MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„The Potential of Gamification in ECommerce

on the Example of the Austrian Beauty Market"

verfasst von / submitted by

Nina Klopf, B.A.

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Science (MSc)

Wien, 2022 / Vienna 2022

Studienkennzahl lt. Studienblatt / degree programme code as it appears on the student record sheet:	UA 066 915
Studienrichtung lt. Studienblatt / degree programme as it appears on the student record sheet:	Masterstudium Betriebswirtschaft
Betreut von / Supervisor:	Assoz. Prof. Wenjie Tang, PhD

Abstract – German

Die vorliegende Arbeit analysiert das Potential von Gamification im Ecommerce Bereich anhand des Österreichischen Kosmetikmarkts. Das Ziel ist es, Empfehlungen für Kosmetikmarken zu verfassen, um Gamification erfolgreich in ihren Online-Auftritt zu integrieren.

Der allgemeinen Definition von Gamification folgt die Evaluierung zweier theoretischer Modelle, welche auch als MDA Framework und Octalysis Framework bezeichnet werden. Anschließend wird der Zusammenhang zwischen Gamification und Spaß genauer erläutert bevor die Vorteile, wie beispielsweise ein Anstieg der Verkaufszahlen oder die Wahrscheinlichkeit eines Kaufabschlusses sowie mögliche Herausforderungen evaluiert werden. Abschließend erfolgt die Veranschaulichung einiger Gamification Beispiele aus verschiedenen Branchen und die Hypothesen werden formuliert.

Eine Übersicht über den Österreichischen Kosmetikmarkt liefert die nötige Information um die Komplexität der Produkte sowie die Zurückhaltung der Österreichischen Konsumenten in Bezug auf Online-Käufe zu verstehen. Darüber hinaus wird das Potential der digitalen Erweiterung für den Österreichischen Kosmetikmarkt in einem Vergleich der Ecommerce Shares innerhalb der Kosmetikindustrie, sowie anderen mit anderen Industrien deutlich.

Nach der Evaluierung der theoretischen Erkenntnisse erfolgt die Ausführung eines quantitativen Experiments bezogen auf die Hautpflege, um die Auswirkung von Gamification auf die Kaufentscheidung sowie die Kundenzufriedenheit zu prüfen. Obwohl die Hypothesen nicht angenommen werden können, lässt sich eine grundsätzlich positive Auswirkung von Gamification erkennen, vorausgesetzt, der Informationsprozess wird als unterhaltsam empfunden. Im Gegensatz dazu stellt die Sorge bezüglich des sicheren Umgangs mit persönlichen Daten ein potentielles Hindernis dar, weshalb Unternehmen in diesem Bereich höchste Sorgfalt und Transparenz anwenden sollten.

Abstract – English

This thesis analyses the potential of gamification in ecommerce on the example of the Austrian beauty market. The aim is to compose recommendations for beauty brands to successfully implement gamification into their online appearance.

After the general definition of gamification as well as the evaluation of two theoretical models, namely the MDA framework and the octalysis framework, the connection of gamification and fun is explained. Furthermore, benefits such as an increase in sales or the likeliness to purchase a product as well as possible challenges are discussed. Lastly, gamification examples from various industries, such as the food, tourism, or fashion industry are shared, and hypotheses composed.
An overview of the Austrian beauty market provides the information required to understand the complexity of the products as well as the Austrian customers' hesitation to become online buyers. Moreover, an international comparison of ecommerce shares within the beauty industry as well as the shares of different industries show the potential for the Austrian beauty market to expand in a digital way.

Following the evaluation of the theoretical findings, a quantitative experiment is carried out within the skincare category to analyze the impact of gamification on the purchase intention and overall customer satisfaction. Even though significance do not support the hypotheses, the overall results of the survey draw a positive picture on the beneficial effects of gamification if it is perceived to create the informational process more fun. However, data protection still constitutes a potential obstacle for customers to try out a quiz and should therefore be handled with caution by the company.

Table of Contents

List of Figures

List of Tables

1. Introduction

This thesis is composed with the purpose to illustrate an in-depth exploration of the concept of gamification, its elements, and its effects. Moreover, possible challenges and risks in the context of applied gamification in e-commerce shall be analyzed. In order to apply the theoretical findings on a practical example, the Austrian beauty market will be investigated to identify a possible potential for gamification in the ecommerce sector, that can help companies to drive sales and overall customer satisfaction with their online performance and presence.

1.1 Initial Situation

Buying products online is an increasingly popular method for customers to shop in a more comfortable way. However, the adoption of online shopping is different depending on which category products are bought from. Textiles, household appliances as well as groceries represent some of the most popular categories for online shopping, hence they determine the biggest share of online sales, more precisely €3.1 billion, €2.2 billion, and € 1.3 billion, respectively. Compared to these numbers, the beauty industry has generated a relatively small amount in online sales, namely €600 million. Although the popularity of ecommerce has also increased among beauty shoppers because of the COVID-19 pandemic, the sales generated within the Austrian beauty market only represent 16% of the total revenue generated in the year of 2020 (Schultz, 2021; Statista, 2021a).

The use of game-like elements in a non-game context is further referred to as gamification and represents a suited measure to increase customer's purchase intention when they shop in an online-store. Such elements can be quizzes, which are incorporated into a website to assist a customer. Leaderboards, and points, which are rewarded to customers for certain actions represent other playful ways to entertain the customers in an online shop. Apart from that, brands, who have already implemented gamification to their online shops claimed, that they were able to provide a better customer experience and generally increase the customer's interaction with their brand (Karać & Stabauer, 2017; Koivisto & Hamari, 2019; Schöbel, Janson & Söllner, 2020).

1.2 Problem Statement

As mentioned in chapter 1.1, the Austrian beauty market currently generates 16% of its overall revenue through online sales, which marks a great potential to further increase the online share within the next few years.
Apart from that, the COVID-19 pandemic has led to a global increase in online-sales for other categories, which raises the question on why a vast majority of products from the cosmetics industry is still purchased in stationary stores and what elements provided in a nondigital customer journey are crucial to drive online sales as well. Gamification might present a suited measure to recreate such elements and provide them in an online context, for example the replacement of in-store-assistance by means of an online quiz to help customers with their search for the right skincare routine, foundation shade or another product, they might need help with before the make their final purchase decision.

1.3 Aim and Research Questions

The aim of the thesis is to give an in-depth analysis of gamification and its potential as a useful tool for companies to increase their ecommerce performance. Furthermore, the Austrian beauty market shall be investigated, and its characteristics displayed. Moreover, the specific analysis of the acceptance of ecommerce in the beauty industry will be investigated regarding an international comparison and crucial factors identified.

Empirical research by means of an online questionnaire will finally review the literature findings and analyze the openenness of Austrian beauty shoppers towards ecommerce in general as well as the impact of gamification implemented in beauty online shops with regard to its effect on customer's purchase intention and overall satisfaction with the web performance. Finally, recommendations for beauty brands in regard on how to best implement gamification into their online shopping experience shall be composed. Therefore, the research questions for this thesis are as followed:

RQ1: What are the main factors that influence beauty shoppers' decision to shop cosmetic products in brick-and-mortar stores instead of online?

RQ2: How can gamification elements increase the user experience and overall attractiveness of online shops in the beauty industry?

1.4 Scientific Method

In order to provide an in-depth illustration of gamification and its beneficial impact in the ecommerce sector in Austria, literature research will be carried out to deliver the basic information required to compose the research design for an empirical exploration.

The latter will be carried out by means of an online questionnaire, which will be composed regarding the findings of the formerly conducted literature research and explored in a quantitative context to ensure representative results. In order to illustrate the impact of gamification elements on the purchase intention and customer satisfaction, two different questionnaires will be handed out and later compared.

The number of participants shall be around 100 people, split up upon the two different questionnaires, which shall be reached within the time of two weeks of active research followed by the analyzation phase, in which all results will be evaluated by means of SPSS. More precicely, the hypotheses will be tested and other correlation explored. Finally, the results will be summarized and recommendations for beauty brands regarding the implementation of gamification composed.

1.5 Frame of Reference

The following figure represents the frame of reference for this thesis:

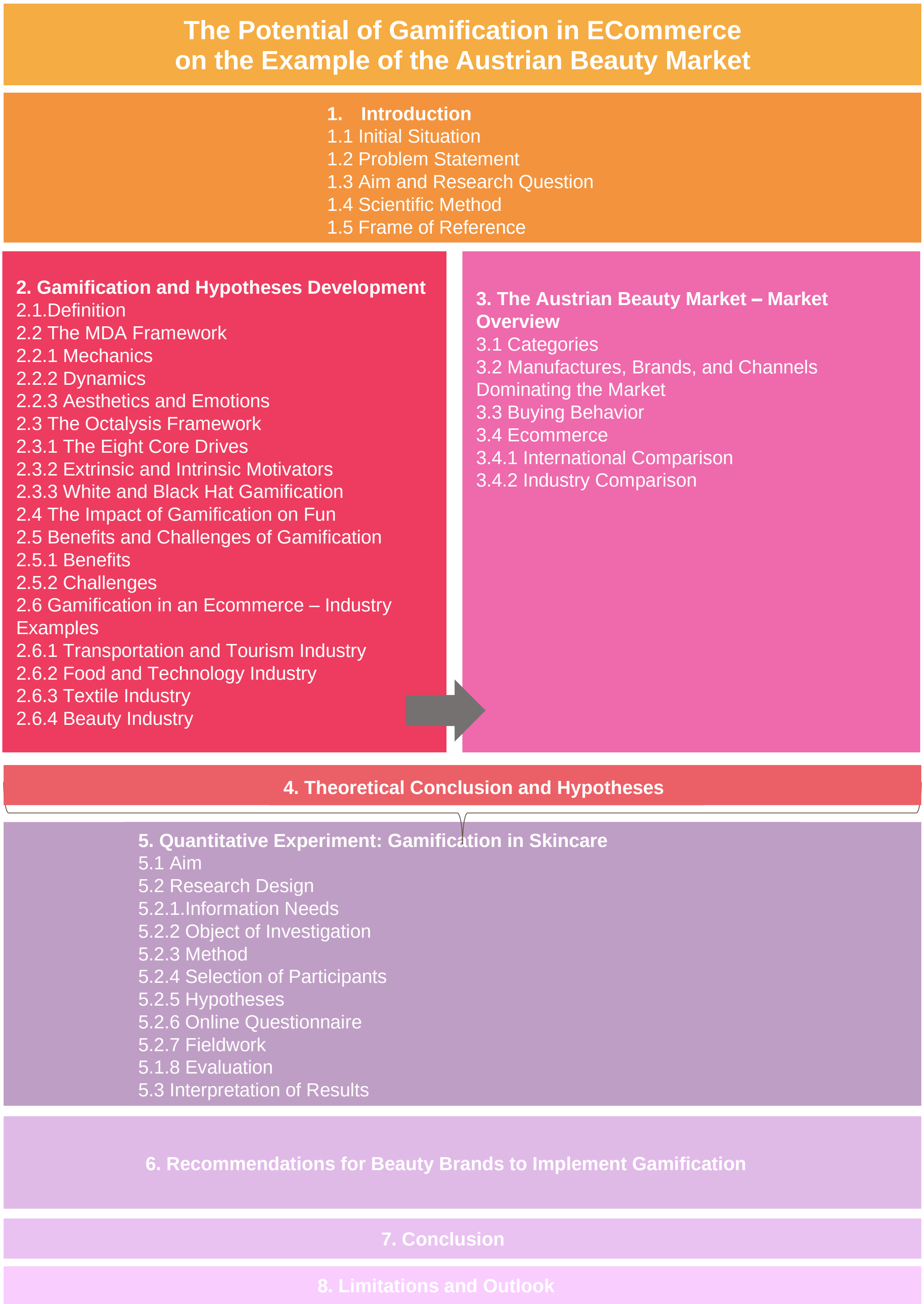


Figure 1. Frame of Reference (own illustration)

The thesis will be separated in a theoretical part consisting of 3 chapters, more specifically the introduction to gamification including the hypotheses development, an overview of the Austrian beauty market, and the conclusion of the theoretical findings. Furthermore, the empirical part of the thesis will consist of the research chapter and the final composition of recommendations for beauty brands on the implementation of gamification.

First, the introduction delivers the framework for the thesis by providing the initial situation and the problem statement followed by the aim of the thesis and the research question as well as a quick overview of the chosen scientific method. Furthermore, the hypotheses will be composed after gaining in-depth knowledge of gamification and the Austrian beauty market. Secondly, the empirical part, consisting of the experimental research with the aim to compose recommendations for beauty brands to implement gamification, and the final conclusion will follow.

2. Gamification and Hypotheses Development

In the following chapter, the definition of gamification will be discussed, as well as two frameworks, namely the MDA framework and the octalysis framework introduced. Furthermore, common benefits and challenges regarding the implementation of gamification will be presented and its use in an e-commerce context among different industries analyzed.

2.1 Definition

"…'gamification', is an umbrella term for the use of video game elements (rather than full-fledged games) to improve user experience and user engagement in non-game services and applications" (Deterding, O'Hara, Sicart, Dixon & Nacke 2011, n.p.).

The term originally occurred in the metier of digital media around 2008, despite not getting much attention until the year of 2010. It was found that video games have the potential to change the behavior of users in a way, that can be an economic advantage for companies, for example if gamification is intended to drive sales. Other terms, such as funware, productivity games or applied gaming are also often used to describe the mechanism of gamification (Deterding, Dixon, Khaled & Nacke, 2011; Deterding, O'Hara, Sicart, Dixon & Nacke 2011).

2.2 The MDA Framework

Hunicke, LeBlanc and Zubek (2004) introduced the MDA framework that proposed the differentiation of gamification elements along three different characteristics, namely mechanics, dynamics, and aesthetics. Robson, Plangger, Kietzmann, McCarthy and Pitt (2015) extended the third component aesthetics with the term emotions as the former are said to explain the emotional reaction on the user's behalf, for example fantasy, discovery or submission and therefore linking it directly to emotions creates a better understanding of the model. Ruhi (2015) extended the framework with the allocation of twenty concepts, that he called the twenty Cs of "meaningful enterprise gamification" (Hunicke, LeBlanc & Zubek, 2004; Ruhi, 2015; Robson et al., 2015; Van Elderen & Van der Stappen, 2019).

The following figure presents the MDA framework together with the 20Cs:

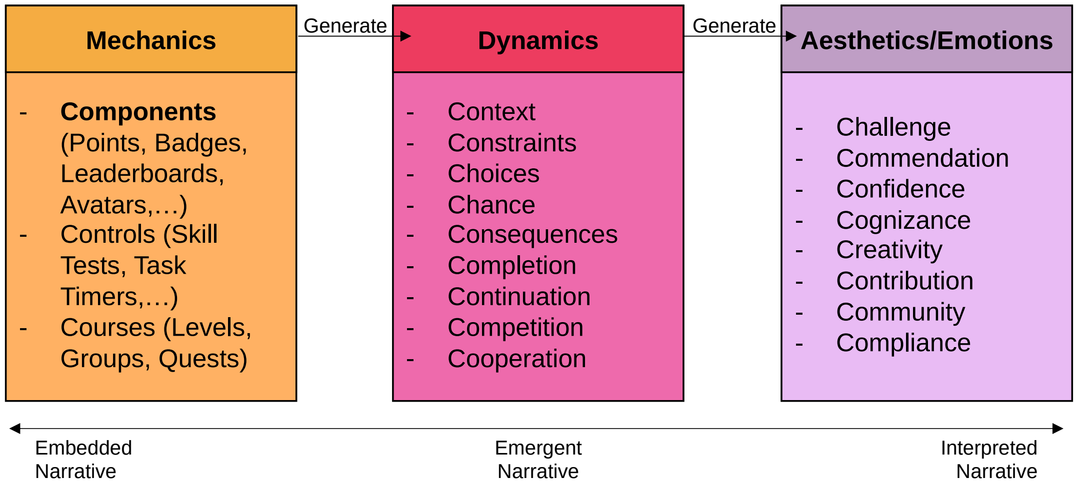


Figure 2. MDA Framework and the 20 Cs of Meaningful Enterprise Gamification (own illustration based on Hunicke, LeBlanc & Zubek, 2004; Ruhi, 2015; Robson et al., 2015)

The framework represents the three stages, that are ran through when games are played, which are the rules, the system, and the fun, referred to as mechanics, dynamics and aesthetics or emotions in the framework, respectively. The idea behind the model is to view games as artifacts, which is the behavior of the player rather than the media material that is consumed by him/her within the course of the game. Hence, the framework represents the three stages, that help to form a certain behavior on the player's behalf, where the game designer generates each step, while the player views each step regarding the actions, he/she is trying to achieve. The viewpoint of both, player and game designer is represented as a narrative, that changes regarding the components. In the mechanics stage, the designer's view is represented by the embedded narrative, which shows the conceptual conjunction of the game sequences. The narratives, that are formed by players are referred to as emergent narratives and are built in the course of the game through the player's activities, which is why they are developed in the dynamics stage. Lastly, the interpreted narratives are aligned with the aesthetics, as they represent the player's mental response to the gamification application (Hunicke, LeBlanc & Zubek, 2004; Ruhi, 2015).

2.2.1 Mechanics

The first component describes the actual elements of a game on the level of the algorithm, that remain unchanged regardless of the user and represent the core aspect of gamification. It assembles from components, controls, and courses, that are further identified as points and leaderboards, skill tests and levels, respectively (Junior & Silva, 2021; Van Elderen & Van der Stappen, 2019).
Given the fact, that points, leaderboards, and badges represent some of the most frequently used gamification elements, components will be described in detail.

<u>Components</u>

Gamification can be found in several different implementations. Some of the most common ones are points, badges, or leader boards, which are used to display the top-performing users on a platform. Kovisto and Hamari (2019) stated, that points, badges, and leaderboards, which are all considered to be achievement-oriented elements are among the most frequently used implementations of gamification. These kinds of elements are often used to provide feedback to users and players. Two of the most commonly used elements are points and badges, which are both used to show or even reward top-performing users on a platform. A popular action to be rewarded with points is the purchase of a certain product or service, which can often be found on sharing economy platforms, such as Uber or Airbnb. Furthermore, learning websites also often use points to reward a certain progress in the user's learning journey (Koivisto & Hamari, 2019; Lei Wang, Gunasti, Shankar, Pancras & Gopal, 2020; Panessai, Aiden & Mohd, 2018).
Many platforms have already introduced a program or mechanism on their website for users to use their points in order to receive some kind of reward. Some of the most common forms of reward are for example a discount on another purchase or stepping up to a higher level. These rewards can also result in people showing a certain desired behavior. Furthermore, companies can benefit from the incorporation of rewards as it can increase the user satisfaction with the usability of a website (Ahn, Ball & Johnsen, 2019; Dikcius, Urbonavicius, Adomaviciute, Degutis & Zimaitis, 2020).
Leaderboards add a social dimension as they show the process or accomplishments of several users, which creates a sense of competition within

their community. This can be a driver for users to increase their own performance to keep up with others, as they are naturally motivated through the leaderboard feature. A practical example of leaderboards is the home training bike company Peloton, that provides leaderboards for all their users to see each other's performance and personal bests on different workouts to compare and motivate each other (Pelodbuddy, 2019; Zhang, Van Horen & Zeelenberg, 2021).

2.2.2 Dynamics

The second component in the MDA framework is dynamics, which describe how a user plays the game and therefore change and adapt individually in the course of ever player's game according to their his/her behavior. Completion and continuation are two important Cs within the dynamics component, as they help users to visualize the goal of a certain task. Furthermore, consequences represent a key ingredient for feedback-based gamification tools (Ruhi, 2015; Van Elderen & Van der Stappen, 2019).

<u>Completion, Continuation and Consequences</u>

A popular tool for users to orientate within the game-process regarding the completion and continuation of the game are progress bars, which are designed to support the users' goal orientation and constantly provide a visual illustration of the degree of completion as it rises. Together with consequences, they form the fundament for feedback services in a gamified context, that enable users to change their behavior to a certain outcome, as studies have shown, that even such little visual aids can help to increase user motivation to continue with the task (Ruhi, 2015; Mazarakis & Bräuer, 2020).

2.2.3 Aesthetics and Emotions

The third and last component are aesthetics, that describe how a player reacts emotionally in the course of the game. Common elements are challenges, that are for example individual quizzes or surveys, confidence, creativity, or community. Robson et al. (2015) extended the term by adding the word emotions, as the aesthetics component describes the feelings, users realize during the course of the game (Ruhi, 2015; Robson et al., 2015; Van Elderen & Van der Stappen, 2019).

Challenge

Challenges require users to solve a problem or make a certain decision, which represents an attractive reason for them to engage in a gamified application. A popular way to increase user entertainment on a platform are quizzes and surveys. Especially in education industry, this form of gamification presents an impactful measure as it can help entertain users of a learning-website along their educational journey. Quizzes are used to maintain a high motivation among the users of a platform as they can deliver a sense of accomplishment. Apart from that, they are also useful to create a learning process, that is perceived to be simpler and less stressful (Areed, Amasha, Abougalala, Alkhalaf & Khairy, 2021; Ruhi, 2015).

When applied on an e-commerce platform, a quiz or a survey can be a useful tool for companies to find out more about the specific needs of their online customers but in an entertaining way. This enables them to offer more relevant assistance to their customers and provide a suited product selection to them, as well as deeper education and information on the products they are interested in (Wood, 2020).

2.3 The Octalysis Framework

Chou (2015) introduced an octalysis framework including the eight core drives, that motivate people to act a certain way or make a specific decision. He placed these eight core drives in the shape of an octagon, representing the extrinsic motivators on the left and the intrinsic motivators on the right side. Furthermore, the upper and lower half of the octagon were split into white and black hat gamification, naming the positive and negative motivators, respectively (Chou, 2015; Karać & Steinbauer, 2017).

The following figure represents the octalysis framework:

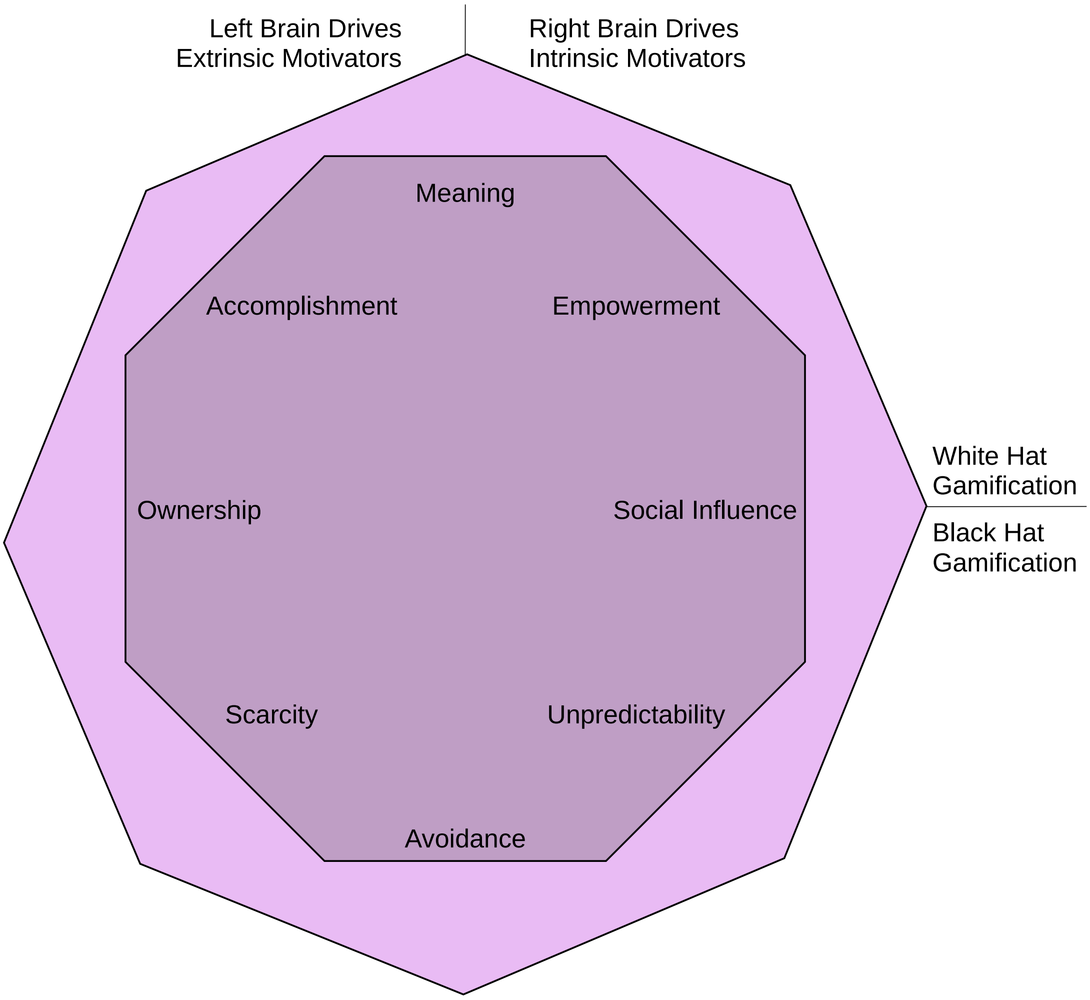


Figure 3. Octalysis Framework (own illustration based on Chou, 2015).

