A Work Project, presented as part of the requirements for the Award of a Master's degree in Management from the Nova School of Business and Economics.

Chatbot Design Factors Influencing Generation Z in Fast-moving Consumer Goods Industry

Sophia Marie Feldmann
(61919)

Work project carried out under the supervision of:

Prof. Dr. João Castro

20/05/2025

Abstract This study explores which chatbot design factors positively influence trust and engagement among Generation Z consumers in the fast-moving consumer goods e-commerce industry. Through qualitative, expert interviews and user-centered analysis, key expectations of Generation Z regarding conversational design, visual appearance, and functional reliability are identified. The findings offer practical guidance for designing chatbots that appeal to this digitally native generation, aiming to improve user experience, strengthen customer trust, and enhance conversion rates in online fast-moving consumer goods retail environments.

Keywords (Chatbot, User Experience, Gen Z, E-Commerce, FMCG, User Interface, Conversional Design, Anthropomorphism, Uncanny Valley Effect)

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

Table of Contents

Main part

1. Introduction

1.1 Introduction to the Research Topic

The rapid development of artificial intelligence (AI) is fundamentally changing the way people interact with digital systems (Haleem et al. 2022; Singh and Namin 2025). Chatbots, as text-based AI interfaces, in particular, are becoming increasingly important in e-commerce, as they advise users in real time and facilitate purchasing decisions (Araujo 2018; Gnewuch, Maedche and Morana 2017). While companies from the fashion sector, such as the fashion retail brand Zalando, are already successfully using chatbots, the FMCG sector has so far remained cautious despite growing online sales (Klein and Martinez 2022; Landim et al. 2021; J.-Y. M. Kang and Choi 2023; Radtke 2020). However, providers such as Flink and Picnic show that digital shopping experiences and fast delivery are increasingly appreciated (Mittler, Klaus and Mahr 2024). Gen Z, as a digitally socialised target group, places particularly high demands on individualisation, usability, and transparent communication (Francis and Hoefel 2020; Gewiese, Rau and Varghese 2025). In order to promote trust and conversion, chatbots must be designed along the dimensions of UX, UI, and CD (Haugeland et al. 2022; Y. Cheng and Jiang 2020; Liu, Xu, and Zhou 2024). Theoretical frameworks such as anthropomorphism and the Uncanny Valley theorie help to explain how human-looking chatbots affect Gen Z (Araujo 2018; Mara, Appel, and Gnambs 2022; Mori, MacDorman and Kageki 2012).

1.2 Research Question and Hypothesis

The challenge for companies is to determine how chatbots need to be designed to promote trust and willingness to buy in Gen Z (Pereira, Limberger and Ardigó 202; Singh and Namin 2025). As this target group with purchasing power has not yet been analysed from the point of view of digital commerce preferences, this paper examines the research question: To optimise the approach for and increase the sales conversion rate in Gen Z, which UX, UI, and CD factors

play a decisive role in the development of trust in chatbots during e-commerce, FMCG purchases? The hypothesis derived from this and to be tested in this thesis is: A chatbot in FMCG online retail that is specifically tailored to the digital usage behaviour of Gen Z, taking into account habits and optimally designed conversation elements such as UX, UI, and CD design, leads to more trust in the chatbot and a higher conversion rate from this target group.

H_0 = There is no correlation between the individual UX, UI, and CD design factors and the conversion rate.

H_1 = There is a correlation between the individual UX, UI, and CD design factors and the conversion rate.

1.3 Objective

The aim of this work is to reveal to companies in the FMCG industry which of the factors UX, UI, and CD of a virtual chatbot in online retail positively influence the trust of the target group Gen Z when promoting repurchase on their corresponding website.

2. Literature Review

2.1 Chatbots in E-commerce

Chatbots are computerised systems developed on the basis of AI and machine learning to interact with users using natural language (AbuShawar and Atwell 2005; Singh and Namin 2025). The first foundations were laid by Weizenbaum in 1966 with the ELIZA system, which enabled dialogues based on keywords (Weizenbaum 1966; Abu Shawar and Atwell 2007). Modern chatbots use natural language understanding (NLU), dialogue management and text generation to respond flexibly to users (Abu Shawar and Atwell 2015; Singh and Namin 2025). Due to their constant availability, cost efficiency and the possibility of personalised communication, chatbots make a significant contribution to increasing customer satisfaction (Adamopoulou and Moussiades 2020; Lv et al. 2021). Research shows that empathetically

designed chatbots in particular can increase user trust and reduce negative emotions in customer interactions (Gaudiello et al. 2016; Prentice, Lopes, and Wang 2020; Yim 2023; Yen and Chiang 2020). Despite significant technological advances, challenges remain, particularly in understanding ambiguities and context-dependent meanings of natural language (Choung, David, and Ross 2022; Coheur 2020; T. W. Kim et al. 2022).

Electronic commerce (e-commerce) refers to commerce via digital platforms in which websites or mobile applications act as central interfaces between providers and customers (Saeed, Grover, and Hwang 2005). Against the backdrop of increasing digitalisation, e-commerce today is significantly shaped by technological innovations such as big data, the 'Internet of Things' and, in particular, AI-based systems such as chatbots (Bertacchini, Bilotta, and Pantano 2017; Heinemann 2024; Orzoł and Szopik-Depczyńska 2023). In e-commerce, chatbots fulfill a variety of functions, including generating leads, assisting with purchasing decisions and providing customer service support (Chong et al. 2021; Pröllochs 2023; Rose et al. 2012). However, key barriers to their use remain of a technological and functional nature, such as poor language processing and a high error rate, as well as the skepticism and mistrust of many customers towards AI-supported communication (Habib et al. 2024; C. Wang et al. 2023; Zia and Alotaibi 2024). The ability to interact with human service staff remains essential as many users find purely AI-based communication insufficient for complex or sensitive topics (Castelo, Bos, and Lehmann 2019; T. W. Kim et al. 2022). A lack of human escalation options can have a negative impact on satisfaction, brand loyalty and purchase intent (Arikan et al. 2022; Pereira, Limberger, and Ardigó 2021; Rahman et al. 2025). Companies that want to achieve a targeted customer approach are therefore focusing on the trust-building, empathetic design of chatbots and platforms (Le, Park, and Lee 2023).

