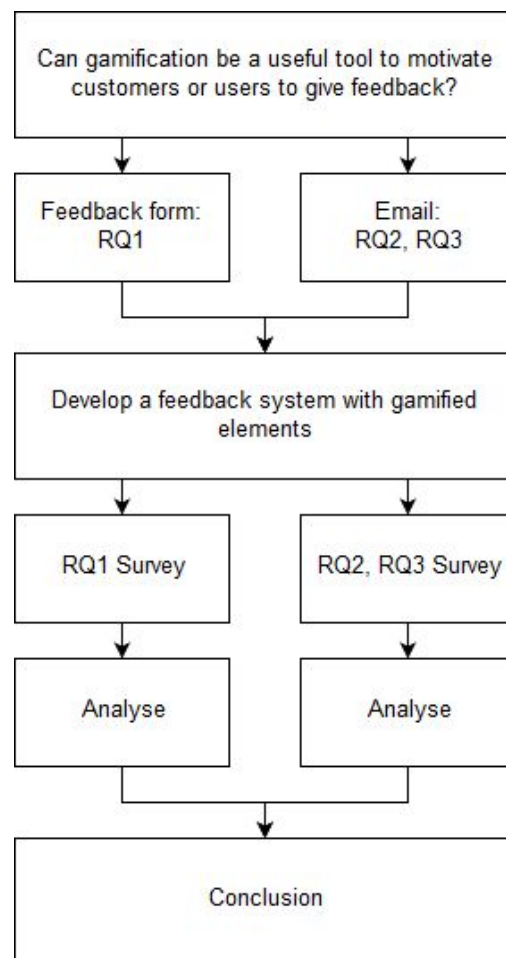


Figure 4: The process of the study

### 3.1 Search Strategy and Requirements

The study used literature from scientific databases by using queries such as “gamification”, “gamification in e-commerce”, “gamification customer feedback”. It also used information from articles and books written by credible authors. To determine if the author is credible one of the following criterion had to exist:

- The author should have studied the subject at least 6 months.
- The author works for a company that explains how the subject had an effect on their business.
- The author is well respected within the community connected to the subject. For example, reviews backing up the credibility of the author.

In order to determine if the literature is acceptable, one of the following criteria must have been fulfilled:

- The article is from a scientific database, such as Google Scholar, Scopus or ResearchGate.
- The author fulfills at least one criteria for “credible author”.
- It is acquired from a well-known dictionary or encyclopedia and only used for brief descriptions.

#### Search result

After searching with the following queries shown in Table 1, the number of hits did vary. The search started by using Google Scholar which is a web search engine that filters metadata and full text from scholarly literature [5]. Later the search continued with Scopus which is the largest citation and abstract database of peer-reviewed literature such as books, conference proceedings and scientific journals [6]. The results are shown in Table 1.

Query	Google scholar result hits	Scopus result hits
gamification	51,800	3,543 document results
gamification in education	28,500	1,221 document results
gamification customer feedback	7,670	4 document results
gamification ecommerce	3,560	3 document results

Table 1: Search results

The amount of results indicates that there is not that many gamification studies focused on e-commerce and customer feedback compared to education. This is not proof that more studies are needed regarding “gamification in ecommerce” and “customer feedback with gamification”. Gamification is a way to motivate, as described in section 1.2.1 Therefore it makes sense that there are not many studies directly focusing on how to receive customer feedback with gamification. But the result does, however, show us that more could be added without being excessive, while also adding value and perspective to the current studies.



## 3.2 Preparation for data collection

The development of the feedback system was done at the company, the software was developed with C# and JavaScript (Angular.js framework). The MDA-framework (that was explained in section 1.2.4) was used while creating the feedback system to assist with the visualization of the designer-to-user relationship. The Software Development Life Cycle was not strict, instead, there was one main requirement, which was to create a system that covers the feedback flow shown in Figure 1. The team developing the system consisted of 2 researchers (who were developers during the project) and three co-founders. The roles of the co-founders are different, one being CEO, one who acted as team leader and company advisor and one who was in charge of the backend.

### 3.2.1 Feedback form

The MDA-framework was used when creating the feedback form. When the gamified form was created, a basic HTML-form was also created. A basic HTML-form, in this case, referring to a submit form without any added CSS styling or Javascript. Both of these forms helped to answer RQ1 by appearing in a survey.

### 3.2.2 Designing emails

To answer RQ2 and RQ3, four emails were created. One was a basic email, while the other three were gamified. The vocabulary (8 Aesthetics types) from the MDA-framework was used to assist in gamifying the emails. The emails contain links with different query strings so the user can click on one of the links to give feedback via the email. The feedback flow that was shown in section 1 shows that the customer needs to make a reservation and complete it before receiving an email. Therefore the emails needed to be created in a way that asked the customer for feedback regarding the reservation. To clarify, the reservation that is booked is with a professional, for example, a tattoo artist or optician. Table 2 shows the thoughts behind the emails.

<b>Basic Email</b>	The “basic email” will not focus on the user experience, other than that it should look decent and be short and concrete. The email will just remind the customer that they recently booked a service via a website and then asks them a question.
<b>Gamification Email 1</b>	This email will implement gamification by utilizing the aesthetic type Fellowship. The idea is to motivate the customer to answer the email by composing the email like they would be answering the professional. Driving factors here will be companionship or dislikeness depending on the reservation.
<b>Gamification Email 2</b>	This email will implement gamification by utilizing the following aesthetic types Narrative, Fellowship. The body of the email will make it look like the customer would be helping others. Therefore making it look like it is the customer’s mission to influence the professional’s business or other people.
<b>Gamification Email 3</b>	This email will implement gamification by utilizing the following aesthetic types Challenge, Discovery. It will contain a progress bar containing steps to a reward. The challenge aspect is seeing a progress bar, discovery is discovering what the gift is since the customer does not know what it actually is.