2.3.1 The Eight Core Drives

The eight core drives identified by Chou (2015) are meaning, accomplishment, empowerment, ownership, social influence, scarcity, unpredictability and avoidance and represent the extrinsic and intrinsic motivators behind every action. Apart from that, sensation was identified as a ninth hidden drive but not placed in the octagon as it is the only core drive, that includes the aspect of physical feelings (Chou, 2015; Karać & Stabauer, 2017).

<u>Meaning</u>

The first core drive is epic meaning, also referred to as calling as it describes a person's individual perception of being destined to do something or chosen to carry out a certain action, that not everyone can do. An example is the platform

Wikipedia and its many contributors, who do not get paid or any other form of compensations. People simply contribute their knowledge because they feel it is their responsibility to educate other people (Chou, 2015; Karać & Stabauer, 2017).

Accomplishment

Development and in the further course also accomplishment describe the second core drive, that represents the least challenging to design but also one of the most powerful core drives. It motivates the people's internal desire to self-develop, make progress, and achieve certain goals. A lot of classic gamification elements, such as badges, leaderboards and points are specifically designed to trigger people's natural desire to accomplish a challenge and be rewarded for doing so (Chou, 2015; Karać & Stabauer, 2017).

Empowerment

Empowerment describes the motivation people feel to be creative and receive feedback, that encourages users to try out different ways as a mean to eventually come up with the best creative solution for a problem. Game designers often take advantage of this motivational drive as if implemented correctly, people don't necessarily request new content to remain active users, because they entertain themselves (Chou, 2015; Karać & Stabauer, 2017).

Ownership

The core drive ownership explains the intrinsic desire of people to own or hold possession over something and to constantly improve or increase that possession. In a game context this behavior can be found in the creation of avatars, as people automatically become more attached and invested when they spend a lot of time on such an activity which increases the perceived feeling of ownership. This can be equally applied to other things, such as projects, processes, or a company as well (Chou, 2015; Karać & Stabauer, 2017).

Social Influence

The relatedness to something or somebody is described in the core drive social influence, as it includes both, positive and negative social factors that motivate people to achieve something. Positive factors are for example social acceptance and feedback, as well as mentorship, whereas comparison and envy can be seen as rather negative influential factors (Chou, 2015; Karać & Stabauer, 2017).

Scarcity

Impatience and scarcity explain the desire of people to own something, that is exclusive, rare, or hard to get. In a game context, designers have taken advantage of this core drive by implementing waiting times for certain rewards, for example a two-hour period that is originally intended on focusing people's mind on a specific game, level or product. The same effect also occurred with the launch of Facebook, as it was originally available to a very limited group of students, that continuously grew bigger so that, by the time the platform was available to everyone, people just wanted to sign up to be part of something that was exclusive for such a long time. By now, this phenomenon, also referred to as artificial shortage has become a clever tool for pricing strategies as the shortage of a product or service often increases the demand for it, allowing the producer to shape the pricing to its advantage (Chou, 2015; Karać & Stabauer, 2017; Zreika & Gangoadhyay, 2012).

Unpredictability

The seventh core drive in the octalysis framework represents unpredictability and curiosity, which describe external motivators that drive people to constant engagement as a result of the fear of missing out on something. On an extreme level, this motivator is often described as the source for gambling addiction in both, a digital and a non-digital context. However, the lighter impact of the core drive of unpredictability is the motivations that empower people to finish watching a movie or reading a book, as they are curious about its ending (Chou, 2015; Karać & Stabauer, 2017).

Avoidance

The eighth and final core drive is avoidance, especially of negative events, such as loss or similar things. A popular example on how to trigger this motivational factor is the implementation of short-term promotions, such as limited time offers as users are motivated to act on them immediately due to their short existence (Chou, 2015; Karać & Stabauer, 2017).

2.3.2 Extrinsic and Intrinsic Motivators

Gamification mainly triggers people's motivation, which can be further identified into extrinsic and intrinsic motivation. The former describes the motivation, that is driven from external factors, for example a competitive salary or an approaching deadline for a school project. The external factor therefore motivates a person to carry out a certain action according to that motivator. In contrast to that, intrinsic motivation includes all factors, that are formed inside an individual's mind. Hence, certain actions are carried out because people feel enjoyment about it (Chou, 2015; Yfantis & Tseles, 2017).

2.3.3 White and Black Hat Gamification

The differentiation between the upper and lower core drives, also referred to as white and black hat gamification, represents the split between rather positive drives, that originate from creativity compared to rather negatively perceived drives, that are a result from uncertainty and avoidance. A high representation of white hat gamification indicates that users feel empowered to carry out a certain action. Whereas an overrepresentation of black hat gamification implies, that users act out of a rather negative feeling, for example anxiety of missing out on something, which can be an effective motivational drive to make users revisit a website more frequently (Chou, 2015; Webley & Cham, 2017; Yfantis & Tseles, 2017).

2.4 The Impact of Gamification on Fun

The wide offer of online shops and mobile applications shapes the expectations online customers set for their shopping experience. Pleasure and fun are among the top elements they seek in order to have an entertaining shopping experience. Gamification displays a suited tool for customers to actively engage in virtual challenges in order to have fun, which is an important effect of gamification especially regarding the sharing of information or education. Hence, learning platforms often integrate gamification models in order to increase the perceived pleasure among its users, which also motivates them and increases the overall performance. Especially, millennials and generation z show a fun-characteristic behavior when using gamification (Alsawaier, 2018; Borrás-Gené, Martínez-Núñez & Martín-Fernández, 2019; De Canio, Fuentes-Blasco & Martinelli, 2021; Jain & Dutta, 2019).

Given the positive impact of gamification mentioned above, the following hypotheses has been composed:

H1: *Gamification elements can significantly increase the user experience online and therefore increase the customer satisfaction.*

2.5 Benefits and Challenges of Gamification

The following chapter displays the benefits and challenges that may arise regarding the incorporation of gamification as a company.

2.5.1 Benefits

Gamification can be beneficial for companies in many ways, for example as an engagement driver for their customers or a tool to increase sales. To further explain the positive effects of gamification, they will be distinguished along two different criteria: Benefits for the company and the customers and users. The former can further be differentiated along qualitative and quantitative benefits, that describe the effects, that are rather hard to measure and the monetary effects, respectively (Rauch, 2013).

Qualitative Benefits for Companies

In general, gamification can have a positive impact on the engagement between a company and its customers, but also its employees as well as it helps to increase their motivation to retain with the company. Hence, it is an effective creator and driver for loyalty. Furthermore, gamification and other technologies motivate companies to constantly invest into more research and development (R&D) as it is crucial to keep a competitive position within the market. Apart from that, gamification is said to have a positive impact on the perceived quality of a company as well as its service-efficiency, which helps to meet the high expectations from their customers and gain a competitive advantage. Another benefit for companies lies in the gathering of relevant customer data, such as preferences, purchase patterns and other important information to better target their individual needs. Lastly, companies may benefit from improved processes, that are structured more efficiently due to gamification (Mavroeidi, Kitsiou & Kalloniatis, 2020; Porto, Jesus, Ferrari & Fabbri, 2021; Rauch, 2013).

Quantitative Benefits for Companies

Besides the positive effects gamification can have on a business regarding its innovation or connection with its customers, its positive impacts can also be evaluated regarding a company's hard facts, such as revenue, costs, and profitability. First, gamification can help reduce timely and monetary resources as it can function as a substitute for services, that would be quite expensive or time intensive. Furthermore, the right implementation often results in an increased return on investment, as well as a higher generation of sales. Lastly, if applied correctly, gamification is said to be beneficial for both, companies, and their customers as it can help to drive sales while entertaining the customers during their shopping experience (Dhahak & Huseynov, 2020; Rauch, 2013).

Given these benefits, the following hypotheses has been comoposed:

H2: *Gamification elements have a significant positive impact on the customer's purchase decision.*

Benefits for Customers and Users

Companies, who introduce gamification as a tool to improve its customer service automatically create benefits on their customers' behalf as well. This could be perceived social benefits, as some users might feel as part of a community or more accepted by their close peers, when using gamification. Another benefit can be an increased perceived excitement, as gamification can create routine procedures more fun and entertaining. Furthermore, users often report that they find tools easier to use when they have been assisted with gamification, as well as they have been faster with the conduction of certain tasks. Assistance has also been reported to be a big benefit for users, as gamification methods, such as a personalized quizzes can help customers with relevant feedback to find exactly what they were looking for or educate them more about a product or service, they consider purchasing (Hassan, Dias & Hamari, 2019; Kovisto & Hamari, 2014).

2.5.2 Challenges

If implemented correctly, gamification presents a useful tool for companies to achieve some of the mentioned benefits above. However, there are some challenges regarding the implementation, acceptance among users and also legal and privacy concerns, they should be aware of beforehand (Porto, Jesus, Ferrari & Fabbri, 2021).

Implementation Challenges

Given that gamification requires a certain knowledge in the digital area, companies often struggle to implement it correctly as a result of missing know-how within the organization or struggling to find the right external agency to carry out the implementation. As a result, customers often fail to understand the idea behind the tools, which leaves them confused. Furthermore, it is crucial to carry out research beforehand in order to find suited gamification elements for the company and the purpose it is aiming for. Apart from that, top managers, that often show less touchpoints with newer digital tools might need additional conviction of gamification and its benefits before they agree to implement it (Porto, Jesus, Ferrari & Fabbri, 2021).

User Acceptance

Gamification presents a rather innovative tool, hence people might hesitate to try it out or take advantage of it, even though they can benefit from it. The fact, that gamification is often perceived as rather impersonal also represents a common challenge, as people often prefer the personal and social interaction compared to a gamified service. Furthermore, gamification elements such as points, or rewards represent a popular incentive for users regarding cheating attempts in order to receive more points and increase their personal score. Apart from that, some companies experience difficulties with the identification of tools, that remain a high motivational level on the user's behalf over a longer period of time (Porto, Jesus, Ferrari & Fabbri, 2021).

Data Privacy

Collecting relevant data about customers can be a benefit for companies, however, it is crucial to be aware of any possible privacy issues and design every gamification element with the necessary security measure to assure the safe handling with sensitive customer information. Given the fact, that most gamification elements, such as challenges, quizzes or profiles require at least some basic customer data, it is important to inform customers about the information being saved and what measures are taken to keep it privately, which can also help to build trust on their behalf (Mavroeidi, Kitsiou, Kalloniatis & Gritzalis, 2019; Mavroeidi, Kitsiou & Kalloniatis, 2020).

2.6 Gamification in ECommerce – Industry Examples

The offer of online stores increases steadily, hence brands are required to shift their focus on the improvement of their digital customer experience besides other strategic challenges, such as relevant pricing or their product portfolio. A successful application of gamification in an online context can help companies to increase their customers' motivation and drive their engagement on the web shop (Gamification and E-Commerce, 2018; Grewal, Levy & Kumar, 2009).

The following chapter provides an overview of gamification implemented in different industries, such as the transportation, tourism, technology, food, and textile industries.

2.6.1 Transportation and Tourism Industry

Many companies are already taking advantage of the benefits of gamification. One practical example is the platform Lyft, a sharing economy model from the transportation industry. On the app, drivers can participate in an incentive program, that enables them to be rewarded with a bonus whenever they surpass a specific amount of rides, that users had taken with them. The reward program is a similar mechanism to receiving points, which presents a classic element of achievement-oriented gamification. In return, Lyft can benefit from satisfied customers and users on their platforms, as these reward program creates loyal drivers and users (Kovisto & Hamari, 2019; Wirtz, So, Mody, Liu & Chun, 2019).

The sharing economy app Airbnb represents another brand, that already uses gamification elements to entertain their digital customers. Hosts, who have received 80% or more five-star ratings and did not cancel any reservations are rewarded with the so called “Superhost” badge, which represents a seal like indicator for superior quality. Hence, receiving the superhost status is strongly desired among the platform’s hosts, as it can also result in more bookings for them (Teubner, Saade, Hawlitschek & Weinhardt, 2016).

2.6.2 Food and Technology Industry

Back in 2011, the pizza chain Domino’s launched its Pizza Hero App, where users could make their own pizza and add any topics to their liking in an attempt to collect achievement points. Users were also able to order their own pizza creation and furthermore even apply for a job at the food chain if their skills were great. As a result, sales increase by around 30% with roughly seven million pizza creations on the app even though it was originally created for fun purposes only (Grub Street, 2011; Octalysis Group, 2020).

The digital marketplace Amazon has also introduced a badge system to its website, where users can earn different badges for certain actions, for example the “Real Name” badge, which rewards users for leaving their real data on product reviews. Another example is the number one viewer, which can be achieved on their video streaming service platform (Insley & Nunan, 2014).

2.6.3 Textile Industry

In other industries, such as the textile industry, where customers value the possibility to try the products in-store, companies still struggle to recreate the same sensory experience in an online space. Furthermore, the product quality is one of the most influential characteristics regarding the purchase decision of apparel items, hence people often prefer to evaluate it through tangible interaction (Elliott, 2020; Hansen & Jensen, 2009).

Due to the global pandemic, that limited the opportunity for physical fashion shows, the luxury garment label Balenciaga took advantage of gamification to present their Fall/Winter 2021 collection by means of an interactive video game, that was streamed online under the name “Afterworld: The Age of Tomorrow” and was available for free to its users. The game takes place in the year of 2031 and lets users interact with characters fully dressed in pieces of the launching collection (Reydar, 2021).

2.6.4 Beauty Industry

Some beauty brands have already started to incorporate gamification elements into their online appearance. The most common form are quizzes to assist with finding the right product despite the absence of a real person to assist in the way it would occur in a physical environment. Apart from that, loyalty and reward programs are also used by some brands (Elf Cosmetics, 2021; Salmon & Schroeder, 2021).

<u>Routine Quiz by SkinCeuticals</u>

The scientific skincare brand SkinCeuticals, which is part of the L’Oréal Group offers a customized skincare quiz to assist customers in finding their skincare routine on the website. After questioning the customers’ gender, age, skin type and need in terms of care, it provides a full facecare routine without the incorporation of human assistance. The suggested products can then be viewed in detail on the product pages and further purchased from the website (SkinCeuticals, 2021).

The figure below shows the start of the skincare quiz provides by SkinCeuticals:

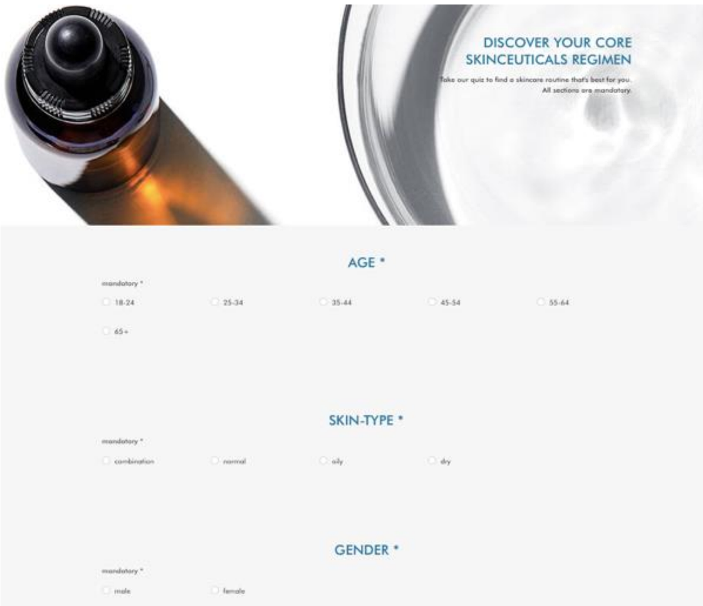


Figure 4. Routine Quiz by SkinCeuticals (SkinCeuticals, 2022)

<u>Haircare Finder by L’Oréal Paris</u>

L’Orál Paris offers its customers a variety of virtual assistance on its website to substitute for real-life testing of its products. On of the tools is the haircare-finder, where customer can take a quiz regarding their hairtype, color and need to find the right products online (L’Oréal Paris, 2022a; L’Oréal Paris, 2022b).

The figure below shows a sequence of the haircare finder quiz:

Figure 5. Virtual Haircare Finder by L’Oréal Paris (L’Oréal Paris, 2022b)

Virtual Makeup Studio by Maybelline New York

Another brand, that even offers several forms of virtual assistance, is Maybelline New York. It’s virtual makeup studio provides a variety of personalized quizzes regarding the search for the right mascara, brow product, foundation, and shade to its customers. The latter even allows customers to take a live picture or upload one to match the foundation shade even more precisely (Maybelline, 2022).

The following figure displays the virtual makeup studio provided on the website:

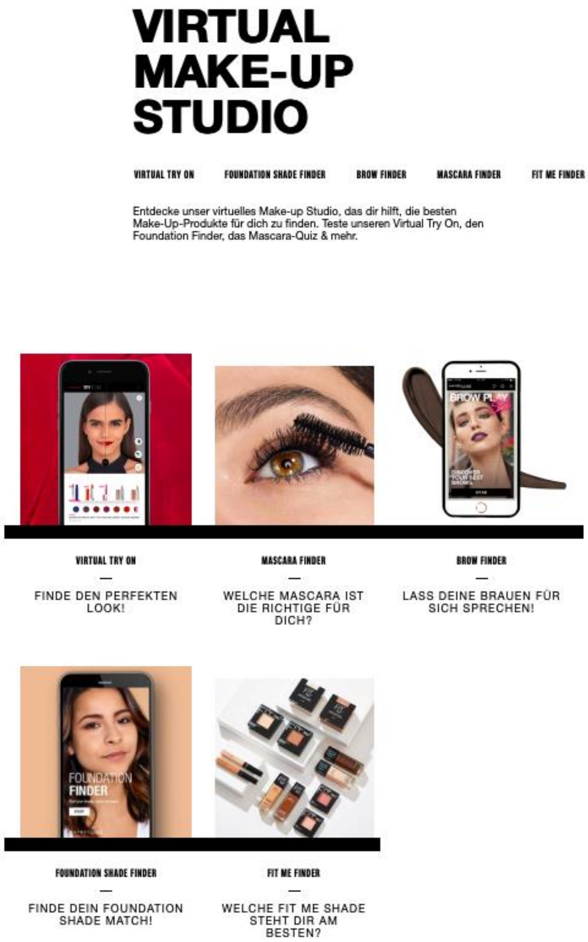


Figure 6. Virtual Makeup Studio by Mabelline New York (Maybelline, 2022)

Fragrance Quiz by Sephora

The beauty retailer Sephora offers its online customers the possibility to find the right perfume, cologne, or eau de toilette by means of a fragrance quiz provided on the website. Similar to instore assistance customers are asked about their preferred scents, whether they want a popular or new product and similar questions before they are presented a wide selection of suited products (Sephora, 2022).

The following figure represents the result page of the fragrance quiz:

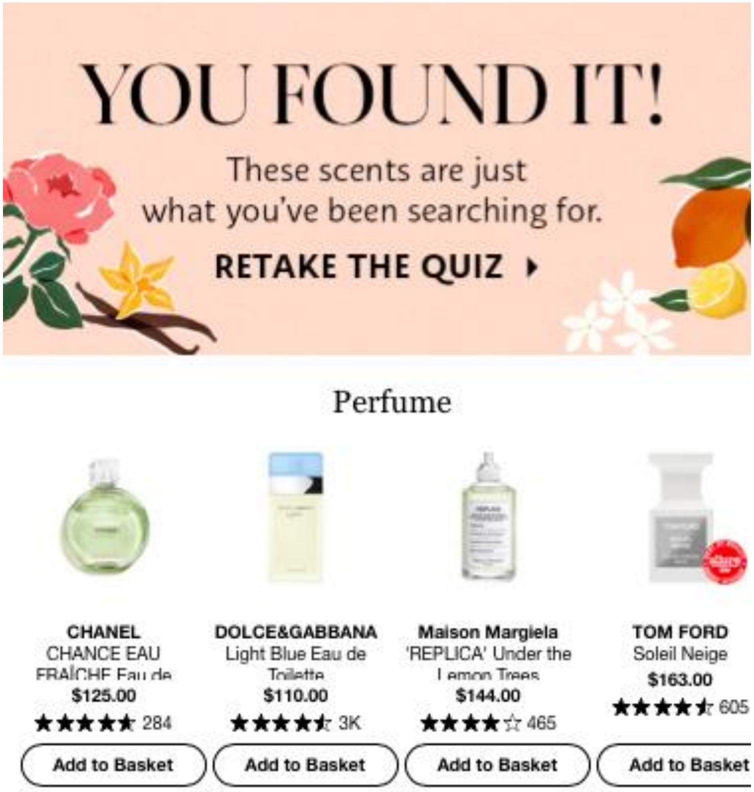


Figure 7. Results from Sephora Fragrance Quiz (Sephora, 2022)

Loyalty Program by e.l.f. cosmetics

A popular example for the latter is the brand e.l.f. cosmetics. The makeup brand with American heritage offering products for eyes, lips and face introduced a loyalty program for its customers under the name “e.l.f. beauty squad”. The program enables the brand’s customers to receive points as exchange for certain actions, for example the purchase of a product or the registration to the website’s newsletter, that can later be redeemed to receive a discount, a birthday gift or special access to certain sales deals (Elf Cosmetics, 2021).

The following figure displays a sample picture of the leaderboard of the e.l.f. beauty squad program:

PERKS	FAN 0-999 POINTS	PRO 1000-1999 POINTS	ICON 2000+ POINTS
Early Access	●	●	●
Birthday Gift	●	●	●
Access to Loyalty-Exclusive Collections, Bundles, Capsules & Sales	●	●	●
Bonus Points Events	●	●	●
Personalized & Discounted Product Recommendations		●	●
Free Shipping		$10 Minimum[1]	No Minimum
Loyalty-Anniversary Gift		●	●
Early Access to New Tutorials		●	●
Bonus Points During Birthday Month		●	●
Try New Products Before Launch (For Free!)			●
Personal Beauty Advisor and Consultation			●

Figure 8. e.l.f. beauty squad program (Elf Cosmetics, 2022)

3. The Austrian Beauty Market – Market Overview

The Austrian beauty market generated €1.83 billion in revenue in 2020 even though the COVID-19 crisis accounted for a €5 million loss compared to the year before (Statista, 2021b).

3.1 Categories

Personal care products constitute most of the revenue within the beauty sector, followed by other categories, color cosmetics, fragrance and skincare. The latter is purchased by roughly 70% of Austrian people. In general, the average spending on beauty items among the Austrian population is around €203,00 per year (Statista, 2021a; Statista, 2021b).

<u>Personal Care</u>

The biggest cosmetics category in Austria accounts for around €871 million of revenue made in the year of 2020. It contains product categories, such as oral hygiene products, body hygiene products, and haircare, which are used by 92%, 86%, and 68% of Austrians on a regular basis, respectively. In general, personal care items are regularly purchased and used by 63,2% of female and 36,8% of male Austrian customers almost equally distributes among all income levels (Statista, 2021a; Statista, 2022a).

<u>Skincare</u>

The estimated revenue in the Austrian skincare sector in 2021 is about €406 million with a further estimation of €458 million by the year of 2025, accounting for a per capita spending of roughly €45 on skincare products. In addition to that, the mass market is estimated to generate around 66% of the overall revenue within the beauty market in 2021, even before the luxe market (Statista, 2021b).
A report published by one of the world's leading beauty manufactures, the French company L'Oréal, has stated, that skincare is the biggest category in demand within the beauty market and is expected to grow by a 6% compound annual growth rate (in value) within the years 2016 to 2021. The French company accounts for an annual revenue of $33.4 billion, which replicates the situation

within the Austrian market, where L'Oréal is the market dominating manufacturer as well (Bauer, 2020; Statista, 2020a; Statista, 2021a).

Color Cosmetics

In 2020 €268 million revenue were generated within the color cosmetics sector, that includes makeup for eyes, face, lips, and nails. Around one third of Austrians say to use makeup on a regular basis. The most dominating segment within the color cosmetics category is the eye segment, which accounts for around 40% of the total revenue. It can further be separated into the sub segments mascara, eyebrow, eyeliner, and eyeshadow, respectively representing their revenue impact. The second biggest segment is face, which combines the product categories foundation, concealer, powder, and face plus products, such as contour or blush. In 2021 it accounted for around 27% of revenue within the makeup category. Lip and Nail are also referred to as color segments and account for almost 13% and 19% of overall revenue, respectively (Nielsen, 2022; Statista, 2021a; Statista, 2022b).

Fragrance

The smallest category within the beauty market is fragrance, which accounted for around €251 million in 2020 and is divided between luxury and non-luxury products with a share of 32% and 68%, respectively. The segment combines the product categories eau de perfume, eau de toilette, eau de cologne, and aftershave. Around 63% of Austrians say, that they regularly use fragrance with an average spending per capita of €23,00 (Statista, 2021a; Statista, 2022c).