2.2 Characteristics of the FMCG Industry in a Digital Context

Fast-moving consumer goods (FMCG) include everyday products such as food, cosmetics, personal care, washing, cleaning and cleaning products, as well as non-prescription medicines and pet supplies, which are characterised by high turnover rates, low prices and short purchase cycles (Ahrens 2025; Statista 2025). Digitalisation has also changed the FMCG sector as consumers now expect fast, convenient and personalised online experiences via websites, mobile application programs and social media (Saarijärvi et al. 2023; Schmitt 2019). AI and machine learning enable personalised product recommendations, sales forecasts and a more efficient customer approach (Ramachandran 2024). Chatbots are therefore being used more and more frequently in customer service; for example, usage for product advice or to automate ordering processes (Chong et al. 2021; Gläß 2018; Zia and Alotaibi 2024). AI-supported hyper-personalisation in FMCG customer relationship management enables individual recommendations and optimised loyalty programmes through real-time data and behavioural analyses (Orzoł and Szopik-Depczyńska 2023; Ramachandran 2024; Wagh and Ramesh 2024). New formats such as quick commerce (i.e. the ultra-fast delivery of everyday consumer goods) are becoming increasingly important (Heinemann 2024). German retailers such as Rewe, Picnic and Knuspr are driving change, and manufacturers such as Nespresso are also increasingly focussing on direct-to-consumer sales (Mittler, Klaus, and Mahr 2024; Radtke 2020). Technological change in the FMCG industry is rapid, but the customer remains the key success factor. Digital innovations continue to be oriented towards the creation of genuine added value for them (Babin, Feng, and Borges 2021; Chong et al. 2021).

2.3 User Experience-, User Interface- and Conversational Design

User experience (UX) describes the totality of experiences that a user has while interacting with a digital system, taking into account both functional and emotional aspects (Becker and Jaakkola 2020; Lemon and Verhoef 2016). The customer experience encompasses spontaneous

and conscious reactions along the customer journey and is a multidimensional construct consisting of cognitive, emotional, social, sensory and behavioural dimensions (Miclau et al. 2020). In the context of chatbots in e-commerce, six key requirements for a positive UX include fast, efficient support for online shopping (Brandtzaeg and Følstad 2017) and intuitive, easy-to-use user guidance (Habib et al. 2024). Smooth interactions with high responsiveness strengthen the user experience (Alsadoun and Alnasser 2025; J.-Y. M. Kang and Choi 2023). Easy access to human help when needed is also important (T. W. Kim et al. 2022). Personalised product recommendations promote trust and loyalty (Chih, Wang, and Banda 2025; Liu et al. 2024). Mobile optimisation also plays a central role, as Gen Z prefers mobile shopping (Joshi 2025). User interface (UI) refers to the visual design and aesthetics of a digital application. An intuitive and attractively designed UI contributes significantly to user satisfaction by facilitating orientation and promoting positive emotional reactions (Chaves and Gerosa 2020; Liu, Xu, and Zhou 2024). The six important requirements for the UI design of chatbots include a minimalist, clear design with modern colours and fonts (Liu, Xu, and Zhou 2024). Visual elements such as avatars increase the social impact of the chatbot (Chen et al. 2023; Yuan et al. 2024). Seamless integration into the website design supports a consistent UX (Bertacchini, Bilotta, and Pantano 2017). Personalisation through naming or purchase history is appreciated (Brandtzaeg, Skjuve, and Følstad 2022), or customisable design options, such as dark mode (Y. Cheng and Jiang 2020). Conversational design (CD) is also taken into account to achieve a human-like UX (Chen et al. 2023). This encompasses the systematic design of dialogue-based interactions between the user and the system, with the aim of enabling a conversation that is as natural and fluid as possible (Yuviler-Gavish, Halutz, and Neta 2024). Factors such as depth of dialogue, cultural adaptability and transparency about the machine nature of communication play a central role here (Altendorfer 2024; Cui, Van Esch, and Phelan 2024; Nass and Moon 2000). Six key principles for successful CD include the natural flow of conversation is perceived as particularly

pleasant (Altendorfer 2024; Chaves and Gerosa 2020; Haugeland et al. 2022), especially when users can use their own language with slang or emojis (Araujo 2018). Entertaining elements such as quizzes or discounts promote emotional loyalty (Brandtzaeg and Følstad 2017). Trust is created through clear, friendly communication (Choung, David, and Ross 2022; Nass and Moon 2000) and transparent references to the AI character (X. Cheng et al. 2021; Yuviler-Gavish, Halutz, and Neta 2024). Users want helpful suggestions without feeling infantilised (Blut et al. 2021; Kang and Choi 2023).

2.4 Anthropomorphism and the Uncanny Valley Theory

The humanisation of such systems also plays a role in the adaptation of UX, UI, and CD (Go and Sundar 2019). Anthropomorphism refers to the deliberate integration of human characteristics into chatbots to create social presence and increase trust and acceptance among users (Adam, Wessel, and Benlian 2020; Yen and Chiang 2020). Studies show that empathetic and socially influenced behaviour of chatbots can positively influence purchase intent (Yen and Chiang 2020; Chih, Wang, and Banda 2025). However, excessive humanisation harbours risks that are addressed by the Uncanny Valley theory (Mara, Appel, and Gnambs 2022). This theory, originally formulated by Mori in 1970, postulates that an excessive but imperfect similarity between machine and human triggers discomfort and rejection in the user (Burleigh, Schoenherr, and Lacroix 2013; Mori, MacDorman, and Kageki 2012; Rieger 2018). Empirical studies show that overly human-like chatbot avatars increase the feeling of eeriness and reduce trust and willingness to buy (S. W. Song and Shin 2022; Yonemitsu et al. 2021). In addition, a balanced design between functional competence and moderate humanity sustainably increases user acceptance (Blut et al. 2021; S. Wang, Lilienfeld, and Rochat 2015).