Table 2: Thoughts for emails

### 3.3 Data collection

All research questions are answered with surveys. RQ1 did have its own survey while RQ2 and RQ3 shared a survey. Information such as which gender the participant had, was not required for the research. The participants needed to be at least 18 years of age since the surveys are focused on adults. The surveys were sent out to the email list of Blekinge Institute of Technology.

#### Survey for research question 1

After the gamified feedback form and basic HTML-form was created, the forms were used to set up a survey for RQ1. The survey showed 2 videos, that showed the process of completing the forms. After the two videos were shown, the participant was asked the questions shown in Table 3.

Question	Option	Data type
Which one of the forms looked the most fun to complete?	Gamified or basic	quantitative
Which one of the forms would you prefer to complete?	Gamified or basic	quantitative
Video 1 ("basic"). On a scale 1-5, how motivated or interested do you think you would've been to answer it?	1-5	quantitative
Video 2 ("progress bar"). On a scale 1-5, how motivated or interested do you think you would've been to answer it?	1-5	quantitative
Please type anything you would like to add (optional)	Text	qualitative

Table 3: Questions for RQ1 survey

#### Survey for research question 2-3

After the 4 emails had been created, they were used to create a survey for RQ2 and RQ3. The survey asked the participants to imagine a fictional scenario where they had just booked a private appointment with "Bob" via a fictive website called *WooshService*. Bob could be an optician or tattoo artist, that was up to the participant to imagine, which could have affected the result since people create their own idea who Bob is. But it should not have affected the results since the text was formulated so the participant understands that which profession Bob has is not of importance. The important thing is that they understand that the reason why they received an email is due to a reservation they have completed. Images were later shown to the participants and questions regarding the images was asked. The answers will be used to answer RQ2 and RQ3.

#### Research question 2

The survey showed 4 images which represented the emails. One image was shown at the time, and three questions were thereafter asked. The questions shown in Table 4 was asked for each image.

Question	Option	Data type
How motivated do you feel to push on one of the emojis? 1-5	1-5	quantitative
How curious are you what will happen if you push on one of the emojis? 1-5	1-5	quantitative
What's your emotional response to the e-mail? If 1 being negative 3 medium 5 positive. 1-5	1-5	quantitative

Table 4: Questions for each email in the RQ2-3 survey

### Research question 3

To answer RQ3, the participant was asked “what/which of the options below motivates you to answer an email asking for feedback? Feel free to choose as many as you'd like.”. The participant thereafter had multiple options, which are displayed in Table 5.

Options	Aesthetic type
A gift, some sort of reward	Sensation
An e-mail that isn't that direct, more enjoyable to read than straight forward.	Fantasy
An email that creates an emotional response. For example anger, happiness, sadness, surprised and etc.	Narrative
An e-mail that provides a challenge for you to beat (Challenge)	Challenge
Helping the company or person. (Fellowship)	Fellowship
Curious about what will happen (Discovery)	Discovery
You want to share your opinion (Expression)	Expression
Just to pass the time (Submission)	Submission
Other	None

Table 5: Options regarding RQ3 in the RQ2-3 survey

Most of these are straightforward, but fantasy and narrative might not be that obvious in an email. Marc LeBlanc describes fantasy as make-believe, while some refer to it as escapism [14], therefore the motivation for the question regarding fantasy is that the enjoyable text creates a sort of escapism. The narrative type is some sort of drama, a story for the player. This study chose to interpret narrative as a way to try to create emotional responses, therefore the question asked for that type, is if an emotional response motivates the participants to answer the email.

### 3.4 Data Analysis

There were two surveys and they were analysed separately. The analysed data were combined and used in the conclusion chapter. Averages were used since the surveys mainly collected quantitative data. The questions connected to quantitative data have its answers connected to a certain email or form, an example can be a question from the RQ1 survey, “Which one of the forms would you prefer to complete?”.

The survey for RQ1 contained the variables fun, preferability, and motivation/interest. Each variable is connected to a question and could get a maximum score of 5. The variables were used to calculate a total average score for the forms that were being compared. The calculation of the total average was the sum of the variables scores divided by the number of variables, which was 3. The higher the score was, the better, since more points equal to it being better perceived by participants. There were, however, two different option types which were *1-5* and *gamified or basic*. The *1-5* option type offered an easy calculation by simply adding all the gathered points up and then dividing it by the number of participants. The *gamified or basic* option type offers two choices, which means that there was no connection to a maximum score of 5. This problem was solved by converting the percentages to decimals and then multiplying it by 5.

The approach of calculating an average score was also used in the survey that will be answering RQ2 and RQ3. Lastly, the analysis also looked at the qualitative data. There is only one question that is focused on collecting qualitative data, which is from the RQ1 survey. The qualitative data was analysed by trying to find themes. Valid answers created themes, in this case, valid answers entail having a connection to RQ1, all other answers were discarded. In this study, the themes emerged from similarities in the answers, after comparing the answers.

