Unveiling the Depths of Customer Satisfaction -

An Exploratory Qualitative Study on Chatbot Services and the Expectation Confirmation Model (ECM)

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Abstract

The Expectation confirmation model (ECM) is commonly employed to investigate technological advances and customer satisfaction with chatbots. However, customer satisfaction is a multifaceted concept intertwined with emotions and subjective perceptions, comprehending customer satisfaction fully can therefore be challenging. Consequently, the purpose of this exploratory study was to develop and refine the concept of customer satisfaction by answering the research question: *How does the integration of underlying factors to the Expectation Confirmation Model (ECM) affect customer satisfaction with chatbot services?*. The study incorporated underlying factors such as anthropomorphic behavior, brand perception, trust and word of mouth, which were integrated into the existing components of the ECM. Through a unique research approach involving 20 semi-structured interviews and observations, this study captured and reflected on the subjective impressions and emotions of customers while using chatbots. An array of findings are presented, such as the importance of distinguishing between usability and problem-solving efficiency of chatbots performance, the emphasis on accurate answers over human-like characteristics for chatbots, and the impact of experience, familiarity and age on customer satisfaction with chatbots. In conclusion, this study advocates for further qualitative research to explore the potential impact of other underlying factors' on customer satisfaction for ECM.

Keywords: Customer satisfaction, customer expectation, chatbot performance, Expectation Confirmation Model (ECM), exploratory research, underlying factors

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1. Introduction

This chapter begins by presenting an introduction to this thesis subject, followed by a problem statement, addressing the identified problem in current research. The chapter ends with a purpose and research question, related to the problem statement.

Artificial intelligence (AI) is increasingly used within the field of marketing (Huang & Rust, 2021) and has created new communication possibilities for businesses (Goralski & Tan, 2020). Chatbots are a developed AI technology system, creating both marketing and business opportunities (Cheng et. al, 2022), and are expected to grow more than 10 times by 2027 (Um, Kim & Chung, 2020). A chatbot is defined as "a machine conversation system which interacts with human users via natural conversational language" (Shawar & Atwell, 2005, p.489). Chatbots therefore function as substitutes or complements for human service agents (Chen et. al, 2022), due to their ability of answering customers' questions and solving individual issues at high speed (Kaczorowska-Spychalska, 2019). Hence, Jeon (2022) and Hsu & Lin (2023) argue for chatbots significantly being implemented within the customer service domain.

Within customer service, chatbots can also reduce costs (Jeon, 2022), generate a high return on investment (Haleem et. al, 2022) and provide customer service at all times (Jiménez-Barreto, Rubio & Molinillo, 2021). With chatbots having the ability to communicate by using natural conversational language (Shawar & Atwell, 2005), there is a growing interest in improving human-like qualities of chatbots, a strategy known as anthropomorphism (Roy & Naidoo, 2021). Studies have shown that chatbots with similar behavior as humans can increase customers' intentions to use its service (Jiang et. al, 2022; Schanke, Burtch & Ray, 2021) and generate more positive customer-chatbot interactions (Nordheim, Følstad & Bjørkli, 2019).

However, Kim, Giroux & Lee (2021) state that customers are becoming more skeptical towards the advancements in AI technology, and Roy & Naidoo (2021) indicates that customers generally prefer communicating with humans over chatbots. Research has shown that customer discontent can arise from misinterpretations of their input (Sheehan, Jin &

Gottnieb, 2020). For instance, Facebook's Project M, a text-based assistant, is believed to have had a failure rate of over 70 percent (Griffith & Griffith, 2018; Song et. al, 2022). Such chatbot performance can cause customer frustration, especially when they are repeatedly asked the same questions (Hsu & Lin, 2023) and receiving irrelevant responses (Song et. al, 2022).

When chatbots fail to understand and communicate effectively, it can negatively affect customers' expectations of the technology (Sheehan, Jin & Gottlieb, 2020), leading to less efficient marketing strategies and displeased customers (Jeon, 2022). To understand customer satisfaction with chatbot services, Jiang et. al (2022) underlines the need of studying text-based interactions between chatbots and customers. However, neglecting the emotional experiences of customers can lead to an incomplete understanding of service satisfaction, resulting in Filieri et. al (2022) and Razzaq, Yousaf & Hong (2017) highlighting the importance of studying customers' emotional experiences with services. Customers' emotions, including their feelings, behavior and satisfaction, are affected while using a service (Razzaq, Yousaf & Hong, 2017), and impacts the design of chatbots (Filieri et. al, 2022).

1.1 Problem statement

Customer satisfaction is determined by the extent to which a service meets or fulfills customer expectations (Cheng & Jiang, 2020). The study of customer satisfaction with chatbots is considered important, as customers' decision to use the technology can be further clarified (Ashfaq et. al, 2020). A widely used framework for measuring customer satisfaction of services in the field of marketing is the Expectation confirmation model (ECM) (Hossain & Quaddus, 2011), consisting of four primary components: experiences, perceived performance, confirmation and satisfaction (Bhattacherjee, 2001).

The primary usage of the ECM in chatbot research has been to investigate the drivers of customer satisfaction using quantitative conditions (Ashfaq et. al, 2020). However, it is important to note that the definition of satisfaction can vary from person to person (Oliver, 1980), and it is necessary to establish a contextual understanding of it. Therefore, this qualitative exploratory study aims to approach the ECM framework from a different perspective. Considering that satisfaction is closely linked to customers' behavioral responses and subjective perceptions (Griffiths, Johnson & Hartley, 2007), and that customers' emotions can influence chatbot designs (Filieri et al., 2022), the aim of this study is to gain deeper

insights into customers' behaviors, thoughts, and emotions. This study will take a unique research approach by combining semi-structured interviews and observations. By examining customers' subjective perspectives during their interactions with chatbots in customer service scenarios, this study seeks to uncover a profound understanding of customer satisfaction, as well as the underlying interpretations and reasoning behind it.

However, Bagozzi (2007), argues that ECM has methodological limitations as it overlooks other underlying factors that can affect customer satisfaction, beyond the model's existing components. Underlying factors which may influence customer satisfaction with chatbots service are anthropomorphistic behavior (Sheehan, Jin & Gottlieb, 2020; Jiang et. al, 2022), brand perceptions (Roy & Naidoo, 2021), trust (Nordheim, Følstad & Bjørkli, 2019) and word of mouth (Rajaobelina et. al, 2022). According to Yun & Park (2022), anthropomorphistic behavior can improve chatbots communication quality, and Kervyn, Fiske & Malone (2012) highlights that chatbots performance needs to be in line with the brand personality. Kassim & Abdullah (2010) further argue for trust having an effect on customer satisfaction, and Yun & Park (2022) how word of mouth affects customers' intention of using the service. By integrating these factors to the study, a more comprehensive exploration of the ECM can be achieved. This approach allows for a deeper understanding of both the existing components within the model and the presented underlying factors, and how they influence customer satisfaction with chatbot services.

1.2 Purpose and research question

Customer satisfaction is a complex concept based on customers' subjective perceptions and experiences (Griffiths, Johnson & Hartley, 2007), making it challenging to measure and comprehend. The ECM has traditionally relied on quantitative methodologies to evaluate customer satisfaction, which has limitations in capturing the emotions, feelings and behaviors of satisfaction. Therefore, adopting an exploratory qualitative research approach to ECM allows for a more comprehensive view of the underlying factors contributing to customer satisfaction, besides the model's existing components. By integrating the additional four underlying factors, this study aims to gain a deeper interpretation of customers satisfaction and explore ECM from a new perspective,

How does the integration of underlying factors to the Expectation Confirmation Model (ECM) affect customer satisfaction with chatbot services?

2. Literature review

This chapter presents the theoretical framework, by first describing chatbots within marketing and customer service. This is followed by an explanation of ECM, a well-established framework to assess customer satisfaction. Subsequently, this chapter discusses additional underlying factors that influence customer satisfaction, concluding with the analytical framework used in this study.

2.1 Chatbots

A chatbot is an AI technology system (Cheng et. al, 2022), that allows humans to communicate to a machine using conversational language (Shawwar & Atwell, 2005). In its early stages, chatbots focused on basic text communication (Lee et. al, 2020), which changed with technological advances (Hsu & Lin, 2023). Today, chatbots use natural language processing, creating the opportunity of progressively more intricate conversations with their users (ibid). Within conversations, chatbots' general purpose has been to present short, simple and structured answers to the users (Lee et. al, 2020). However, the functionality of chatbots is expanding from not only providing generic responses, but creating individualized services (Cheng & Jiang, 2022; Youn & Jin, 2021). With this development, chatbots have increasingly been implemented within the customer service domain (Hsu & Lin, 2023).

2.2 Chatbot within customer service

With customers requiring fast responses and an opportunity to communicate with companies in real-time (Jiang et. al, 2022), more industries are implementing chatbots for customer service purposes (Cheng & Jiang, 2022; Yun & Park, 2022). Chatbots have the ability to provide individualized service to each customer (Chung et. al, 2020; Haugeland et. al, 2022), due to AI technology's capacity of collecting a large amount of customer data (Haleem et. al, 2022). Hence, chatbots can provide efficient customer service (Haugeland et. al, 2022), and accomplish tasks previously done by humans at a higher speed (Kaczorowska-Spychalska, 2019; Mustak et. al, 2021; Nordheim, Følstad & Bjørkli, 2019). While humans may take more time to understand customers' needs, chatbots can also reduce human errors (Yun & Park, 2022) and directly interact with customers (Jiang et. al, 2022). Jeon (2022) therefore argues for a decreased need of human employees within customer service.

2.2.1 Customers experiences with chatbots service

Tran, Pallant & Johnson (2021) anticipate a continuous expansion of chatbots as service providers in the coming years. Understanding customers' experiences with chatbots is therefore of importance, especially with its influence on customer satisfaction (Wang, Zhou & Zhang, 2020). Jiang et. al (2022) presents how chatbots have the capacity of meeting customers' needs while communicating fast and in real-time. However, Rapp, Curti & Boldi (2021) states that chatbots need improvements to better meet customers expectations. If chatbot miscommunicates, customers can become frustrated with its service (ibid). Hsu & Lin (2023) elaborates that the miscommunication often takes shape by customers repeatedly being asked the same questions by chatbots, or as stated by Song et. al (2022) receiving homogeneous services.

Nordheim, Følstad & Bjørkli (2019) promotes the necessity of chatbot improvements in customer service. The observed lack of communication quality for chatbots (Song et. al, 2022) has resulted in a decline of customer expectations towards the technology (Sheehan, Jin & Gottlieb, 2020). According to Cheng and Jiang (2020), there is a strong relationship between customers' expectations and their satisfaction, since the degree to which these expectations are met will impact their satisfaction. Consequently, when a chatbot successfully fulfills customers' expectations, they will feel satisfied with the technology (Dhiman & Jamwal, 2023).

2.3 Expectation confirmation model (ECM)

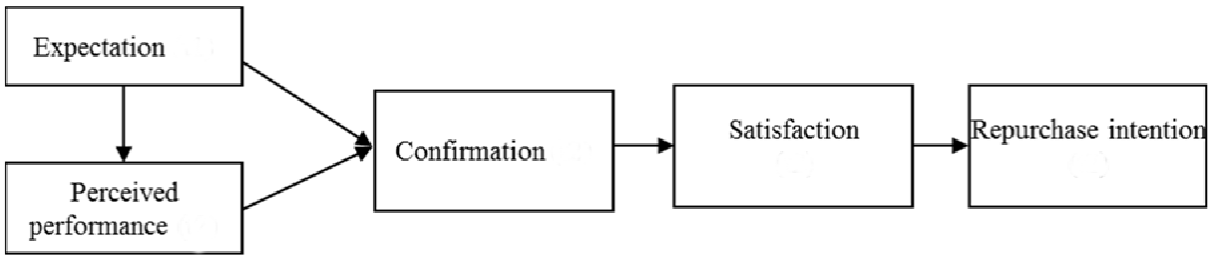

Figure 1; Expectation confirmation model (ECM) (Islam, Mäntymäki & Bhattacherjee, 2017).