2.5 Gen Z as a Digital Target Group

Gen Z represents an age group born between 1995 and 2010 (Gewiese, Rau, and Varghese 2025). They are considered to be the first fully digitally socialised generation, which is why

they are also known as ‘digital natives’ (Blume et al. 2025). They are said to have a high affinity for technology, usability and digital communication (Francis and Hoefel 2020; Stummeyer 2025). Around 48% belong to the early majority when it comes to adopting new technologies (Gewiese, Rau and Varghese 2025). Their consumer behaviour is characterised by pragmatism, a desire for transparency and identification with brand values (Francis and Hoefel 2020). Purchase decisions are primarily based on social media, online reviews and influencer recommendations (Blume et al. 2025; Gewiese, Rau and Varghese 2025). In online shopping, Gen Z attaches particular importance to fast deliveries, transparent processes and flexible return options (Blume et al. 2025). Chatbots are primarily perceived by Gen Z as practical tools for fast, location- and time-independent services (Sboui, Baati, and Sfar 2024; Tamara, Tumbuan, and Gunawan 2023).

3. Problem Being Studied

3.1 Initial Situation

The use of AI-based chatbots in e-commerce has become widespread in recent years (Agnihotri and Bhattacharya 2023). In the FMCG sector, there is growing interest in improving digital communication interfaces to provide customers with efficient and personalised support at the point of sale (Ahrens 2025; Radtke 2020). The increased online purchasing of FMCG products is due in particular to the coronavirus crisis (Ahrens 2025). At the same time, the importance of the Gen Z as a target group with purchasing power is growing (Francis and Hoefel 2020; Gewiese, Rau, and Varghese 2025). Due to their digital socialisation, they place high demands on user-friendliness, communication style, usability and personalisation in online shopping (Tamara, Tumbuan, and Gunawan 2023). Numerous user studies show that young user groups, in particular, often perceive chatbots as annoying, impersonal or not very effective, even though they are actually advertised as an efficient solution for customer interaction (Chih, Wang, and

Banda 2025). Elements such as UX, UI, and CD are considered influential factors in making interaction with chatbots effective, pleasant and trustworthy (Y. Cheng and Jiang 2020; Følstad, Nordheim, and Bjørkli 2018). Companies are increasingly recognising the potential of these design elements, but there is a lack of concrete recommendations on how they should be tailored to the needs of Gen Z (Tamara, Tumbuan, and Gunawan 2023).

3.2 Identification of the Research Gap

While numerous studies have investigated the impact of chatbots in e-commerce, there has been a lack of specific research into the importance of the design dimensions UX, UI, and CD for Gen Z in the context of FMCG online retail (Chong et al. 2021; Landim et al. 2021). Research shows that this generation has particularly high expectations of digital services (Gewiese, Rau and Varghese, 2025; Sboui, Baati, and Sfar 2024). Studies show that anthropomorphic design elements, such as human-like language, facial expressions or avatars, can increase the willingness to use and trust in chatbots (Adam, Wessel, and Benlian 2020; Han 2021). Human-like design elements, such as language, avatars or humour, can increase acceptance, but should not be exaggerated in order to avoid the so-called Uncanny Valley Effect (Adam, Wessel and Benlian 2020; S. W. Song and Shin 2022). The question of how chatbots need to be designed to promote trust, acceptance and conversion among Gen Z in FMCG e-commerce has so far remained unanswered in the existing literature (Schuetzler, Grimes, and Giboney 2020). It is unclear which design features have a particularly positive influence on the experience and therefore, lead to higher acceptance and customer return rates (Schuetzler, Grimes, and Giboney 2020). Existing studies often focus on general user groups or on other sectors such as fashion or technology (J.-Y. M. Kang and Choi 2023; Landim et al. 2021).

3.3 Relevance of Research for Practice

FMCG companies are under pressure to reach and retain young target groups via digital channels (Radtke 2020; W. B. Kim and Hur 2023). In view of the increasing purchasing power

and digital affinity of Gen Z, this user group represents a strategically important target group (Sboui, Baati, and Sfar 2024; Stummeyer 2025; Tamara, Tumbuan and Gunawan 2023). Cultural differences and individual affinity for technology must be taken into account when designing digital communication systems in order to ensure trust and acceptance among young consumers (K. Kang and Alnefaie 2024; Lee and Xiong 2024; Vollmer et al. 2018). Insights into how UX, UI, and CD must be specifically designed are therefore highly relevant for companies that want to make their e-commerce presence fit for the future (Bertacchini, Bilotta, and Pantano 2017; W. B. Kim and Hur 2023). The targeted optimisation of chatbots based on the expectations of Gen Z offers great potential for increasing customer satisfaction, repurchase intent and conversion rates in e-commerce (Chih et al. 2025; Joshi 2025; Sboui, Baati, and Sfar 2024). Good design is characterised by the fact that the result is convincing (Norman 2013, 293). This work therefore provides practical recommendations for the design of this interface (Schuetzler, Grimes, and Giboney 2020).

3.4 Objective and Contribution of the Study to Research

The aim of this thesis is to analyse the influence of the chatbot design factors UX, UI, and CD on the perception and behaviour of Gen Z in FMCG e-commerce. Qualitative and quantitative methods are used to determine which elements of human-machine interaction are particularly effective in promoting trust and willingness to buy (Castelo, Bos, and Lehmann 2019; Gaudiello et al. 2016; T. W. Kim et al. 2022). The work thus makes an empirically sound contribution to the user-centered design of chatbots and closes a research gap in the field of FMCG-specific UX for Gen Z in online retail (Kamoonpuri and Sengar 2023).

3.5 Delimitation of the Study

The study is limited to FMCG e-commerce, only considers chatbots that are integrated into websites as part of online shops and focuses exclusively on the Gen Z target group in Germany (Cardona et al. 2019; Heinemann 2024). Preferences of other age groups are not analysed. Only

chatbot systems on company websites are deliberately analysed, not voice assistants or chatbots in social media messenger services (Choung, David, and Ross 2022; S. Song et al. 2020). The paper discusses enbodied robots whose human-machine input works via NLU, excluding technical robots (Broadbent 2016). In addition, the gender of the chatbot and the effects on trust are not discussed further, as other studies have investigated and found that female chatbots are more trustworthy (Feine et al. 2020). The focus is on the UX, UI, and CD dimensions and their influence on purchasing behaviour and user acceptance (W. B. Kim and Hur 2023). The humanisation of chatbots and the Uncanny Valley theory are discussed in more detail in order to describe the already investigated phenomenon of the rejection of superhuman chatbots (Lu and Zhang 2024). Aspects such as data protection are left out, and detailed technical architectures are not covered in depth (Følstad, Nordheim, and Bjørkli 2018).