### 3.5 Planning

This study's deadline was 2018-05-22 23:59 and, therefore, needed to have gathered the required data stated earlier in the text. The review system was planned to be completed at week 15. The gathering of data and creation of the surveys occurred week 15 to the middle of May.

## 4. Literature Review

In a research from 2011, the researchers proposed that gamifications definition should be *“the use of game design elements in non-game contexts.”* [12]. In the study it was also brought up beliefs regarding that the design of video games main purpose is entertainment, to be able to engage users. Therefore non-game services and products with the help of game elements could make them more engaging and enjoyable. In an article [13] from October 2012, the authors, however, challenges the definition that was proposed by Deterding, Dixon, Khaled, and Nacke in their publication from 2011 [12]. Their reasoning is that the experience or value that a user/player feels during playing a game or to decide in general what a game even is, is very personal. They explain that a designers focus should be the user/player/customer experience due to a game’s very existence is reliant on the personal opinion of the user/player. Their suggestion is that gamification should be defined as *“a process of enhancing a service with affordances for gameful experiences in order to support user’s overall value creation”*, their reasoning for this is that the definition should focus on the goal of gamification instead of the methods.

In more recently published literature, Yu-Kai Chou’s twelve-year research was summed up in a book [4] published May 13, 2015. In his book, he explains that he thinks a clearer and more suitable name for gamification is *“Human-Focused Design”*. This is since it is a design process that optimizes for human motivation. According to Yu-kai Chou, the only reason that we call it gamification is due to that the people creating games was the first to master *“Human-Focused Design”*[4].

In an even more recent publication [16] from January 2017, it describes gamification as a popular method of enhancing information technologies. According to the publication, multiple studies in different contexts have shown that gamification can indeed be an efficient approach to engage and motivate users in an activity. However, according to a study from 2012 [13], it seemed like most previous studies had measured the success of gamification based on clicks, sales figures and also retention of users, instead of the actual perception of gamified elements. Although gamification has been shown to work, an article published in 2012 predicted that by 2014 *“80 percent of current gamified applications will fail to meet business objectives primarily because of poor design”*[17]. Because of the estimated poor comprehension amongst people how to implement gamification, the authors of the recent publication [16] sought to *“advance the understanding of best practices related to the gamification design process”*. They interviewed several gamification experts, and their findings showed that some experts noted that some methods are restricting the possible design space and creativity if followed strictly. Generally the experts, however, agreed that frameworks can offer guidelines that are useful for developing gamification designs.

It is, however, not something new to try to understand how one can achieve *“successful gamification”*. The publication from 2011 [12] explains that many researchers have looked at how to create a design that assists in gamification, which is true if we look at the MDA-framework [11]. The MDA-framework (that was explained in the background) was for example taught and developed as part of a Game Design and Tuning Workshop at San Jose 2001-2004. Speaking of frameworks, the gamification framework, Octalysis, which is created by Chou and described in his book [4], where he says that the framework has had great success with helping people implementing gamification. Which shows that a well-designed

framework such as MDA or Octalysis gives a clear path and vocabulary that can help designers to achieve their goal, for example increasing activity or motivating a user to complete a task.

To summarize, this study combines the definitions of gamification to regard it as, *“a process of designing with regards to the user experience by using game design elements in non-game contexts”*. Furthermore, the effects of applying gamification to forms and emails should, in theory, be able to motivate both customers and users to give feedback. However, gamification needs to be applied correctly to be successful. Therefore, it is a good idea to use a framework since they can provide guidelines for applying gamification. The MDA-framework, for example, should be a good way to ensure that gamification (game design) is being implemented correctly by helping the designer with the designer-to-user relationship. Lastly, it would be interesting with a study to see the actual perception of gamified elements from people, since most of the previous gamification studies have been based on clicks, sales figures and also retention of users.

## 5. Analysis and Results

This chapter is divided into two sections. Section 5.1 will be presenting the results, while the section 5.2 will be analysing the data and connecting it to the research questions.

### 5.1 Results

The results from the data preparation and collection are presented in this section. Firstly the result of the developed form and designed emails are shown. Each time one of them is shown, the data that was collected for its respective survey is presented after.

#### Feedback form results

The MDA-framework was used when creating the feedback form. The *Mechanics* are supposed to allow a user to give feedback, two questions for the artist and also two questions for the company. The user is also supposed to be able to get a discount code as a gift at the end of completing all the steps for giving feedback. The *Dynamics* is a progress-bar that is clearly showing that each question is a step toward a reward. It is clear if the questions are connected to the artist or the company, by showing a picture (see Figure 5 for visualization). The *Aesthetics* (emotional responses) that the dynamics are supposed to create is *Challenge, Discovery, Sensation, and Fellowship*. The idea is to motivate the user with a gift by showing a progress bar that shows how to get to it (as a challenge). The reward should trigger an urge to discover what it contains, the pleasure is when the challenge is completed and the gift is acquired. By showing the artist image it should create a social aspect. Showing the steps is also meant to increase the probability that the user does not quit the feedback form before it is completed. The steps create a sense of progress, ensuring that the user becomes committed to finishing it. This is because they do not want to lose their progress. In Figure 5 the result of the gamified form is shown, by showing some parts of the flow.