The Expectation confirmation model (ECM) (see figure 1) developed by Bhattacherjee (2001) serves as a valuable tool to increase the understanding of customer satisfaction for services. Over the years, ECM has been applied in numerous service marketing fields, particularly for the research of chatbots (Ashfaq et. al, 2020; Nguyen, Chiu & Le, 2021). ECM has five components including expectation, perceived performance, confirmation, satisfaction and repurchase intention (Bhattacherjee, 2001). In essence, the theory functions on the premise that satsfied customers have their expectations of the service confirmed (Wang, Zhou & Zhang, 2020). ECM has been useful when understanding customers behavior, and to adjust marketing strategies to meet customers needs (Hossain & Quaddus, 2011).

Furthermore, ECM was designed to explore the technology acceptance of customers (Bhattacherjee, 2001), and has in multiple ways provided valuable insights for studies on emerging technologies (Ashfaq et. al, 2020). When newly developed technologies, such as chatbots generate positive outcomes (ibid) and trustworthy services for individuals, their satisfaction increases (Cheng & Jiang, 2020; Jiang et. al, 2022). ECM also includes the evaluation of customers' intentions to continue using a technology after the initial purchase, which is named the repurchase intentions within the model (Bhattacherjee, 2001). Noteworthy, this study intentionally excluded this component within the analytical framework. Overall, ECM has demonstrated a high level of success in the information technology (IT) literature (Gupta, Anish & Abhishek, 2020), as well as the service marketing field (Ashfaq et. al, 2020; Bhattacherjee, 2001).

2.3.1 Customer expectations

Before the customer satisfaction component, ECM describes customer expectation and perceived performance as two components which generate satisfied customers (Bhattacherjee, 2001). According to Wang, Zhou & Zhang (2020) customer satisfaction depends on the confirmation of their expectations. Therefore, the authors propose that customer expectations are the precursor to customer satisfaction. Consequently, in ECM, expectations refers to customers' perception of a service before consumption, and confirmation to the post-consumption stage (Dhiman & Jamwal, 2023). Dhiman & Jamwal (2023) is therefore highlighting the strong relationship between customers' expectations and the confirmation of their expectations. Generally, customers' expectations are based on previous knowledge or other users' experience with the service (Hossain & Quaddus, 2011). For emerging technologies, customers' expectations are generally evolving quickly (Oliveira,

Roth & Wendell, 2002) and are influenced by the technologies primary attributes in relation to similar technologies they used (Gupta, Anish & Abhishek, 2020). If the technology's performance exceeds customers expectations during usage, they are likely to accept the technology and remain engaged with it (Shen, Li & Sun, 2018).

2.3.2 Perceived performance and confirmation

According to ECM, customer satisfaction is primarily grounded in the perceived performance component (Bhattacherjee, 2001). In this component, customers assess the quality and performance of the service (Eren, 2020) and evaluate its usefulness (Bhattacherjee, 2001). Gupta, Anish & Abhishek (2020) further note that perceived performance is a part of the post-adoption stage. If customers' expectations are met by the service performance, they are accepted in the confirmation stage (Hossain & Quaddus, 2011). Dhiman & Jamwal (2023) therefore highlight perceived performance as a fundamental component within ECM, particularly to assess customers' acceptance of the technology. De Cicco, Silva & Alparone (2021) further argues the acceptance of chatbots performance being dependent on customers familiarity and digital literacy. For new technologies, confirmation occurs when customers expectations are fulfilled while using the service (Eren, 2020). Ashfaq et. al (2020) note that perceived performance therefore refers to the extent customers find new technologies, such as chatbots, to be useful and effective in helping them solve problems.

2.3.3 Customer satisfaction

Customer satisfaction refers to how well customers' expectations are confirmed (Oliver, 1980). Generating customer satisfaction is especially important within the service industry (Jedin & Balachandran, 2021) and is dependent on customers expectations and their experiences when using a service (Yun & Park, 2022). Jedin & Balachandran (2021) argues that if the service quality meets customers' expectations, they will be satisfied with the service, and if not, their level of satisfaction will decrease. With increased implementation of chatbots for customer service purposes (Cheng & Jiang; 2022, Yun & Park, 2022), the interest in studying customer satisfaction has grown (Ruan & Mezei, 2022). Chung et. al (2020) states that if a chatbot provides relevant and trustworthy information, customers satisfaction will increase. Ashfaq et. al (2020) continues by adding that in the area of emerging technologies such as chatbots, customers will continually use them if they are satisfied with their service. Hence, the quality and perceived performance of chatbots play a central role in establishing satisfied customers (Eren, 2020).

2.4 Additional underlying factors influencing customer satisfaction

Wang, Zhang & Zhao (2022) state that technological innovation, such as chatbots, are affected by multiple factors when studying their performance, which may influence the final satisfaction of customers (Liu & Kao, 2022). For example, trust is connected to service performance and customer satisfaction (Kassim & Abdullah, 2010), and chatbots' use of language similar to humans can improve communication quality (Yun & Park, 2022). Kervyn, Fiske & Malone (2012) punctuates the importance of chatbots communication being aligned with the brand personality, and Yun & Park (2022) notes that customer satisfaction can be influenced by word of mouth (WOM) from others' usage of chatbots service. Therefore, all of these underlying factors might have an effect on various components of ECM. Consequently, they could impact customer satisfaction of the service chatbots provide.

2.4.1 Chatbots anthropomorphistic behavior

Chatbots' capacity to use natural language similar to humans (Nordheim, Følstad & Bjørkli, 2019) and demonstrate human-like characteristics, has been shown to enhance their communication quality (Yun & Park, 2022). When chatbots behave as humans, it relates to the concept of anthropomorphism (Roy & Naidoo, 2021), which involves embedding non-human entities with human characteristics (Sheehan, Jin & Gottlieb, 2020). When a chatbot engages with customers in a conversational way, their response and acceptance level depends on the satisfaction they gain from the chatbot service (Chiang, Lo & Wang, 2017). Sheehan, Jin & Gottlieb (2020) argues that the possibility of miscommunication can decrease if chatbots have more anthropomorphistic attributes, leading to higher trust and acceptance of the technology among customers (Jiang et. al, 2022).

2.4.2 Brand perceptions of chatbots

Chatbots not only serve as a way of providing services to customers, but are also becoming a part of a brand’s communication tactics (Roy & Naidoo, 2021). The marketing field has increasingly recognized the effectiveness in using chatbots to develop communication more aligned with the brand personality (Kervyn, Fiske & Malone, 2012). Customers tend to anthropomorphise not only technologies but also brands (Toldos-Romero & Orozco-Gómez, 2015), which makes people more emotionally invested in the company and more easily satisfied by the services they provide (Araujo, 2018). Furthermore, research has demonstrated that customers' evaluation of chatbot communication is significantly influenced by their brand perceptions (Roy & Naidoo, 2021).

2.4.3 Customer trust towards chatbots

In order to achieve positive marketing outcomes, customer trust becomes an essential factor (Walsh & Mitchell, 2010), especially for successful adaptation of new technologies (Nordheim, Følstad & Bjørkli, 2019). The extent to which chatbots provide answers and meet customers' needs impacts customers' trust towards chatbots services (ibid). If chatbots provide low service quality, customers' trust towards chatbots decreases (Mozafari, Weiger & Hammerschmidt, 2022). Nordheim, Følstad & Bjørkli (2019) further explain that customers' trust in chatbots is dependent on the technology's ease of use. Since trust is commonly linked to the perceived performance of a service, providing high-quality service is necessary to increase satisfaction of customers (Kassm & Abdullah, 2010).

2.4.4 Word of mouth for chatbots

Word of mouth (WOM) refers to customers communicating to others about the quality of service (Shi et. al, 2016). Hossain & Quaddus (2011) state that customers' expectations of a service are influenced by others' experiences with the service, and Yun & Park's (2022) explains that others' experiences and feedback of a service affect customer satisfaction. WOM is therefore becoming more relevant when studying customers' experiences with new technologies such as chatbots (Rajaobelina et. al, 2022). If chatbots services meet customers' needs, the likelihood of chatbots receiving favorable WOM increases, leading to positive emotions and recommendations to others (ibid). When customers communicate positively to others about their service experience (Verkijika & De Wet, 2019), it can affect other customers' decision to choose the same service (Yun & Park, 2022).

2.5 Analytical framework

To study customer satisfaction of chatbots service, an extensive analytical framework has been developed (see figure 3). This framework was constructed to capture the insights of customers' emotions, encompassing their satisfaction, behavior and feelings, while engaging with chatbots. Collecting information regarding customers' emotions is of importance to understand ECM through a new perspective by conducting an exploratory qualitative research design.

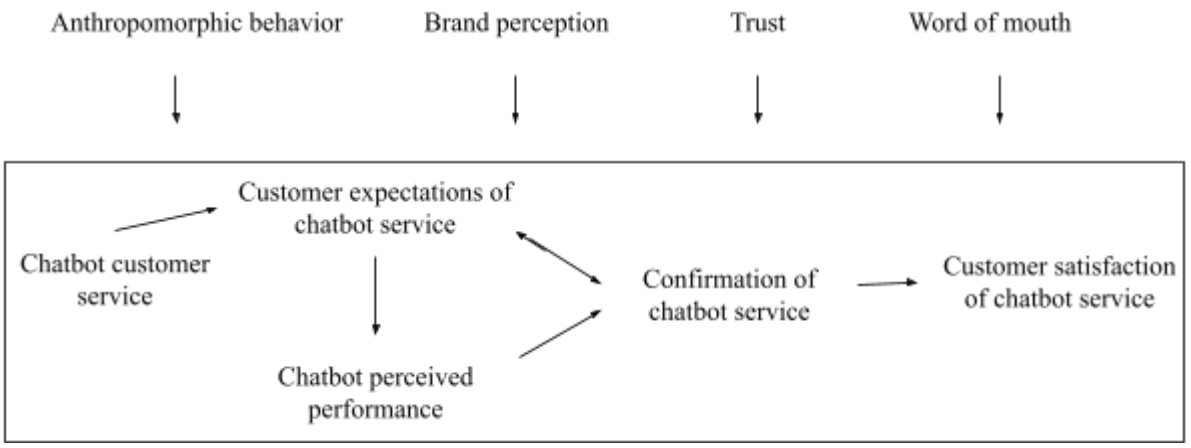

Figure 2; The constructed analytical framework

The analytical framework is also built with the intention of studying additional underlying factors which may influence customer satisfaction (Liu & Kao, 2022), components not currently addressed in the ECM model (Bagozzi, 2007). Even though ECM was developed with the purpose of understanding satisfaction of information systems and emerging technologies, it emphasizes customers' repurchase intentions from their utilized services. The aim of this study is to investigate customers' satisfaction while using chatbots, and not customers' long-term usage of them. The analytical framework therefore excluded the last component of ECM, and modified ECM to address this study's research question.

The first component of the analytical framework is named *Chatbots customer service*, which is the service chatbots provide to the customers. This component has a path towards *Customer expectations of chatbots service*, to outline the customers with prior knowledge of chatbots as service providers. *Customer expectations of chatbots service* have a path towards *Chatbots perceived performance*, which is the component evaluating the quality of chatbots service to the customers. In the perceived performance stage, customers' expectations of chatbots service will either be confirmed or disproven by the chatbots quality. This creates a path from *Customer perceived performance* to *Confirmation of chatbots service*, which has a path to *Customer satisfaction of chatbots service*. The basis of the last component is to interpret customers' satisfaction with chatbots, depending on whether their expectations are confirmed or not.