3.2 Manufacturers, Brands, and Channels Dominating the Market

The five biggest manufacturers within the beauty market are L'Oréal, Unilever, Estèe Lauder, Procter & Gamble, and Shiseido with a worldwide revenue of $32 billion, $22,2 billion, $14,2 billion, $14 billion, and $8,4 billion, respectively. However, there are some differences regarding the categories. For example, the most popular brand for body cream, which is part of the skin care category is Nivea with 26%, which is manufactured by Beiersdorf, which ranks on the eight place in the total ranking (Statista, 2021a).

Other popular brands within the skin care segment are Dove, Balea, and Nivea Men. Furthermore, a smilar ranking can be notices within the personal care category. The most popular brands for haircare are Head & Shoulders, which is manufactured by Procter & Gamble, Glem Vital, Nivea, and Schwarzkopf. The brands Maybelline New York and L'Oréal Paris, both manufactured by L'Oréal, are the two most popular brands within the makeup category, followed by S-he, Look, and Manhattan. Lastly, the most popular brands for non-luxury fragrance are Axe, Gilette, Balea, and Nivea, while Hugo Boss, Calvin Klein, Boss, and Chanel are the most popular luxury brands (Statista, 2021a).

The Austrian retailer landscape can be split into drugstores, such as dm drogeriemarkt, BIPA, or Müller, perfumeries, such as Douglas and Marionnaud, pharmacies, supermarkets, hypermarkets, online retailers, and other outlets. However, Austrian customers say, that perfumeries, drug stores, and online retailers are the top three channels when purchasing fragrance, whereas drugstores, pharmacies, and perfumeries are the top three channels regarding skincare products. Apart from that, around 40% of customers previously seek information online, with a dermatologist or doctor, or in a pharmacy before purchasing skincare (Statista, 2021a).

3.3 Buying Behavior in Austria

Quality and tolerance represent two of the most crucial characteristics for cosmetic shoppers when they select a product within the skincare segment. Fragrance and ingredients rank third and fourth regarding the importance and relevance for customers. Within the DACH region, the most preferred outlet to purchase beauty items are drug stores, which are the most popular shopping outlet for around 60% of the shoppers. Another 20% purchase beauty products in a grocery store and 7% of people name perfumeries as their favorite shopping destination for cosmetics. Pharmacies present the second most popular outlet for skincare shoppers, namely 18%. However, no matter where people prefer to buy their beauty items, the general attitude towards the importance of assistance before buying a product is about equal, as roughly 30% of people claim to seek consultation online, in pharmacies or even at their dermatologist practice. The

other 60% of shoppers preferably shops beauty products by themselves without the help of advisors or in-store personnel (Statista, 2021a).
The revenue generated through online sales currently accounts for about 16% of the total revenue generated within the Austrian beauty market. Amazon, retailer online-shops, such as Douglas.at, Bipa.at or dm.at as well as the web shop of Yves Rocher are the most visited web shops (Statista, 2021a).

3.4 ECommerce

Around 16% of revenue in the Austrian beauty market were generated through online sales in the year of 2020, with an estimated increase of the share to 19% by the year of 2024. Due to the pandemic in the same year, the online share increased by around 33%. The age group, that shops the most online is 35-44-year-olds with 33,6% followed by 25-34-year-olds with 31,3% and 45-54-year-olds with 27,2% (Statista, 2021a).

3.4.1 International Comparison

In 2021 the share of online sales has risen globally due to the ongoing COVID-19 pandemic. However, there are significant differences regarding various areas compared on a worldwide basis. It can be seen that most areas still show a dominance in offline sales, but some countries, such as China or South Korea already generate around 50% of sales through ecommerce (McKinsey & Company, 2020; Statista, 2022d).

On the continental, Asia only ranks second after Australia and Oceania and before Europe, America, and Africa, respectively. However, each continent shows rather large differences regarding its individual countries (Statista, 2022d).

The table below provides an overview of the online and offline split in various countries and areas to gain a global perspective.

Channel Split Online and Offline Beauty Sales in 2021					
Area	**Offline**	**Online**	**Area**	**Offline**	**Online**
Worldwide	**76.4%**	**23.6%**	**Europe**	**76.9%**	**23.1%**
Africa	**94.5%**	**5.5%**	**Austria**	**79.1%**	**20.9%**
South Africa	94.3%	5.7%	Germany	68.3%	31.7%
Kenya	99.4%	0.6%	Switzerland	70.7%	29.3%
Americas	**77.4%**	**22.6%**	UK	63.1%	36.9%
Canada	73.3%	26.7%	Ireland	84.4%	15.6%
USA	70.7%	29.3%	France	70.0%	30.0%
Mexico	90.4%	9.6%	Netherlands	73.7%	26.3%
Argentina	93.5%	6.5%	Belgium	79.4%	20.6%
Brazil	85.3%	14.7%	Sweden	60.2%	39.8%
Asia	**71.5%**	**28.5%**	Denmark	76.7%	23.3%
China	40.3%	59.7%	Norway	59.6%	40.4%
South Korea	53.8%	46.2%	Finland	78.3%	21.7%
Japan	82.4%	17.6%	Italy	85,3%	14,7%
India	90.9%	9.1%	Spain	86.5%	13.5%
Australia & Oceania	**67,2%**	**32,8%**	Portugal	83.3%	16.7%
Australia	63.9%	36.1%	Czechia	81.9%	18.1%
New Zealand	75.8%	24.2%	Turkey	92.8%	7.2%

Table 1. Channel Split Online and Offline Beauty Sales in 2021 (own illustration based on Statista, 2022d)

Africa

On an international level, Africa is the continent with the lowest ecommerce share. However, there are large differences between the countries. Rather developed countries, for example South Africa are above the continental average, whereas Kenya almost does not generate any sales through ecommerce (Statista, 2022d).

Americas

The difference between North and South American countries is quite big regarding their respective ecommerce shares. The continental average of roughly 23% is surpassed by both Canada and the US with almost 27% and 29%, respectively. Mexico, Argentina, and Brazil are all far below the average with around 9 – 15%. This is also the reason why the American continent is the country with the second lowest ecommerce share, despite the high shares of the northern countries (Statista, 2022d).

Asia

Asia is the continent with the second largest ecommerce share, more precisely 28,5%. However, similar to the Americas, there are some countries with an extremely high share, such as China and South Korea, who make almost 60% and 46% trough ecommerce in the beauty industry. Other countries, for example Japan or India have a much lower share of almost 18% and 9%, which is much closer to the overall continental average ecommerce share of around 28% (Statista, 2022d).

Australia and Oceania

With an ecommerce share of 32%, Australia and Oceania rank highest within the global comparison. Australia itself is among the leading countries with around 36%, whereas New Zealand generates around 24% through ecommerce (Statista, 2022d).

Europe

The average ecommerce share in Europe is around 23%, which equals the global average. However, there are huge regional differences regarding the ecommerce share between the different countries. Denmark and Sweden are the countries with the highest share within Europe, as they both reach around 40%, which lifts the Scandinavian average to 31%. The United Kingdom ranks on the third place within Europe with an ecommerce share of around 37%, followed by Germany and France, which both generate around one third of their beauty sales from ecommerce. Other countries, such as the Netherlands and Switzerland rank closely above the continental average with around 26% and 29%, respectively. Austria is slightly below the average with a share of 21%, whereas Southern and Eastern countries, such as Italy, Spain, Portugal, Czechia, and Turkey generate less than 20% or even 10% of revenue through online sales (Statista, 2022d).

3.4.2 Industry Comparison

The following table presents an industry comparison regarding the online share of business of various categories within the Austrian market.

Channel Split Online and Offline Industry Comparsion in 2021		
Industry	**Offline**	**Online**
Alcoholic Drinks	99,0%	1,0%
Non Alcoholic Drinks	98,9%	1,1%
Food	98,6%	1,4%
Home and Laundry Care	94,6%	5,4%
Beauty and Personal Care	**79.1%**	**20.9%**
Apparel	76,3%	23,7%
Footwear	72,3%	27,7%
Accessories	76,4%	23,6%
Consumer Electronics	48,4%	51,6%
Household Appliances	65,5%	34,5%
Furniture	87,0%	13,0%
OTC Pharmaceuticals	76,9%	23,1%

Table 2. Channel Split Online and Offline Industry Comparison in 2021 (own illustration in accordance to Statista, 2022d; Statista, 2022e; Statista, 2022f; Statista, 2022g; Statista, 2022h; Statista, 2022i; Statista, 2022j; Statista, 2022h; Statista, 2022i; Statista, 2022j; Statista, 2022k; Statista, 2022l; Statista, 2022m; Statista, 2022n; Statista, 2022o)

Compared to different industries within Austria, beauty and personal care is quite in the middle with an ecommerce share of around 21%. Especially the food and beverage industry are still dominated by stationary sales but expected to extend its online share of business in the following years. Home and laundry care currently generates 5% of sales through online sales, which might be due to the fact, that the products of that category are often heavier than regular food categories. Apparel, footwear, and accessories are above the beauty industry, with an online share of business of 24%, 28%, and 24%, respectively. Consumer electronics and household appliances are among the top two industries with an online share of business of almost 57% and 35%, respectively (Statista, 2022d; Statista, 2022e; Statista, 2022f; Statista, 2022g; Statista, 2022h; Statista, 2022i; Statista, 2022j; Statista, 2022h; Statista, 2022i; Statista, 2022j; Statista, 2022k; Statista, 2022l; Statista, 2022m; Statista, 2022n; Statista, 2022o).

4. Theoretical Conclusion and Hypotheses

Gamification implemented on platforms is quite effective in terms of entertaining its users especially in regard to delivering information. Hence, it is often incorporated on learning platforms. A popular theoretical approach to describe gamification is the MDA framework, describing the three main elements of gamification, namely mechanics, dynamics, and aesthetics. The latter has later been extended with the term emotions, as gamification is said to increase the user's motivation and perceived fun and therefore is able to create positive emotions on the user's behalf. If implemented on an online shopping platform, this can also lead to beneficial effects regarding the customer satisfaction or even the purchase intention, which is why many companies have already started to implement it into their web presence.

Therefore, the first hypothesis is as follows:

H1: *Gamification elements can significantly increase the user experience online and therefore increase the customer satisfaction.*

The beauty industry has increased its share of online sales during the COVID-19 pandemic. However, compared to some other industries, such as the apparel, consumer electronics or household appliances industry, the online share is still relatively low, especially within the Austrian market. Furthermore, other countries within Europe, but also on a global level show a much higher ecommerce share regarding their respective beauty revenue. This leads to the question, whether gamification can be a useful tool to increase online beauty sales within Austria and if so, what elements are the most effectful to carry out the implementation.

Therefore, the second hypothesis is as followed:

H2: *Gamification elements have a significant positive impact on the customer's purchase decision.*

5. Quantitative Experiment: Gamification in Skincare

The following chapter provides all details regarding the experimental quantitative survey carried out to analyze the impact of gamification within the purchase decision and customer satisfaction of skincare in an online context. First, the aim and research design will be displayed, followed by the interpretation of results and final composition of recommendations for beauty brands to impellent gamification.

5.1 Aim

The aim of the empirical study is to analyze the impact of gamification on the purchase decision and customer satisfaction regarding the online skincare market.

The research questions composed in the course of this thesis are as followed:

RQ1: How can gamification elements increase the user experience and overall attractiveness of online shops in the beauty industry?

RQ2: What are the main factors that influence beauty shoppers' decision to shop cosmetic products in brick-and-mortar stores instead of online?

5.2 Research Design

The following chapter provides the research design, containing the information needs, object of investigation, chosen method and participants, hypotheses, and the online questionnaires with their respective results.

The following figure represents a visualization of the research design:

INFORMATION NEEDS	• Skincare Shoppers' Attitude Towards Gamification in an Ecommerce Context and Ecommerce in General
OBJECT OF INVESTIGATION	• Online Skincare Buying Behavior of Male and Female Austrians between the age of 18 and 65
METHOD	• Quantitative Market Research by Means of an Online Questionnaire
SELECTION OF PARTICIPANTS	• Male and Female Austrians between the age of 18 and 65 (n=100)
HYPOTHESES	• H1: Gamification elements can significantly increase the user experience online and therefore create more value for the customers. • H2: Gamification elements have a significant positive effect on the customer's purchase decision.
ONLINE QUESTIONNAIRE	• Questions about Beauty Shopping Behavior On- and Offline • Questions/Comparison of Gamification in ECommerce • Questions About Demographic Information • 5–7 Minutes
FIELDWORK	• 10 Pre-tests • Start: March 2022 • End: March 2022
EVALUATION	• Analysis by Means of SPSS • Frequency Tables • Filtered Questions Regarding Age and Gender • Chi-Square-Tests

Figure 9. Research Design (own illustration based on Bradley, 2010)

5.2.1 Information Needs

In order to identify the online buying behavior of Austrian customers regarding the skincare segment, a quantitative online survey was carried out. To analyze the overall impact of gamification on the purchase decision and overall customer satisfaction, previous papers, that have studied similar matters, have been analyzed. However, the specific correlation between the impact of gamification and the buying behavior of skincare, especially within the Austrian market, have not been analyzed yet.

The following table displays the findings of existing research papers regarding similar matters:

Source	Research Object	Findings	Method	Participants	Countries
Bittner & Shipper (2014)	Differences regarding age & motivational effects of gamification in product advertising	Strongest predictors for gamified products: usefulness & perceived attitude	Online questionnaire	101 males & females (15–71 years) affection to sports	Netherlands & Belgium
Lee, Goh & Mohd Nazri Bin (2019)	Purchase intention of skincare products	Positive impact of brand awareness, association, brand loyalty & perceived quality on purchase intention of skincare products	Online questionnaire	150 males & females (mainly) (18–21 years)	Malaysia
Bauer, Linzmajer, Nagengast, Rudolph & D’Cruz (2020)	Impact on games on customer satisfaction & loyalty	Positive impact on perceived enjoyment, customer satisfaction & loyalty	Scenario-based experiment	First study: 598 males & females Second study: 404 males & females	USA

Dhahak & Huseynov (2020)	Impact of gamification regarding customer's attitude & purchase intention for FMCGs in an online context	No positive correlation between perceived ease of use and purchase intention	Online questionnaire	200 males & females (17–70 years)	Turkey
Hamouda (2021)	Impact of mobile applications on purchase intentions	Positive experience with mobile application can generate favorable responses	Online questionnaire	118 males & females (<16 – >51 years)	Not given
Willis & Viany (2021)	Impact of gamification on purchase intention	Achievement gamification positively influenced intension to purchase and brand engagement	Online questionnaire	368 males & females (19–24 years)	Not given

Table 3. Previous Research Regarding Gamificaton and Customer Satisfaction (own illustration based Bauer, Linzmaier, Nagengast, Rudolph & D'Cruz, 2020; Bittner & Shipper, 2014; Dhahak & Huseynov, 2020; Hamouda, 2021; Lee, Goh & Mohd Nazri Bin, 2019; Willis & Viany, 2021)

The studies presented in the table above provide important information regarding the impact of gamification on the purchase intention, partly even within the skincare or beauty industry. Almost all of them were carried out online, suggesting that this method is suited to answer the research questions of this thesis as well. Furthermore, all studies include male and female participants. Given the fact, that skincare is a segment that caters both, male and female needs, both genders will be questioned within the course of the survey as well (Bauer, Linzmaier, Nagengast, Rudolph & D'Cruz, 2020; Bittner & Shipper, 2014; Dhahak & Huseynov, 2020; Hamouda, 2021; Lee, Goh & Mohd Nazri Bin, 2019; Willis & Viany, 2021).

Common findings are, that gamification has a positive impact on the brand awareness as well as the customer satisfaction. Furthermore, participants said to have found the app or platform they have used the gamified tool, to be more useful and entertaining. Another positive impact, that has been frequently detected, is the positive influence of gamification on the purchase intention of the participants (Bauer, Linzmaier, Nagengast, Rudolph & D'Cruz, 2020; Bittner & Shipper, 2014; Dhahak & Huseynov, 2020; Hamouda, 2021; Lee, Goh & Mohd Nazri Bin, 2019; Willis & Viany, 2021).

5.2.2 Object of Investigation

The object of investigation is the impact of gamification on the purchase decision and overall customer satisfaction within the skincare segment in the course of the online buying process.

5.2.3 Method

As mentioned in chapter 5.2.1, almost all the reference papers carried out an online survey to identify the object of investigation. Hence, this research is also be carried out online by means of an empirical experimental online survey. More specifically, there are two surveys, that compare the regular skincare customer journey with a gamified customer journey to then detect significant differences regarding the results. Surveys are a suited method to collect data in order to later statistically analyze and evaluate it. However, there are two different kinds of surveys, namely full and partial survey. A full survey interviews an entire population or sample size, whilst a partial survey only takes part of the sample size into consideration to make assumptions about the entire population (Bonart & Bär, 2020).

5.2.4 Selection of Participants

The quantitative online experiment is carried out among 100 male and female Austrians aged 16 – 65, equally distributed into two groups to later compare the results. Even though the reference papers surveyed between 100 and around 600 people, it can be mentioned, that less people will be enough to draw first assumptions from the experiment. Furthermore, as mentioned in chapter 5.2.1,

skincare is a segment relevant to both genders, hence male and female Austrians are included in the survey (Bauer, Linzmaier, Nagengast, Rudolph & D'Cruz, 2020; Bittner & Shipper, 2014; Dhahak & Huseynov, 2020; Hamouda, 2021; Lee, Goh & Mohd Nazri Bin, 2019; Willis & Viany, 2021).
The participants were chosen randomly in an online environment, which is where the survey was carried out and control over the participants is very limited. However, it is the goal of the study to reach a representative sample size for each age group and gender to later make possible assumptions about the Austrian population (Bonart & Bär, 2020).

Table 4 illustrates the quote selection in regard to the Austrian market, which is split up equally between both genders.

Selection of Participants According to Austrian Population								
Age Group	**Total**	**Share**	**Male**			**Female**		
			Total	**Share**	**Participants Needed (n=50)**	**Total**	**Share**	**Participants Needed (n=50)**
younger than 18 (from 16)	174.051	2,9%	89.595	51,5%	1	84.456	48,5%	1
18-25	790.560	13,3%	408.273	51,6%	3	382.287	48,4%	3
26-40	1.838.859	30,8%	937.733	51,0%	8	901.126	49,0%	8
older than 40 (till 65)	3.160.508	53,0%	1.571.177	49,7%	13	1.589.331	50,3%	13
Total	5.963.978	100,0%	3.006.778		25	2.957.200		25

Table 4. Selection of Participants According to Austrian Population (own illustration based on Statistik Austria, 2022)

5.2.5 Hypotheses

In order to analyze the impact of gamification on the purchase decision and overall customer satisfaction, the two hypotheses have been formulated.

H1: *Gamification elements can significantly increase the user experience online and therefore increase the customer satisfaction.*

H2: *Gamification elements have a significant positive impact on the customer's purchase decision.*

Hypotheses test were carried out with the analytical tool SPSS using a rank correlation test, of which the significance does not exceed the value of 5%, which is necessary to accept the hypotheses (Bonart & Bär, 2020).

5.2.6 Online Questionnaire

The survey was conducted by means of an online questionnaire displayed in the appendix (A-10) and offered on the platform umfrageonline. com. Participants took around 5 – 10 minutes to finish the questions that focused on product information and general questions about customer satisfaction and purchase intention. The final part focused on specific questions about the participants, such as age, gender, or income.

5.2.7 Fieldwork

To maximize the potential of the survey for the later analyzation, 10 pre-tests were carried out before the survey officially started on April 8th. The survey was closed around a six weeks later, which is later than expected and a result of the difficulties in finding suited participants.

5.2.8 Evaluation

The data collected in the course of the survey was reviewed and cleaned and later transferred to the program SPSS for further statistical evaluation. To carry out a proper evaluation, tools such as frequency tables, data filters for age and gender as well as chi-square tests were applied in order to draw possible conclusions regarding the benefit of gamified quizzes.

5.3 Interpretation of Results

The survey comprises a total of 100 people equally split up into two groups. One was presented the impressions and information, customers would see if they take advantage of a personalized quiz, while the other group was shown the regular shopping journey on the website. To evaluate the design and structure of different skincare quizzes, three different brands namely The Inkey List, The Ordinary and Skinceuticals are compared.

The age and gender distribution among the final group of participants slightly differs to the distribution, that would represent the quotas for the Austrian population. Both groups show a bigger percentage of female participants than originally aimed for, which might be due to the fact that even though skincare is used by males and females, the latter might use it more dominantly.

The figure below presents the gender distribution for both, the experimental and the regular group.

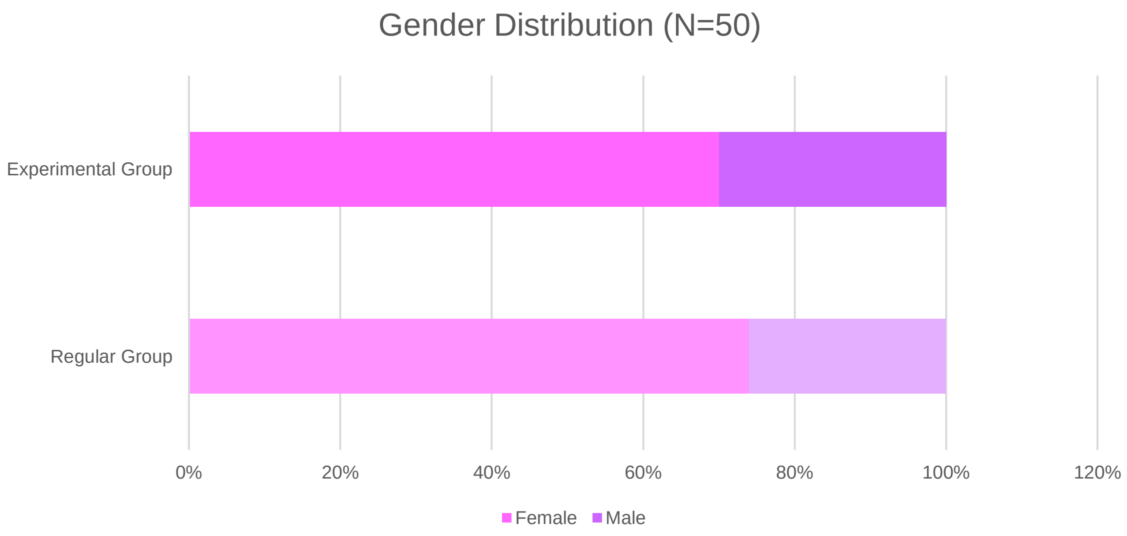


Figure 10. Gender Distribution (own illustration)

Furthermore, the final age distribution achieved in the survey also shows some differences to the one originally aimed for. Contrary to the calculated quotas, the age group of people older than 40 is only represented with 16% and 20% within the regular group and the experimental group, respectively. Given that this age group is expected to represent the most according to the quota selection with 53%, the results should be evaluated with caution as older people might have different thoughts on the use of digital services as part of their customer journey in the skincare area. The two biggest groups in the survey are people between the age of 18 and 25 as well as the ones between 26 and 40 with a share of 46% and 34%, respectively.

Figure 11 displays the age distribution among both groups of the survey.

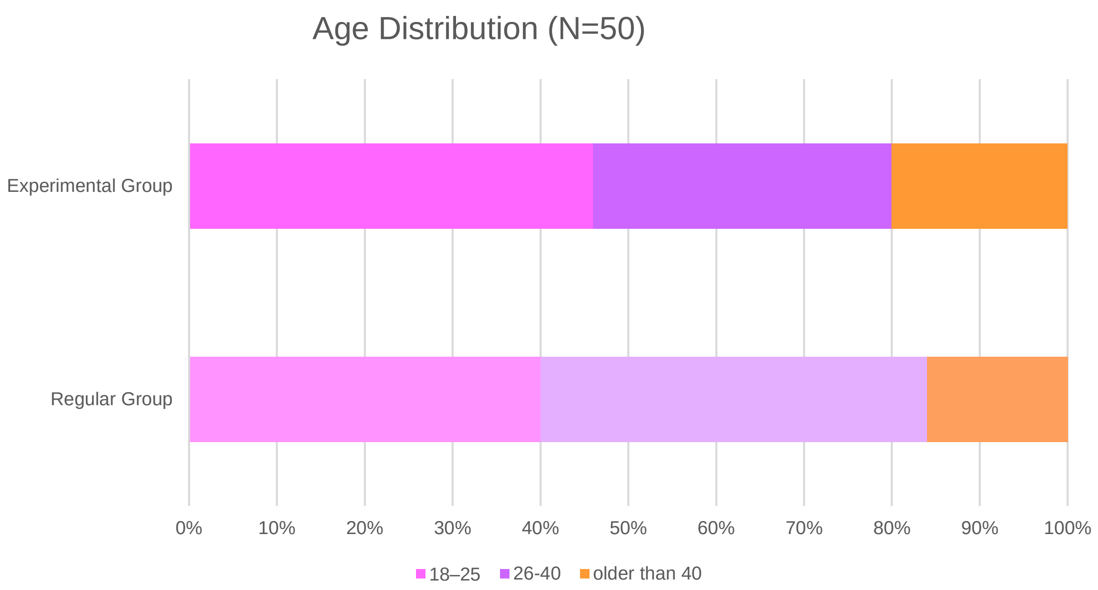


Figure 11. Age Distribution (own illustration)

Other demographic characteristics, such as the average monthly income show a similar distribution among both groups as the income level, that is represented the most is between 1.501–4.000€ with a share of 66% for both groups.