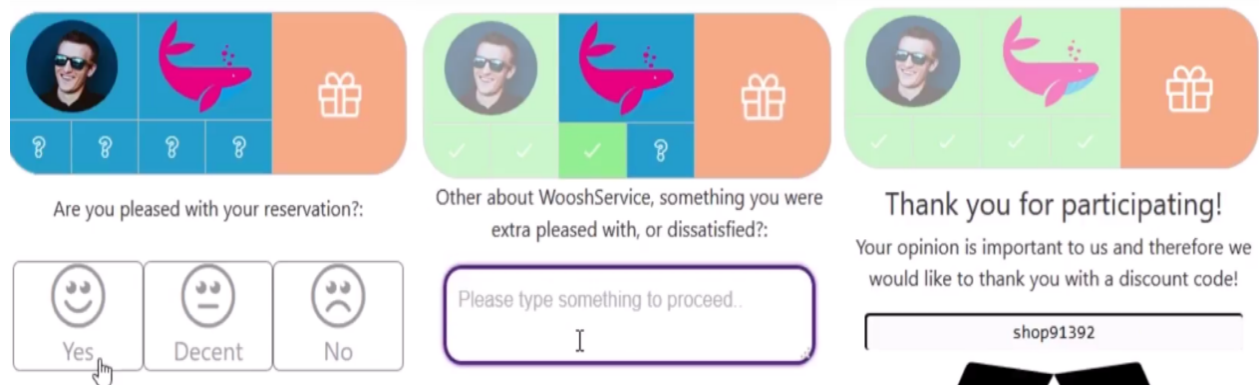


Figure 5 Gamified feedback form

The survey showed 2 videos showing the process of completing the gamified feedback form (Figure 5) and the basic HTML-form (Figure 6). The gamified form is referred to as *progress form* in the survey and connected to video 2, while the basic form is connected to video 1.

Are you pleased with your reservation?:  Yes  Decent  No

Please write about your experience with the artist (this is visible to others):

Would you recommend WooshService to a friend?:  Yes  No

Other about WooshService, something you were extra pleased with, or dissatisfied?:

Figure 6: Basic HTML-form

### Survey Data

The survey regarding the comparison between a gamified form and a basic HTML-form were answered by 41 participants. The participants all have a connection to Blekinge Institute of Technology since the survey was sent out to people connected to the school. Figure 7 shows the ages of the people that answered the survey. It shows that the majority (63,4%) of the participants were between 18-24 years old.

### What is your age?

41 svar

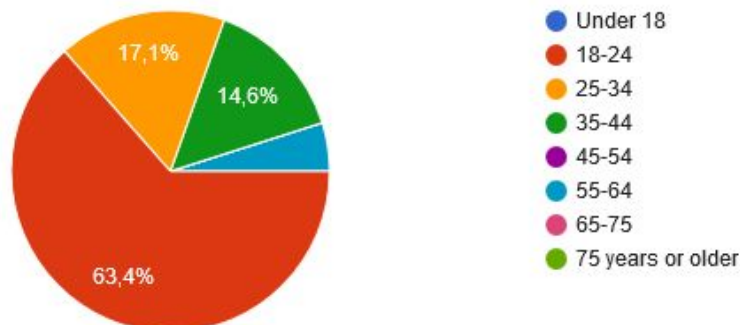


Figure 7: Pie chart of the ages of participants for RQ1 survey



Figure 8 shows that 100% of the participants thought that the gamified form looked the most fun to complete. Figure 9 shows that 85,4% of the participants would have preferred to answer the gamified form over the basic HTML-form. Which means that 14,6% would have preferred the basic HTML-form.

### Which one of the forms looked the most fun to complete?

41 svar



Figure 8: Pie chart of first question in RQ1 survey

### Which one of the forms would you prefer to complete?

41 svar

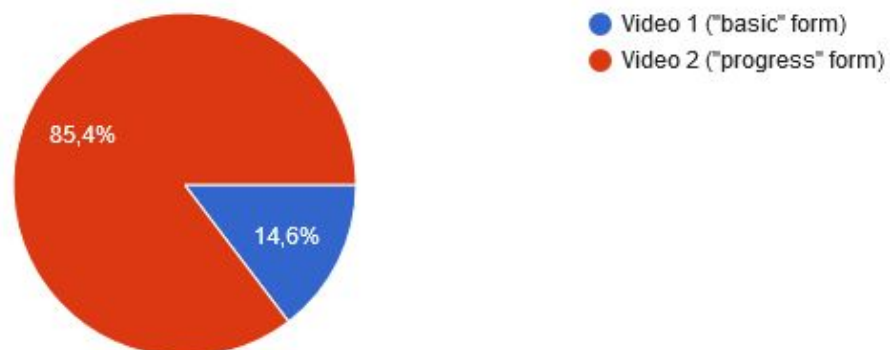


Figure 9: Pie chart of second question in RQ1 survey

Figure 10 and Figure 11 shows the result of participants being asked on a scale 1-5, how motivated or interested they would have felt to answer a form like the gamified feedback form and basic HTML-form.