Furthermore, ECM states that customers' intention to continue using a service is determined by their previous usage of the service (Oliver, 1980). The importance of including a path

between *Customers' expectations of chatbot service* and *Confirmation of chatbot service* is therefore critical, as customers intentions of using the service can be influenced by its prior effectiveness of meeting their needs (Bhattacherjee, 2021). This path predominantly stands for the recursive part of the model as previous experiences can shape the *Confirmation of chatbot services*. Thus, the preconceived expectations that customers already hold for chatbot services could have an impact on customers' satisfaction in this study.

Liu & Kao (2022) state that multiple factors besides quality influence customer satisfaction, and Bagozzi (2007) notes that these additional factors are excluded in ECM, highlighting the model's limitations. Hence, four additional underlying factors were included at the outer rim of the analytical framework. The underlying factors that might have an effect on customer satisfaction of chatbot services are anthropomorphistic behavior (Sheehan, Jin & Gottlieb, 2020; Jiang et. al, 2022), brand perception (Roy & Naidoo, 2021), trust (Nordheim, Følstad & Bjørkli, 2019) and word of mouth (Rajaobelina et. al, 2022). Their positioning was motivated by a varying influence throughout different components of the ECM. For example, trust has the capability to affect both ease of use (Nordheim, Følstad & Bjørkli, 2019), indicating an effect on perceived performance. However, Nordheim, Følstad & Bjørkli (2019) also argues for trust being important to meet customers needs, suggesting it influences the confirmation stage. Therefore, these underlying factors were intentionally kept outside the core of the analytical framework.

3. Method

This chapter involves this thesis methodological choices, starting with an explanation of the chosen industry and company. The following part presents the methodological- and analytical approach, and the qualitative research criterias. This continues with an argument of data collection, operationalisation, choice of respondents and coding method. The chapter ends with a discussion of ethical considerations and the thesis limitations.

3.1 Methodological approach

A qualitative design is particularly useful for exploring complex phenomena, such as human thoughts and behaviors (Bryman, 2016). The choice of a qualitative approach, with the focus on language rather than numerical data (Punch, 1994), was therefore deemed the most appropriate. This is closely aligned with the purpose of this study, as understanding the underlying factors affecting customers' subjective thoughts and satisfaction is the prominent goal. A qualitative design emphasizes the need to understand the social context (Bryman, 2016), which holds significance in interpreting customer satisfaction for the methodological approach employed in this study.

3.1.1 Research philosophy

The ontological orientation of constructivism acknowledges people's social realities and how it is constructed through interactions with each other and the world (Bryman, Bell & Nilsson 2017). Therefore, a constructivist orientation was considered suitable for this study, in order to understand how individuals perceive and interpret a social phenomenon and how they construct their understanding of it (Bryman, Bell & Nilsson, 2017). When exploring customers' satisfaction, it was necessary to acknowledge the diversity of perspectives and experiences to understand the respondents' particular stance. Hence, a constructivist approach was chosen for this study, which takes the subjectivity of the customers into consideration.

To invite into situations where knowledge is created through ongoing dialogues, in which participants communicate their different meanings of their social realities (Bryman, 2016), an interpretivist epistemological standpoint was chosen. Taking an interpretative stance often leads to researchers coming up with unexpected findings, especially outside the social context

that is being studied (ibid). Flexibility to absorb knowledge and the ability to be surprised was found central while interacting with respondents for the sake of this study. Striving to establish an interactive environment increases the likelihood of understanding customers' satisfaction with chatbots services. As emphasized by Holloway & Todres (2003), a researcher's epistemological stance plays a significant role to achieve consistency and coherence in thematic analysis. As this study used a thematic analysis for transcribing its interviews, there was value in defining an interpretive framework, else it could have compromised the analysis trustworthiness (ibid).

3.1.2 Analytical approach

An abductive reasoning was deemed appropriate for this study as its theory was largely determined prior to the data collection, due to relevant theoretical contributions within the research area. For example, the analytical framework of ECM, which is a proven success model to increase the understanding of customer satisfaction for services (Ashfaq et. al, 2020). Although there was a strong theoretical foundation within the subject area of this study, abductive reasoning helped to explore the specific circumstances and experiences of the respondents. This, as abduction grounds the participants' perspectives and meanings to their social worlds (Bryman, 2016), it is a more iterative and flexible approach between theory and data (Walton, 2004). To better contextualize the perspective and meanings of the customers, this study therefore made inferences to theory based on the respondents explanations shown in the data.

3.2 Data collection

Customer satisfaction is a complex concept rooted in emotions and subjective perceptions (Griffiths, Johnson & Hartley, 2007). Measuring and understanding customer satisfaction can therefore be challenging, due to a lack of conceptual clarity (Ograjenšek & Gal, 2011). Therefore, this study adopted an interpretivist perspective, which acknowledges interviewers and interviewees may have different meanings and experiences of customer satisfaction (Bryman, 2016). In qualitative research, combining observations and interviews is an approach used to negate misunderstandings (ibid). Hence, the research method chosen for this study was a combination of two qualitative research methods, in the shape of semi-structured interviews and observations. Bryman (2016) describes both observations and semi-structured interviewing as methods used by researchers to keep an open mind about the contents they need to know about, which aligns with this study's interpretivist perspective. The

constructivist approach is furthermore compatible for the data collections of qualitative design, such as semi-structured interviews and observations, as it provides comprehensive insights into the separate views and realities of the participants (Bryman, Bell & Nilsson, 2017).

Observations were chosen in combination with semi-structured interviews, based on Larsen's (2018) arguments that observations commonly used in qualitative studies as a complement to other methods. Patel & Davidson (2019) further propose that observations are suitable for exploratory studies, as they have the capacity to study verbal utterances, emotions and behavior. Given this study's purpose of increasing the understanding of customers' satisfaction, by including the subjective impressions of their behavior and emotions, an explorative approach with the use of observations was deemed appropriate. The observation was based on a predefined task (see appendix 2) that all respondents were required to complete with H&M's chatbot. Having all respondents complete the same task contributed to the development of detailed information related to the respondents behaviors and feelings (Johannessen, Tufte & Christoffersen, 2020). Johannessen, Tufte & Christoffersen (2020) further explain that the researcher's theoretical framework can guide what to observe. Therefore, it was suitable to decide the observations content beforehand, allowing the researchers to connect the observation results to the ECM framework.

Semi-structured interviews were chosen as the primary source of data collection for this abductive study, due to the possibilities to navigate various directions and adjust the line of reasoning as new insights unfolded (Bryman, 2016). Furthermore, semi-structured interviews allowed the respondents to express their feelings, perspectives and views of the context (Bryman, 2016). Since this study aimed to increase the understanding of customer satisfaction of chatbots service, a collection of customers in-depth responses was needed. Bryman (2016) emphasizes the advantages of using an interview guide, which was applied while conducting the interviews for this study. Meaning a number of questions related to the studied phenomena are prepared before the interview takes place. The researchers do not need to follow the interview guide in detail, and can depart from it during the interview by asking follow-up questions in relation to responses provided by the interviewees (Bryman, 2016). In order to increase the understanding of customer satisfaction while using chatbots for customer service, follow-up questions made it easier to gather information about their

perceptions and thoughts of chatbots service. An interview guide was therefore constructed prior to the interviews taking place, built upon the components from ECM.

3.2.1 Operationalisation

The data collection process started with all respondents answering part one of the questions in the interview guide (see appendix 1). Part one involved demographic questions such as respondents' age, sex, occupation and geographical affiliation (see table 1), but also questions of prior experiences with chatbots. After answering these questions, the respondents participated in the observation part, where each respondent was given the same predefined task to solve (see appendix 2). This task involved the respondents using H&M's chatbot for solving an issue which required customer service. The reason for asking about their prior experiences with chatbots in part one of the interview questions, was due to following the construct of ECM, starting with expectations. Having all respondents then solve the same predefined task, gave the opportunity of measuring H&M's chatbot's performance and quality, aligned with ECM's second stage of perceived performance. Before solving the predefined task with H&M's chatbot, the respondents had time reading it through and could ask any questions they had of the assignment. An important note written was that all respondents needed to act and behave as customers while solving the task.

During the observation, all respondents approved being video recorded. This was beneficial due to the opportunity of re-watching the materials and capturing information of the respondents behavior (Larsen, 2018). Each respondent was recorded using two devices, one was a phone camera, and the other was Screencastify, a screen video recording program. The phone camera was used to capture the respondents behavior, body language and verbal comments, while Screencastify was used to record the conversation between the respondent and H&M's chatbot on the screen. These two recordings were of importance later during the coding process, since the respondents' conversation with the chatbot, body language and behavior could be viewed multiple times. Besides these two recordings, notes were also taken of respondents' behaviors and spoken comments. Both researchers were available during the observation process, as the documentation of their behavior while studying their conversation with H&M's chatbot could be done. The respondents were allowed to solve the given task as long as they deemed necessary, and were able to stop whenever they felt the task was solved.

After the observation, the second part of the interviews were conducted, as these questions were related to their experiences and satisfaction with H&M's chatbot. The reason for having part two of the interview questions directly after the observation was to provide the respondents with the potential to recall their use of H&M's chatbot in further detail. All respondents used the same chatbot, which presented the opportunity to explore whether their expectations were met and if they were satisfied with the services. Part two of the interview questions were related to the confirmation- and satisfaction stage of ECM. All questions in the interview guide and follow-up questions during the interview, were therefore connected to this study's analytical framework, with the intention of answering the research question.

During the second part of the interview, the interview guide was utilized, but not followed into detail, due to the possibility of asking follow-up questions based on the respondents answers, as recommended by Bryman (2016). The questions were posed directly to the respondents during the interview, to enhance their chances of expressing authentic and truthful answers. This resulted in the respondents' opportunity to freely answer the questions without interruptions. Additionally, all interviews and the whole observation part took place in-person, due to the possibility of documenting all respondents' expressions, body language, spoken comments and gestures. All interviews were also recorded and later transcribed, due to it simplifying the coding process.

3.3 Choice of industry

To understand customer satisfaction within ECM, by integrating the underlying factors that explore feelings and behaviors, an in-depth study of customers' emotional experiences with chatbots is needed, as noted by Filieri et. al (2022) and Razzaq, Yousaf & Hong (2017). By studying customers behavior, thoughts and feelings while using the service, allowed for an increased understanding of customers satisfaction with chatbots service. However, customers' expectations and satisfaction of chatbots service varies across industries (Chen, Le & Florence, 2021). By choosing one particular industry, a more contextual and comprehensive understanding of chatbots' effect on customer satisfaction was developed.

The fashion sector's long use of chatbots as service providers (Landim et. al, 2022; Rese, Ganster & Baier, 2020) led to this study demarcation to this particular industry. Murtarelli, Collina & Romenti (2023) further explained how the industry capitalized from using chatbots, which included reaching customers across markets and generating positive

customer experiences. For customer service within fashion, chatbots are a convenient resource for customers when accessing efficient service (Rese, Gangster & Baier, 2020). With these studies demonstrating the fashion industry's advantages of using chatbots, and Murtarelli, Collina & Romenti (2023) noting the increased number of fashion companies planning to implement chatbots for customer services purposes, the industry was considered relevant for this study.

3.3.1 Choice of company within the fashion industry

To conduct an in-depth study of customer satisfaction while using chatbots, one fashion company's chatbot was selected for this research. When choosing the fashion company, two criteria needed to be met. Firstly, the company should have made substantial investments in chatbots, and secondly, it should utilize chatbots as service providers. Based on these criterias, H&M was chosen due to the findings of Chung et. al (2020) which indicated that H&M had obtained benefits from implementing chatbots as service providers, by meeting customers' needs and expectations. H&M is a Swedish fashion company, founded in 1947 with the intention of offering affordable fashion (H&M Group, 2021). Today, H&M is a global fashion company that operates worldwide (H&M Group, n.da), and offers both sustainable and quality clothes at an affordable price (H&M Group, n.db).