The survey also questiones some general ecommerce related topics, such as the average hours per week that are spent online or the preferred way to shop skincare. Both groups show similar preferences regarding the former question with more than half the participants claiming to spend more than 15 hours a week online. A similar distribution also applies to the latter question. However, whereas only 52% of the regular group prefer to shop offline, it's even 60% of participants in the experimental group.

The main part of the survey includes the comparison of the incorporation of a gamified quiz within the customer journey opposed to the regular journey. To gain more in-depth information three different brands are compared and later evaluated regarding different characteristics. The participants' intention to purchase the presented product, the overall satisfaction with the website's presentation of the product and its information, as well as the product's fit for the shopper's individual needs are among the questions.

The first brand in the survey is The Inkey List and the product shown is the brand's salicylic acid cleanser. The experimental group was shown screenshots of the steps customers go through when taking the personalized quiz, while the regular group was shown the product detail page with all the information displayed in the regular way.

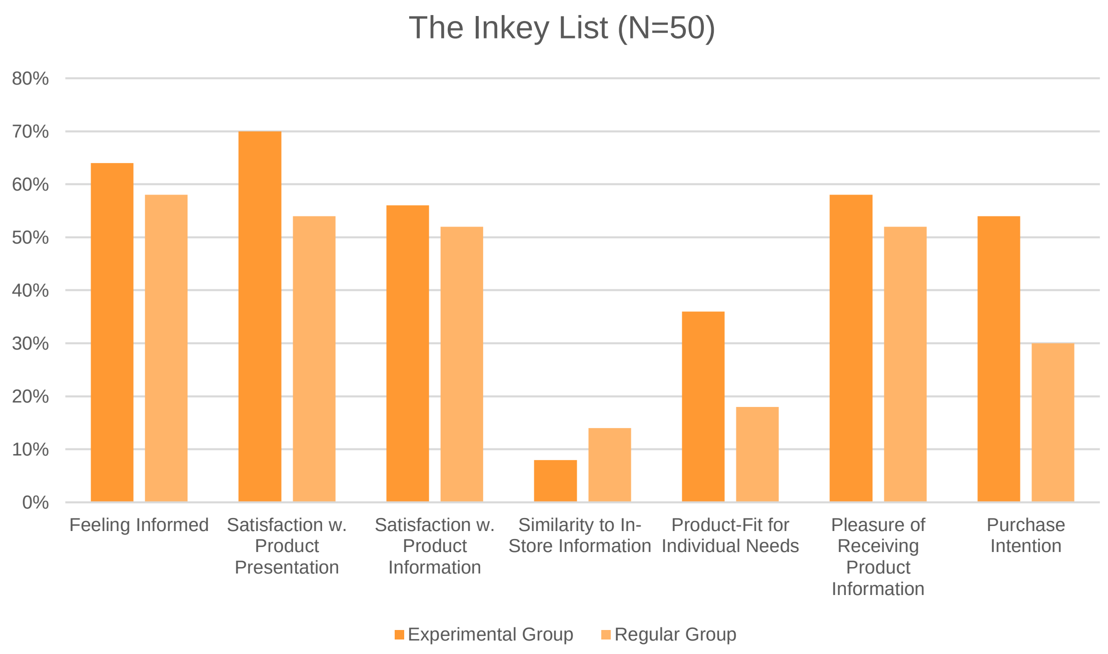


Figure 12. The Inkey List (own illustration)

As presented in figure 12, it can be noticed, that the experimental group ranks higher in every category except the similarity of the provided information to the one they would have received in a physical store. The latter ranks higher among the regular group with 14% compared to 8% of the experimental group.

All other items, such as the purchase intention, the satisfaction with the products information and presentation as well as fit for individual needs score higher within the experimental group with 54%, 56%, 70%, and 36%, respectively. This might indicate that a personalized quiz is a suited tool to provide individual information in a better way, than the regular presentation on the product page of a website.

The second brand evaluated in the survey is The Ordinary. Contrary to the first brand, the website's quiz does not offer recommendations for one specific product but an entire recommended routine with a variety of its products. The product, which information was shown to the regular group is the brand's squalane cleanser. The outcome of the survey is quite similar to the first brand, however, the difference between the experimental and the regular group is even bigger. Overall, around 46% of the experimental group say that they would purchase the presented products, while only 28% of the regular group would do so. Furthermore, 38% of the experimental group say that they enjoyed the quiz and the final presentation of information compared to 14% of the regular group.

The figure below shows the total results of the evaluation of the brand The Ordinary.

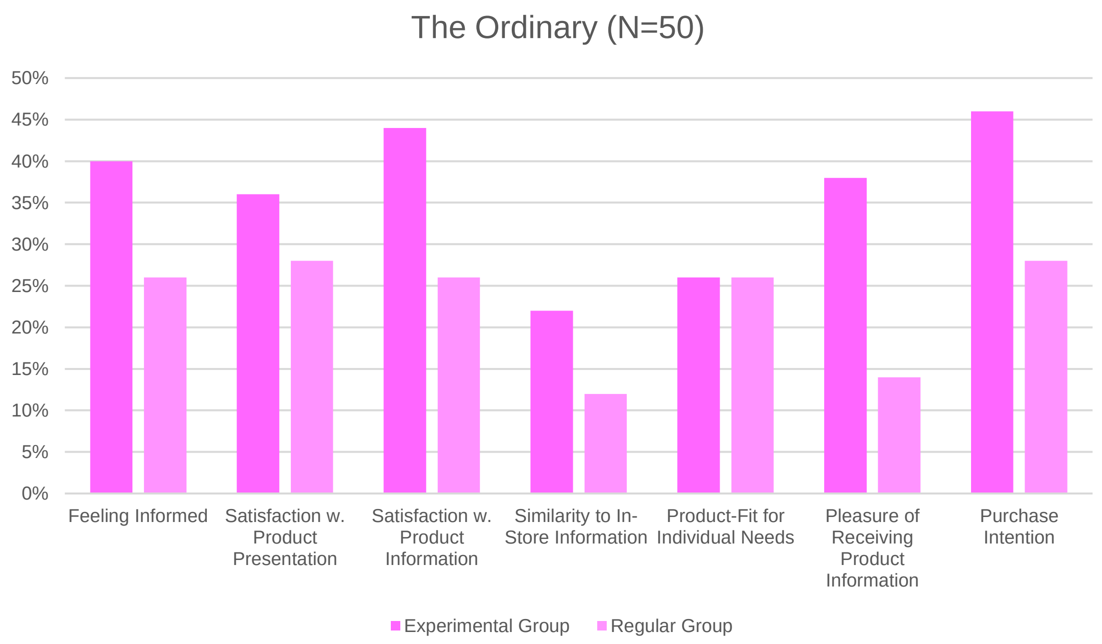


Figure 13. The Ordinary (own illustration)

In terms of the similarity to in-store information, this brand ranks higher among the experimental group indicating, that the quiz might offer a more realistic information, which is even better suited than in-store assistance. This might be due to the fact, that the quiz offers an entire personalized routine instead of one recommended product.

The third brand evaluated in the course of the survey is Skinceuticals. It offers a small three-step routine as the result of the personalized quiz, which was compared to the product detail page of the brand's CE ferulic serum. Similar to the other two brands, the experimental group ranks much higher among all categories, however, in this case the difference to regular group is the biggest. One of the biggest differences was regarding the purchase intention, as 40% say, that they intend to purchase one of the products displayed in the result of the quiz, whereas only 6% of the regular group would do so as well. Furthermore, the satisfaction with the product presentation and information also ranks higher, with 28% and 18% of the experimental group, respectively.

Figure 14 below presents all the results of the brand Skinceuticals.

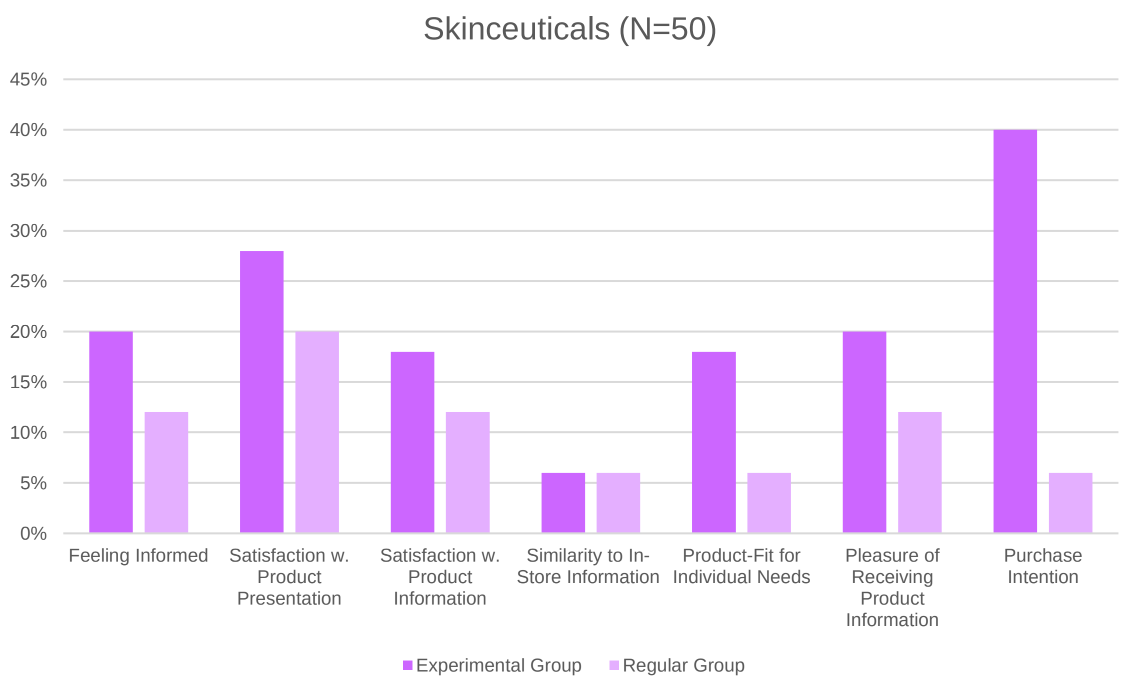


Figure 14. Skinceuticals (own illustration)

Even though the difference between the regular and the experimental group is the biggest regarding the quiz of Skinceuticals, participants ranked the quiz of The Inkey List the highest. The following figure represents the brand comparison of the experimental group and therefore the direct differences regarding the rankings of all three quizzes.

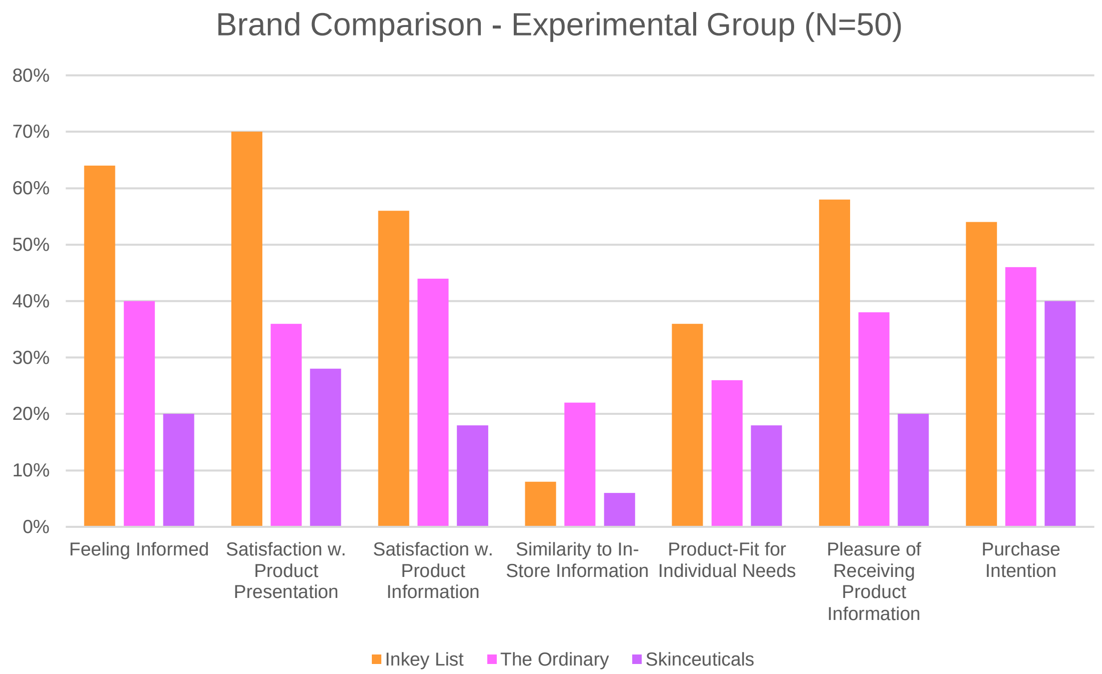


Figure 15. Brand Comparison – Experimental Group (own illustration)

As shown in figure 15, participants rank the brand The Inkey List the highest, which indicates, that the brand's quiz delivers the product information in the most useful way and best suited for the customers' individual needs. However, the brand is perceived to be relatively low regarding the similarity of the information delivered within the quiz compared to in-store information with 8%. Overall, the average rankings for the brands are 49%, 36%, and 21% for The Inkey List, The Ordinary, and Skinceuticals, respectively. A possible explanation might be the fact, that The Inkey List and The Ordinary offer a more detailed quiz with more questions to deliver individual results with the difference, that The Ordinary offers an entire routine as a result, whereas The Inkey List focuses on one specific product recommendation. Hence, this might also be the reason why The Inkey List ranks particularly high regarding the information and presentation of the recommended product.

The second part of the survey focuses on some general information about the participants' beauty shopping behavior and category specific differences. In general, both groups show a dominant tendency to shop products offline no matter the category. Personal care is the category that participants of the regular group did not purchase online at all.

Figure 16 shows the complete channel distribution of the experimental and regular group among all four beauty categories.

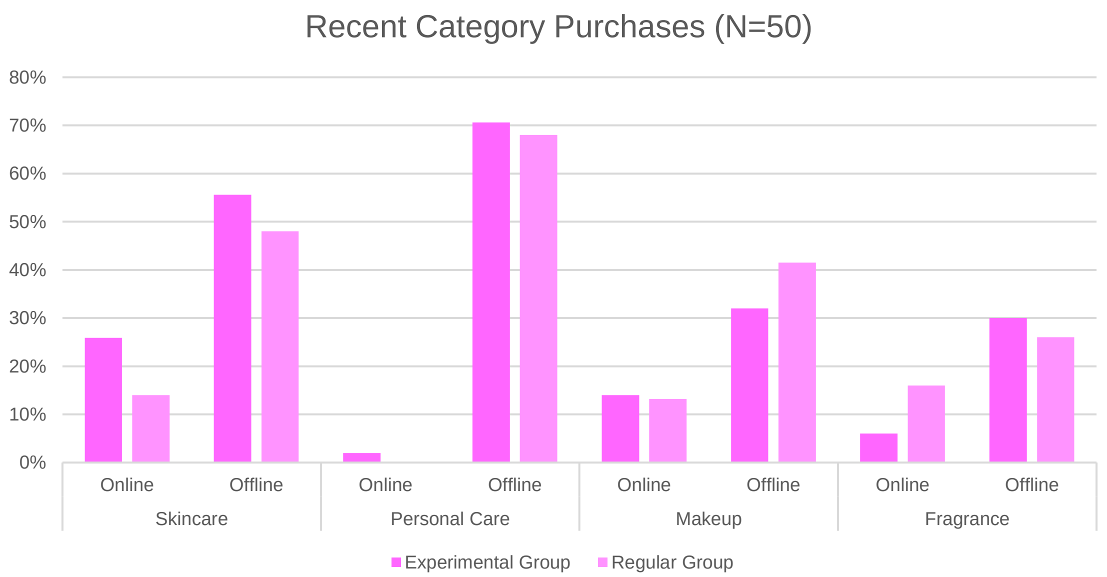


Figure 16. Recent Category Purchases (own illustration)

Question 5 asks participants about their favorite beauty brand. The brands L'Oréal Paris and Maybelline New York are among the top two brands for both, the experimental and the regular group. The third place within the experimental group is the brand Balea, whereas the regular group third place is Mac cosmetics. Other brands such as Chanel, Artdeco, or Alverde rank in the middle field among both groups.

The last part of the survey deals with a set of general statements regarding the online skincare shopping journey and the overall attitude and experience with personalized quizzes. Participants rate most of the questions equally, however there are some statements with bigger differences. In general, it can be noticed that the importance of quality regarding skincare as well as a higher spending on the category and the frequency of shopping trips is almost equal among both groups. Furthermore, both groups state to appreciate in-store assistance as they also trust in-store personnel.

Participants of the regular group rate the difficulties regarding the finding of the right product as well as the right skincare product much higher than participants of the experimental group do with 80% and 72% versus 50% and 48%, respectively. Furthermore, it can be noticed, that participants of the experimental group rank the perceived fun of virtual quizzes much higher than participants of the regular group with 66% and 48%, respectively. However, the openness to try out virtual assistance as part of the product finding journey on behalf of the regular group is quite big with 60%.

Figure 17 displays all findings of the general questions.

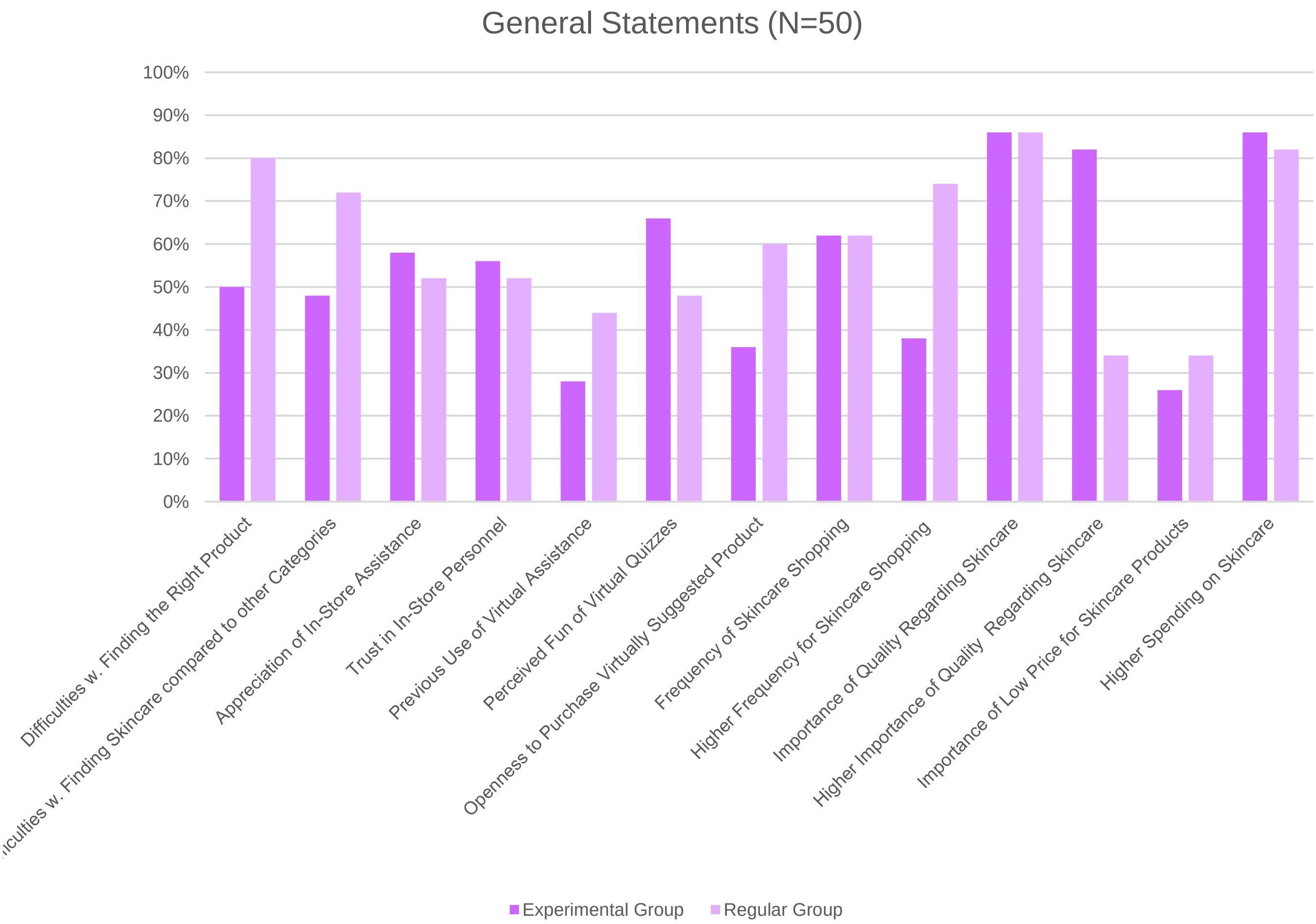


Figure 17. General Statements (own illustration)

In the final question, participants are asked about their general attitude towards quizzes, which was answered quite equally between both groups. Both groups show an equally high intention to purchase products after having used a personal quiz as well as an increase of the openness to purchase products online in general. Furthermore, participants also show an equally high demand for personalized quizzes in other categories among both groups.

The biggest differences occur between the participants' hesitation towards data security and the perceived usefulness of quizzes to find skincare online. The former question shows a huge percentage of the regular group, as 52% claim to be hesitant to use an online quiz because of the concerns towards data privacy. Contrary only 4% of the experimental group show the same doubts. This miht be due to the fact, that once participants have seen or even tried out a quiz, they were less afraid of data security issues. Furthermore, participants of the experimental group rank the usefulness of online quizzes to find skincare much higher than participants of the other group with 57% and 14%, respectively. This might also be due to the experimental group's first contact with the quiz situation showing them the benefits of using the quiz.

Lastly, both groups state that they perceived an increased level of fun during the customer journey when they receive information through a personal quiz rather than through a regular way, for example by means of a product description.

The full set of answers is displayed in the figure below.

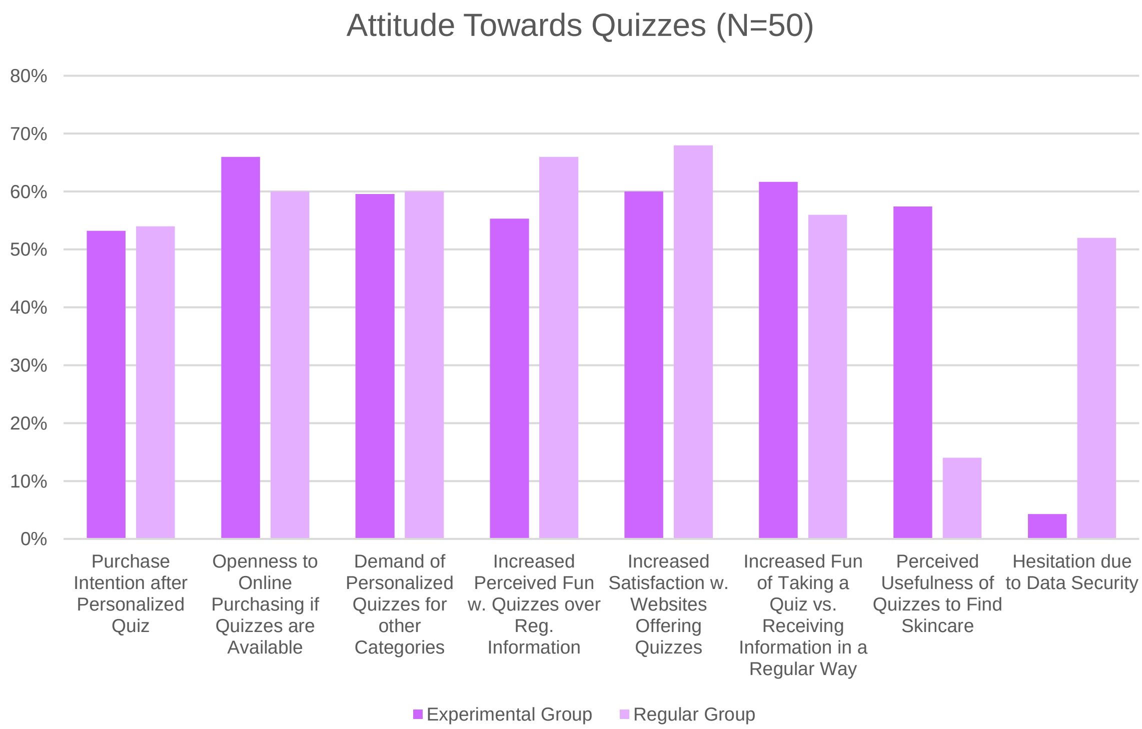


Figure 18. Attitude Towards Quizzes (own illustration)

To evaluate the hypotheses composed in the course of the thesis, a chi-square-test was carried out with a level of significance of 5%, which means, that hypotheses beyond this level cannot be accepted. After the evaluation it turned out, that both hypotheses reach a value above the significance level with 0,092 and 0,289, respectively and therefore cannot be supported.