**Video 1 ("basic"). On a scale 1-5, how motivated or interested do you think you would've been to answer it?**

41 svar

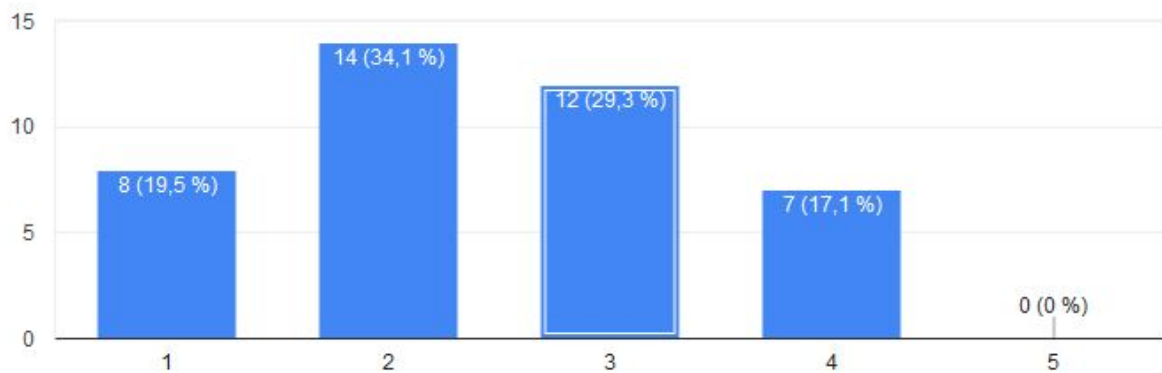


Figure 10: Result for basic form

**Video 2 ("progress bar"). On a scale 1-5, how motivated or interested do you think you would've been to answer it?**

41 svar

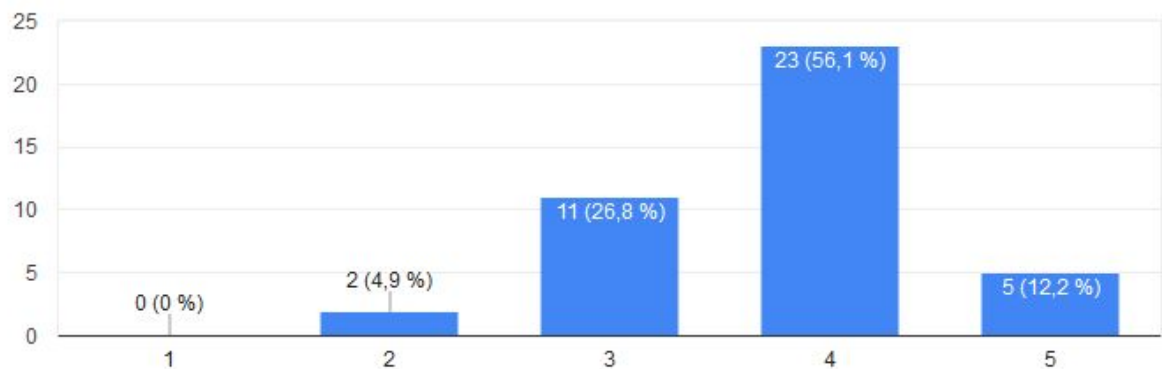


Figure 11: Result for gamified form

Participants were asked, “Please type anything you would like to add (Optional)”. Video 1 represented the basic form while video 2 represented the gamified form. This optional question got 11 answers, but the study discarded the answers that did not have anything to do with RQ1. Therefore the study ended up with 6 answers and Table 10 shows these answers.

<b>Answers</b>
Video 2 seemed a bit overdone, but I get the general idea. I much prefer it over Video 1, but it depends on where it was used. A more serious company (like Skatteverket or Arbetsförmedlingen) should use the form showed in Video 1.
Video 2 maybe a little more fun, because of colors and icons. Video 1 may seem more serious, which can be a positive. I think I prefer video 2 because it looks like it demands less of me. As long as the questions are short and as long as i have a reason to answer them, like if it is for a good cause, I would answer.
With the "basic" forms, I know what I get. With the progress forms I'm wary that it might send me to some other site. I like the idea of having a progress bar however when only one view is visble at a time
While the 2nd looks fun it also looks annoying to answer
The second looks more "fun", but you don't know how long it will take to complete it. The first one has everything visible instantly and seems like no nonsense. The second one looks like it's going to try to force me to subscribe to something at the end, wasting my time filling it in because I won't complete it and send it.
Even though video2 looks more fun, video1 is really simple and quick

Table 10: Relevant answers from the optional question in the RQ1 survey.

## Designed emails results

The result of designing the emails is shown below, in Figures 12, 13, 14 and 15.