4. Methodology

4.1 Research Design and Method Selection

To determine which factors make the use of chatbots in e-commerce in the FMCG industry particularly effective for addressing Gen Z, a deductive research approach is pursued (Oehlrich 2022, 9). Theoretical research is used to derive the hypothesis and a comprehensive literature review provides the basis for utilising existing research findings (Hox and Boeije 2005). This is followed by an empirical examination of the state of research through a survey and the quantitative measurement of interviews based on this (Oehlrich 2022). This was carried out in the form of a standardised online survey on the expectations of UX, UI, and CD as factors influencing user behaviour in the target group Gen Z (Saunders, Lewis and Thornhill 2016). The answers collected from the survey are analysed inductively according to Mayring (Mayring and Fenzl 2019). The expert interviews act as the qualitative analysis methodology in order to supplement and substantiate the data collected from the survey with expert knowledge (Hox

and Boeije 2005). The contents of the interviews are analysed deductively according to Mayring (Brinkmann 2020; Mayring and Fenzl 2019). The mixed-methods approach used combines quantitative and qualitative data collection in order to shed light on the research question in a comprehensive manner (Hox and Boeije 2005; McCusker and Gunaydin 2014). As Karl Popper's theory states, the previously established hypothesis is thus falsified or not falsified (Oehlrich 2022, 147).

4.2 Theoretical Foundation of the Literature Review

The structured literature research and data collection were carried out systematically via various scientific databases such as ScienceDirect, Taylor & Francis, Emerald Insight, Researchgate, Academic Search Complete (EBSCO), Oxford Academic, Economic Sciences, and SpringerLink using targeted keyword combinations on chatbots, UX, UI, CD factors, FMCG, e-commerce, anthropomorphism, Uncanny Valley model and Gen Z. In addition, the snowball system was used to find further relevant works from the literature found (Oehlrich 2022). In addition, current market studies from Statista and PwC were used to categorise industry-specific developments in FMCG e-commerce and consumer trends of Gen Z in an up-to-date and well-founded manner. The secondary sources were analysed deductively by systematically assigning study content to central categories such as UX, UI, CD, trust, and user behaviour in Chapter 2. The identified concepts of UX, UI, and CD as well as theories such as anthropomorphism and the Uncanny Valley model are used as a basis for the empirical quantitative survey of the online survey. They also form the basis for deriving the hypothesis to answer the research question. The aim of the theoretical foundation is to define key terms such as UX, UI, and CD in the context of chatbot design, to systematically process scientific findings, to categorise the digital FMCG industry and Gen Z as a target group and to derive the research question and hypothesis on this basis.

4.3 Empirical Data Collection (Quantitative and Qualitative)

4.3.1 Online Survey

A structured online survey was conducted to measure the factors influencing UX, UI, and CD on the acceptance and behaviour of Gen Z in FMCG e-commerce. Recruitment was carried out via personal contacts, social networks, university groups and the SurveyCircle platform, and participation was anonymous and voluntary (Appendix 1.). The sample includes participants from Gen Z (i.e. people born between 1995 and 2010 who live in Germany). Only submitted and complete surveys are included in the analysis. The survey data were collected over several weeks using Qualtrics and descriptively described and statistically analysed partly using Qualtrics and Excel, but primarily with the help of Jamovi. Firstly, a descriptive analysis was carried out, indicating frequencies and descriptives (e.g., mean values, standard deviations, and extremes), followed by a linear regression analysis with a significance level of $\alpha = 0.05$ to test the influence of UX, UI, and CD on the stated return rate (Oehlrich 2022). For each of the three factors UX, UI, and CD, six aspects and their influence on the corresponding factor were also determined. The aim of the quantitative survey is to gain a deeper understanding of expectations, experiences and acceptance factors of chatbots in FMCG e-commerce among Gen Z, especially with regard to the importance of UX, UI, and CD for return rates and purchase decisions. A structured questionnaire consisting of several thematically organised sections serves as the survey instrument (Appendix 1.1.). Demographic information, general experience with chatbots, FMCG online shopping experience with chatbots, chatbot design preferences and a final section to query the conversion rate based on customised chatbots. The demographic section not only includes a survey of age (Appendix 1.1. Q1), but also dichotomous questions on residence in Germany (Appendix 1.1. Q4) and general previous experience with chatbots (Appendix 1.1. Q5) to determine target group affiliation. The questionnaire also asks about gender (Appendix 1.1. Q2) and level of education (Appendix 1.1. Q3). The assessment of

personal benefit on a scale of 0 to 100 (Appendix 1.1. Q6), supplementing the quantitative information with a short qualitative response that provides subjective reasons for the personal benefit of chatbots (Appendix 1.1. Q7) and is analysed inductively according to Mayring (Mayring and Fenzl 2019). This allows central patterns of reasoning to be categorised and codes to be developed and assigned. The quantitative results can be supplemented with qualitative data. After a short information text, the section asks about consumer behaviour in FMCG e-commerce, whereby a multiple selection of platforms and websites used for online purchases of FMCG products can be specified (Appendix 1.1. Q8). The frequency of online purchases can be selected using a four-point scale (>3x per month, 1-3x per month, and <1x per month to never) (Appendix 1.1. Q9). The question about previous negative experiences with chatbots (also on a four-point scale) is asked (Appendix 1.1. Q10). A short info text introduces the participant to the chatbot design preferences section. Information on the appropriate chatbot and the user's expectations regarding UX (Appendix 1.1. Q11a), UI (Appendix 1.1. Q12a), and CD (Appendix 1.1. Q13a) is then provided. Six closed statements derived from the theoretical foundation were formulated for each of these three areas of analysis. The participants' evaluation was based on five-point Likert scales (1 = strongly disagree, 5 = strongly agree). After each UX, UI, and CD part, participants were asked on a scale (from 0-100) to what extent the corresponding factor influenced their decision to visit a website again for future FMCG purchases (Appendix 1.1. Q11b, Appendix 1.1. Q12b, Appendix 1.1. Q13b). To conclude, the general probability of return in the case of a positive chatbot experience was determined on a 0-100 scale (Appendix 1.1. Q14).