With changing customer behavior, H&M has been adapting by embracing more digital and technological solutions, to enhance interactions with their customers (H&M Group, 2021). Walk-Morris (2020) noted that H&M has invested in chatbots to engage with customers in real-time and provide further assistance to their queries. Chung et. al (2020) continued by stating that H&M is planning to further increase their use of chatbots in the following years. H&M was therefore a suitable company for this study, as it fulfilled the criterias of having made substantial investments in chatbots and utilizing them as service providers.

3.3.2 Choice of respondents

The respondents were chosen through snowball sampling, a common sampling method within qualitative studies (Bryman, 2016). In snowball sampling, the researcher starts by choosing a small number of respondents who are valuable and can contribute to the study. These respondents then chose other respondents of relevance to the study (Bryman, 2016). All respondents (see table 1) were chosen based on two criterias. Firstly, they were required to have experience with technology and be familiar with online navigation. Secondly, they

needed to hold previous experience with human customer service within the fashion industry, enabling them to provide a nuanced perspective on the comparison of chatbots and human service. Having these criterias were of importance, as Bryman (2016) argued that respondents should be able to provide germane information relevant to the study.

Table 1; The study's respondents

Respondents	**Identity**	**Age**	**Occupation**	**Accommodation**	**Date**
Respondent 1	Man	18	Student/Entrepreneur	Stockholm	7 April 2023
Respondent 2	Woman	19	Student/Employee	Stockholm	7 April 2023
Respondent 3	Man	20	Student/Employee	Stockholm/Uppsala	8 April 2023
Respondent 4	Other	18	Student	Stockholm	8 April 2023
Respondent 5	Man	14	Student	Stockholm	9 April 2023
Respondent 6	Woman	49	Employee	Stockholm	10 April 2023
Respondent 7	Man	22	Employee	Stockholm	11 April 2023
Respondent 8	Woman	25	Student/Employee	Stockholm	12 April 2023
Respondent 9	Woman	24	Employee	Stockholm	12 April 2023
Respondent 10	Woman	25	Student/Employee	Stockholm	14 April 2023
Respondent 11	Woman	24	Student	Uppsala	14 April 2023
Respondent 12	Woman	25	Student	Uppsala	15 April 2023
Respondent 13	Man	24	Student/Employee	Uppsala	16 April 2023
Respondent 14	Woman	67	Retired	Stockholm	18 April 2023
Respondent 15	Man	43	Employee	Stockholm	19 April 2023
Respondent 16	Woman	29	Employee	Stockholm	20 April 2023
Respondent 17	Man	26	Student	Stockholm	22 April 2023
Respondent 18	Man	64	Retired	Stockholm	22 April 2023
Respondent 19	Man	36	Employee	Stockholm	23 April 2023
Respondent 20	Man	27	Employee	Stockholm	24 April 2023

3.4 Data analytics

While conducting the observations, the coding process started with the researchers taking notes of the respondents behavior and verbal comments. These notes followed the format of theoretical notes, which Johannessen, Tufte & Christoffersen (2020) argues is a beneficial coding method for observations. This since theoretical notes include the researchers documentation of the interpretations of the respondents behavior and verbal utterances that is connected to the study's theoretical framework (Johannessen, Tufte & Christoffersen (2020). With customer satisfaction being linked to their subjective perceptions and behaviors (Griffiths, Johnson & Hartley, 2007), theoretical notes were a suitable coding method for this study's observation. The theoretical notes were further complementary to the verbal utterances and behavior seen on the video recordings. All the commonly seen behavior and similar verbal comments made by the respondents were collected and illustrated in a table (see appendix 3), and later used while conducting the study's analysis. However, Bryman (2016) raises a usual critique of observational studies being the concentration of directly observable behavior, which rarely captures the intentions behind the behaviors. For this study, the aim of the observation was to act as a preliminary stage for the interview, aiming to enhance the understanding and depth of the respondents' perceptions of chatbots.

Thematic analysis is a typical approach to qualitative data analysis (Bryman, 2016), which was executed for the sake of analyzing the transcriptions (see appendix 4). Bazeley (2013) underscores the necessity for clear themes and for researchers to showcase how they emerged from the data. Therefore, this study structured its main themes from the components of the analytical framework (see figure 2). While coding the transriptions, constant comparison within and between respondents were carried out, which led to sub themes developing through a refined and iterative process. This aligns with Thompson's (2022) assertion of thematic analysis advantages being its flexibility within abductive studies. Subsequently, sub themes were developed from the data, and defined for each component of the analytical framework they were related to. This is explained by Bryman (2016) as the matrix based method, where recurring motifs from the theory are linked to the data.

Furthermore, quotations should be employed to build compelling support for the sub themes (Lochmiller, 2021), which was executed through the process of identifying repetitions. Including quotations also enhances the trustworthiness, as it becomes challenging to question the veracity of raw empirical data (Thompson, 2022). Hence, another ambition of deploying a

thematic analysis was to increase this study's trustworthiness by attaining a higher degree of credibility.

3.5 Qualitative research criterias

Trustworthiness functions as an alternative to reliability and validity to build and assess standards for qualitative research (Bryman, 2016). The evaluation criterias of trustworthiness are based on four aspects, *credibility*, *transferability*, *dependability* and *confirmability*. To establish credibility, researchers' findings need support from the studied social context (Bryman, 2016), leading to all findings being shared with this study's respondents to obtain member validation. All notes taken from the observation and transcription from the interviews were therefore read by the respondents, to ensure they were aligned with the results. Since qualitative research conducts detailed studies of a small group of individuals in a specific social context (Bryman, 2016), this study used thick descriptions to generate transferability. Lincoln & Guba (1985) states qualitative studies seldom focus on breadth rather than depth. With multiple respondents participating in this study, the transferability of this study's result arguably increased to further research.

All records and notes were collected throughout the process, which Bryman (2016) presents as dependability. This ensured that relevant data were presented consistently across all parts of the study, especially notes from the observations and transcripts from interviews. Confirmability refers to the issue of reaching complete objectiveness within qualitative research (Bryman, 2016). Therefore, the approach to present the findings was of good faith, refraining from including personal values. Having all interviews transcribed and observations recorded contributed to excluding personal biases and reaching a more objective outcome.

3.6 Ethical considerations

Including ethical consideration is of significant importance in social research (Bryman, 2016). Diener & Crandall (1978) present four aspects, including *harm to participants*, *lack of informed consent*, *invasion of privacy* and *deception*, which researchers need to take into consideration while conducting qualitative research (Bryman, 2016). To exclude any harm and invasion of the respondents privacy during the interviews and observation, all respondents were informed of the study's purpose. With Bryman (2016) stating the importance of providing the respondents with comprehensive information of the study, all respondents were informed of the observation- and interview process. They were also

informed that the research findings would be made publicly available upon completion and were asked to confirm their understanding of this matter. Additionally, all respondents were also told they could skip any question during the interview, if they felt that question invaded their privacy.

Further, with confidentiality of records being difficult to address within qualitative studies (Bryman, 2016), all respondents were anonymous. This, since multiple respondents explained their reluctance of being named in the presentation of empirical findings. Bryman (2016) also presents the connection between confidentiality and recording, which can invade the respondents privacy. To ensure all respondents' privacy was protected, they were asked for permission to record before both the interview and observation started. With Larsen (2018) stating the importance of ensuring anonymity, all respondents had the possibility to stop the video recording during the observation, and audio recording during the interview, if it threatened their privacy or caused any discomfort. However, this did not occur for any respondents during either the observation or interview.

3.7 Methodological limitations

While studying chatbots within the fashion industry, some limitations were acknowledged, and the generated conclusions can therefore only be applied to the studied industry. Additionally, this study's results are solely applicable to H&M's chatbot, highlighting another limitation. However, focusing on one chatbot resulted in detailed insights and nuanced perspectives where the theoretical account was grounded in the view of the respondents, strengthening the abductive reasoning of this study (Bryman, 2016). Furthermore, the respondents only used H&M's chatbot when solving the predefined task, which resulted in further limitations, due to the possibility of other tasks providing a different outcome. Certain limitations could also have derived from the respondents being video recorded, as they were aware of the recording which may impact their natural behavior (Larsen, 2018).

4. Empirical Findings

This chapter is structured according to the components in the analytical framework, and presents the result from the observations and interviews with the respondents. The first component, named; Customers expectation of chatbot service, involves part 1 of the interview. The second component named; Chatbot perceived performance included both the observations and part 2 of the interviews. The remaining two components of the analytical framework, named; Confirmation of chatbot service and Customer satisfaction of chatbot service exclusively involve part 2 of the interview.

4.1 Customers expectation of chatbot service

Before using H&M's chatbot, all respondents shared their past experiences of using chatbots within customer service, revealing they had used chatbots for this purpose before. The majority of the respondents had previously chosen chatbots due to its flexibility and easy access. According to these respondents, chatbots offered prompt and direct responses to their questions distinguishing them from human customer service where waiting times were often involved. In comparison to calling a human agent and waiting in a telephone queue, chatbots provided faster service. In addition, the majority of the respondents mentioned the beneficial aspect of chatbots being available at all times, which contributed to their view of chatbots being a convenient option. Respondent 1 supported this by saying:

> "A chatbot is quick and it's good that it's organized and uses punctuation for alternatives to find the answers. Another positive aspect is that you can access service 24/7."

However, the majority of the respondents (excluding 1, 3, 5 & 7) also mentioned a prior experience of chatbots being difficult to use. During previous chatbot interactions, these respondents felt that they had received automatic and standardized responses less related to their questions. Some respondents (1, 4, 5, 7, 8, 10 & 11) also noted that chatbots tend to provide lengthy automatic answers, which have led to confusion and hindered their ability to get clear answers. Respondent 4 expressed this during the interview by saying:

> “When I have asked chatbots questions in the past, automatic answers have immediately popped up. This answer has often been too long and has not quite answered my question”.

Furthermore, the majority of the respondents felt that they had undergone negative emotions, such as irritation and frustration from past chatbot interactions. According to respondents 6, 8, 13, 16 & 19, their negative emotions stemmed from chatbots asking them to reformulate their question multiple times. Respondents 8, 13 & 19 further noted how this previously resulted in them having to find another service alternative, a more time consuming activity in total when seeking customer service. Respondent 8 explained this by saying:

> “I just get irritated when I try chatbots and hope for a fast service, but it only gives me an automatic answer that doesn’t have anything to do with my question, and I end up calling a person anyway. Then, I would rather call a person in the first place and wait. I get the answer I need directly and the possibility of misunderstanding decreases.”

Half of the respondents (1, 2, 3, 4, 5, 7, 8, 9, 10 & 11) mentioned that the complexity of the question impacted chatbots performance. According to these respondents, chatbots have been a beneficial service alternative when asking short and simple questions. For basic customer service errands, these respondents found chatbots time saving and helpful. However, when these respondents needed more guidance and an opportunity of explaining their problem in detail, chatbots have had difficulties understanding their question. Due to chatbots' limited capability of providing solutions to complex problems, respondents 8, 9, 10 & 11 explained their usage of chatbots to be situational. Therefore, when needing service for more complicated issues, these respondents explained their preference of human agents. They believed that humans could better comprehend the intricacies of their problems and give them the opportunity to further describe their concerns. Respondent 11 highlighted this by mentioning:

> “Chatbots have been a good alternative when I have had simpler questions. But for more complex questions, they can’t really give me a clear answer. Then I would rather have a human so I can explain my problem in more detail and get the help I need”.

4.2 Chatbot perceived performance

The commonly held view among the respondents was the crucial role of usability for chatbots, they found that the system should be intuitive and easy to navigate. The majority of the respondents found H&M´s chatbot easy to maneuver and its user-friendliness to be fairly high. Exceptions for a percieved usability could be made for six of the respondents (6, 11, 13, 14, 15 & 19), which all experienced that the chatbot was challenging to use. Based on their reasoning, the chatbot's interface and overall usability could be improved to enhance the user experience. Respondent 13 explained this by saying:

> "I thought the chatbot was irregularly difficult. I explained myself thoroughly but the alternatives provided were confusing and of less use."