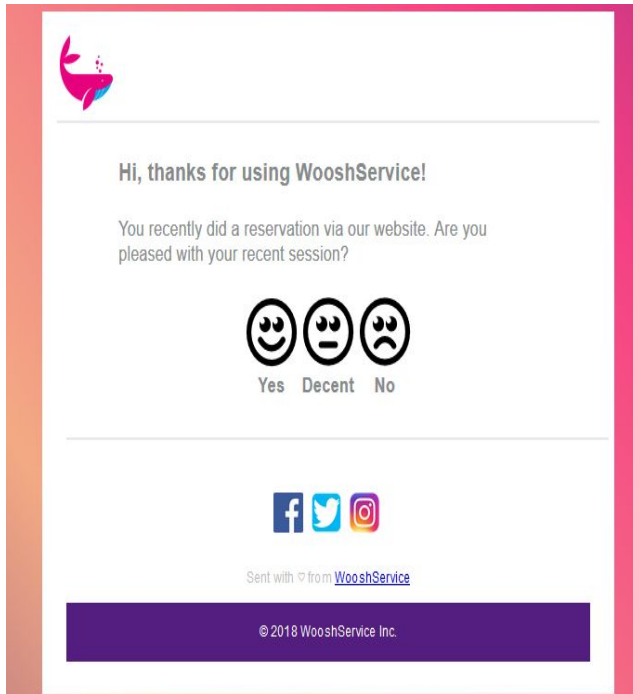


Figure 12: Basic email

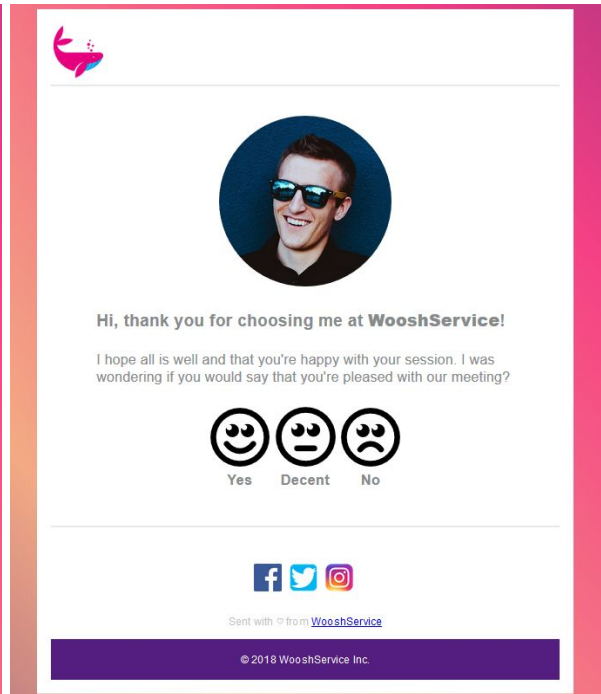


Figure 13: Gamification email 1

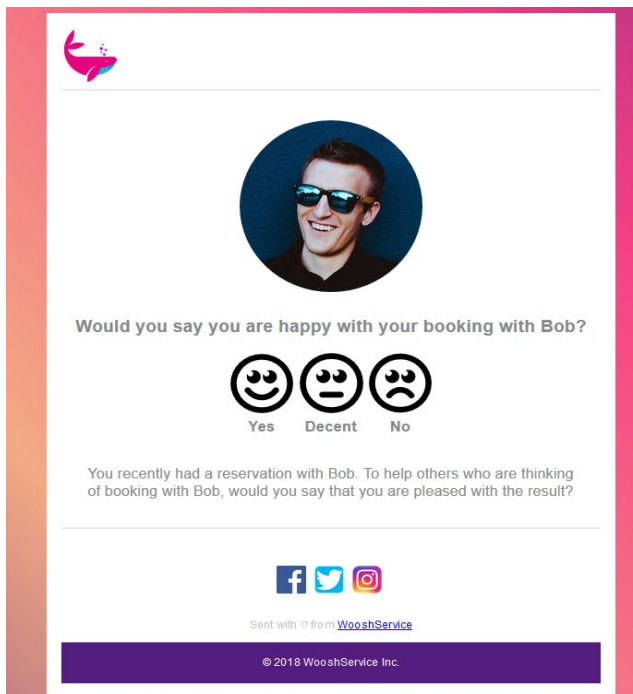


Figure 14: Gamification email 2

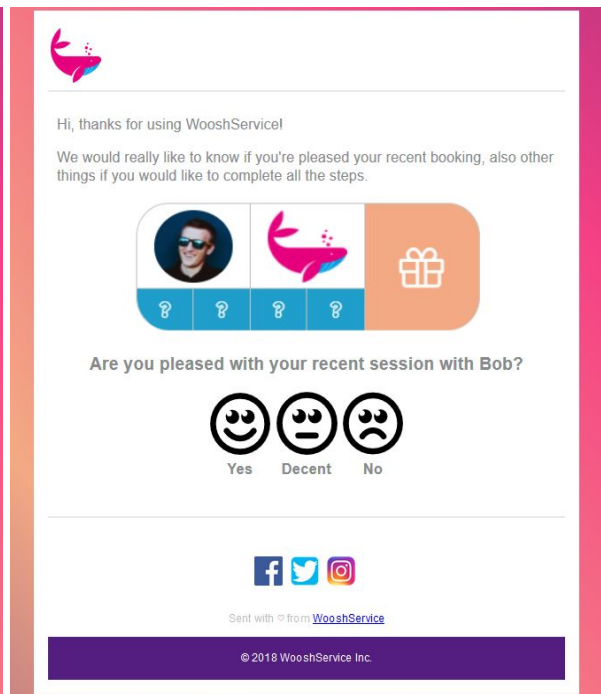


Figure 15: Gamification email 3

## Survey data

The survey regarding the design of the emails was answered by 87 participants. The participants all have a connection to Blekinge Institute of Technology since the survey was sent out to people connected to the school. The participants were asked to imagine the scenario described in section 3.3. Figure 16 shows the ages of the people that answered the survey. It shows that the majority (54,02%) of the participants was 18-24 years old. While also 29,89% was around 25-34 years old, which indicates that 83,91% of the participants are under the age of 35.