The tables below show chi-square-test conducted to evaluate the hypotheses.

H1: *Gamification elements can significantly increase the user experience online and therefore increase the customer satisfaction.*

Chi-Square-Test H1			
	Value	df	asymptotical significance (bilateral)
Chi-Square after Pearson	7,979[a]	4	0,092
Likelihood-Quotient	6,778	4	0,148
Correlation linear-with-linear	2,249	1	0,134
Number of valid cases	47		

Table 5. Chi-Square-Test H1 (own illustration)

H2: *Gamification elements have a significant positive impact on the customer's purchase decision.*

Chi-Square-Test H2			
	Value	df	asymptotical significance (bilateral)
Chi-Square after Pearson	4,985[a]	4	0,289
Likelihood-Quotient	5,549	4	0,235
Correlation linear-with-linear	0,011	1	0,915
Number of valid cases	180		

Table 6. Chi-Square-Test H2 (own illustration)

6. Recommendations for Beauty Brands to Implement Gamification

As a result of the evaluation of the theoretical part as well as the experiment carried out through an online survey, the following recommendations for beauty brands have been composed in order to use the potential of gamification in an ecommerce context.

Best Practice: In-Store Assistance

Especially in the beauty industry, all above the skincare category, a competent expert is important to educate customers about a product. A personalized quiz is a very suited tool to substitute personal assistance in an online environment and therefore its structure can be very crucial regarding its successful implementation. Hence beauty brand should carefully evaluate their in-store assistance and recommendation process before building and structuring the online quiz. This way, trust can be built more easily and the openness to use a quiz might increase, which is also beneficial if brands or companies plan to expand their quiz offers among other brands or categories within their portfolio.

Crucial Element: Fun

Fun can be a powerful driver and parameter within a learning journey and has proven to make the process more successful. The same effect can be applied to customer education, especially when the complexity of the products and their ingredients or way to use is relatively high, as it often occurs with beauty products. However, if people choose to buy online rather than in a personal store, the product information provided online can often be overwhelming and perceived as too much or not fun to read. Contrary to that, an individual quiz allows the online customers to only see the information relevant to their individual needs due to their personal answers in the quiz. This way, the educational process is perceived as more fun and relevant product information can be presented more precisely.

Minimized Insecurities: Data Safety

Even though many customers are technically open to try out an online quiz, many people show a rather hesitant attitude due to their concerns regarding data privacy. Given the fact, that online customers are asked a number of personal questions in order to compose an individual product recommendation, the answers given should be treated very carefully and with the highest standard of data safety. Furthermore, some general concerns can be minimized before the quiz officially starts by referring to a certain security standard. This way less customers will be concerned and probably decide to try out the quiz.

7. Conclusion

Gamification can be a useful tool to create a more entertaining learning process that allows people to perceive the educational journey as more fun than if taught in a regular way. The same phenomenon can be applied to the customer education process, as a fun experience also benefits a positive purchase intention and the overall satisfaction with a brand. However, especially within the beauty industry the hesitation to buy products online is high among customers, who value in-store consultation to explain and educate them about complex products and ingredients. Hence, personalized quizzes represent an effective tool to decrease the barrier among customers to buy online and to increase the overall experience with the shopping journey as well as the likeliness for a product to be purchased.

There are already some brands, that offer individual quizzes to their customers to assist with finding the right product, such as the brands The Inkey List, The Ordinary, or Skinceuticals. Therefore, the quizzes of the before mentioned skincare brands delivered the main part of the experimental survey carried out among Austrian customers in order to investigate the effects of gamification. The results show that it is important to precisely replicate the in-store consultation experience to further deliver individual product recommendations and deliver solely relevant information to the customer. Furthermore, the positive results achievable through gamification can vary, whether customers actually perceive the informational process as fun, which is something developers should be aware of before creating a certain quiz. Furthermore, the concern about personal data safety is quite present, which might represent a barrier to try out a quiz in the first place but can be minimized through clear education on how the private data and answers are treated.

If implemented correctly, gamification can leverage a beauty brand's online performance as it can help increase the openness for online purchasing, the overall purchase intention as well as the satisfaction with a brand or a website.

8. Limitations and Outlook

Even though studies about gamification and its effects on the purchase intention as well as the customer satisfaction already exist, there is not a lot of research about the effects of gamification in an ecommerce context. Furthermore, the focus on the beauty industry as well as a geographic approach on the Austrian market have not really been evaluated yet. Therefore, the findings of the thesis should be interpreted with caution. Furthermore, it should be mentioned, that the sample size in the experiment is rather small and does not equally represent all age groups and genders within Austria according to the quotas calculated beforehand. As a consequence, a more diverse age or gender distribution might also result in a slightly different outcome.

Furthermore, the empirical part focuses on individual quizzes within the skincare category to draw a first impression on the effects of gamification. However, a different gamification or the extension among all beauty categories, such as makeup, personal care, and fragrance could also deliver various results.

The last aspect, that should be considered is that the thesis solely focused on the Austrian market. Given the fact, that the openness to buy beauty products online strongly varies among countries, the perceived usefulness of gamification might also vary. Hence, the openness to take advantage of a quiz as well as its positive effect on the buying intention might not be the same among different nationalities.

Bibliography

Ahn, S., Ball, C. & Johnsen, K. (2019). Points-Based Reward Systems in Gamification Impact Children's Physical Activity Strategies and Psychological Needs. Health Education & Behavior 46(3), 1–23. https://doi.org/10.1177/1090198118818241

Alsawaier, R. (2018). The effect of gamification on motivation and engagement. *The International Journal of Information and Learning Technology 35*(1), 56–79. DOI 10.1108/IJILT-02-2017-0009

Areed, M., Amasha, M., Abougalala, R., Alkhalaf, S. & Khairy, D. (2021). Developing Gamification E-Quizzes Based on an Android App: The Impact of Asynchronous Form. *Education and Information Technologies 2021*(3), 1–22. https://doi.org/10.1007/s10639-021-10469-4

Bauer, J., Linzmajer, M., Nagengast, L., Rudolph, T. & D'Cruz, E. (2020). Gamifying the digital shopping experience: Games without monetary participation incentives increase customer satisfaction and loyalty. *Journal of Service Management, 31*(3), 563–595.

Bauer, M. (2020). *The K-beauty Industry.* Available at https://medium.com/@msuigin/the-k-beauty-industry-5acdc443885f [05.06.2021]

Bittner, J. & Shipper, J. (2014). Motivational effects and age differences of gamification in product advertising. *The Journal of Consumer Marketing 31*(5), 391–400.

Bonart, T., & Bär, J. (2020). *Quantitative Betriebswirtschaftslehre Band III. Marketing und Marktforschung, Technische Zuverlässigkeit.* Wiesbaden: Springer Gabler

Borrás-Gené, O., Martínez-Núñez, M., & Martín-Fernández, L. (2019). Enhancing Fun through Gamification to Improve Engagement in MOOC. *Informatics 6*(3), 1–20.

Bradley, Nigel (2010): *Marketing Research. tools and techniques* (2nd ed.). New York, NY: Oxford University Press Inc.

Chou, Y. (2015). *Actionable Gamification. Beyond Points, Badges, and Leaderboards.* Octalysis Media: California, USA

De Canio, F., Fuentes-Blasco, M., & Martinelli, E. (2021). Engaging shoppers through mobile apps: the role of gamification. *International Journal of Retail & Distribution Management 49*(7), 919–940. DOI 10.1108/IJRDM-09-2020-0360

Deterding, D., Dixon, D., Khaled, R. & Nacke, L. (2011). From Game Design Elements to Gamefulness: Defining Gamification. Paper presented at

Conference: Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments

Deterding, S., O'Hara, K., Sicart, M., Dixon, D., & Nacke, L. (2011). Gamification: Using game design elements in non-gaming contexts. Paper presented at Conference on Human Factors in Computing Systems, Vancouver, BC, Canada, May 7–12; 2425–28.

Dhahak, K. & Huseynov, F. (2020). The Influence of Gamification on Online Consumers' Attitude and Intention to Purchase Fast Moving Consumer Goods. *Business and Economics Research Journal 11*(3), 769-791.

Dikcius, V., Urbonavicius, S., Adomaviciute, K., Degutis, M., & Zimaitis, I. (2020). Learning Marketing Online: The Role of Social Interactions and Gamification Rewards. *Journal of Marketing Education,* 1. https://doi.org/10.1177/0273475320968252

Elf Cosmetics (2021). Welome to E.l.f. Beauty Squad. Retrieved from https://www.elfcosmetics.com/e.l.f.-beauty-squad/ [02.06.2021]

Elf Cosmetics (2022). Beauty Squad. Retrieved from https://www.elfcosmetics.com/e.l.f.-beauty-squad/ [20.02.2022]

Elliot, S. (2002). *Electronic Commerce: B2C Strategies and Models*. Chichester: John Wiley & Sons Ltd.

Gamification and E-Commerce: Play Your Way to Success. (2018). *FRPT - Ecommerce Snapshot*, 17–18.

Grewal, D., Levy, M. & Kumar, V. (2009). Customer Experience Management in Retailing: An Organizing Framework. *Journal of Retailing, 85*(1), 1–14.

Grub Street (2011). *Domino's Launches 'Pizza Hero,' the Latest in Un-Fun Branded Apps.* Retrieved from https://www.grubstreet.com/2011/11/dominos-pizza-hero-ipad-app.html [01.01.2022]

Insley, V. & Nunan, D. (2014). Gamification and the Online Retail Experience. International *Journal of Retail & Distribution Management 42*(5), 340–351. https://doi.org/10.1108/IJRDM-01-2013-0030

Hamouda, M. (2021). Purchase intention through mobile applications: a customer experience lens. *International Journal of Retail & Distribution Management 49*(10), 1464–1480.

Hansen, T. & Jensen, M. (2009). Shopping Orientation and Online Clothing Purchases: The Role of Gender and Purchase Situation. *European Journal of Marketing, 43*(9), 1154–1170.

Hassan, L., Dias, A., & Hamari, J. (2019). How motivational feedback increases user's benefits and continued use: A study on gamification, quantified-self and social networking. *International Journal of Information Management 46*(2019), 151–162.

Hunicke, R., LeBlanc, M., & Zubek, R. (2004). MDA: A Formal Approach to Game Design and Game Research. Workshop on Challenges in Game AI.

Jain A., & Dutta D. (2019). Millennials and Gamification: Guerilla Tactics for Making Learning Fun. *South Asian Journal of Human Resources Management 6*(1), 29-44. doi:10.1177/2322093718796303

Junior, R., & Silva, F. (2021). Redefining the MDA Framework—The Pursuit of a Game Design Ontology. *Information 12*(10), 395.

Karać J. & Stabauer M. (2017). Gamification in E-Commerce. In: Nah FH., Tan CH. (eds) HCI in Business, Government and Organizations. Supporting Business. HCIBGO 2017. Lecture Notes in Computer Science, vol 10294. Springer, Cham. https://doi.org/10.1007/978-3-319-58484-3_4

Kovisto, J., & Hamari, J. (2014). Demographic differences in perceived benefits from gamification. *Computers in Human Behavior 35*(2014), 179–188.

Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management, 45*, 191–210. https://doi.org/10.1016/j.ijinfomgt.2018.10.013

Lee, J., Goh, M. & Mohd Nazri Bin, M. (2019). Understanding purchase intention of university students towards skin care products. *PSU Research Review, 3*(3), 161–178.

Lei Wang, Gunasti, K., Shankar, R., Pancras, J., & Gopal, R. (2020). Impact of Gamification on Perceptions of Word-Of-Mouth Contributors and Actions of Word-Of-Mouth Consumers. *MIS Quarterly, 44*(4), 1987–2011. https://doi.org/10.25300/MISQ/2020/13726

L'Oréal Paris (2022a). Jetzt Produkte virtuell testen. Available at https://www.loreal-paris.de/virtuell-testen [26.02.2022]

L'Oréal Paris (2022b). Ihre personalisierte Haardiagnose. Available at https://www.loreal-paris.de/welche-haarpflege-passt-zu-mir [20.02.2022]

Maybelline (2021). Virtual Make-Up Studio. Available at https://www.maybelline.de/make-up-tipps/virtual-make-up-studio [26.02.2022]

Mavroeidi, A., Kitsiou, A., & Kalloniatis, C. & Gritzalis, S. (2019). Gamification vs. Privacy: Identifying and Analysing the Major Concerns. *Future Internet 11*(3), 67

Mavroeidi, A., Kitsiou, A., & Kalloniatis, C. (2020). The Role of Gamification in Privacy Protection and User Engagement. In: Ethics, Laws, and Policies for Privacy, Security, and Liability

Mazarakis, A., & Bräuer, P. (2020). Gamification of an open access quiz with badges and progress bars: An experimental study with scientists. Paper presented at Conference: GamiFIN 2020

McKinsey & Company (2020). How COVID-19 is changing the world of beauty.

Nielsen (2022). Dashboard Color Cosmetics in Austria – Full Year 2019, 2020, 2021

Octalysis Group (2020). *Extraordinary Gamification Examples That Changed the Food & Beverage Industry (Part 1)*. Retrieved from https://octalysisgroup.com/extraordinary-gamification-examples-that-changed-the-food-beverage-industry-part-1/ [01.01.2022]

Panessai, I., Aiden, J. & Mohd, N. (2018). Gamification Elements and their Impacts on Teaching and Learning - A Review. *The International Journal of Multimedia & Its Applications 10*(6), 37–46.

Pelodbuddy (2019). What do the Numbers on the Leaderboard/Right Side of the Screen Mean?. Retrieved from https://www.pelobuddy.com/faqs/what-do-the-numbers-on-the-leaderboard-right-side-of-the-screen-mean/ [31.12.2021]

Porto, D., Jesus, G., Ferrari, F., & Fabbri, S. (2021). Initiatives and challenges of using gamification in software engineering: A Systematic Mapping. *The Journal of Systems & Software 173*(2021), 110870.

Rauch, M. (2013). Best Practices for Using Enterprise Gamification to Engage Employees and Customers. In: Kurosu, M. (eds) Human-Computer Interaction. Applications and Services. HCI 2013. Lecture Notes in Computer Science, vol 8005. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-39262-7_31

Reydar (2021). *Fashion Gamification: Why high-end brands like Balenciaga are turning to virtual gaming.* Retrieved from https://www.reydar.com/fashion-gamification-balenciaga/ [02.01.2022]

Ruhi, U. (2015). Level Up Your Strategy: Towards a Descriptive Framework for Meaningful Enterprise Gamification. *Technology Innovation Management Review 5*(6), 5–16.

Robson, K., Plangger, K., Kietzmann, J., McCarthy, I., & Pitt, L. (2015). Is it all a game? Understanding the principles of gamification. *Business Horizons 58* (4), 411–420.

Salmon, N. & Schroeder, R. (2021). The 7 best virtual makeover tools. Available at https://www.harpersbazaar.com/uk/beauty/make-up-nails/g32470461/best-virtual-makeover-tools/ [02.06.2021]

Schöbel, S., Janson, A. & Söllner, M. (2020). Capturing the complexity of gamification elements: a holistic approach for analysing existing and deriving novel gamification designs. *European Journal of Information Systems 29*(6), 641–668.

Schultz, E. (2021). *Umsätze im E-Commerce in Österreich nach Warengruppen im Jahr 2020.* Available at https://de.statista.com/statistik/daten/studie/317276/umfrage/brutto-jahresumsatze-im-internet-einzelhandel-in-oesterreich-nach-warengruppen/

Sephora (2022). Fragrance Quiz. Available at https://www.sephora.com/beauty/fragrance-gift-guide [20.02.2022]

SkinCeuticals (2021). Entdecken Sie Ihre SkinCeuticals Pflegeroutine. Available at https://www.skinceuticals.de/on/demandware.store/Sites-skinceuticals-de-Site/de_DE/Quiz-Show?qid=routine-finder#routine-finder-iam=18-24&routine-finder-sex=female&routine-finder-myskin=combination&routine-finder-myconcern=dehydrated&routine-finder-interesting=interesting [02.06.2021]

Skinceuticals (2022). Discover Your Core Skinceuticals Regimen. Retrieved from https://www.skinceuticals.com/skinc-finder [19.02.2022]

Statista (2020a). *Cosmetics Industry Worldwide*

Statista (2021a). *Kosmetik- und Körperpflegemarkt in Österreich.* Available at https://de.statista.com/themen/7635/kosmetik-und-koerperpflegemarkt-in-oesterreich/#dossierSummary

Statista (2021b). *Hautpflege*. Available at https://de.statista.com/outlook/cmo/beauty-personal-care/hautpflege/oesterreich [05.06.2021]

Statista (2022a). Personal Care. Available at https://www.statista.com/outlook/dmo/ecommerce/beauty-health-personal-household-care/personal-care/austria?currency=EUR [29.05.2022]

Statista (2022b). Beauty Care. Available at https://www.statista.com/outlook/dmo/ecommerce/beauty-health-personal-household-care/beauty-care/austria?currency=EUR#revenue [29.05.2022]

Statista (2022c). Fragrances. Available at https://www.statista.com/outlook/cmo/beauty-personal-care/fragrances/austria?currency=EUR [29.05.2022]

Statista (2022d). Beauty & Personal Care. Available at https://www.statista.com/outlook/cmo/beauty-personal-care/worldwide [07.06.2022]

Statista (2022e). Alcoholic Drinks. Available at https://www.statista.com/outlook/cmo/alcoholic-drinks/austria [12.06.2022]

Statista (2022f). Non Alcoholic Drinks. Available at https://www.statista.com/outlook/cmo/non-alcoholic-drinks/austria [12.06.2022]

Statista (2022g). Food. Available at https://www.statista.com/outlook/cmo/food/austria#analyst-opinion [12.06.2022]

Statista (2022h). Home and Laundry Care. Available at https://www.statista.com/outlook/cmo/home-laundry-care/austria#sales-channels [12.06.2022]

Statista (2022i). Apparel. Available at https://www.statista.com/outlook/cmo/apparel/austria#analyst-opinion [12.06.2022]

Statista (2022j). Footwear. Available at https://www.statista.com/outlook/cmo/footwear/austria#sales-channels [12.06.2022]

Statista (2022k). Accessories. Available at https://www.statista.com/outlook/cmo/accessories/austria#analyst-opinion [12.06.2022]

Statista (2022l). Consumer Electronics. Available at https://www.statista.com/outlook/cmo/consumer-electronics/austria#revenue [12.06.2022]

Statista (2022m). Household Appliances. Available at https://www.statista.com/outlook/cmo/household-appliances/austria#analyst-opinion [12.06.2022]

Statista (2022n). Furniture. Available at https://www.statista.com/outlook/cmo/furniture/austria#sales-channels [12.06.2022]

Statista (2022o). OTC Pharmaceuticals. Available at https://www.statista.com/outlook/cmo/otc-pharmaceuticals/austria#analyst-opinion [12.06.2022]

Statistik Austria (2022). Bevölkerung nach Alter/Geschlecht. Available at https://www.statistik.at/statistiken/bevoelkerung-und-soziales/bevoelkerung/bevoelkerungsstand/bevoelkerung-nach-alter/geschlecht [14.06.2022]

Teubner, T., Saade, N., Hawlitschek, F. & Weinhardt, C. (2016). t's only pixels, badges, and stars: On the economic value of reputation on Airbnb. *Australia's Conference on Information Systems.* Available at https://www.researchgate.net/publication/309204371_It%27s_only_pixels_badges_and_stars_On_the_economic_value_of_reputation_on_Airbnb

Van Elderen, J., & Van der Stappen, E. (2019). The Potential Impact of Gamification Elements on the Acceptance of Technology in the Context of Education: A Literature Review. Paper presented at Conference: 32nd Bled eConference | Humanizing Technology for a Sustainable SocietyAt: Bled, Slovenia

Webley, S., & Cham, K. (2017). Designing for the Play Instinct: Gamification, Collective Voodoo and Mumbo Jumbo in Dymek, M., & Zackariasson, P. (ed.). The Business of Gamification. A Critical Analysis. Taylor & Francis: New York, USA

Willis, R. & Viany, U. (2021). Effect of interaction with gamification feature on purchase intention: the mediation role of brand engagement. *Journal of Management Information and Decision Sciences 4*(24), 1–12.

Wirtz, J., So, K.K.F., Mody, M.A., Liu, S.Q. and Chun, H.H. (2019), "Platforms in the peer-to-peer sharing economy". *Journal of Service Management, 30*(4), 452-483. https://doi.org/10.1108/JOSM-11-2018-0369

Wood, K. (2020). *Why You Should Consider Gamification In Your Web Design.* Available at https://www.bluetext.com/gamification/ [05.06.2021]

Yfantis, V., & Tseles, D. (2017). Exploring Gamification In The Public Sector Through The Octalysis Conceptual Model. Paper presented at Conference: eRA-12International Scientific ConferenceAt: Piraeus University of Applied Sciences (PUAS)

Zhang, Y., Van Horen, F., & Zeelenberg, M. (2021). Increasing saving intentions through leaderboards: A gamification approach. *PLoS One 16*(4), 1–16

Zreika, M., & Gangopadhyay, P. (2012). Artificial Shortages and Strategic Pricing. *Journal of Mathematics and Statistics 8*(1), 154–156.

Appendix

Table of Contents

List of Figures

List of Tables

1. Time Frame

Time Frame	
Preparation I: Topic Research, Exposé & Seminar Paper	01.03.2021- 14.06.2021
Preparation II: Composition of Proposal	27.09.2021
Literature Review: Research and Composition of Theory	01.10.2021- 15.03.2022
Preparation III: Preparation of Empiric Research (Questionnaire,…)	15.03.2022- 07.04.2022
Empiric Research: Fieldwork and Evaluation of Results	08.04.2022- 20.08.2022
Submission of Master Thesis	02.09.2022

Table 1. Time Frame (own illustration)

2. Questionnaires

The following chapter presents the two questionnaires used in the course of the experiment. First, the experimental questionnaire will be presented including different skincare quizzes, followed by the version that does not include any form of gamification.

2.1 Experimental Questionnaire

QUESTIONNAIRE I

ONLINE BUYING BEHAVIOR IN COSMETICS

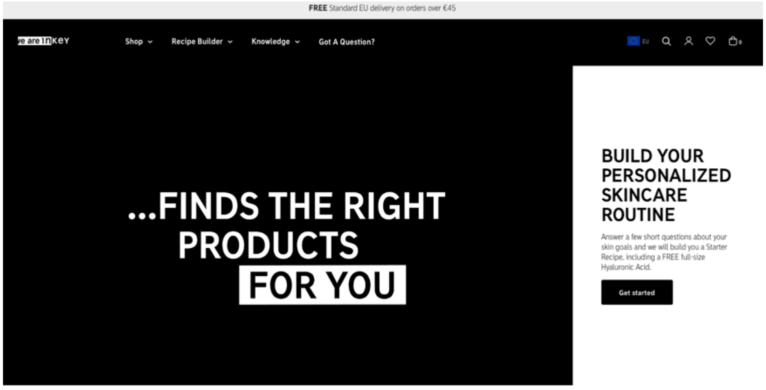
In the course of my master thesis, I am investigating the online buying behavior of beauty products (skincare, personal care, makeup, fragrance). If you could be so kind and fill out this 10-minute survey I would be very grateful. Your information will of course remain anonymous.