Albeit these six respondents had feelings of the chatbot's difficulty, their views were different from the larger group of respondents for the study. Respondent 18 for example, found that the locked alternatives given by the chatbot created a clear dialogue that was easy to navigate. The dominant view of high usability was related to the chatbots layout, systematic approach for dialogue and overall simplistic style. However, most respondents did not perceive the chatbot's usability as an indicator of high performance. 13 out of 20 respondents (6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19) interpreted the overall performance of the chatbot as primarily inadequate. During the observation stage, a general complication of the chatbot misinterpreting questions could be noticed by the chatbot's dialogue. The respondents with less desired replies demonstrated negative emotions through frustrated comments, but also confusion by their hesitancy. These respondents asked questions for which they received answers of less relevance by the chatbot. For some of these respondents (6, 8, 9, 11, 12, 13, 14, 16 & 19), the chatbot's answers became a cause for discontent and irritation. Respondent 19 elaborated on this by saying:

> "I didn't really get a response to my asked questions, it misinterpreted what information I was looking for entirely which annoyed me."

Other respondents (1, 2, 3, 4, 5, 7 & 20) expressed more enthusiasm towards the chatbot's performance. Seen from the observation stage, they shared the trait of being able to articulate their questions in a precise and short manner. Respondent 4 understood the importance of

phrasing yourself to the chatbot in a concise way, and elaborated potential issues deriving from this:

> "The chatbot worked just fine. However I think that if the customer service errand would have been more complex, it would have been hard to deliver the message in a brief way for it to fully understand me."

During the interviews, the chatbots' ability to adapt to the respondents' specific questions became a recurring theme. Nearly half of the respondents (6, 8, 9, 10, 11, 12, 13 & 15) felt that H&M's chatbot was deficient in this aspect, and that it could not provide them personalized answers. Their main concern was that the chatbot replies did not account for their particular situation, which according to respondent 10 felt generic. Respondent 20 compared H&M´s chatbot to larger, more sophisticated language models that have a natural way to interpret user input, similar to human conversations. Still, there were aspects of H&M´s chatbot that he thoroughly enjoyed, such as the simplicity and guidance it provided. Respondent 20 concluded by saying:

> "You need to balance between a more user friendly and adapted model. I think the goal should be a chatbot that is simple and steers the user in the right direction, but also has a more developed way of understanding the person."

Typically, a phrased concern by these respondents was the chatbot's limited interpretations for detailed questions. The majority stated that while asking complex questions, the chatbot often struggled to decode them and either asked for a rephrased question, or provided narrow replies. According to respondents 6, 9, 13, 14 & 15 the chatbot could never understand their problem, leading to less confidence in its accuracy. As explained by respondent 6, the chatbot was unable to grasp the complexity of her situation:

> "The chatbot didn't understand my question at all and I needed to formulate the question a million times. It focused on certain words rather than understanding the larger context. It was much better when I came to a personal assistant who solved it directly."

For some of the respondents (6, 9, 14 & 15), the chatbot was unsuccessful in fully resolving their issues, which ultimately led to the chatbot redirecting them to a human agent. Others, such as respondent 18, expressed that even though he found the chatbot finally solving his problem, it would have been optimal if the answers were reinforced by a human. This, to gain assurance that the chatbot's answers were correct from a more credible source.

4.3. Confirmation of chatbot service

After using H&M's chatbot, all respondents provided feedback on its performance in relation to their prior experiences. For respondents 1, 2, 3, 4, 5, 7 & 20, H&M's chatbot met their expectations of performance, solved their problem quickly and provided better responses compared to previously used chatbots. Respondents 1, 3 & 7 also mentioned how their prior experience with chatbots enabled them to effectively communicate with H&M´s chatbot. Hence, their successful interaction was considered an outcome of previous exposure and understanding of the technology. Respondent 7 further explained that less experienced customers may therefore have difficulties communicating with chatbots in order to receive valuable service. During the interview, respondent 3 highlighted this by saying:

> "Since I have used chatbots before I know how to ask a question in order to get a good answer. However, if you were to use a chatbot for the first time, it would probably have difficulties understanding your question."

The experiences of H&M´s chatbot were mixed for the dissatisfied respondents, with some indicating that it performed similarly (6, 8, 9, 14 & 18) or worse (10, 11, 12, 13, 15, 16, 17 & 19) than their prior experiences with chatbots. Respondents 6, 14 & 18 expressed pre-existing skepticism towards chatbots, and felt that H&M's chatbot met their already low expectations. These respondents were hesitant to engage with chatbots, as they were accustomed to interacting with humans for customer service. Respondent 14 explained this further:

> "I personally use chatbots less often. This is because the experience I got from H&M's chatbot was what I expected from the technology. Therefore, I would say it met my set expectations."

Another aspect raised by some of the respondents (8, 10 & 16) were the limitations of the chatbot to interpret keywords. Respondent 10 had used chatbots for customer service multiple

times, but felt that H&M's chatbot faced difficulties understanding keywords, even if she reformulated her question repeatedly. Furthermore, respondent 16 also expressed concerns about the chatbot´s ability to understand her phrasing and stated:

> "I think the chatbot could have adapted to my answers a little bit more, and had a better understanding of my questions. It was just looking for my keywords to get into a closed loop of answers."

Moreover, the majority of the respondents (6, 8, 9, 10, 11, 12, 14, 15 & 18) receiving poor service from H&M's chatbot, expressed their positive interactions with human service agents. Some respondents (6, 14, 15 & 18) expressed that the primary reason for their preference was their familiarity with human service interactions. Respondent 6 mentioned that she trusted human service agents over H&M´s chatbot. Especially since she had to reformulate her question multiple times, which led to her uncertainty if the chatbots provided correct answers. Ultimately, all these respondents preferred human service due to the lack of quality in chatbot's answers. During the observations, respondents 6, 8, 9 & 11 explicitly stated their desire for a human agent, due to frustration with the chatbot's inability to understand their questions. The majority of these respondents felt that human agents were better equipped to understand their needs and provide more valuable service. As phrased by respondent 18:

> "As this is some form of customer service, it is very much about how you are assisted. Chatbots are very sterile and abstract, and almost uncomfortable. It is a robot, and I am not really used to being assisted by it."

However, respondents 8, 9, 10, 11 & 12 expressed their openness of shifting to chatbots within customer service, if they offered better service quality than human agents. These individuals emphasized that receiving a satisfactory answer to their question is the most crucial aspect of customer service, meaning they do not care whether that service comes from a human or chatbot. In fact, a few respondents (8, 9, 10, 11 & 12) even said they would opt for a chatbot over a human agent if it could provide the same service. Their primary reason for this was the time-saving benefits of using chatbots. Additionally, most respondents who had a positive experience with H&M´s chatbot (1, 2, 3, 4, 5, 7 & 20) expressed agreement with the idea that the source of customer service is less important than its quality. Respondent 7 explained this by saying:

> “I don’t care if the chatbot behaves as a human or not. For me it’s more important that I get an answer to my question. And in this case, the chatbot gave me that directly.”

Another aspect raised by half of the respondents was how their interactions with H&M's chatbot had an impact on their perception of the brand. Respondents 1, 3, 4, 5 & 7 had high expectations of H&M´s chatbot, given its status as a multinational company with major resources and capital. Their positive experiences with the chatbot only enhanced their view of the brand. However, respondents 8, 9, 10, 11 & 15 expressed an opposite experience, where their negative interactions with the chatbot caused them to have a diminished view of the brand. Respondent 11 mentioned in particular how the positive customer service experience in-store was not reflected by the chatbot, which affected her overall view of the brand. During the interview, respondent 8 further explained this by saying that:

> “You expect a multinational company with huge capital to invest in an AI system that actually works. I must say that my view of their brand weakened since my question was not answered and I felt ignored. And also since the service didn’t correspond to the nice personal service in store.”

4.4 Customer satisfaction of chatbot service

Among all 20 respondents, only seven (1, 2, 3, 4, 5, 7, & 20) were satisfied with H&M´s chatbot service, while the remaining 13 were dissatisfied. Those who were satisfied, generally praised the chatbot for being quick and delivering sufficient service. As demonstrated during the observations, these respondents were able to solve the predefined task within three minutes. Consequently, they expressed willingness to use both H&M´s chatbot, and other chatbots again. Respondent 2 explained this by saying:

> “I will use a chatbot again since it saves time and energy. You don’t have to wait in a telephone queue for 20 minutes.”

The satisfied respondents were unanimous that their prior experience of using chatbots and knowledge of interacting with them contributed to their successful use of H&M’s chatbot. Respondent 3, for example, mentioned that his previous interactions with chatbots had taught him how to communicate with them effectively to receive satisfactory answers. According to

some satisfied respondents (1, 3 & 7), inexperienced customers may face difficulties communicating with a chatbot, resulting in incorrect answers to their questions. Therefore, these respondents explained that chatbots are not the ideal service alternative for all customers and may be better suited for people with technological proficiency. Respondent 1 highlighted this by saying:

> "How well you ask your question is going to determine how satisfied you are with its service. If you ask a clear and short question, the chatbot will help you, but not otherwise."

Furthermore, the remaining 13 respondents stated their dissatisfaction towards H&M's chatbot's service. This discontent arose from either not receiving an answer to their queries or having to reformulate their questions multiple times. Respondents 6, 9, 12, 14 & 16 were unable to receive satisfactory answers from the chatbot and were eventually redirected to a human agent, which they expressed elation for. However, these respondents considered the need to escalate the conversation to a human agent as a sign of the chatbot's limitations, resulting in their dissatisfaction towards not only H&M´s chatbot, but also chatbots in general.

The dissatisfied respondents further explained their discontent with H&M´s chatbot's service because they found it to be a more time consuming activity, compared to directly contacting a human. Despite using H&M´s chatbot, these respondents got transferred to a human agent to obtain sufficient answers. Respondent 6, 8, 14 & 15 mentioned the time-saving benefits of directly contacting a human agent, instead of trying the chatbot first. During the interview respondent 8 stated:

> "I get frustrated when I chat for 10 minutes with a chatbot and still don't get an answer to my question. I would rather spend that time in a telephone queue and get valuable service"

However, some of the dissatisfied respondents (9, 10, 11, 12, 13, 16, 17 & 19) explained their willingness to still try the chatbot as a first alternative when seeking customer service. These respondents mentioned H&M´s chatbots' quick service and availability as the main reasons to continue using both H&M's chatbot, and chatbots in general. In particular, when needing

service for short and simple questions, chatbots were considered a beneficial service alternative. These respondents also mentioned that technological developments may improve chatbots service capabilities in the future, which contributed to their willingness to continue using chatbots. Respondent 12 explained this by saying:

> "The reason I would use a chatbot again is because of its flexibility and that they are available 24/7. If they develop from their current state, I would use them for quick service errands."

During the interviews, these dissatisfied respondents also motivated that they would not recommend chatbots for complex tasks that require more explanations. Their consensus was that chatbots have difficulties understanding customers' needs in such situations, resulting in less desired outcomes. Further, respondent 9 elaborated on technological knowledge as a central factor in customers' ability to successfully use chatbots for customer service. Respondent 9 specifically stated that she would not recommend chatbots to the older generation, who may have less experience with technology. Respondent 10 further mentioned how the younger generation is more accustomed to fast service, making them more prone to use chatbots, and explained:

> "I am satisfied as long as I get my question answered, and if a chatbot can provide that, I am happy. But this chatbot and previous ones have asked me to reformulate my question so many times, which makes me frustrated. But it may depend on the fact that I'm in my 20s and want fast service."