4.3.2 Interviews as a Qualitative Data Collection Method

To collect qualitative data and supplement the survey, two guided interviews were conducted with the aim of analysing expectations, barriers and reactions to chatbots. The interview guide served as a survey instrument, based on the topics of the literature research and the quantitative

survey findings. The topics ranged from preferences for UX, UI, and CD as well as background information and explanations for the behaviour of Gen Z. In addition, the influence of design features such as UX, UI, CD and anthropomorphism on their acceptance was investigated by conducting a deductive qualitative content analysis according to Mayring (Mayring and Fenzl 2019). Two different perspectives were selected for the interviews. Firstly, the point of view of UX designer Ms. Semtsiv, highlighted the specialist input on UX, UI, and CD for chatbots and the importance of anthropomorphism while at the same time, observed the Uncanny Valley hypothesis in more detail (Semtsiv, UX-Design, May 9, 2025). Mrs. Hüttmann is a professor, coach and communications expert who has studied the values and behaviour of Gen Z extensively. Her in-depth knowledge enabled her to precisely classify and characterise this target group (Hüttmann, Gen Z, May 10, 2025). The two interviewees provided information through oral statements and narrative examples, which were collected in the individual interviews (Brinkmann 2020; Saunders, Lewis and Thornhill 2016). Expert interviews can be used as a promising instrument, as the questions are precisely tailored to the knowledge of the interviewed specialist and can thus be specifically adapted to answer the research question (Aityan 2022; Dorussen, Lenz, and Blavoukos 2005, McCusker and Gunaydin 2015). Video interviews were conducted in this study. The advantages outweigh the disadvantages. These include efficiency and global presence (Brinkmann 2020; Berg and Milmeister 2011; Saunders, Lewis and Thornhill 2016). These interviews were analysed using the transcription option of the Microsoft Teams tool, which was used to conduct the interview. The transcripts were then translated from the native language German into English (Klein-Ellinghaus, Ernst, and Makarova 2015). This was followed by a deductive qualitative content analysis according to Mayring (Mayring and Fenzl 2019). The interview transcripts were systematically analysed by assigning text passages to specific categories, the ‘codes’ (Berg and Milmeister 2011). These codes are based on previously defined and developed topics such as trust, UX, UI, CD,

anthropomorphism, Uncanny Valley. The theoretical foundations of these topics were projected onto the surveys and finally, conclusions were drawn from the quantitative survey results and the qualitative interviews. The next chapter presents the conclusions as research results.

5. Results

5.1 Overview of Theoretical Findings

The literature makes it clear that UX, UI, and CD are decisive success factors for user-centered chatbots. From the relevant literature research within chapter 2, six aspects per UX, UI, and CD factor are identified as follows:

Table 1: The six aspects of the UX, UI, and CD factors.

UX	UI	CD
Fast and efficient support during online shopping.	Preference for a minimalist and clear design.	Feels like a natural conversation, not like filling out a form.
Easy to use without requiring much cognitive effort.	Appealing and modern colors and fonts.	Use of personal language, possibly including slang or emojis.
Smooth and pleasant interaction.	A friendly appearance through avatars or visual elements.	Small rewards, such as quizzes or discount codes, are appreciated.
Option to easily switch to a human representative when needed.	Seamless integration of the design into the website.	Clear, friendly, and easy-to-understand communication.
Personalized shopping experience through relevant product recommendations.	Desire for personalization through name or purchase history.	Transparency about the chatbot being AI.
Intuitive use of the chatbot on mobile devices.	Desire for dark mode or customizable design options.	Offers suggestions without pushing for decisions.

Own figure

The UX through the vens personalisation, functionality and mobile optimisation, is described as elementary for user retention and conversion (Becker and Jaakkola 2020; Chih et al. 2025). For UI, the importance of a modern, clear design with customisation options is emphasised, while for CD, the focus is on a natural flow of language and transparency about the nature of AI (Altendorfer 2024; Yuan et al. 2024). Furthermore, theories such as the anthropomorphism approach and the Uncanny Valley theory point to the importance of a balanced human-machine design that promotes trust but does not appear artificial or uncanny (Mori et al. 2012; Appel et al. 2019).

5.2 Survey Results

The sample size of Gen Z comprises 106 (n = 106) test subjects, 35 of whom are aged 19-24 and 71 between 25-30 (Appendix 1.2. Q1). A proportion of 52.8% are female and 47.2% are male (Appendix 1.2. Q2). Over half of the participants have at least an undergraduate level of education (Appendix 1.2. Q3). All participants have their permanent centre of life in Germany (Appendix 1.2. Q4) and have already interacted with a chatbot (Appendix 1.2. Q5). The descriptive mean value of whether chatbots are useful is 63.0 and gives a right-skewed distribution, which indicates that they tend to be seen as useful (Appendix 1.2. Q6). Inductively categorised according to Mayring, the following reasons were given for a positive experience with the chatbot (Mayring and Fenzl 2019). Fast responses (i.e. the efficiency of the chatbot), assistance with basic and general questions, cost savings by relieving the burden on humans and personalisation. The negative experiences with a chatbot resulted in the following 'codes': The inability to solve individual or specific problems, standardised or generic responses from the chatbot, a lack of understanding and insufficient conversational skills. Points mentioned also include unreliable, incorrect and superficial responses, frustration during use due to the lack of human contact and design flaws (Appendix 1.2. Q7). Online purchasing behaviour in the FMCG sector can be outlined as follows: Most have already purchased FMCG via general online marketplaces, followed by specialised online stores, and over half have also had consumer goods sent online via instant delivery services quick commerce. Purchasing directly from the supplier is in the next place, followed by purchasing FMCG in online supermarkets. Approximately a quarter have bought FMCG online via social commerce and application program. There are also a small number of respondents who say they have never bought anything online (Appendix 1.2. Q8). Half of the respondents purchase FMCG at least 1-3 times a month via online retail (Appendix 1.2. Q9). The majority of participants (53.8 %, n=57) state that they have had bad experiences with chatbots, whereby 23.6 % (n=25) have experienced