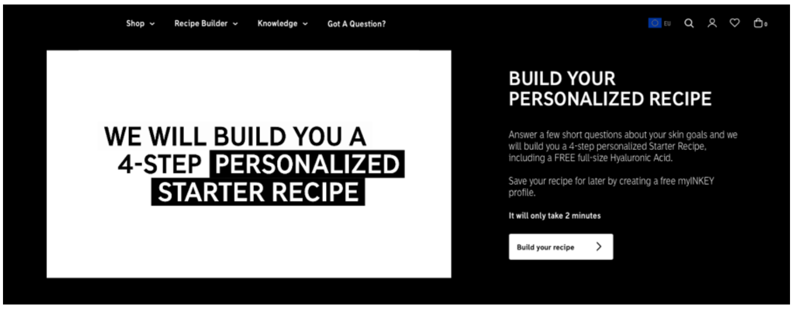
Thank you very much,

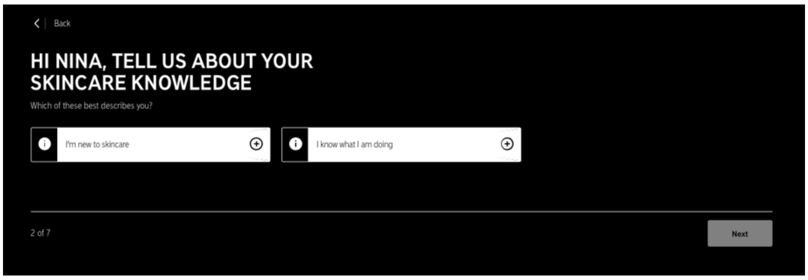
Nina

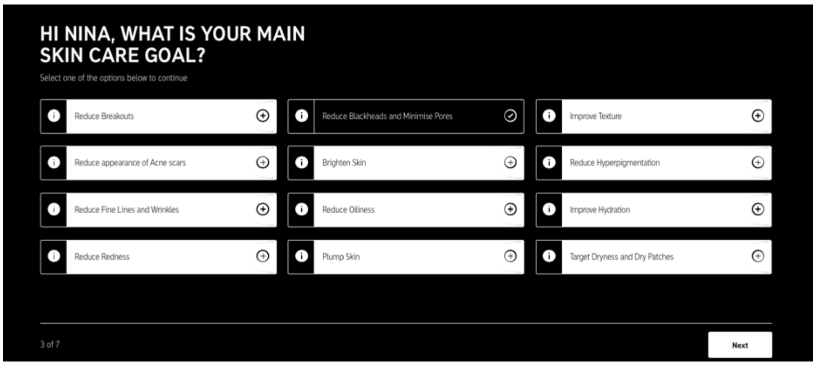
Imagine you are shopping the websites of different brands to buy new skincare products and you have taken advantage of their personal quizzes to assist with finding the right product for you. The quizzes are displayed below:

1) The Inkey List

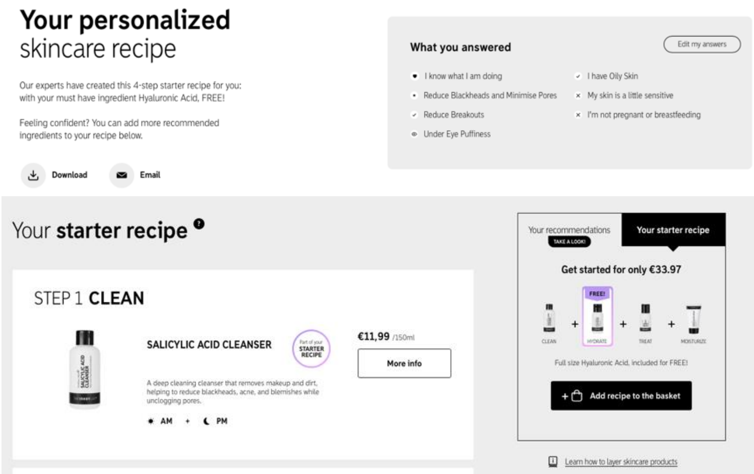


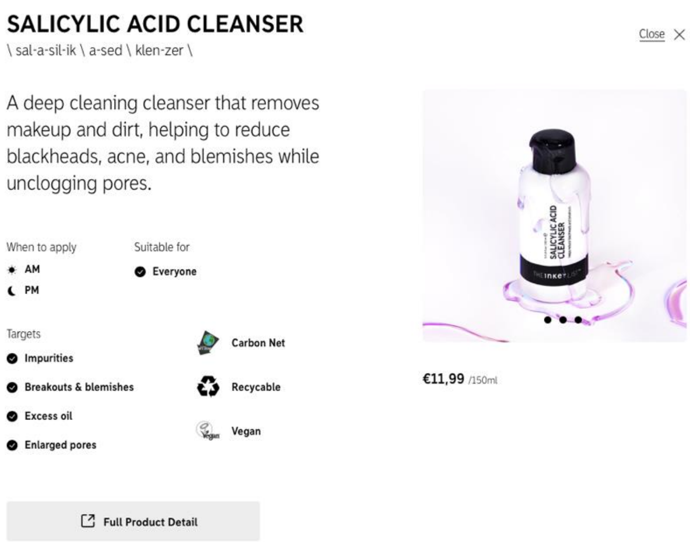






This is your final result:





On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) "I intend to buy this product."						
b) "I am satisfied with the information regarding the product."						
c) "I feel informed about the product."						
d) "I am satisfied with the way the product information is presented to me."						
e) "The information about the product is the same I would have received by instore personnel."						
f) "I feel as if this product is just the right one to cater my individual needs."						
g) "I enjoy reading the information."						

2) The Ordinary

Clinical Formulations with Integrity.

The Ordinary.

01. Hi :-)
Welcome to our Regimen Builder. What's your name?

Enter your name

This will take 4 minutes.

OK

01.

08.

03. I'm unsure what my concerns are.

Select up to 3.

A. I am looking to protect my skin against environmental damage (antioxidant support, protect against visible signs of aging caused by environmental stressors).

B. I experience signs of congestion (visible shine, enlarged pores, blemishes).

C. I experience signs of dryness (dry patches, feelings of tightness, flaking).

D. I experience dullness of the skin (lack of radiance or brightness).

01.

07.

04. How would you describe or rate the severity of these concerns?

Drag slider to indicate concern level (1 - mild, 2 - moderate, 3 - severe).

B. Signs of congestion

1 2 3

01.

07.

06. What is your age group?

Select 1.

- A. 18 or under
- B. 19 to 29
- C. 30 to 39
- D. 40 to 49
- E. 50 and over
- F. Prefer not to answer

01.

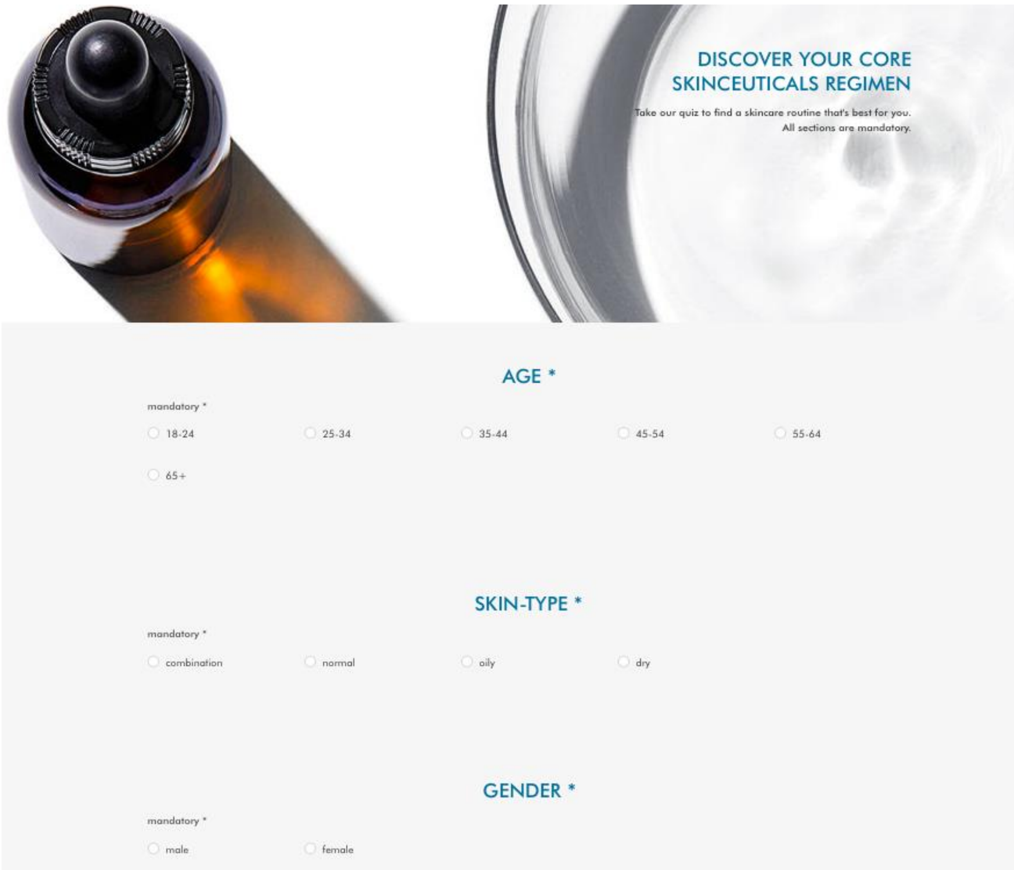
07.

This is your final result:

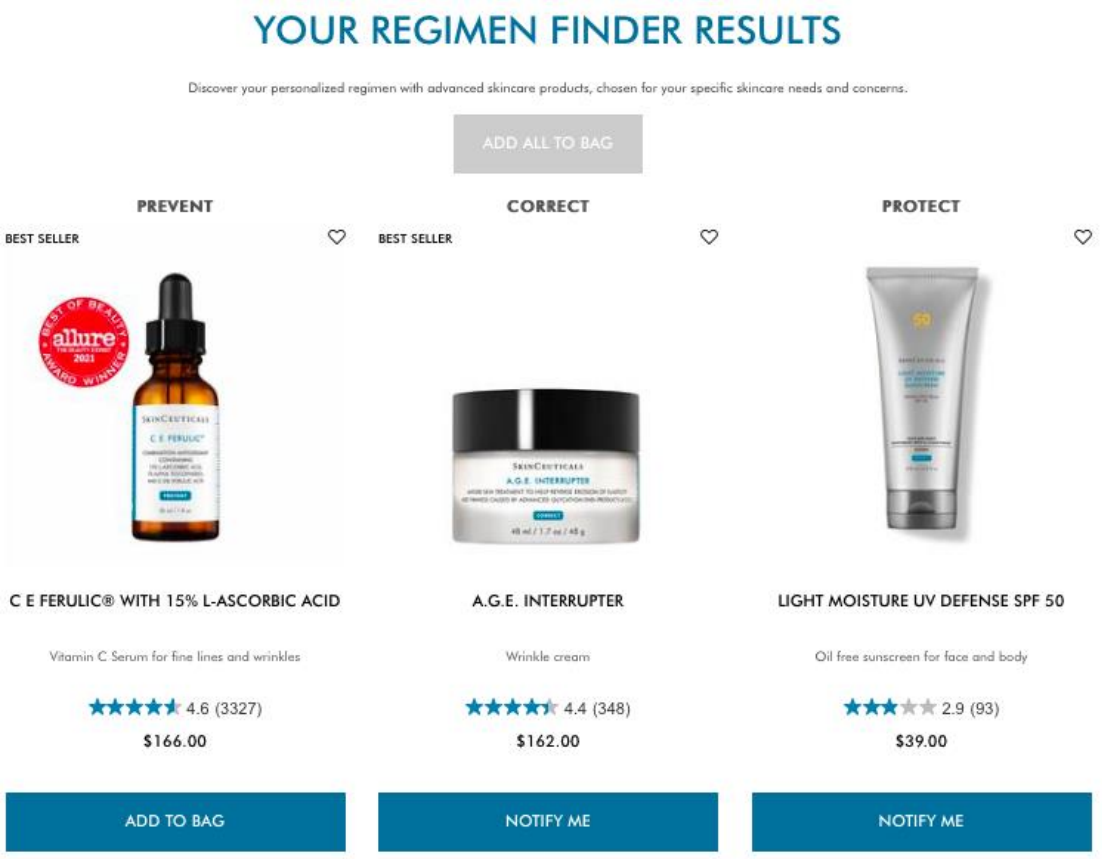
On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) “I intend to buy this product.”						
b) “I am satisfied with the information regarding the product.”						
c) “I feel informed about the product.”						
d) “I am satisfied with the way the product information is presented to me.”						
e) “The information about the product is the same I would have received by instore personnel.”						
f) “I feel as if this product is just the right one to cater my individual needs.”						
g) “I enjoy reading the information.”						

3) SkinCeuticals



This is your final result:



On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) "I intend to buy this product."						
b) "I am satisfied with the information regarding the product."						
c) "I feel informed about the product."						
d) "I am satisfied with the way the product information is presented to me."						
e) "The information about the product is the same I would have received by instore personnel."						
f) "I feel as if this product is just the right one to cater my individual needs."						
g) "I enjoy reading the information."						

4) Did you recently buy a beauty item (skincare, personal care, makeup, fragrance) within the last 30 days and if yes, where did you buy it?

	physical store	online	did not buy a product
a) Skincare			
b) Personal Care			
c) Makeup			
d) Fragrance			

5) What is your favorite beauty brand? _______________

6) On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?
Note: other beauty categories = personal care (haircare, deodorant), makeup, fragrance

	1	2	3	4	5	no answer
a) "I have trouble finding the right skincare product because the topic is complex to me."						
b) "I find it harder to find the right skincare product than a product from another beauty category."						
c) "I value in-store assistance when I am shopping a skincare product."						
d) "I trust instore personnel to assist me in finding the right skincare product."						
e) "I have taken advantage of virtual assistance (personal quiz, routine finder,…) when I shopped skincare online."						
f) "I think, that taking a quiz to find out what the right product is for me, is fun."						
g) "I would be open to purchase a product that was suggested to my via an online assistance tool."						
h) "I regularly buy skincare products."						
i) "I buy skincare products more often than products from other beauty categories."						
j) "Quality is very important to me when it comes to skincare."						
k) "The quality of skincare is more important to me than the quality of other beauty categories."						
l) "A low price is important to me when buying skincare."						
m) "I spend more money on skincare than on other beauty categories."						

7) On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) "I would rather purchase a product offered to me as the result of a personalized quiz than when I have to search for information by myself."						
b) "I would be more open to buying products online if the website offered a quiz comparable to instore assistance."						
c) "I would like to take advantage of personalized quizzes regarding other beauty categories (e.g. personal care, makeup, fragrance) as well."						
d) "Taking a quiz is more fun to me than searching for information on the product page."						
e) "I am more satisfied with websites that offer additional services, such as quizzes and personal assistance."						
f) "I am having more fun on my online shopping trip when I am participating in a personalized quiz."						
g) "I think personalized quizzes are a great tool to help me find the right skincare."						
h) "I hesitate to make use of personalized quizzes because I am concerned about the privacy of my data."						

PERSONAL QUESTIONS

8) What gender do you identify with?

- ☐ female
- ☐ male
- ☐ other

9) How old are you?

- ☐ <18
- ☐ 18-25
- ☐ 26-40
- ☐ >40

10) What is your monthly income in € (without state support)?

- ☐ less than 400
- ☐ 401 – 1.500

- ☐ 1.501 – 4.000
- ☐ more than 4.000
- ☐ Prefer not to say

11) How many hours/week do you spend on the internet (phone, tablet, computer,…)?
- ☐ less than 7
- ☐ 7–15
- ☐ more than 15

12) How do you prefer to shop beauty products?
- ☐ Offline (Store, Pharmacy, Supermarket,…)
- ☐ Online
- ☐ No preference

SOURCES

The Inkey List:
Receipe Builder Start: https://eu.theinkeylist.com/pages/recipe
Receipe Builder 1: https://eu.theinkeylist.com/pages/recipe
Receipe Builder 2: https://eu.theinkeylist.com/pages/recipe-builder#/
Receipe Builder 3: https://eu.theinkeylist.com/pages/recipe-builder#/new
Receipe Builder Result: https://eu.theinkeylist.com/pages/recipe-results/#/sacl,hyal,beta,phat,omem/sacl,hyal,beta,succ,niac,phat,cafe,omem,spfs,kaol?custom=1

The Ordinary:
Regimen Builder Start: https://deciem.com/en-us/theordinary/regimen-builder.html
Regimen Builder 1: https://deciem.com/en-us/theordinary/regimen-builder.html
Regimen Builder 2: https://deciem.com/en-us/theordinary/regimen-builder.html
Regimen Builder 3: https://deciem.com/en-us/theordinary/regimen-builder.html
Regimen Builder Result: https://deciem.com/en-us/regimen-results

SkinCeuticals:
Routine Finder: https://www.skinceuticals.com/skinc-finder?qid=routine-finder
Routine Finder Result: https://www.skinceuticals.com/skinc-finder?step_age=f873be6f874258b44f95bdca12&step_skin-type=06f4b9bd811c57e631d5170f57&step_gender=300e314261d6d7ea1f7d9dd078&step_concern=7b7bc213d376074b9f2e5e4320

2.2 Regular Questionnaire

QUESTIONNAIRE II

ONLINE BUYING BEHAVIOR IN COSMETICS

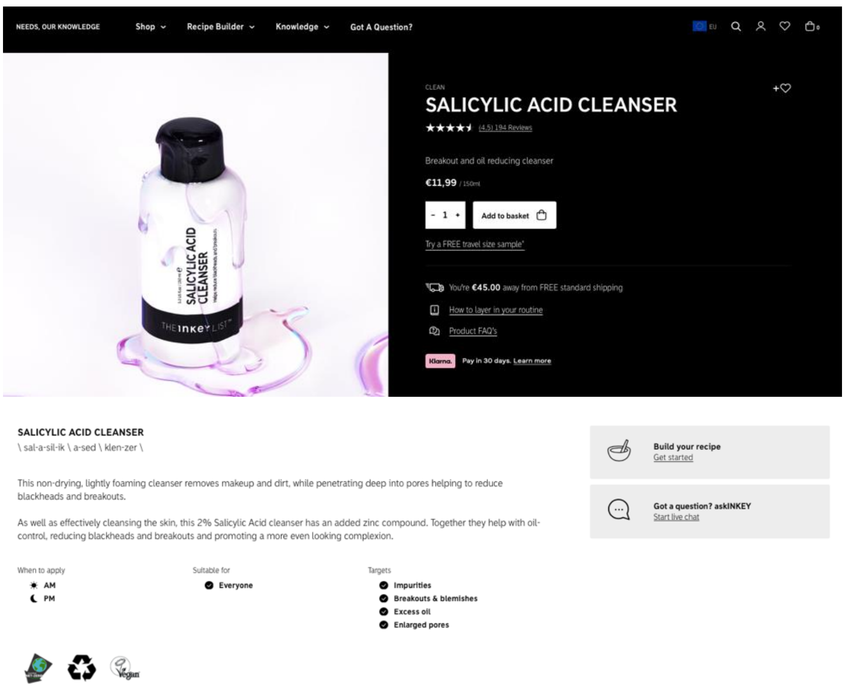
In the course of my master thesis, I am investigating the online buying behavior of beauty products (skincare, personal care, makeup, fragrance). If you could be so kind and fill out this 10-minute survey I would be very grateful. Your information will of course remain anonymous.

Thank you very much,

Nina

Imagine you are currently looking for a new skincare routine on the websites of different skincare brands. Please rate the following pictures regarding the aspects shown below.

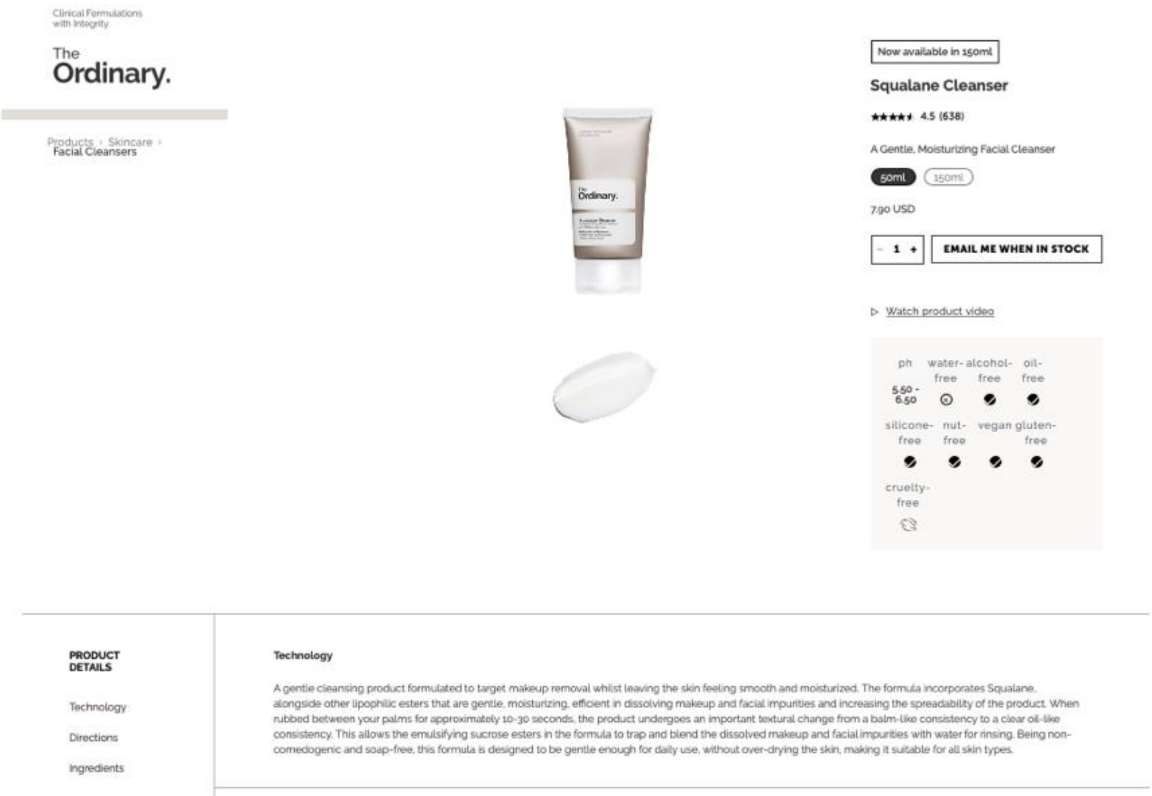
1) The Inkey List



On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) “I intend to buy this product.”						
b) “I am satisfied with the information regarding the product.”						
c) “I feel informed about the product.”						
d) “I am satisfied with the way the product information is presented to me.”						
e) “The information about the product is the same I would have received by instore personnel.”						
f) “I feel as if this product is just the right one to cater my individual needs.”						
g) “I enjoy reading the information.”						

2) The Ordinary



On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) "I intend to buy this product."						
b) "I am satisfied with the information regarding the product."						
c) "I feel informed about the product."						
d) "I am satisfied with the way the product information is presented to me."						
e) "The information about the product is the same I would have received by instore personnel."						
f) "I feel as if this product is just the right one to cater my individual needs."						
g) "I enjoy reading the information."						

3) SkinCeuticals

On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) "I intend to buy this product."						
b) "I am satisfied with the information regarding the product."						
c) "I feel informed about the product."						
d) "I am satisfied with the way the product information is presented to me."						
e) "The information about the product is the same I would have received by instore personnel."						
f) "I feel as if this product is just the right one to cater my individual needs."						
g) "I enjoy reading the information."						

4) Did you recently buy a beauty item (skincare, personal care, makeup, fragrance) within the last 30 days and if yes, where did you buy it?

	physical store	online	did not buy a product
a) Skincare			
b) Personal Care			
c) Makeup			
d) Fragrance			

5) What is your favorite beauty brand? ________________

6) On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

Note: other beauty categories = personal care (haircare, deodorant), makeup, fragrance

	1	2	3	4	5	no answer
a) "I have trouble finding the right skincare product because the topic is complex to me."						
b) "I find it harder to find the right skincare product than a product from another beauty category."						
c) "I value in-store assistance when I am shopping a skincare product."						
d) "I trust instore personnel to assist me in finding the right skincare product."						
e) "I have taken advantage of virtual assistance (personal quiz, routine finder,…) when I shopped skincare online."						
f) "I think, that taking a quiz to find out what the right product is for me, is fun."						

g) “I would be open to purchase a product that was suggested to my via an online assistance tool.”						
h) “I regularly buy skincare products.”						
i) “I buy skincare products more often than products from other beauty categories.”						
j) “Quality is very important to me when it comes to skincare.”						
k) “The quality of skincare is more important to me than the quality of other beauty categories.”						
l) “A low price is important to me when buying skincare.”						
m) “I spend more money on skincare than on other beauty categories.”						

7) On a scale from 1 (very much) to 5 (not very much) how much do the following statements represent your personal opinions and behavior?

	1	2	3	4	5	no answer
a) “I would rather purchase a product offered to me as the result of a personalized quiz than when I have to search for information by myself.”						
b) “I would be more open to buying products online if the website offered a quiz comparable to instore assistance.”						
c) “I would like to take advantage of personalized quizzes regarding other beauty categories (e.g. personal care, makeup, fragrance) as well.”						
d) “Taking a quiz is more fun to me than searching for information on the product page.”						
e) “I am more satisfied with websites that offer additional services, such as quizzes and personal assistance.”						
f) “I am having more fun on my online shopping trip when I am participating in a personalized quiz.”						
g) “I think personalized quizzes are a great tool to help me find the right skincare.”						
h) “I hesitate to make use of personalized quizzes because I am concerned about the privacy of my data.”						

PERSONAL QUESTIONS

8) What gender do you identify with?
- ☐ female
- ☐ male
- ☐ other

9) How old are you?
- ☐ <18
- ☐ 18-25
- ☐ 26-40
- ☐ >40

10) What is your monthly income in € (without state support)?
- ☐ less than 400
- ☐ 401 – 1.500
- ☐ 1.501 – 4.000
- ☐ more than 4.000
- ☐ prefer not to say

11) How many hours/week do you spend on the internet (phone, tablet, computer,…)?
- ☐ less than 7
- ☐ 7–15
- ☐ more than 15

12) How do you prefer to shop beauty products?
- ☐ Offline (Store, Pharmacy, Supermarket,…)
- ☐ Online
- ☐ No preference

SOURCES

The Inkey List:
Regular Product Page: https://eu.theinkeylist.com/products/salicylic-acid-cleanser

The Ordinary:
Regular Product Page: https://deciem.com/en-us/theordinary/mas-rdn-squalane-cleanser.html?dwvar_mas-rdn-squalane-cleanser_size=50ml&quantity=1

SkinCeuticals:
Regular Product Page: https://www.skinceuticals.com/c-e-ferulic-with-15-l-ascorbic-acid-635494263008.html

3. Results

The following chapter displays the results and tables generated with the program SPSS in order to analyze and evaluate the survey results.