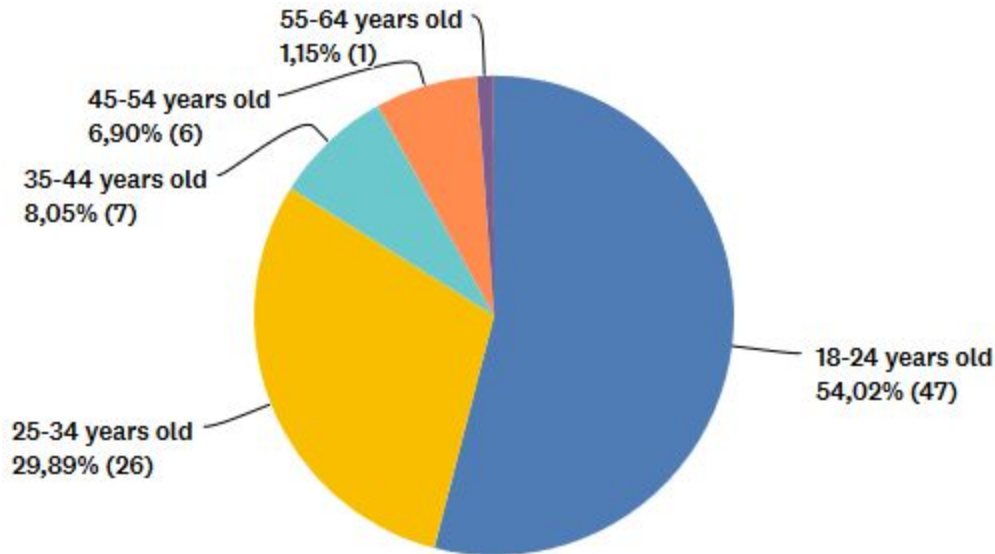


Figure 16: Pie chart of the ages of participants for RQ2 and RQ3 survey

Table 6 shows the results of the created emails. Each number represents the average score of each question asked.

Name	How motivated do you feel to push on one of the emojis?	How curious are you what will happen if you push on one of the emojis?	What's your emotional response to the e-mail? If 1 being negative, 3 medium, 5 positive.
Basic email	2,72	2,15	2,85
Gamification email 1	2,99	2,22	3,06
Gamification email 2	2,92	2,16	2,94
Gamification email 3	2,43	2,28	2,52

Table 6: Average score for questions from Table 4, for each email

Figure 21 shows the result regarding RQ3. It shows what aesthetic types that motivated the participants the most to give feedback by answering the email. 61% chose “helping the company/person”, 44% answered that they want to share their opinion and 42% would be motivated by a reward.

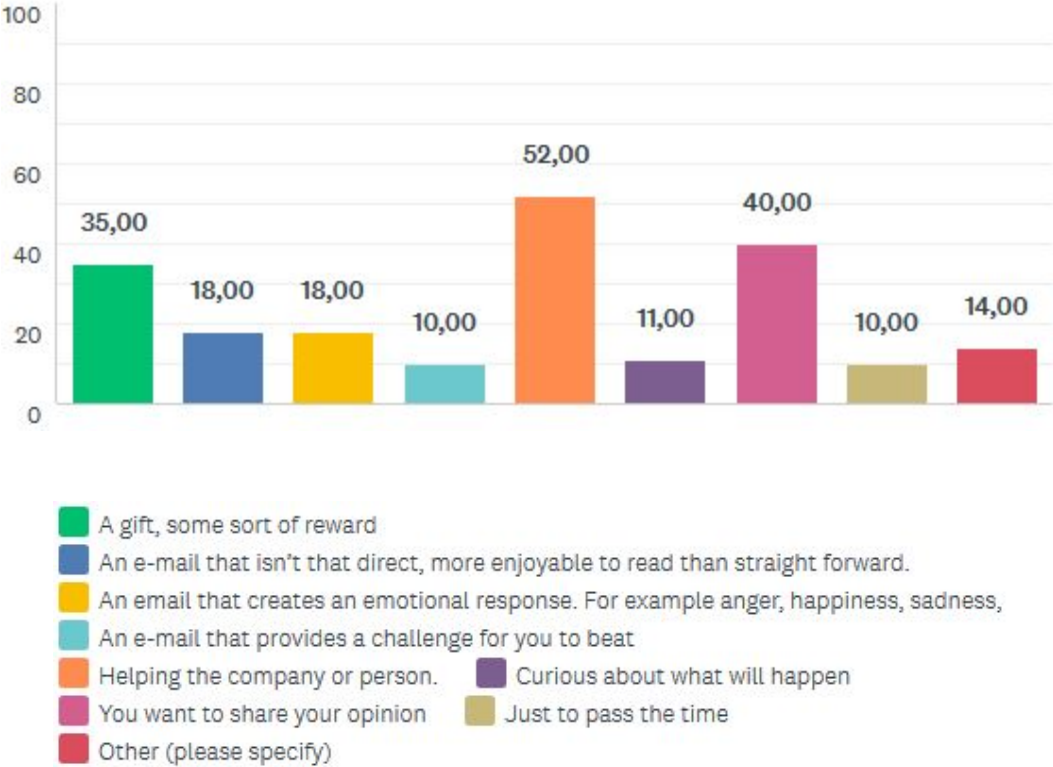


Figure 21: Diagram of result for aesthetic type options

## 5.3 Analysis

### RQ1: What effects does a gamified feedback form have compared to a basic HTML-form?

The RQ1 will be answered here with the results that were shown in 5.1 (Feedback form results). Firstly all the quantitative data will be used to get an average score for each form. To count the average of the “scale 1-5 how motivated/interested” question of each form, the calculations shown in Table 7 were used.

Form type	Calculation	Average
Gamified form	$(23 * 4) + (3 * 11) + (2 * 2) + (5 * 5) = 154 / 41$	3,756
Basic form	$(8 * 1) + (2 * 14) + (12 * 3) + (7 * 4) = 100 / 41$	2,439

Table 7: Calculations used for the “scale 1-5 how motivated/interested” question from RQ1 survey

By combining all the results of the three questions variables “fun”, “preferability” and “motivation/interest”, the total average is displayed in Table 8.