this encounter but did not feel affected by it. Few (5.7 %, n=6) state that they are always satisfied with it, and around 17.0 % (n=18) have not encountered such a situation (Appendix 1.2. Q10). Gen Z's expectations of chatbot UX (i.e., it‘s functionality and feel) are fast, simple, mobile-optimised and personal (Appendix 1.2. Q11a). UX influence on the return to the website is moderately correlated (Appendix 1.2. Q11b). The explanatory value of the model is rather low with an r^2 of 0.194 and r of 0.440. The UX factors therefore explain approximately 19.4 % of the variance in the return rate. The most important factor influencing the return rate is the personalisation of the chatbot. Other UX factors play a subordinate role or are not statistically effective in this model. Personalisation of the shopping experience (Appendix 1.2. Q11a_5) has by far the greatest positive effect on the return rate and is the only factor that is statistically significant ($p < 0.001$). This suggests that personalisation is a particularly strong driver for the intention to visit the website again. Mobile usability (Appendix 1.2. Q11a_6) and efficiency (Appendix 1.2. Q11a_1) also show a positive correlation, but are not statistically significant. Smooth, pleasant interaction (Appendix 1.2. Q11a_3) and possibility to hand over to a human (Appendix 1.2. Q11a_4) have a negative effect, but are also non-significant.

Visual aesthetics, individualisation and integration capability are Gen Z's expectations of chatbots UI visual appeal and appearance (Appendix 1.2. Q12a). With $r^2 = 0.428$, 42.8 % of the variance in the return rate can be explained by the UI factors (Appendix 1.2. Q12b), which is a moderately strong correlation ($r = 0.654$). Significant predictors ($p < 0.05$) (i.e. factors that significantly increase the return rate) are modern design (Appendix 1.2. Q12a_2) ($p = 0.008$) and dark mode / customisability (Appendix 1.2. Q12a_6) ($p = 0.006$). Personalisation (Appendix 1.2. Q12a_5) ($p = 0.097$) tends to be an important factor ($\alpha = 0.10$). As evidenced by the quantitative significance, the visual design of the chatbot, are decisive drivers for whether users want to visit a website with a chatbot again. This also quantitatively shows the significant effect of individual UI factors on the return rate.

A natural-looking dialogue style is particularly important for user loyalty. Transparency about the AI nature of the interaction is also crucial. CD has an influence on the user's return (Appendix 1.2. Q13b). The model explains 27.1 % ($r^2 = 0.271$, $r = 0.521$) of the variance in the return rate through the UX factors of the CD. This is a moderate explanatory value. Two of the six CD aspects are statistically significant. Natural conversation (Appendix 1.2. Q13a_1) has the strongest positive influence on the return rate. Users particularly appreciate natural, dialogue-like communication ($p < 0.001$). Transparency (Appendix 1.2. Q13a_5) ($p = 0.037$), the fact that an AI rather than a human answers, also significantly increases the willingness to use the app. Other aspects of the CD, such as rewards and language style, appear to be less decisive for the return rate (Appendix 1.2. Q13a). The use of simple language, rewards, clear communication and suggestions by the chatbot have no significant influence ($p > 0.05$), even if some show subtle effects.

When analysing not only the six design aspects that influence the factors, but also the influence that the three factors (UX, UI, and CD) of the chatbot have on return visits as reported by the users, the following becomes apparent: the analysis of the data provides significant evidence to reject the null hypothesis:

H_0 = There is no correlation between the individual UX, UI, and CD design factors and the conversion rate.

H_1 = There is a correlation between the individual UX, UI, and CD design factors and the conversion rate.

The model has a high correlation between predictors and dependent variable ($r = 0.700$). 49.1 % ($r^2 = 0.491$) of the variance in the dependent variable (Appendix 1.2. Q14) is explained by the three predictors (UX, UI, CD). UX design is significant ($p < 0.001$), which means that as UX improves, its effect on conversion rate strenghten. UX has the strongest influence in the model and thus, on the user's return to the website (Appendix 1.2. Q11b_1 UX). The UI of the

chatbot is not significant (p = 0.946) and has no demonstrable influence on returning to the website (Appendix 1.2. Q12b_1 UI). The CD is marginally significant (p = 0.050) and has a moderate influence on the customer's conversion rate (Appendix 1.2. Q13b_1 CD). According to this model UX is the most important driver for the retention rate, CD plays a supporting role but less than UX, and UI alone is not decisive.

5.3 Derived Expert Perspectives

The interviews supplement these results with contextualised insights. The expert interview with UX designer Anastasija Semtsiv clearly shows which factors are decisive for the design of chatbots in FMCG e-commerce from a design perspective. According to her assessment, good UX primarily includes intuitive usability, fast response times, personalisation, fault tolerance, emotional intelligence and a high degree of transparency about the system's capabilities and limitations. It is not only essential for younger users such as Gen Z that a chatbot responds reliably, comprehensibly and empathetically. In the area of UI, clear navigation, reduced design, mobile optimisation, and visual feedback were highlighted as trust-building elements. Interactive elements such as quick replies and clear data protection notices also strengthen user loyalty. The CD plays a central role in the experience: a structured introduction to the conversation, targeted dialogue, and a language style that suits the target group and it friendly, empathetic, and goal-oriented, promote trust and acceptance. Humour and a consistent tone can create additional closeness but must not come across as ‘artificial’. With regard to anthropomorphism, the interviewee emphasises the opportunities of a human-looking design, such as through voice, facial expressions or linguistic empathy, to promote sympathy and trust. At the same time, she warns against excessive humanisation, which can lead to irritation and rejection in the so-called Uncanny Valley. A balanced design that is credible but does not deceive the user is crucial (Semtsiv, UX-Design, May 9, 2025).

The expert interview on Gen Z with Mrs. Hüttmann confirms that Gen Z is digitally socialised, tech-savvy, critical and highly networked. They attach great importance to authenticity, self-determination and quality of life. They are pragmatic in their consumer behaviour, use digital tools in a targeted manner and react sensitively to discrepancies between brand promises and reality. Transparency, consistency and an emotionally coherent approach are crucial for trust in offers of any kind. Companies need to communicate clearly, helpfully and authentically in order to gain acceptance. If expectations are disappointed, Gen Z will quickly switch to the competition; their loyalty depends on the situation and is linked to the perceived relevance and quality of the experience (Hüttmann, Gen Z, May 10, 2025).