3.1 Question 1 – The Inkey List

Experimental Group – Frequency Table Purchase Intention – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	1	2,0	2,0	2,0
	much	26	52,0	52,0	54,0
	neutral	17	34,0	34,0	88,0
	not much	1	2,0	2,0	90,0
	not very much	5	10,0	10,0	100,0
	Total	50	100,0	100,0	

Table 2. Experimental Group – Frequency Table Purchase Intention – The Inkey List (own illustration)

Experimental Group – Frequency Table Satisfaction w. Product Information – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	9	18,0	18,0	18,0
	much	19	38,0	38,0	56,0
	neutral	19	38,0	38,0	94,0
	not much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 3. Experimental Group – Frequency Table Satisfaction w. Product Information – The Inkey List (own illustration)

Experimental Group – Frequency Table Feeling Informed – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	7	14,0	14,0	14,0
	much	25	50,0	50,0	64,0
	neutral	17	34,0	34,0	98,0
	not much	1	2,0	2,0	100,0
	Total	50	100,0	100,0	

Table 4. Experimental Group – Frequency Table Feeling Informed – The Inkey List (own illustration)

Experimental Group – Frequency Table Satisfaction w. Product Presentation – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	19	38,0	38,0	38,0
	much	16	32,0	32,0	70,0
	neutral	11	22,0	22,0	92,0
	not much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 5. Experimental Group – Frequency Table Satisfaction w. Product Presentation – The Inkey List (own illustration)

Experimental Group – Frequency Table Similarity to In-Store Information – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	16,0	16,0	16,0
	very much	1	2,0	2,0	18,0
	much	3	6,0	6,0	24,0
	neutral	11	22,0	22,0	46,0
	not much	27	54,0	54,0	100,0
	Total	50	100,0	100,0	

Table 6. Experimental Group – Frequency Table Similarity to In-Store Information – The Inkey List (own illustration)

Experimental Group – Frequency Table Product-Fit for Individual Needs – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	4	8,0	8,0	14,0
	much	14	28,0	28,0	42,0
	neutral	23	46,0	46,0	88,0
	not much	3	6,0	6,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 7. Experimental Group – Frequency Table Product-Fit for Individual Needs – The Inkey List (own illustration)

Experimental Group – Frequency Table Pleasure of Receiving Product Information – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	very much	14	28,0	28,0	28,0
	much	15	30,0	30,0	58,0
	neutral	12	24,0	24,0	82,0
	not much	6	12,0	12,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 8. Experimental Group – Frequency Table Pleasure of Receiving Product Information – The Inkey List (own illustration)

Regular Group – Frequency Table Purchase Intention – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	15	30,0	30,0	30,0
	neutral	10	20,0	20,0	50,0
	not much	17	34,0	34,0	84,0
	not very much	8	16,0	16,0	100,0
	Total	50	100,0	100,0	

Table 9. Regular Group – Frequency Table Purchase Intention – The Inkey List (own illustration)

Regular Group – Frequency Table Satisfaction w. Product Information – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	4	8,0	8,0	8,0
	much	22	44,0	44,0	52,0
	neutral	10	20,0	20,0	72,0
	not much	10	20,0	20,0	92,0
	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 10. Regular Group – Frequency Table Satisfaction w. Product Information – The Inkey List (own illustration)

Regular Group – Frequency Table Feeling Informed – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	10	20,0	20,0	20,0
	much	19	38,0	38,0	58,0
	neutral	10	20,0	20,0	78,0
	not much	7	14,0	14,0	92,0

	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 11. Regular Group – Frequency Table Feeling Informed – The Inkey List (own illustration)

Regular Group – Frequency Table Satisfaction w. Product Presentation – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	10	20,0	20,0	20,0
	much	17	34,0	34,0	54,0
	neutral	16	32,0	32,0	86,0
	not much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 12. Regular Group – Frequency Table Satisfaction w.Product Presentation – The Inkey List (own illustration)

Regular Group – Frequency Table Similarity to In-Store Information – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	7	14,0	14,0	14,0
	neutral	27	54,0	54,0	68,0
	not much	12	24,0	24,0	92,0
	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 13. Regular Group – Frequency Table Similarity to In-Store Information – The Inkey List (own illustration)

Regular Group – Frequency Table Product-Fit for Individual Needs – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	3	6,0	6,0	18,0
	neutral	9	18,0	18,0	36,0
	not much	20	40,0	40,0	76,0
	not very much	12	24,0	24,0	100,0
	Total	50	100,0	100,0	

Table 14. Regular Group – Frequency Table Product-Fit for Individual Needs – The Inkey List (own illustration)

Regular Group – Frequency Table Pleasure of Receiving Product Information – The Inkey List					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	10	20,0	20,0	20,0
	much	16	32,0	32,0	52,0
	neutral	6	12,0	12,0	64,0
	not much	14	28,0	28,0	92,0
	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 15. Regular Group – Frequency Table Pleasure of Receiving Product Information – The Inkey List (own illustration)

3.2 Question 2 – The Ordinary

Experimental Group – Frequency Table Purchase Intention – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	23	46,0	46,0	46,0
	neutral	13	26,0	26,0	72,0
	not very much	14	28,0	28,0	100,0
	Total	50	100,0	100,0	

Table 16. Experimental Group – Frequency Table Purchase Intention – The Ordinary (own illustration)

Experimental Group – Frequency Table Satisfaction w. Product Information – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	7	14,0	14,0	14,0
	much	15	30,0	30,0	44,0
	neutral	17	34,0	34,0	78,0
	not much	2	4,0	4,0	82,0
	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 17. Experimental Group – Frequency Table Satisfaction w. Product Information – The Ordinary (own illustration)

Experimental Group – Frequency Table Feeling Informed – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	4	8,0	8,0	8,0

	much	16	32,0	32,0	40,0
	neutral	19	38,0	38,0	78,0
	not much	2	4,0	4,0	82,0
	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 18. Experimental Group – Frequency Table Feeling Informed – The Ordinary (own illustration)

Experimental Group – Frequency Table Satisfaction w. Product Presentation – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	3	6,0	6,0	6,0
	much	15	30,0	30,0	36,0
	neutral	14	28,0	28,0	64,0
	not much	9	18,0	18,0	82,0
	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 19. Experimental Group – Frequency Table Satisfaction w.Product Presentation – The Ordinary (own illustration)

Experimental Group – Frequency Table Similarity to In-Store Information – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	12	24,0	24,0	24,0
	very much	1	2,0	2,0	26,0
	much	10	20,0	20,0	46,0
	neutral	10	20,0	20,0	66,0
	not much	14	28,0	28,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 20. Experimental Group – Frequency Table Similarity to In-Store Information – The Ordinary (own illustration)

Experimental Group – Frequency Table Product-Fit for Individual Needs – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	13	26,0	26,0	26,0
	neutral	18	36,0	36,0	62,0
	not much	10	20,0	20,0	82,0

	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 21. Experimental Group – Frequency Table Product-Fit for Individual Needs – The Ordinary (own illustration)

Experimental Group – Frequency Table Pleasure of Receiving Product Information – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	12	24,0	24,0	24,0
	much	7	14,0	14,0	38,0
	neutral	16	32,0	32,0	70,0
	not much	6	12,0	12,0	82,0
	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 22. Experimental Group – Frequency Table Pleasure of Receiving Product Information – The Ordinary (own illustration)

Regular Group – Frequency Table Purchase Intention – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	14	28,0	28,0	28,0
	neutral	19	38,0	38,0	66,0
	not much	10	20,0	20,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 23. Regular Group – Frequency Table Purchase Intention – The Ordinary (own illustration)

Regular Group – Frequency Table Satisfaction w. Product Information – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	4	8,0	8,0	8,0
	much	9	18,0	18,0	26,0
	neutral	31	62,0	62,0	88,0
	not much	3	6,0	6,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 24. Regular Group – Frequency Table Satisfaction w.Product Information – The Ordinary (own illustration)

Regular Group – Frequency Table Feeling Informed – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	7	14,0	14,0	14,0
	much	6	12,0	12,0	26,0
	neutral	28	56,0	56,0	82,0
	not much	6	12,0	12,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 25. Regular Group – Frequency Table Feeling Informed – The Ordinary (own illustration)

Regular Group – Frequency Table Satisfaction w. Product Presentation – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	7	14,0	14,0	14,0
	much	7	14,0	14,0	28,0
	neutral	13	26,0	26,0	54,0
	not much	20	40,0	40,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 26. Regular Group – Frequency Table Satisfaction w.Product Presentation – The Ordinary (own illustration)

Regular Group – Frequency Table Similarity to In-Store Information – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	6	12,0	12,0	12,0
	neutral	31	62,0	62,0	74,0
	not much	6	12,0	12,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 27. Regular Group – Frequency Table Similarity to In-Store Information – The Ordinary (own illustration)

Regular Group – Frequency Table Product-Fit for Individual Needs – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	13	26,0	26,0	26,0

		Frequency	Percent	Valid Percent	Cumulative Percent
	neutral	16	32,0	32,0	58,0
	not much	14	28,0	28,0	86,0
	not very much	7	14,0	14,0	100,0
	Gesamt	50	100,0	100,0	

Table 28. Regular Group – Frequency Table Product-Fit for Individual Needs – The Ordinary (own illustration)

Regular Group – Frequency Table Pleasure of Receiving Product Information – The Ordinary					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	4	8,0	8,0	8,0
	much	3	6,0	6,0	14,0
	neutral	13	26,0	26,0	40,0
	not much	27	54,0	54,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 29. Regular Group – Frequency Table Pleasure of Receiving Product Information – The Ordinary (own illustration)

3.3 Question 3 – Skinceuticals

Experimental Group – Frequency Table Purchase Intention – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	20	40,0	40,0	40,0
	neutral	6	12,0	12,0	52,0
	not much	13	26,0	26,0	78,0
	not very much	11	22,0	22,0	100,0
	Total	50	100,0	100,0	

Table 30. Experimental Group – Frequency Table Purchase Intention – Skinceuticals (own illustration)

Experimental Group – Frequency Table Satisfaction w. Product Information – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	3	6,0	6,0	6,0
	much	6	12,0	12,0	18,0
	neutral	14	28,0	28,0	46,0
	not much	19	38,0	38,0	84,0
	not very much	8	16,0	16,0	100,0

	Total	50	100,0	100,0	

Table 31. Experimental Group – Frequency Table Satisfaction w.Product Information – Skinceuticals (own illustration)

Experimental Group – Frequency Table Feeling Informed – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	10	20,0	20,0	20,0
	neutral	11	22,0	22,0	42,0
	not much	18	36,0	36,0	78,0
	not very much	11	22,0	22,0	100,0
	Total	50	100,0	100,0	

Table 32. Experimental Group – Frequency Table Feeling Informed – Skinceuticals (own illustration)

Experimental Group – Frequency Table Satisfaction w. Product Presentation – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	14	28,0	28,0	28,0
	neutral	10	20,0	20,0	48,0
	not much	18	36,0	36,0	84,0
	not very much	8	16,0	16,0	100,0
	Total	50	100,0	100,0	

Table 33. Experimental Group – Frequency Table Satisfaction w.Product Presentation – Skinceuticals (own illustration)

Experimental Group – Frequency Table Similarity to In-Store Information – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	16,0	16,0	16,0
	very much	2	4,0	4,0	20,0
	much	1	2,0	2,0	22,0
	neutral	17	34,0	34,0	56,0
	not much	14	28,0	28,0	84,0
	not very much	8	16,0	16,0	100,0
	Total	50	100,0	100,0	

Table 34. Experimental Group – Frequency Table Similarity to In-Store Information – Skinceuticals (own illustration)

Experimental Group – Frequency Table Product-Fit for Individual Needs – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	2	4,0	4,0	4,0
	much	7	14,0	14,0	18,0
	neutral	18	36,0	36,0	54,0
	not much	14	28,0	28,0	82,0
	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 35. Experimental Group – Frequency Table Product-Fit for Individual Needs – Skinceuticals (own illustration)

Experimental Group – Frequency Table Pleasure of Receiving Product Information – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	4	8,0	8,0	20,0
	neutral	15	30,0	30,0	50,0
	not much	15	30,0	30,0	80,0
	not very much	10	20,0	20,0	100,0
	Total	50	100,0	100,0	

Table 36. Experimental Group – Frequency Table Pleasure of Receiving Product Information – Skinceuticals (own illustration)

Regular Group – Frequency Table Purchase Intention – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	3	6,0	6,0	6,0
	neutral	13	26,0	26,0	32,0
	not much	13	26,0	26,0	58,0
	not very much	21	42,0	42,0	100,0
	Total	50	100,0	100,0	

Table 37. Regular Group – Frequency Table Purchase Intention – Skinceuticals (own illustration)

Regular Group – Frequency Table Satisfaction w. Product Information – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	6	12,0	12,0	12,0

		Frequency	Percent	Valid Percent	Cumulative Percent
	neutral	20	40,0	40,0	52,0
	not much	17	34,0	34,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 38. Regular Group – Frequency Table Satisfaction w.Product Information – Skinceuticals (own illustration)

Regular Group – Frequency Table Feeling Informed – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	3	6,0	6,0	6,0
	much	3	6,0	6,0	12,0
	neutral	14	28,0	28,0	40,0
	not much	23	46,0	46,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 39. Regular Group – Frequency Table Feeling Informed – Skinceuticals (own illustration)

Regular Group – Frequency Table Satisfaction w. Product Presentation – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	10	20,0	20,0	20,0
	neutral	7	14,0	14,0	34,0
	not much	26	52,0	52,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 40. Regular Group – Frequency Table Satisfaction w. Product Presentation – Skinceuticals (own illustration)

Regular Group – Frequency Table Similarity to In-Store Information – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	3	6,0	6,0	6,0
	neutral	27	54,0	54,0	60,0
	not much	3	6,0	6,0	66,0
	not very much	17	34,0	34,0	100,0
	Total	50	100,0	100,0	

Table 41. Regular Group – Frequency Table Similarity to In-Store Information – Skinceuticals (own illustration)

Regular Group – Frequency Table Product-Fit for Individual Needs – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	3	6,0	6,0	6,0
	neutral	10	20,0	20,0	26,0
	not much	22	44,0	44,0	70,0
	not very much	15	30,0	30,0	100,0
	Total	50	100,0	100,0	

Table 42. Regular Group – Frequency Table Product-Fit for Individual Needs – Skinceuticals (own illustration)

Regular Group – Frequency Table Pleasure of Receiving Product Information – Skinceuticals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	much	6	12,0	12,0	12,0
	neutral	11	22,0	22,0	34,0
	not much	24	48,0	48,0	82,0
	not very much	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 43. Regular Group – Frequency Table Pleasure of Receiving Product Information – Skinceuticals (own illustration)

3.4 Question 4 – Category Purchases

Experimental Group – Frequency Table Category Purchase – Skincare				
		Answers		
		N	Percent	Percent of Cases
Skincare[a]	Physical Store	30	55,6%	60,0%
	Online	14	25,9%	28,0%
	Did not buy a product	10	18,5%	20,0%
Total		54	100,0%	108,0%
a. Dichotomy group tabulated at value 1				

Table 44. Experimental Group – Frequency Table Category Purchases – Skincare (own illustration)

Experimental Group – Frequency Table Category Purchase – Personal Care				
		Answers		
		N	Percent	Percent of Cases
Personal Care[a]	Physical Store	36	70,6%	72,0%
	Online	1	2,0%	2,0%

	Did not buy a product	14	27,5%	28,0%
Total		51	100,0%	102,0%
a. Dichotomy group tabulated at value 1				

Table 45. Experimental Group – Frequency Table Category Purchases – Personal Care (own illustration)

Experimental Group – Frequency Table Category Purchase – Makeup				
		Answers		
		N	Percent	Percent of Cases
Makeup[a]	Physical Store	16	32,0%	32,0%
	Online	7	14,0%	14,0%
	Did not buy a product	27	54,0%	54,0%
Total		50	100,0%	100,0%
a. Dichotomy group tabulated at value 1				

Table 46. Experimental Group – Frequency Table Category Purchases – Makeup (own illustration)

Experimental Group – Frequency Table Category Purchase – Fragrance				
		Answers		
		N	Percent	Percent of Cases
Fragrance[a]	Physical Store	15	30,0%	30,0%
	Online	3	6,0%	6,0%
	Did not buy a product	32	64,0%	64,0%
Total		50	100,0%	100,0%
a. Dichotomy group tabulated at value 1				

Table 47. Experimental Group – Frequency Table Category Purchases – Fragrance (own illustration)

Regular Group – Frequency Table Category Purchase – Skincare				
		Answers		
		N	Percent	Percent of Cases
Skincare[a]	Physical Store	24	48,0%	48,0%
	Online	7	14,0%	14,0%
	Did not buy a product	19	38,0%	38,0%
Total		50	100,0%	100,0%
a. Dichotomy group tabulated at value 1				

Table 48. Regular Group – Frequency Table Category Purchases – Skincare (own illustration)

Regular Group – Frequency Table Category Purchase – Personal Care			
	Answers		Percent of Cases

		N	Percent	
Personal Care[a]	Physical Store	34	68,0%	68,0%
	Did not buy a product	16	32,0%	32,0%
Total		50	100,0%	100,0%
a. Dichotomy group tabulated at value 1				

Table 49. Regular Group – Frequency Table Category Purchases – Personal Care (own illustration)

Regular Group – Frequency Table Category Purchase – Makeup				
		Answers		
		N	Percent	Percent of Cases
Makeup[a]	Physical Store	22	41,5%	44,0%
	Online	7	13,2%	14,0%
	Did not buy a product	24	45,3%	48,0%
Total		53	100,0%	106,0%
a. Dichotomy group tabulated at value 1				

Table 50. Regular Group – Frequency Table Category Purchases – Makeup (own illustration)

Regular Group – Frequency Table Category Purchase – Fragrance				
		Answers		
		N	Percent	Percent of Cases
Fragrance[a]	Physical Store	13	26,0%	26,0%
	Online	8	16,0%	16,0%
	Did not buy a product	29	58,0%	58,0%
Total		50	100,0%	100,0%
a. Dichotomy group tabulated at value 1				

Table 51. Regular Group – Frequency Table Category Purchases – Fragrance (own illustration)

3.5 Question 5 – Favorite Beauty Brand

Experimental Group – Frequency Table Favorite Beauty Brand					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-	3	6,0	6,0	6,0
	Alverde	3	6,0	6,0	12,0
	Artdeco	3	6,0	6,0	18,0
	Asam beauty	2	4,0	4,0	22,0
	Balea	5	10,0	10,0	32,0
	Catrice	1	2,0	2,0	34,0
	Chanel	5	10,0	10,0	44,0

	Clarins	2	4,0	4,0	48,0
	Clinique, Clarins	2	4,0	4,0	52,0
	L'Oreal	5	10,0	10,0	62,0
	L‘Oreal	1	2,0	2,0	64,0
	Loreal	1	2,0	2,0	66,0
	Mac	4	8,0	8,0	74,0
	Maybelline New York	3	6,0	6,0	80,0
	Maybelline NY	2	4,0	4,0	84,0
	the body shop	3	6,0	6,0	90,0
	The Ordinary	3	6,0	6,0	96,0
	Unifarco	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 52. Experimental Group – Frequency Table Beauty Brand (own illustration)

Regular Group – Frequency Table Favorite Beauty Brand					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-	6	12,0	12,0	12,0
	Alverde	4	8,0	8,0	20,0
	Artdeco	3	6,0	6,0	26,0
	Chanel	3	6,0	6,0	32,0
	Clarins	3	6,0	6,0	38,0
	Clinique	4	8,0	8,0	46,0
	L'Òreal	4	8,0	8,0	54,0
	Loreal	3	6,0	6,0	60,0
	Mac	6	12,0	12,0	72,0
	Maybelline New York	4	8,0	8,0	80,0
	Maybelline NY	3	6,0	6,0	86,0
	the body shop	3	6,0	6,0	92,0
	Unifarco	4	8,0	8,0	100,0
	Gesamt	50	100,0	100,0	

Table 53. Regular Group – Frequency Table Beauty Brand (own illustration)

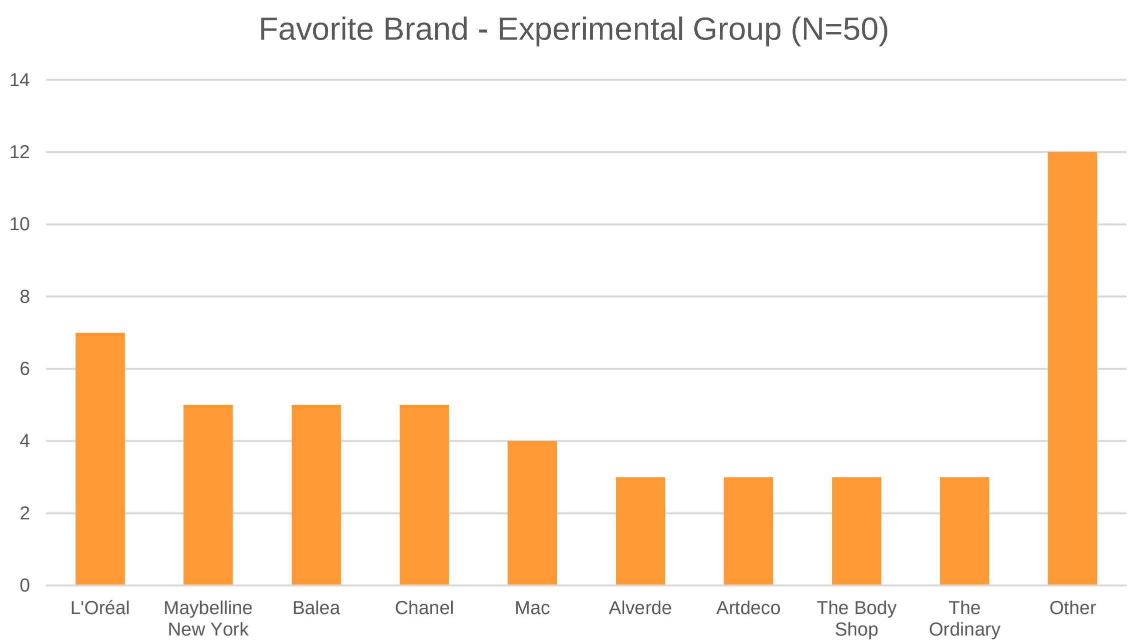


Figure 1. Favorite Brand – Experimental Group (own Illustration)

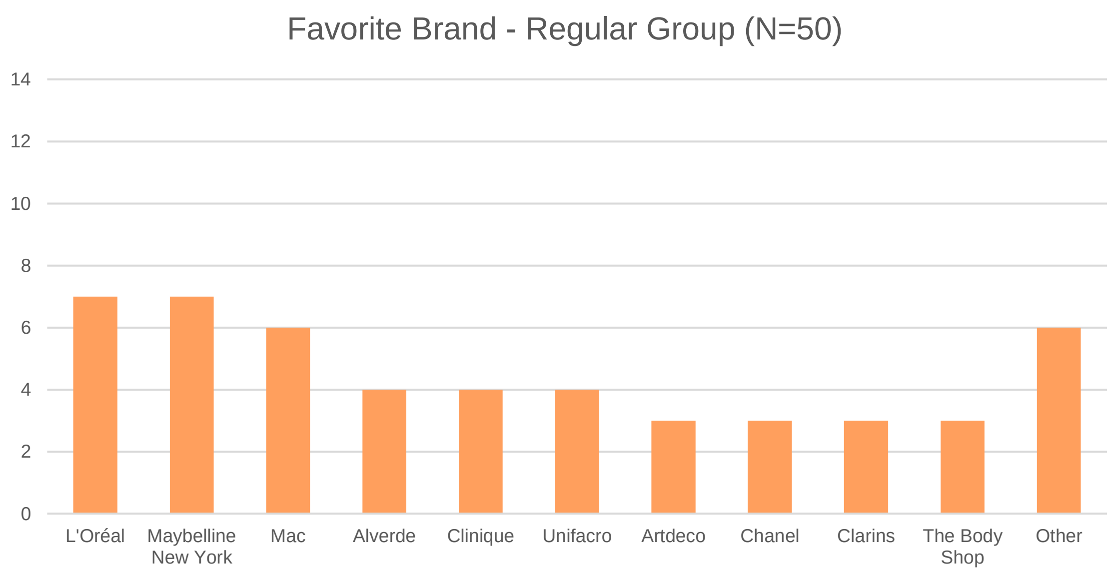


Figure 2. Favorite Brand – Regular Group (own Illustration)

3.6 Question 6 – General Questions

Experimental Group – Frequency Table General Questions – Difficulties w. Finding the Right Product					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	19	38,0	38,0	50,0
	neutral	12	24,0	24,0	74,0
	not much	7	14,0	14,0	88,0

	not very much	6	12,0	12,0	100,0
	Total	50	100,0	100,0	

Table 54. Experimental Group – Frequency Table General Questions – Difficulties w. Finding the Right Product (own illustration)

Experimental Group – Frequency Table General Questions – Difficulties w. Finding Skincare compared to other Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	12	24,0	24,0	24,0
	much	12	24,0	24,0	48,0
	neutral	9	18,0	18,0	66,0
	not much	12	24,0	24,0	90,0
	not very much	5	10,0	10,0	100,0
	Total	50	100,0	100,0	