Form type	Calculation	Total Average
Gamified form	$((1 * 5) + (0,854 * 5) + 3,756) / 3$	4,342
Basic form	$(0 + (0,146 * 5) + 2,439) / 3$	1,056

Table 8: Total score for the forms

The last question in the survey was optional and allowed the participant to type freely about their thoughts regarding the forms. The theme “serious impression” was found in the answers from this question. This is because some participants said that they would prefer the gamified feedback form, but that they also thought that the basic HTML-form felt more serious and trustworthy. With the HTML-form “they know what they get”. This probably means that they would have preferred the basic form, for example, an online bank or a serious website.

So to answer the RQ1, the effects of using gamification in a feedback form is three times better than a basic HTML-form, when looking at the variables “fun”, “preferability” and “motivation/interest”. The analysis shows that utilizing gamification for the feedback form should work for companies who are looking to increase the probability of their users to complete them. However, the analysis also shows that a gamified form needs to be thoughtfully designed, especially if the organization wants a serious impression.

## **RQ2: Is the effect of using gamification to motivate a user to answer an email negative or positive?**

The results shown in Table 6 contains three different questions per email. The average of these three questions has been used to calculate an average score for each email, which result is shown in Table 9.

Name	Basic Email	Gamification 1	Gamification 2	Gamification 3
Average	2,57	2,76	2,67	2,41
Percentage	51,4%	55,2%	53,4%	48,2%

Table 9: Total score for each email

It should be brought up that the result might have been different if this was practiced in “real life” and not in a survey. This is since the participants did not actually make a purchase and therefore they might be missing an emotional connection to the email. However, by looking at the score of each email it clearly shows that the one that scored the highest used gamification. It also shows that the one that scored the lowest used gamification. It is hard to decide whether or not gamification had a positive effect on the emails since all the scores are in the range of 48,2%-55,2%. But since “gamification 1” did score at least 5,2% above 50% it could be seen as that the gamification did have a positive effect. However, since “gamification 3” did score below 50% it does also show that gamification can have a very negative effect if used incorrectly.

The answer to RQ2 is therefore “both”. Gamification can have a positive and also a negative effect, it is highly dependent on the designer of the email. This can be thought as obvious, but the data does show that gamification can help out in the process of designing an email that motivates the reader to answer it.

## **RQ3: Which of the eight type of Aesthetics from the MDA-framework is preferable to use to motivate a user to answer an email.**

The answer to RQ3 is, “fellowship, reward, and expression”. This is because the data showed that more than 35% of the participants chose Fellowship, Reward, and Expression, while the other types received 10%-18%. It does make sense that Fellowship is included in the top 3, this is because by answering the feedback email you are by default helping the company or person. Therefore people might have thought that it is an obvious answer to choose, but 48% did not choose it. This means that “helping out the company/person” is not a guaranteed reason why people give feedback. These people might instead be motivated by rewards or the urge to share their opinion. Therefore by utilizing the top 3 types (from this study's analysis) together might be the best approach to get as many possible to answer the feedback emails.



## 6. Conclusion

This study concludes that gamification can be a great tool to motivate customers/users to give feedback. Surveys were used to collect data for the study. After the data was analysed, it was shown that gamification can successfully be used to encourage customers and users to complete the feedback flow that was described in section 1. The study was conducted from an e-commerce's point of view. The study does, however, conclude that other organizations should be able to increase the probability of receiving feedback from users or customers by applying gamification to their feedback forms. Considerations should be taken for the organization's needs, for example, a bank needs to be careful when using gamification not to lose their serious and trustworthy image.

There were two surveys conducted, one regarding emails while the other was about feedback forms. The analysis regarding the emails showed that gamification can help out in increasing the probability that a customer/user decides to answer an email. But gamification did not achieve the expected high outcome, it instead had a rather low impact on the perception of the participants regarding the emails. This conclusion is made because all the emails got a score around 50%, 0% being awful and 100% being excellent. Therefore it was found that results with gamification can vary, due to positive results is highly dependent on the designer that is implementing gamification. Frameworks such as the MDA-framework can, however, ease the process of designing emails. The aesthetic types "Fellowship, Reward, and Expression" are great options to use when composing an email. This is because the analysis of the collected data found that participants perceived those types to most likely motivate them to answer an email, compared the other aesthetic types.

The other analysis regarding the forms showed that a gamified form was 3 times better perceived than a basic HTML-form, based on the three variables *fun*, *preferability* and *motivation/interest*. While looking through the qualitative data, themes were found that indicated that gamified forms should be carefully implemented if the organization is looking to create or maintain a serious and trustworthy image. This is since some people thought that the basic HTML-form gave a more serious impression.

So if your users or customers are not completing the steps required to give feedback, such as answering emails or filling out feedback forms, then it most definitely a good idea to try out gamification!

## 7. Future Work

This study mainly focused on how people perceived the gamified elements that were built to motivate customers/users to give feedback. It was also discovered in this study, that a gamified form was highly preferable with the help of quantitative data, but the qualitative data showed that it could give an “unseriousness impression”. The participants of the surveys were mostly under the age of 35.

Therefore, the following examples of future works could be done:

- What effects do gamified elements which are meant to acquire feedback from customers have on an e-commerce site?
- How do you balance gamifications playfulness with seriousness?
- Does a person’s age affect their perception of gamified elements?

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