5.4 Discussion

The theoretical foundation suggests that UX, UI, and CD are key influencing factors for the user acceptance of chatbots, especially among the tech-savvy and demanding Gen Z. The quantitative analysis only partially confirms this assumption. UX, especially through personalised interaction and mobile usability, proves to be the strongest predictor of trust in the chatbot and the return rate of Gen Z when using chatbots in FMCG e-commerce. The CD (i.e. the design of the conversation flow) has a complementary effect, whereby natural communication and transparency about the AI character strengthen trust. UI, on the other hand, although visually relevant, shows no significant influence on actual user behaviour in the overall analysis, even though individual design aspects, such as modern appearance or dark mode, are perceived positively. The qualitative interviews complement these findings. Mrs. Hüttmann describes Gen Z as digitally influenced, pragmatic and demanding, with a high demand for authenticity, clarity, efficiency and a sense of purpose. This is consistent with the consumer behaviour and expectations of digital services described in the literature (Hüttmann, Gen Z, May 10, 2025). Ms. Semtsiv emphasises the importance of transparency, emotionality and personalised leadership from a UX design perspective. Over-humanisation, as described by

the Uncanny Valley theory, can have a counterproductive effect, as both the literature and the expert point out (Semtsiv, UX-Design, May 9, 2025). Both interviews emphasise the importance of trust and consistency. To summarise, the mix of methods makes it clear that trust in chatbots for Gen Z is primarily created through a functional-emotional UX, supportive CD and an authentic, not overdrawn design, which largely coincides with theory, survey data and expert assessments. UI plays a secondary role and remains visually important, but only has a limited influence on trust and the return rate of Gen Z.

5.5 Synthesis of Insights

In combination, the data from the literature, the survey with Gen Z and the confirmation from the interview partners show that chatbots must be functional, efficient and empathetic, especially for Gen Z: a purely attractive design is not enough. The theory is therefore supported by the analysis of the surveys and interviews, with convincing evidence for the hypothesis H_1: There is a correlation between the individual UX, UI, and CD design factors and the conversion rate. UX and CD significantly promote trust and conversion, UI only partially. The results of this study show that the target group-orientated design of chatbots in FMCG e-commerce for Gen Z depends largely on the interplay between functional UX, natural CD and trust-promoting communication. While UI elements provide visual support, a personalised, fast and transparent UX has the greatest influence on trust, return rate and ultimately, conversion.

5.6 Recommendations

For companies, this means that investments should primarily be made in the technical and content optimisation of chatbots, not primarily in the visual design. FMCG companies should optimise chatbots specifically along the UX and CD dimensions for Gen Z. Personalisation, natural dialogues and transparency are key factors here. UI can provide support, but is secondary. Human elements can help, but must be used in a measured and strategic way to avoid irritation. Companies should therefore not only design their chatbots to be visually appealing,

but above all, user-centred, empathetic and clearly structured while finding the right level of humanity to strengthen trust and reduce irritation.

6. Conclusion

6.1 Summary of Key Findings

The results of this study show that the design dimensions UX and CD in particular have a significant influence on the trust and return rate of Gen Z consumers in FMCG e-commerce. The research question formulated at the beginning could therefore be answered in a well-founded manner. The literature review emphasised the relevance of UX, UI, and CD as key factors influencing the acceptance of chatbots. In addition, theoretical concepts such as anthropomorphism and the Uncanny Valley Theory were identified as explanatory models for user reactions. The survey provided data that after analysis showed that personalised UX functions, modern and customisable UI design and a natural, transparent dialogue style of the CD had the strongest correlations with the return rate. The qualitative, expert interviews underpinned these findings with practical assessments and highlighted the need for a differentiated, target group-specific design of chatbots for Gen Z.

6.2 Limitations of the Study

This study has several limitations that restrict the validity of the results. The sample of 106 Gen Z individuals living in Germany is small and hardly representative, as subjects were predominantly recruited via personal networks and platforms such as SurveyCircle. In addition, the ages of the actual survey participants does not capture the range of Gen Z as defined in subchapter 2.5. The survey does not include any participants born between 2007 and 2010. The analysis refers to older Gen Z individuals who took the time to complete a survey. It can be assumed that the survey includes an overrepresentation of digital-savvy, Gen Z individuals. Furthermore, participant responses that stated that they planned to live in Germany permanently

were analysed. This means that generalisation to other age groups or cultural areas is only possible to a limited extent. The focus on the three design dimensions of UX, UI, and CD ignores other relevant and influential factors such as data protection, technological acceptance or context of use. The online survey harbours typical risks of bias, such as self-selection, subjective rating scales (Likert, 0-100) and social desirability that can impair the validity of the data. In addition, the study is based on a cross-sectional design that can only demonstrate correlations, not causal relationships. There is no experimental validation through real chatbot tests, such as A/B tests, as these were not carried out due to the scope of the work. The qualitative analysis is also limited, as only two experts were interviewed: a Gen Z expert and a UX designer. This limits the diversity of perspectives, despite the depth of detail provided. The work therefore provides a snapshot without taking into account future technological developments or changing user behaviour. Due to the specific FMCG context in e-commerce, the transferability to other sectors, like banking and healthcare, is also reduced.

6.3 Outlook for Future Research and Current Practitioners

For future studies, a methodological extension would be useful by using internationally comparable samples to show cultural differences that exist in the design of the factors between Germany and other countries or by carrying out broader international samples so as not to be limited to one culture. A/B tests with real chatbot prototypes also enable the experimental testing of specific design factors on user behaviour. Studies over a longer period of time would be suitable for recording changes in user acceptance, and research results would document insights into user behaviour when the chatbot is used multiple times. The expansion of the target group in subsequent research to include millennials and Generation Alpha promise new insights for the design of chatbots in the FMCG sector. Further research can also focus specifically on different channels, such as websites, apps, messengers, social media and chatbot types (e.g., text vs. voice bots) and their area of application in the customer journey. In addition, the role of

trust factors such as data protection, users' affinity for technology, cultural influences and the origin of user mistrust can be analysed in more detail in further work. Anthropomorphic design, gender of the chatbot, language style, humour and emotionality in the dialogue can also be systematically and selectively examined on the basis of this work by introducing new aspects and assessing them by users with regard to their return rate. The technological background, such as AI progress, system architecture and language model, should also be considered. This work deals with the FMCG industry. Thus, an investigation of other industries, such as chatbots on automotive websites, for electronics sales or healthcare markets could strengthen the generalisability of the results or allow for nuanced comparisons among industries.