5. Analysis

This chapter includes an analysis of this study's empirical findings in relation to previous theoretical contributions. The subheadings in the analysis are divided as the components in the analytical framework, and additional underlying factors, originally excluded from ECM.

5.1 Customer expectation of chatbot service

All respondents shared their prior experiences and encounters of chatbot interactions. Based on Hossain & Quaddus (2011) and Yun & Park (2022) statements, customers' expectations of chatbots are formed based on their prior experiences with the service. This results in the assumption that the respondents' expectations of H&M´s chatbot were influenced by their past chatbot interactions. The respondents prior chatbot experiences consistently highlighted some key aspects, including their flexibility, ease of access and availability. The respondents' prior experiences support Jiang et. al's (2022) statement on chatbots benefits offering real-time communication. Furthermore, the majority of the respondents explained chatbots' direct and prompt responses as an advantage in comparison to human service, especially when quick assistance had been required. This aligns with Kaczorowska-Spychalska (2019), Mustak et. al's (2021) and Nordheim, Følstad & Bjørkli's (2019) research, which emphasizes chatbots' ability to expedite tasks previously done by humans. Additionally, Yun & Park (2022) note that humans may require more time understanding customer needs, which was the consensus explained by the respondents.

However, most of the respondents (excluding 1, 3, 5 & 7) had previously experienced chatbots to be complex and challenging to use for customer service, mainly because of their difficulties in understanding questions. These respondents recounted situations where they received automated and standardized answers from chatbots. Their experiences support Sheehan, Jin & Gottlieb's (2020) research, which acknowledges chatbots' potential for miscommunication and unhelpful responses. These findings contradict the statements made by Chung et. al (2020) and Haugeland et. al (2022) regarding chatbots ability to provide individualized service for each customer. Instead of receiving personal responses to their specific circumstance, seven respondents (1, 4, 5, 7, 8, 10 & 11) expressed that confusion and irritation had occurred from chatbots providing them with automatic and lengthy responses.

These respondents' perspectives instead align with Rapp, Curti & Boldi's (2021) argument that chatbots can cause frustration among customers when miscommunications occur.

The respondents stressed that past miscommunications often necessitated contacting a human agent. For instance, respondent 8 shared her experiences where questions had been unanswered by chatbots, due to their stale and automated answers. Consequently, respondent 8 had to endure waiting in telephone queues, resulting in more time spent than anticipated. This does not align with Yun & Park (2022) claims of chatbots being more time efficient due to their reduced susceptibility to errors compared to humans. Instead of reducing human error, respondent 8's prior chatbot interactions had ultimately led to increased errors, as the chatbots had struggled to comprehend her needs.

Furthermore, half of the respondents (1, 2, 3, 4, 5, 7, 8, 9, 10 & 11) noted that from prior chatbot experiences, the questions complexity determined the quality of chatbot response. For simpler issues, these respondents considered chatbots to provide valuable responses in comparison to more complex questions, where a human agent produces better answers. Based on these respondents' prior experiences, the questions complexity determined how well the chatbot performed. It can therefore be argued that for simpler questions, chatbots can reduce human error as expressed by Yun & Park (2022) and provide faster responses as stated by Kaczorowska-Spychalska (2019), Mustak et. al (2021) and Nordheim, Følstad & Bjørkli (2019). However, for more complex questions involving the respondents explaining their problem, the respondents prior experiences entails chatbots increasing errors and being more time consuming, which does not align with Yun & Park's (2022) statement.

5.2 Chatbot perceived performance

According to Ashfaq et. al (2020), perceived performance refers to the extent customers find new technologies both useful and effective in solving their problems. Within this study, the majority of respondents (excluding 6, 11, 13, 14, 15 & 19) found H&M´s chatbot useful, in the sense that it was intuitive, user-friendly and offered organized responses. As Lee et. al (2020) argues, the general purpose of chatbots is to deliver short and simple answers to its users, which was the evident case for the participants of this study. As respondent 18 elaborated, H&M´s chatbot had a systematic approach to communicate, which was easy to navigate due to its simple alternatives it provided.

However, Ashfaq et. al (2020) further noted that perceived performance is equally related to the effectiveness of solving problems as it is to the technology having a high degree of usability. Although the majority of respondents found H&M´s chatbot easy to use, 13 out of 20 respondents still found its overall performance to be insufficient. Hsu & Lin (2023) mentions that frustration can occur when customers are repeatedly asked the same question by chatbots. The limited comprehension for detailed questions was typically explained by the respondents for H&M´s chatbot, in which it repeated itself and caused discontent for respondents.

Furthermore, several respondents (6, 8, 9, 10, 11, 12, 13 & 15), which encountered poor interactions with H&M's chatbot, expressed its deficiency to adapt to their specific questions. These respondents found H&M's chatbot to provide generic responses and display difficulties adjusting answers to each customer's questions. This aligns with Song et. al's (2022) argument of chatbots offering homogenous service and Lee et. al's (2020) statement that chatbots are primarily capable of providing short and simple answers. Contrary to these findings, Cheng & Jiang (2022), Youn & Jin (2021), Chung et. al (2020) and Haugeland et. al's (2022) suggests that chatbots have evolved from the deliverance of generic answers to individualized service. Based on the experiences from most respondents within this study (excluding 1, 2, 3, 4, 5 & 7), H&M's chatbot and chatbots in general have failed to provide individualized responses.

Trust of chatbots performance

Kassim & Abdullah (2010) punctuate how trust is commonly linked to the perceived service quality, and Nordheim, Følstad & Bjørkli (2019) argue that chatbots capability of meeting customers needs and providing answers will impact their degree of trust in chatbots service. For respondents 6, 9, 13, 14 & 15, H&M's chatbot could never understand their problem, leading to unresolved issues and decreased trust in chatbots service, aligned with Kassim & Abdullah (2010) and Nordheim, Følstad & Bjørkli (2019) research. The impact of the chatbot service on respondent's trust highlights the importance of trust as an underlying factor when assessing customer satisfaction. Notably, a demographic pattern could be seen among these respondents, as respondents 6, 14 & 15 were between 43 and 67 years of age. These older respondents had even greater difficulties in finding solutions to their queries, which led to human agents having to intervene during the task. Nordheim, Følstad & Bjørkli (2019) further explain that customers' trust in chatbots is dependent on the technology's ease of use. As the

older respondents (6, 14 & 15) also considered H&M´s chatbot to be more complex to use, this could have been another influence to their negative stance towards the technology.

Furthermore, respondent 18 that was 64 years of age, felt that it would have been optimal with reinforced answers by a human, although he perceived the chatbot's answer to have solved his problem. This implicates a perception of the older respondents having less faith in chatbots. As Nordheim, Følstad & Bjørkli (2019) note, trust becomes especially relevant for the adaptation to new technologies. The decrease of trust in chatbots seen by the older demographics of the study could therefore have negative implications from a marketing standpoint, since Walsh & Mitchell (2010) highlighted trust being essential to generate positive marketing outcomes.

5.3 Confirmation of chatbot service

After the respondents' interacted with H&M´s chatbot, the majority reported that their prior experiences were not confirmed. While respondents 1, 3, 4, 5 & 7 perceived H&M's chatbot to perform better than previously used chatbots, respondents 10, 11, 12, 13, 15, 16, 17 & 19 found H&M´s chatbot performance to be worse. These respondents' different experiences could be related to their prior chatbot interactions, supporting Gupta, Anish & Abhishek's (2020) statement that customers' expectations of technology are influenced by their experiences with similar technologies.

However, it is noteworthy that the respondents having an improved interaction with H&M's chatbot had prior knowledge and experience in effectively communicating with chatbots. This raises the question of how customers' experience levels affect the confirmation of their expectations. Hossain & Quaddus (2011) argue that customers' expectations are confirmed if the service performs in accordance with customers' set expectations. Nevertheless, respondents 1, 3 & 7 expressed that customers' proficiency in chatbot communication could determine whether their expectations are confirmed. In other words, experienced customers may have a better understanding of how to engage with chatbots to have their expectations validated. Hence, inexperienced customers face more challenges having their expectations confirmed due to less familiarity of chatbot interactions. Therefore, instead of Hossain & Quaddus's (2011) statement that service performance solely determines the confirmation of customer expectations, customer's communication experience with the service may significantly impact whether their expectations are confirmed or not.

The remaining and not aforementioned respondents (6, 8, 9, 14 & 18), expressed that H&M's chatbot performed similarly to their previous experiences. These respondents noted that both H&M's chatbot and previously used chatbots had difficulties understanding their questions, resulting in their low expectation of their performance. This aligns with Sheehan, Jin & Gottlieb's (2020) argument that chatbots' failure to communicate affects customers' expectations of the technology. In particular, this could be seen for respondents 6, 14 & 18, which were skeptical towards H&M's chatbot performance since their prior experiences with chatbots had left them with unsolved issues. The confirmation of these respondents' skeptical thoughts when using H&M´s chatbot connects to Sheehan, Jin & Gottlieb (2020) statement, that chatbots lack of communication quality results in lower customer expectations.

However, respondents 1, 2, 3, 4, 5, 7 & 20, who had a positive experience with H&M's chatbot, mentioned its capability to provide them with appropriate information to their questions. All these respondents were between the ages of 14 and 27, whereas the remaining respondents who had a negative chatbot experience were between age 24 and 67. The age disparity in the perception of H&M's chatbot performance aligns with the observations made by Oliveira, Roth & Wendell (2002), highlighting that customers' expectations evolve quickly for emerging technologies, and are influenced by the technology's attributes in relation to similar technologies they used. Therefore, the variating perceptions of H&M's chatbot performance could depend on age. This may be attributed to the younger generation's exposure to technologies, which serves as reference points to establish their expectations upon. For instance, respondent 10 mentioned the younger generation's heightened expectations for quick service. De Cicco, Silva & Alparone (2021) argues that customers' familiarity and technological proficiency have been found to play a significant role in shaping their perception of chatbot performance. In the case of the younger respondents (1, 2, 3 4, 5, 7 & 20), technological expertise could have played a key role in harnessing the potential of the chatbot, resulting in their expectations such as quick service being more easily met.

Chatbots anthropomorphic behavior and trust towards chatbots

Respondents 6, 14, 15 & 18 all expressed their decreased level of trust towards chatbots after their expectations were unconfirmed. These respondents explained their strong reliance on human agents, thereby raising the question whether human-like communication of H&M's chatbots could have increased their levels of trust, as argued by Jiang et. al (2022). However, all these respondents were between the ages of 43 and 67, suggesting that their age and lesser

experience of the technology might have influenced their preference for human interaction over chatbots. Furthermore, most of the respondents (6, 8, 9, 10, 11, 12, 14, 15 & 18) experiencing poor service from H&M's chatbot, expressed their preference for human agents over chatbots, due to the lack of quality in the chatbots' answers. These findings contradict the claims made by Jeon (2022) regarding a decreased reliance for humans within customer service, and Yun and Park's (2022) argument for chatbots reducing errors in comparison to humans.

However, respondents 8, 9, 10, 11 & 12 mentioned that their preference for human service was driven by their current negative experience of chatbot performance. If chatbots could deliver equal or better service than humans in the future, they would opt for the quickest and most accurate alternative, thereby forgoing the empathetic touch of personal assistance. This does not correspond to Jiang et. al (2022) and Schanke, Burtch & Ray's (2021) research noting that if chatbots behave as humans, customers' intention of using the service increases. These respondents instead prioritized accurate and prompt answers to their questions, over human-like interactions within service. This indicates that the underlying factor anthropomorphic behavior was not interpreted as a valuable quality of the chatbot's performance, thereby indicating a lesser effect on the customer satisfaction.

It is worth noting that all these respondents fell in the age range of 24 to 25. In contrast, respondents 6, 14, 15 & 18, who were between the ages of 49 and 67, emphasized the importance of human characteristics when seeking customer service. This indicates that the older generation, as expressed by respondent 6, tends to trust human service over chatbots due to their familiarity with traditional service. Based on these respondents' arguments, age may be a factor determining whether human characteristics are of importance when seeking customer service or not.