Table 55. Experimental Group – Frequency Table General Questions – Difficulties w. Finding Skincare compared to other Categories (own illustration)

Experimental Group – Frequency Table General Questions – Appreciation of In-Store Assistance					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	13	26,0	26,0	32,0
	much	16	32,0	32,0	64,0
	neutral	6	12,0	12,0	76,0
	not much	7	14,0	14,0	90,0
	not very much	5	10,0	10,0	100,0
	Total	50	100,0	100,0	

Table 56. Experimental Group – Frequency Table General Questions – Appreciation of In-Store Assistance (own illustration)

Experimental Group – Frequency Table General Questions – Trust in In-Store Personnel					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	7	14,0	14,0	14,0
	much	21	42,0	42,0	56,0
	neutral	4	8,0	8,0	64,0
	not much	12	24,0	24,0	88,0
	not very much	6	12,0	12,0	100,0

	Total	50	100,0	100,0	

Table 57. Experimental Group – Frequency Table General Questions – Trust in In-Store Personnel (own illustration)

Experimental Group – Frequency Table General Questions – Previous Use of Virtual Assistance					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	7	14,0	14,0	14,0
	very much	7	14,0	14,0	28,0
	much	7	14,0	14,0	42,0
	neutral	8	16,0	16,0	58,0
	not very much	21	42,0	42,0	100,0
	Total	50	100,0	100,0	

Table 58. Experimental Group – Frequency Table General Questions – Previous Use of Virtual Assistance (own illustration)

Experimental Group – Frequency Table General Questions – Perceived Fun of Virtual Quizzes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	7	14,0	14,0	20,0
	much	26	52,0	52,0	72,0
	neutral	12	24,0	24,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 59. Experimental Group – Frequency Table General Questions – Perceived Fun of Virtual Quizzes (own illustration)

Experimental Group – Frequency Table General Questions – Openness to Purchase Virtually Suggested Product					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	5	10,0	10,0	16,0
	much	13	26,0	26,0	42,0
	neutral	27	54,0	54,0	96,0
	not much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 60. Experimental Group – Frequency Table General Questions – Openness to Purchase Virtually Suggested Product (own illustration)

Experimental Group – Frequency Table General Questions – Frequency of Skincare Shopping					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	11	22,0	22,0	22,0
	much	20	40,0	40,0	62,0
	neutral	8	16,0	16,0	78,0
	not much	6	12,0	12,0	90,0
	not very much	5	10,0	10,0	100,0
	Total	50	100,0	100,0	

Table 61. Experimental Group – Frequency Table General Questions – Frequency of Skincare Shopping (own illustration)

Experimental Group – Frequency Table General Questions – Higher Frequency for Skincare Shopping					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	8	16,0	16,0	16,0
	much	11	22,0	22,0	38,0
	neutral	12	24,0	24,0	62,0
	not much	12	24,0	24,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 62. Experimental Group – Frequency Table General Questions – Higher Frequency for Skincare Shopping (own illustration)

Experimental Group – Frequency Table General Questions – Importance of Quality Regarding Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	30	60,0	60,0	60,0
	much	13	26,0	26,0	86,0
	neutral	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 63. Experimental Group – Frequency Table General Questions – Importance of Quality Regarding Skincare (own illustration)

Experimental Group – Frequency Table General Questions – Higher Importance of Quality Regarding Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	7	14,0	14,0	26,0
	neutral	13	26,0	26,0	52,0
	not much	13	26,0	26,0	78,0
	not very much	11	22,0	22,0	100,0
	Total	50	100,0	100,0	

Table 64. Experimental Group – Frequency Table General Questions – Higher Importance of Quality Regarding Skincare (own illustration)

Experimental Group – Frequency Table General Questions – Importance of Low Price for Skincare Products					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	7	14,0	14,0	26,0
	neutral	13	26,0	26,0	52,0
	not much	13	26,0	26,0	78,0
	not very much	11	22,0	22,0	100,0
	Total	50	100,0	100,0	

Table 65. Experimental Group – Frequency Table General Questions – Importance of Low Price for Skincare (own illustration)

Experimental Group – Frequency Table General Questions – Higher Spending on Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	16	32,0	32,0	32,0
	much	18	36,0	36,0	68,0
	neutral	7	14,0	14,0	82,0
	not much	4	8,0	8,0	90,0
	not very much	5	10,0	10,0	100,0
	Total	50	100,0	100,0	

Table 66. Experimental Group – Frequency Table General Questions – Higher Spending on Skincare (own illustration)

Regular Group – Frequency Table General Questions – Difficulties w. Finding the Right Product					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	10	20,0	20,0	20,0
	much	30	60,0	60,0	80,0
	neutral	3	6,0	6,0	86,0
	not much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 67. Regular Group – Frequency Table General Questions – Difficulties w. Finding the Right Product (own illustration)

Regular Group – Frequency Table General Questions – Difficulties w. Finding Skincare compared to other Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	26	52,0	52,0	52,0
	much	10	20,0	20,0	72,0
	neutral	3	6,0	6,0	78,0
	not much	7	14,0	14,0	92,0
	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 68. Regular Group – Frequency Table General Questions – Difficulties w. Finding Skincare compared to other Categories (own illustration)

Regular Group – Frequency Table General Questions – Appreciation of In-Store Assistance					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	17	34,0	34,0	34,0
	much	9	18,0	18,0	52,0
	neutral	10	20,0	20,0	72,0
	not much	7	14,0	14,0	86,0
	not very much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 69. Regular Group – Frequency Table General Questions – Appreciation of In-Store Assistance (own illustration)

Regular Group – Frequency Table General Questions – Trust in In-Store Personnel					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	4	8,0	8,0	8,0

	much	22	44,0	44,0	52,0
	neutral	6	12,0	12,0	64,0
	not much	15	30,0	30,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 70. Regular Group – Frequency Table General Questions – Trust in In-Store Personnel (own illustration)

Regular Group – Frequency Table General Questions – Previous Use of Virtual Assistance					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	8,0	8,0	8,0
	very much	13	26,0	26,0	34,0
	much	9	18,0	18,0	52,0
	neutral	6	12,0	12,0	64,0
	not much	3	6,0	6,0	70,0
	not very much	15	30,0	30,0	100,0
	Total	50	100,0	100,0	

Table 71. Regular Group – Frequency Table General Questions – Previous Use of Virtual Assistance (own illustration)

Regular Group – Frequency Table General Questions – Perceived Fun of Virtual Quizzes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	8	16,0	16,0	16,0
	much	16	32,0	32,0	48,0
	neutral	26	52,0	52,0	100,0
	Total	50	100,0	100,0	

Table 72. Regular Group – Frequency Table General Questions – Perceived Fun of Virtual Quizzes (own illustration)

Regular Group – Frequency Table General Questions – Openness to Purchase Virtually Suggested Product					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	14	28,0	28,0	28,0
	much	16	32,0	32,0	60,0
	neutral	13	26,0	26,0	86,0
	not much	7	14,0	14,0	100,0

	Total	50	100,0	100,0	

Table 73. Regular Group – Frequency Table General Questions – Openness to Purchase Virtually Suggested Product (own illustration)

Regular Group – Frequency Table General Questions – Frequency of Skincare Shopping					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	11	22,0	22,0	22,0
	much	23	46,0	46,0	68,0
	not much	16	32,0	32,0	100,0
	Total	50	100,0	100,0	

Table 74. Regular Group – Frequency Table General Questions – Frequency of Skincare Shopping (own illustration)

Regular Group – Frequency Table General Questions – Higher Frequency for Skincare Shopping					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	11	22,0	22,0	22,0
	much	20	40,0	40,0	62,0
	neutral	3	6,0	6,0	68,0
	not much	6	12,0	12,0	80,0
	not very much	10	20,0	20,0	100,0
	Total	50	100,0	100,0	

Table 75. Regular Group – Frequency Table General Questions – Higher Frequency for Skincare Shopping (own illustration)

Regular Group – Frequency Table General Questions – Importance of Quality Regarding Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	29	58,0	58,0	58,0
	much	8	16,0	16,0	74,0
	neutral	10	20,0	20,0	94,0
	not much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 76. Regular Group – Frequency Table General Questions – Importance of Quality Regarding Skincare (own illustration)

Regular Group – Frequency Table General Questions – Higher Importance of Quality Regarding Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	19	38,0	38,0	38,0
	much	24	48,0	48,0	86,0
	neutral	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 77. Regular Group – Frequency Table General Questions – Higher Importance of Quality Regarding Skincare (own illustration)

Regular Group – Frequency Table General Questions – Importance of Low Price for Skincare Products					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	11	22,0	22,0	34,0
	neutral	10	20,0	20,0	54,0
	not much	20	40,0	40,0	94,0
	not very much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 78. Regular Group – Frequency Table General Questions – Importance of Low Price for Skincare Products (own illustration)

Regular Group – Frequency Table General Questions – Higher Spending on Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	10	20,0	20,0	20,0
	much	31	62,0	62,0	82,0
	neutral	9	18,0	18,0	100,0
	Total	50	100,0	100,0	

Table 79. Regular Group – Frequency Table General Questions – Higher Spending on Skincare (own illustration)

3.7 Question 7 – Attitude towards Quizzes

Experimental Group – Frequency Table Attitude towards Quizzes – Purchase Intention after Personalized Quiz					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	10	20,0	20,0	26,0

	much	15	30,0	30,0	56,0
	neutral	14	28,0	28,0	84,0
	not much	6	12,0	12,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 80. Experimental Group – Frequency Table Attitude towards Quizzes – Purchase Intention after Personalized Quiz (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Openness to Online Purchasing if Quizzes are Available					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	7	14,0	14,0	20,0
	much	24	48,0	48,0	68,0
	neutral	7	14,0	14,0	82,0
	not much	7	14,0	14,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 81. Experimental Group – Frequency Table Attitude towards Quizzes – Openness to Online Purchasing if Quizzes are Available (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Demand of Personalized Quizzes for other Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	7	14,0	14,0	20,0
	much	21	42,0	42,0	62,0
	neutral	14	28,0	28,0	90,0
	not much	3	6,0	6,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 82. Experimental Group – Frequency Table Attitude towards Quizzes – Demand of Personalized Quizzes for other Categories (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Increased Perceived Fun w. Quizzes over Reg. Information					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0

		Frequency	Percent	Valid Percent	Cumulative Percent
	very much	8	16,0	16,0	22,0
	much	18	36,0	36,0	58,0
	neutral	18	36,0	36,0	94,0
	not much	1	2,0	2,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 83. Experimental Group – Frequency Table Attitude towards Quizzes – Increased Perceived Fun w. Quizzes over Reg. Information (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Increased Satisfaction w. Websites Offering Quizzes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	6	12,0	12,0	12,0
	much	24	48,0	48,0	60,0
	neutral	12	24,0	24,0	84,0
	not much	6	12,0	12,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 84. Experimental Group – Frequency Table Attitude towards Quizzes – Increased Satisfaction w. Websites Offering Quizzes (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Increased Fun of Taking a Quiz vs. Receiving Information in a Regular Way					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	13	26,0	26,0	32,0
	much	16	32,0	32,0	64,0
	neutral	12	24,0	24,0	88,0
	not much	4	8,0	8,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 85. Experimental Group – Frequency Table Attitude towards Quizzes – Increased Fun of Taking a Quiz vs. Receiving Information in a Regular Way (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Perceived Usefulness of Quizzes to Find Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	11	22,0	22,0	28,0
	much	16	32,0	32,0	60,0
	neutral	17	34,0	34,0	94,0
	not much	1	2,0	2,0	96,0
	not very much	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 86. Experimental Group – Frequency Table Attitude towards Quizzes – Perceived Usefulness of Quizzes to Find Sincare (own illustration)

Experimental Group – Frequency Table Attitude towards Quizzes – Hesitation due to Data Security					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	6,0	6,0	6,0
	very much	1	2,0	2,0	8,0
	much	1	2,0	2,0	10,0
	neutral	9	18,0	18,0	28,0
	not much	20	40,0	40,0	68,0
	not very much	16	32,0	32,0	100,0
	Total	50	100,0	100,0	

Table 87. Experimental Group – Frequency Table Attitude towards Quizzes – Hesitation due to Data Security (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Purchase Intention after Personalized Quiz					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	8	16,0	16,0	16,0
	much	19	38,0	38,0	54,0
	neutral	16	32,0	32,0	86,0
	not much	3	6,0	6,0	92,0
	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 88. Regular Group – Frequency Table Attitude towards Quizzes – Purchase Intention after Personalized Quiz (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Openness to Online Purchasing if Quizzes are Available					
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	very much	10	20,0	20,0	20,0
	much	20	40,0	40,0	60,0
	neutral	13	26,0	26,0	86,0
	not much	7	14,0	14,0	100,0
	Total	50	100,0	100,0	

Table 89. Regular Group – Frequency Table Attitude towards Quizzes – Openness to Online Purchasing if Quizzes are Available (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Demand of Personalized Quizzes for other Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	13	26,0	26,0	26,0
	much	17	34,0	34,0	60,0
	neutral	10	20,0	20,0	80,0
	not much	10	20,0	20,0	100,0
	Total	50	100,0	100,0	

Table 90. Regular Group – Frequency Table Attitude towards Quizzes – Demand of Personalized Quizzes for other Categories (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Increased Perceived Fun w. Quizzes over Reg. Information					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	14	28,0	28,0	28,0
	much	19	38,0	38,0	66,0
	neutral	4	8,0	8,0	74,0
	not much	9	18,0	18,0	92,0
	not very much	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 91. Regular Group – Frequency Table Attitude towards Quizzes – Increased Perceived Fun w.Quizzes over Reg. Information (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Increased Satisfaction w. Websites Offering Quizzes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	14	28,0	28,0	28,0
	much	20	40,0	40,0	68,0
	neutral	7	14,0	14,0	82,0
	not much	9	18,0	18,0	100,0

	Total	50	100,0	100,0	

Table 92. Regular Group – Frequency Table Attitude towards Quizzes – Increased Satisfaction w. Websites Offering Quizzes (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Increased Fun of Taking a Quiz vs. Receiving Information in a Regular Way					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	8	16,0	16,0	16,0
	much	20	40,0	40,0	56,0
	neutral	16	32,0	32,0	88,0
	not much	6	12,0	12,0	100,0
	Total	50	100,0	100,0	

Table 93. Regular Group – Frequency Table Attitude towards Quizzes – Increased Fun of Taking a Quiz vs. Receiving Information in a Regular Way (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Perceived Usefulness of Quizzes to Find Skincare					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	14	28,0	28,0	28,0
	much	12	24,0	24,0	52,0
	neutral	21	42,0	42,0	94,0
	not much	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 94. Regular Group – Frequency Table Attitude towards Quizzes – Perceived Usefulness of Quizzes to Find Skincare (own illustration)

Regular Group – Frequency Table Attitude towards Quizzes – Hesitation due to Data Security					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	4	8,0	8,0	8,0
	much	3	6,0	6,0	14,0
	not much	23	46,0	46,0	60,0
	not very much	20	40,0	40,0	100,0
	Total	50	100,0	100,0	

Table 94. Regular Group – Frequency Table Attitude towards Quizzes – Hesitation due to Data Security (own illustration)

3.8 Gender

Experimental Group – Frequency Table Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	35	70,0	70,0	70,0
	male	15	30,0	30,0	100,0
	Total	50	100,0	100,0	

Table 95. Experimental Group – Frequency Table Gender (own illustration)

Regular Group – Frequency Table Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	37	74,0	74,0	74,0
	male	13	26,0	26,0	100,0
	Total	50	100,0	100,0	

Table 96. Regular Group – Frequency Table Gender (own illustration)

3.9 Age

Experimental Group – Frequency Table Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18–25	23	46,0	46,0	46,0
	26-40	17	34,0	34,0	80,0
	older than 40	10	20,0	20,0	100,0
	Total	50	100,0	100,0	

Table 97. Experimental Group – Frequency Table Age (own illustration)

Regular Group – Frequency Table Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18–25	20	40,0	40,0	40,0
	26-40	22	44,0	44,0	84,0
	older than 40	8	16,0	16,0	100,0
	Total	50	100,0	100,0	

Table 98. Regular Group – Frequency Table Age (own illustration)

3.10 Income

Experimental Group – Frequency Table Income					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	401-1.500	8	16,0	16,0	16,0
	1.501-4.000	33	66,0	66,0	82,0
	more than 4.000	5	10,0	10,0	92,0
	prefer not to say	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Table 99. Experimental Group – Frequency Table Income (own illustration)

Regular Group – Frequency Table Income					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	401-1.500	10	20,0	20,0	20,0
	1.501-4.000	33	66,0	66,0	86,0
	more than 4.000	4	8,0	8,0	94,0
	prefer not to say	3	6,0	6,0	100,0
	Total	50	100,0	100,0	

Table 100. Regular Group – Frequency Table Income (own illustration)

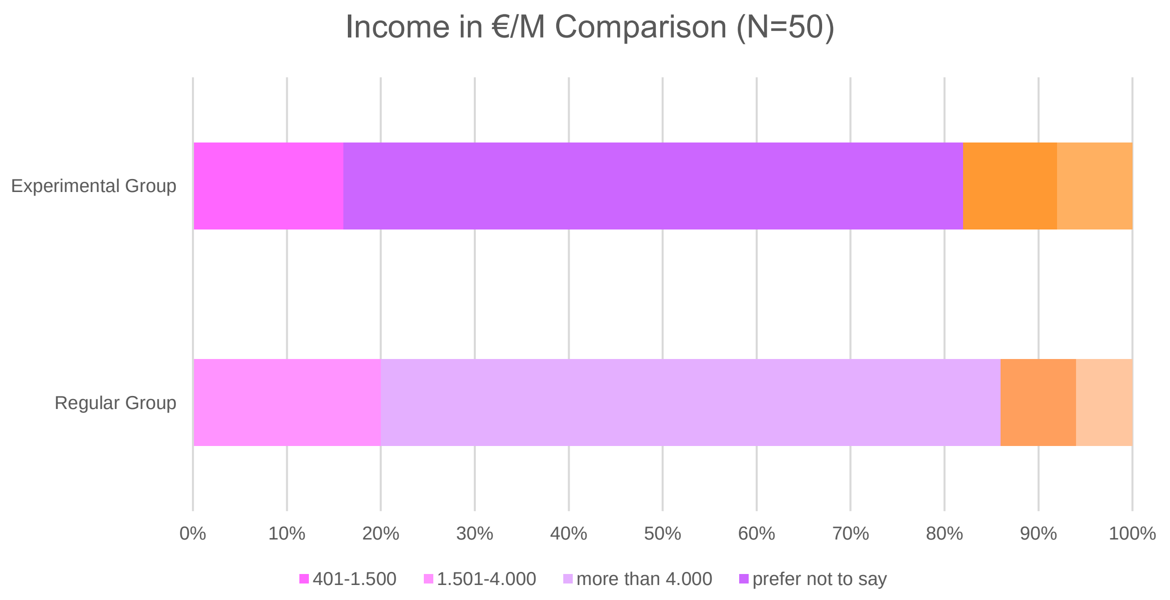


Figure 3. Income in €/M Comparison (own Illustration)

3.11 Online Hours

Experimental Group – Frequency Table Online Hours					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 7	7	14,0	14,0	14,0
	7–15	17	34,0	34,0	48,0
	more than 15	26	52,0	52,0	100,0
	Total	50	100,0	100,0	

Table 101. Experimental Group – Frequency Table Online Hours (own illustration)

Regular Group – Frequency Table Online Hours					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 7	6	12,0	12,0	12,0
	7–15	17	34,0	34,0	46,0
	more than 15	27	54,0	54,0	100,0
	Total	50	100,0	100,0	

Table 102. Regular Group – Frequency Table Online Hours (own illustration)

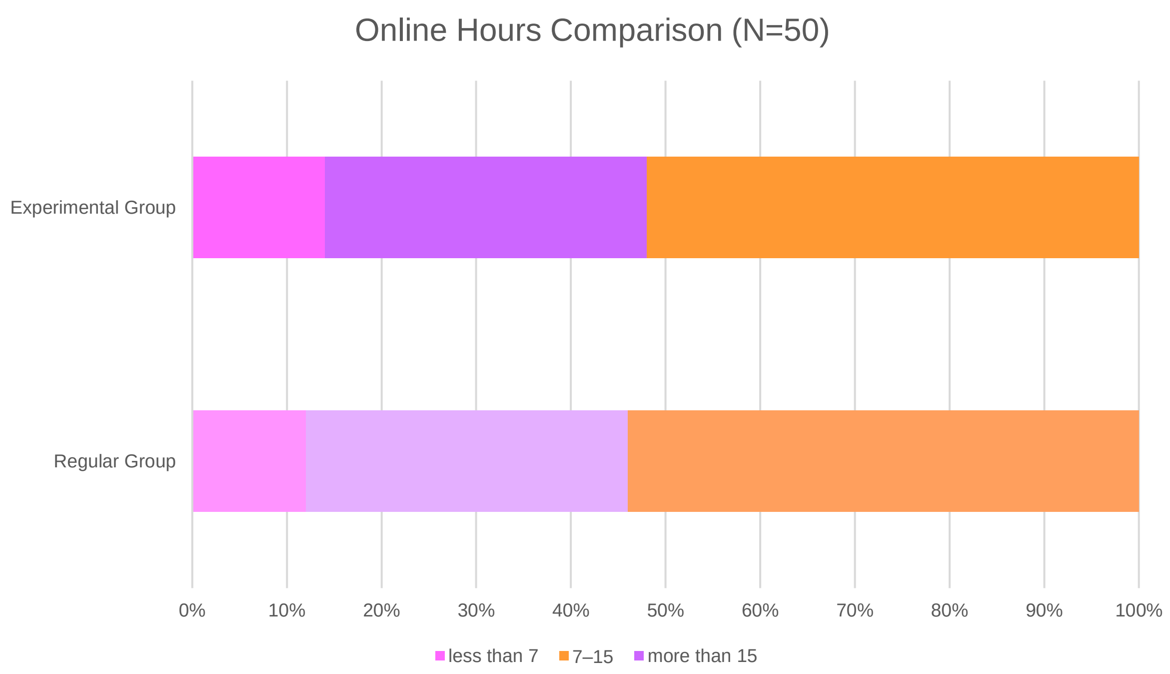


Figure 4. Online Hours Comparison (own Illustration)

3.12 Shopping Channel

Experimental Group – Frequency Table Shopping Channel					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	offline	30	60,0	60,0	60,0
	online	14	28,0	28,0	88,0
	no preference	6	12,0	12,0	100,0
	Total	50	100,0	100,0	

Table 103. Experimental Group – Frequency Table Shopping Channel (own illustration)

Regular Group – Frequency Table Shopping Channel					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	offline	26	52,0	52,0	52,0
	online	13	26,0	26,0	78,0
	no preference	11	22,0	22,0	100,0
	Total	50	100,0	100,0	

Table 104. Regular Group – Frequency Table Shopping Channels (own illustration)

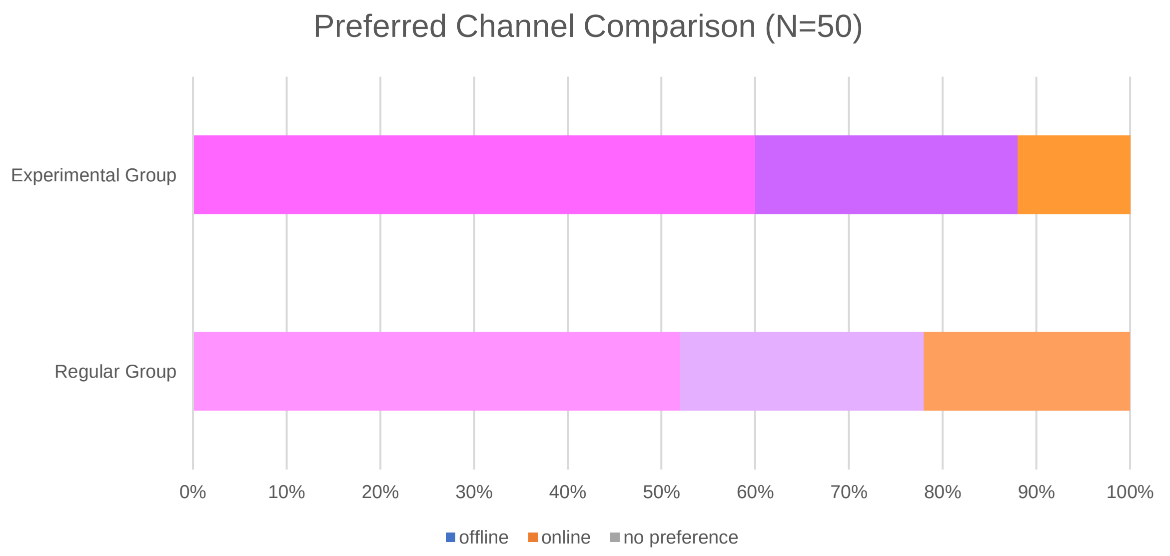


Figure 5. Preferred Channel Comparison (own Illustration)