Brand perceptions of chatbots

The respondents also discussed how their interactions with H&M's chatbot influenced their perception of the brand. Respondents 1, 3, 4, 5 & 7 had high expectations for H&M's chatbot, as they perceived it as a reputable brand with major resources and capital. These findings support Roy & Naidoo's (2021) research stating that customers anticipate chatbots' communication quality to be consistent with their perception of the brand. According to these

respondents H&M's chatbot lived up to their high expectations and enhanced their strong views of the brand.

In contrast, respondents 8, 9, 10, 11 & 15 expressed an opposite experience, where their less favorable experiences with H&M's chatbot indicated a diminished view of the brand. Kervyn, Fiske & Malone (2012) argues that chatbot communication should be aligned with the brand's personality. In the case of these respondents, they expected more from H&M's chatbot, and thought that its performance was an inadequate reflection of the brand. Respondent 8 noted that her perception of the brand declined due to the chatbot's limited communication quality. These findings indicate that chatbots services should be perceived as extensions of the brand, as they can affect customers' impressions. The underlying factor of brand perception is therefore influenced by customer expectations towards the chatbot, indicating different outcomes towards customer satisfaction.

5.4 Customer satisfaction of chatbot services

The research of Ashfaq et. al (2020), Cheng & Jiang (2020), Jiang et. al (2022) and Dhiman & Jamwal's (2023) all underscore that if customers' positive expectations of chatbots are confirmed, they are satisfied with its service. The seven respondents (1, 2, 3, 4, 5, 7 & 20) who had their positive expectations confirmed were satisfied with H&M's chatbot's service, as they received answers to their queries. However, the 13 dissatisfied customers experienced the contrary and encountered difficulties in obtaining answers. This aligns with Chiang, Lo & Wang's (2017) assertion that customer satisfaction with chatbot services hinges on the quality of its responses.

Respondents 1, 3 & 7 expressed their familiarity with chatbots, which suggests that individuals with prior experience and technological proficiency are more likely to get satisfactory information from chatbots. Conversely, the dissatisfied respondents mentioned that they had to reformulate their questions multiple times, but still struggled to get sufficient answers to their problem. This supports the statement of Jedin & Balachandran (2021), that chatbots' poor communication quality negatively impacts customers' satisfaction levels. However, the dissatisfied respondents were generally older than satisfied respondents, indicating that technological prowess might influence satisfaction levels when utilizing chatbot services.

Shen, Li & Sun (2018) and Ashfaq et. al (2020) assert that if technologies perform according to customer expectations, it increases the likelihood of their continuous engagement with chatbots. This was evident by the satisfied respondents, which expressed their intention to continue using chatbots for customer service. Unexpectedly, several dissatisfied respondents (9, 10, 11, 12, 13, 16, 17 & 19) explained their willingness to still try chatbots as a first alternative. This goes against Ashfaq et. al (2020) statement, that customer satisfaction leads to their continued use of chatbots. These dissatisfied respondents were motivated to try the chatbot due to its quick service and availability, aligned with Kaczorowska-Spychalski (2019) argument that chatbots have the ability to perform tasks more efficiently than humans. Sheehan, Jin & Gottlieb (2020) however mentions that a decline has occurred for customer expectations of chatbots. This decline was evident for the majority of respondents, as expectations were tampered from H&M's chatbot's inaccurate responses. Still, these respondents perceived the convenience of H&M's chatbot as a strong motivator to try it again. This raises the question to what extent lower expectations led to less use of chatbots in general, given the explained trade-off of saving time bypassing human customer services.

Trust towards chatbots

However, respondents 6, 14 & 18 expressed their reluctance of using chatbots again, due to the chatbots inability to resolve their issues. Once again, the age of the respondents appeared to be an indicator of dissatisfaction, as they were between the ages of 49 to 67. The dissatisfied older respondents expressed that their trust in human agents' answers outweighed the answers of a chatbot. This aligns with Cheng & Jiang (2020) and Jiang et. al's (2022) research indicating that customers' level of trust in chatbots influences their level of satisfaction. In addition, respondents 6, 9, 12, 14 & 16 were automatically redirected to a human agent when solving the predefined task, which increased their level of dissatisfaction towards chatbot services.

Word of mouth for chatbots

Moreover most respondents, even those who had positive interactions with H&M's chatbot's service, would not recommend chatbots to others. This disputes Rajaobelina et. al's (2022) argument that positive experiences with chatbots lead to positive WOM recommendations. Some satisfied respondents (1, 3 & 7) instead mentioned they would solely recommend chatbots as a service alternative to individuals with sufficient digital literacy. Even dissatisfied customers, like respondents 9 and 10, mentioned that they would recommend

chatbots to people with technological experience, leaving out the older generation who may have difficulties in using the technology. Rather than recommending chatbots based on positive experiences as stated by Rajaobelina et. al (2022), the respondents would limit their recommendation to the ones they found qualified to leverage the technology. In addition, the dissatisfied customers would not recommend using chatbots for complex questions requiring detailed explanations, as H&M's chatbot were perceived to be incapable of providing valuable responses to such cases. Overall, customers seemed less inclined to endorse or recommend chatbots, indicating the underlying factor of WOM as a less relevant outcome for customer satisfaction.

6. Conclusion

This chapter involves a summary of this study's main findings, theoretical contributions and practical outcomes for managers in regards to customer satisfaction of chatbots service.

This study aimed to answer the research question, *How does the integration of underlying factors to the Expectation Confirmation Model (ECM) affect customer satisfaction with chatbot services?*. By drawing from the Expectation confirmation model (ECM), the study explored the existing components within the ECM and contributed new insights to the framework. Regarding the underlying factors, the findings demonstrate that trust and brand perception positively affected customer satisfaction within ECM. However, the influence of anthropomorphic behavior was relatively minor towards customer satisfaction in this study, while WOM recommendations were limited to customers with digital literacy, rather than the outcome of positive customer satisfaction.

Conclusions for the existing ECM components

The findings of this study revealed that customers' prior experiences had a critical role in shaping their perceived expectations. Specifically, positive expectations were formed based on the flexibility, ease of access and availability of chatbots. These expectations were confirmed during the perceived performance stage, indicating chatbots success to meet basic user needs by being intuitive and user friendly. However, previous experiences of customers' also created the notion of chatbots' difficulties understanding their questions, and delivering automated and standardized responses. This study validates the consumers' concerns regarding the limitations of chatbots in effective problem-solving and adaptability. These deficiencies caused negative emotional responses, such as frustration and confusion among the customers. Therefore, this study underscores the necessity to separate chatbots usability and efficiency of solving problems. Both of these aspects are critical for chatbots' perceived performance, which ultimately affects satisfaction.

Furthermore, the willingness to use chatbots again varied depending on customers' technological experience and familiarity. Unexpectedly, this study's findings suggested that not only satisfied customers but also dissatisfied customers' were inclined to try chatbots as a

first alternative. Even though a decline of expectations could be seen from the chatbot's automated and inaccurate responses, this study's results demonstrates how lowered expectations does not necessarily translate to less usage of technologies, if the risk is perceived as relatively low in terms of invested time.

Conclusions of the underlying factors influences on ECM

This study's result indicated that unsatisfied customers often compared chatbots in relation to the personalized service delivered by human agents. Therefore, their current negative experience of the chatbot performance, with less adapted responses, resulted in their preference of human service. However, if chatbots were capable of providing services equal or superior to humans in the future, customers would choose the fastest alternative. This suggests that human-like characteristics of chatbots was less prioritized by customers, the emphasis was instead on access to accurate and prompt answers. Therefore, the customers disregarded anthropomorphic behavior as a factor of their satisfaction.

Furthermore, the chatbot's inability to understand problems and provide satisfactory answers negatively impacted trust towards the technology, particularly for older customers. The difficulties for older customers to use chatbots were attributed to their lower technological proficiency and familiarity with chatbots. In contrast, younger individuals, who had higher levels of technological experience, were able to utilize the potential of chatbots more effectively and encountered fewer challenges in meeting their expectations for quick service. Therefore this study implies that the level of satisfaction may be a question of how experienced the customers are with chatbots and technology, which is more prevalent among younger customers than older ones. Additionally, customers also viewed chatbots as an extension of the brand, thereby impacting their expectations of the technology. These findings indicate the effect of customers' expectations for the brand, and how well the chatbot's ability to satisfy their needs will influence their brand perceptions. Depending on their experiences, their perception of the brand was either enhanced or diminished.

These findings further challenge the argument that positive experiences lead to positive WOM recommendations. Satisfied customers limit their endorsements to those with digital literacy, or requiring simpler customer service support. Hence, chatbots WOM derived from the qualifications of individuals, rather than their own positive experiences. The unsatisfied customers within this study also expressed their unwillingness of recommending chatbots for

customer service, due to their perceived inability to accurately address and resolve their issues.

6.1 Theoretical implications

This study has made significant contributions to the understanding of customer satisfaction with chatbot services, and contributed to the ECM framework. The findings highlight the influence of various underlying factors on customer satisfaction for ECM, including anthropomorphic behavior, brand perception, trust and WOM. Through exploratory research, this study captured valuable insights into the emotions and feelings experienced by customers when interacting with chatbots. As a result, it has provided unique and profound insights to the factors that shape customer satisfaction of chatbot services.

For perceived performance, the results underline the need to separate usability and effectiveness of solving problems. Furthermore, a focus on accurate and prompt answers of performance, rather than anthropomorphic behavior tends to be more sought after by unsatisfied respondents. This study also suggests that customer satisfaction with chatbots varies based on technological experience, familiarity and age. Specifically, older customers are less trusting, as they tend to have lower levels of technological proficiency. These findings also challenge the assumption that positive experiences lead to positive WOM recommendations, as recommendations also are steered by the degree of digital literacy among customers, and the complexity level of their service needs.

6.2 Managerial implications

Through this exploratory study, several recommendations can be offered to managers regarding the factors that influence customer satisfaction. By an increased understanding of these factors, managers can navigate the dynamic technological environment of chatbots, with a focus on meeting fundamental customer needs. These recommendations help managers make informed decisions to enhance customer satisfaction in the context of chatbot services.

For managers, it is central to distinguish usability and problem-solving efficiency when evaluating chatbot performance. While chatbots may be considered user-friendly and intuitive to use by customers, their effectiveness in solving problems and adapting to customer needs must be prioritized for an improvement of their satisfaction. Managers also need to acknowledge that older customers have a lower level of technological proficiency, and may

face challenges in using chatbots. It is important for managers to provide appropriate support and guidance to help older customers overcome these difficulties. By ensuring their positive experiences, companies can acquire further trust, and ultimately satisfaction towards the technology. Understanding generational differences and adapting chatbot services to different customer segments could help address the experience discrepancies between older and younger customers. Additionally, the findings of this study indicates that the main premise of chatbots within the fashion industry should be to deliver precise and accurate responses. Witnessed in this study, customers perceived sufficient answers as their primary concern, which superseded the need for chatbots to behave similar to humans.

7. Future research and limitations

This chapter involves recommendations to future researchers within the area of customer satisfaction and chatbot service.

7.1 Recommendations for future research

This study built upon the argument of ECM excluding underlying factors, which may have an impact on customer satisfaction. However, important to note is that this study only examined four underlying factors having an effect on customer satisfaction with chatbot service. This leaves room for future research to explore additional factors that may affect customer satisfaction. The intention of this exploratory study was to contribute to the development and refinement of the ECM model. Hence, future research could expand upon this study, by examining a wider range of factors and their effects on customer satisfaction with chatbot services.

This study concentrated on H&M's chatbot within the fashion industry, highlighting the need for future research to explore customer satisfaction with chatbots in other industries, or different companies within the fashion industry. It is important to acknowledge that customer satisfaction and expectations vary across industries (Chen, Le & Florence, 2021), which could influence the customer satisfaction of chatbots. Another intriguing direction for future research would be to assign respondents with a different task to solve, which would enable the exploration of whether level of task difficulty influences the perceived performance of the chatbot, and consequently, customer satisfaction. Lastly, all respondents of this study had previous experience of chatbots. Thus, there may be other discoveries for customers without prior experiences, as expectations would likely be shaped by their perceptions of similar technologies as stated by Gupta, Anish & Abhishek (2020).

7.2 Limitations

With customer satisfaction capturing subjective behaviors and perceptions (Griffiths, Johnson & Hartley, 2007), multiple underlying factors could affect customers satisfaction with chatbots service. Since this study solely integrated four underlying factors affecting customer satisfaction in ECM, an assumption would be that other underlying factors could have

affected the outcome of this study. Furthermore, it is important to note that the geographical scope of this study was limited to the Stockholm and Uppsala region, other perceptions of chatbots might exist outside the boundaries of this specific area.

Furthermore, with the quick adaptation of chatbots (Tran, Pallant & Johnson, 2021), it can be argued that chatbots are a relatively new studied phenomena still in its developing stages. Consequently, the conclusions made in this study are relative to its time, since new understanding of chatbots may change customer satisfaction in the future. In addition, with AI technology's constant development, it can be argued that the perception of customer satisfaction can gradually change over time. However, the shift towards such a change would require foundational knowledge of customer satisfaction, which this study aims to contribute with.

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Appendix

Appendix 1

Interview guide

PART 1

1. How do you identify yourself? (Women/Men/Other)

2. How old are you?

3. What is your current profession/occupation?

4. Where are you currently living?

Customer expectation of chatbot service;

1. Did you know chatbots are used for customer service purposes?

2. Have you used a chatbot for customer service before?

3. If yes, how was your experience with that chatbot?

PART 2

Chatbot perceived performance;

1. Was the chatbot easy/difficult to use? If yes/no explain why!

2. Did the chatbot meet your expectations?

- What were your expectations before using H&M's chatbot?
- If yes, how did it meet your expectations?
- If not, how did the chatbot fail to meet your expectations?

3. Did you find the chatbot helpful in assisting you with your questions or concerns?

4. Did you find the chatbots responses to be relevant to your questions or concerns?

5. Is there any function of the chatbot you would like to improve? Explain!

Confirmation of chatbots service;

1. Did the chatbot provide you with a desired outcome? If yes/no elaborate!

2. While using H&M's chatbot, did it perform differently or similar to your previous experience of using chatbots? (If you had any previous experience with chatbots)

3. If you have not used a chatbot before solving this task, would you use it again for customer service purposes?

4. Do you feel that H&M's chatbot provided a different answer in comparison to a human agent? Explain why/why not!

5. Did your usage of H&M's chatbot differ from human customer service? If yes, what did differ? If not, why is it similar?

Customer satisfaction of chatbots service;

1. Would you continually use chatbots for customer service purposes?

2. What part of chatbots service did you like/don't like?

3. Would you recommend using a chatbot for customer service purposes to others?

4. Overall, how well did you feel that H&M's chatbot helped and assisted you while solving the predefined task?

5. Even if this was your first time using a chatbot or if you have used a chatbot before, would you use it again for customer service purposes?

6. Was there anything else you thought of when using H&M's chatbot? Something that perhaps surprised you?

Appendix 2

Observation task

You have just been informed of this study's purpose and agreed to participate in this study's observation and interview. We will now proceed with the observation part, which involves a task you should try to solve with a chatbot. You are allowed to take any time needed to solve this task, but it's important that you read it through beforehand, ask questions if you have any and try your best to solve it. Before starting, it's important to know that you must act and behave as a customer throughout this whole task. You are therefore put into the role/position of a H&M customer while solving the task below.

The task;

You have bought a jacket in one of H&M's physical stores. In the store you really loved the color of the jacket and thought it would look great with your vintage jeans at home. But when you came home the same day you unfortunately realized that the jacket does not fit with the vintage jeans. In addition, the jacket has changed color and is much darker at home compared to how it looked in store with all the bright lights. You therefore decide to return the jacket. Since you have lost your receipt, you go to H&M's website to look for customer service alternatives and see how you can best return the jacket. While being on the website you see that H&M has a chatbot that provides customer service 24/7 and can answer any customer questions. You decide to start chatting with H&M's chatbot.

Now, while using H&M's chatbot, your task is to return the jacket you bought in the physical store. You are only allowed to chat with H&M's chatbot, meaning you are not allowed to use any other customer service related alternatives. Once again, you can take any time you feel needed to solve this task. Let's start whenever you are ready!

Appendix 3

Theoretical notes coded from observations

Behavior/Emotional gestures	**Respondent**
Sign of frustration	6, 8, 9, 11, 12, 13, 14, 16 & 19
Agitated typing	6, 8, 9, 11, 13, 14, 15, 17 & 19
Cues of satisfactory results	1, 2, 3, 4, 5, 7 & 20
Verbal utterances (Comments on)	
The chatbot's misinterpretations	6, 8, 9, 11, 13, 15 & 19
The chatbot's positive performance	1, 3, 4 & 7
Preferring a human agent	6, 8, 9, 14, 15 & 18
Non-qualified answers of the chatbot	6, 8, 9, 13, 14 & 15
The chatbot's quick responses	1, 3, 4, 5 & 7

Appendix 4

Thematic analysis from the interviews

Main Themes	**Sub Themes**	**Quotes**
Customers expectations of chatbot service	Previous chatbot experiences Expectations of chatbots performance	*"A chatbot is quick and it's good that it's organized and uses punctuations for alternatives to find the answers. Another positive aspect is that you can access service 24/7."* - Respondent 1 *"The complexity of the question determines how well a chatbot performs. For simpler questions, chatbots were a beneficial alternative, since it saved time."* - Respondent 3

		"When I have asked chatbots questions in the past, automatic answers have immediately popped up. This answer has often been too long and has not quite answered my question." - Respondent 4 *"The access of chatbots is a plus. I like that I get service directly and don't need to wait in a telephone queue for 20 minutes before getting help."* - Respondent 5 *"I just get irritated when I try chatbots and hope for a fast service, but it only gives me an automatic answer that doesn't have anything to do with my question, and I end up calling a person anyway. Then, I would rather call a person in the first place and wait. I get the answer I need directly and the possibility of misunderstanding decreases."* - Respondent 8 *"I often get irritated when the chatbots only give me a standardized answer that doesn't fit my question."* - Respondent 9 *"Chatbots have been a good alternative when I have had simpler questions. But for more complex questions, they can't really give me a clear answer. Then I would rather have a human so I can explain my problem in more detail and get the help I need."* - Respondent 11 *"I would use chatbots for its flexibility, and the fact that they are available 24/7."* - Respondent 12

		"It was so frustrating when I needed to reformulate my question multiple times. At one point I wondered if the chatbot was even capable of giving me an answer." - Respondent 19
Chatbot perceived performance	The chatbot's usability The chatbot's efficiency of solving problems Customer trust in chatbots service	*"The chatbot was easy to use since it understood my question and what I was looking for, and sent the information I needed directly."* - Respondent 3 *"The chatbot worked just fine. However I think that if the customer service errand would have been more complex, it would have been hard to deliver the message in a brief way for it to fully understand me."* - Respondent 4 *"The chatbot gave me an opportunity to describe my problem. And it guided me throughout the whole process until I had an answer. So, I was happy with its responses."* - Respondent 5 *"The chatbot didn't understand my question at all and I needed to formulate the question a million times. It focused on certain words rather than understanding the larger context. It was much better when I came to a personal assistant who solved it directly."* - Respondent 6 *"As soon as you write a more personal and complex question, chatbots have difficulties providing relevant answers. When a chatbot gives you a more standardized answer, the response feels generic."* - Respondent 10

		"I would say, based on the chatbot's performance, that it had difficulties understanding more complex questions and often asked me to reformulate my question." - Respondent 11 *"I thought the chatbot was irregularly difficult. I explained myself thoroughly but the alternatives provided were confusing and of less use."* - Respondent 13 *"The chatbot misunderstood my question and gave me irrelevant responses not related to my issue."* - Respondent 14 *"The locked alternatives given by the chatbot made it easy to navigate and get my question answered. However, I would still want a human agent to reinforce the answers."* - Respondent 18 *"I didn't really get the response to my asked questions, it misinterpreted what information I was looking for entirely which annoyed me."* - Respondent 19 *"You need to balance between a more user friendly and adapted model. I think the goal should be a chatbot that is simple and steers the user in the right direction, but also has a more developed way of understanding the person."* - Respondent 20
Confirmation of chatbots service	Customers expectations in relation to	*"The chatbot performed better than I expected. It gave me a specific answer quickly."* - Respondent 1

	chatbots performance Chatbots vs human customer service Chatbots performance in relation to brand perception Customer trust in chatbots service	*"Since I have used chatbots before I know how to ask a question in order to get a good answer. However, if you were to use a chatbot for the first time, it would probably have difficulties understanding your question."* - Respondent 3 *"I would much rather call a human agent for customer service. I trust a human over a chatbot, especially when I need to reformulate my question many times. Then, I don't know if the chatbot gives me the right answer or not."* - Respondent 6 *"I don't care if the chatbot behaves as a human or not. For me it's more important that I get an answer to my question. And in this case, the chatbot gave me that directly."* - Respondent 7 *"You expect a multinational company with huge capital to invest in an AI system that actually works. I must say that my view of their brand weakened since my question was not answered and I felt ignored. And also since the service didn't correspond to the nice personal service in store."* - Respondent 8 "*If chatbots in the future will provide better or even the same good service as a human, I would use a chatbot. I don't really care if it is a human or chatbot that helps me. It's more important that I get valuable service and get my question answered."* - Respondent 9 *"I personally use chatbots less often. This is*

		because the experience I got from H&M's chatbot was what I expected from the technology. Therefore, I would say it met my set expectations." - Respondent 14 *"I think the chatbot could have adapted to my answers a little bit more, and had a better understanding of my questions. It was just looking for my keywords to get into a closed loop of answers."* - Respondent 16 *"As this is some form of customer service, it is very much about how you are assisted. Chatbots are very sterile and abstract, and almost uncomfortable. It is a robot, and I am not really used to being assisted by it."* - Respondent 18
Customer satisfaction of chatbots service	Satisfaction with chatbots responses Recommending chatbots to others (WOM) Probability of using chatbots again for customer service	*"How well you ask a question is going to determine how satisfied you are with its service. If you ask a clear and short question, the chatbot will help you, but not otherwise."* - Respondent 1 *"I will use a chatbot again since it saves time and energy. You don't have to wait in a telephone queue for 20 minutes."* - Respondent 2 *"Since I have used chatbots before, I know how to use them to get valuable service. However, for more inexperienced people, a chatbot is not a good alternative. Instead, I think previous interactions with chatbots teach you how to use them successfully."* - Respondent 3

		"I get frustrated when I chat for 10 minutes with a chatbot and still don't get an answer to my question. I would rather spend that time in a telephone queue and get valuable service." - Respondent 8 *"Based on its performance, I would not recommend chatbots to others. Especially not the older generation who may have more difficulties handling technology."* - Respondent 9 *"I am satisfied as long as I get my question answered, and if a chatbot can provide that, I am happy. But this chatbot and previous ones have asked me to reformulate my question so many times, which makes me frustrated. But it may depend on the fact that I'm in my 20s and want fast service."* - Respondent 10 *"The reason I would use a chatbot again is because of its flexibility and that they are available 24/7. If they develop from their current state, I would use them for quick service errands."* - Respondent 12 *"I got redirected to a human agent while using the chatbot. I would definitely say this is a sign of chatbots incapability to answer questions. However, I was happy for the human service I received, since I then got an answer to my question."* - Respondent 16