For companies in the FMCG sector that want to integrate chatbots on their website as part of the customer journey, the results oft he study assert following the specific points. In the future, companies should consider the increasing UX requirements for design elements that users and primarily Gen Z have for chatbots. The chatbots on the company website should be designed specifically for the target group, developed in a culturally sensitive way and regularly tested in a user-centred manner (e.g. using A/B tests or usability feedback with Gen Z users). There is a particular focus on building trust, where companies must clearly communicate their privacy practices to website visitors when using chatbots. Future development of the technologies remains important for companies at all times, and a certain adaptability to future support from AI, such as the chatbot or other systems, is a prerequisite. In addition, it is crucial for a company's conversational branding to adapt the chatbot personality to the brand identity and make the system coherent across channels. In the FMCG market in particular, this can have a positive impact on reuse intent, brand loyalty and conversion. The careful construction of chatbots should not be viewed as a purely technical solution by current practitioners of chatbots, but rather as a strategic communication tool along the digital customer journey.

References

Abu Shawar, Bayan, and Eric Atwell. 2007. “Chatbots: Are They Really Useful?” *Deleted Journal* 22 (1): 29–49. https://doi.org/10.21248/jlcl.22.2007.88.

Abu Shawar, Bayan, and Eric Atwell. 2015. “ALICE Chatbot: Trials and Outputs.” *Computación Y Sistemas* 19 (4). https://doi.org/10.13053/cys-19-4-2326.

Abu Shawar, Bayan, and Eric Steven Atwell. 2005. “Using Corpora in Machine-learning Chatbot Systems.” *International Journal of Corpus Linguistics* 10 (4): 489–516. https://doi.org/10.1075/ijcl.10.4.06sha.

Adam, Martin, Michael Wessel, and Alexander Benlian. 2020. “AI-based Chatbots in Customer Service and Their Effects on User Compliance.” *Electronic Markets* 31 (2): 427–45. https://doi.org/10.1007/s12525-020-00414-7.

Adamopoulou, Eleni, and Lefteris Moussiades. 2020. “Chatbots: History, Technology, and Applications.” *Machine Learning With Applications* 2 (November): 100006. https://doi.org/10.1016/j.mlwa.2020.100006.

Agnihotri, Arpita, and Saurabh Bhattacharya. 2023. “Chatbots’ Effectiveness in Service Recovery.” *International Journal of Information Management* 76 (July): 102679. https://doi.org/10.1016/j.ijinfomgt.2023.102679.

Ahrens, Sandra. 2025. “Themenseite: FMCG.” Statista. March 12, 2025. Accessed April 17, 2025. https://de.statista.com/themen/574/fmcg/.

Aityan, Sergey K. 2022. *Business Research Methodology*. *Classroom Companion: Business*. https://doi.org/10.1007/978-3-030-76857-7.

Alsadoun, Abdullah Ali, and Asem Nasser Alnasser. 2025. “Role of Artificial Intelligence Chatbot Marketing in Enhancing Customer Satisfaction and Loyalty in Digital Shopping Experiences.” *International Journal of Innovative Research and Scientific Studies* 8 (1): 1902–9. https://doi.org/10.53894/ijirss.v8i1.4826.

Altendorfer, Laura-Maria. 2024. “Wie Kommunizieren Service-Chatbots Mit Nutzer:Innen?” In *Springer eBooks*, 65–83. https://doi.org/10.1007/978-3-658-42173-1_5.

Appel, Markus, David Izydorczyk, Silvana Weber, Martina Mara, and Tanja Lischetzke. 2019. “The Uncanny of Mind in a Machine: Humanoid Robots as Tools, Agents, and Experiencers.” *Computers in Human Behavior* 102 (July): 274–86. https://doi.org/10.1016/j.chb.2019.07.031.

Araujo, Theo. 2018. “Living up to the Chatbot Hype: The Influence of Anthropomorphic Design Cues and Communicative Agency Framing on Conversational Agent and Company Perceptions.” *Computers in Human Behavior* 85 (March): 183–89. https://doi.org/10.1016/j.chb.2018.03.051.

Arikan, Esra, Nesenur Altinigne, Ebru Kuzgun, and Mehmet Okan. 2022. “May Robots Be Held Responsible for Service Failure and Recovery? The Role of Robot Service Provider Agents’ Human-likeness.” *Journal of Retailing and Consumer Services* 70 (October): 103175. https://doi.org/10.1016/j.jretconser.2022.103175.

Babin, Barry J., Cong Feng, and Adilson Borges. 2021. “As The Wheel Turns Toward the Future of Retailing.” *The Journal of Marketing Theory and Practice* 29 (1): 78–91. https://doi.org/10.1080/10696679.2020.1860688.

Becker, Larissa, and Elina Jaakkola. 2020. “Customer Experience: Fundamental Premises and Implications for Research.” *Journal of the Academy of Marketing Science* 48 (4): 630–48. https://doi.org/10.1007/s11747-019-00718-x.

Berg, Charles, and Marianne Milmeister. 2011. “Im Dialog Mit Den Daten Das Eigene Erzählen Der Geschichte Finden: Über Die Kodierverfahren Der Grounded-Theory-Methodologie.” In *VS Verlag Für Sozialwissenschaften eBooks*, 303–32. https://doi.org/10.1007/978-3-531-93318-4_14.

Bertacchini, Francesca, Eleonora Bilotta, and Pietro Pantano. 2017. “Shopping With a Robotic Companion.” *Computers in Human Behavior* 77 (March): 382–95. https://doi.org/10.1016/j.chb.2017.02.064.

Blume, Tim, Peter Kauschke, Sevilay Huesman Koecke, Stefanie Raimund, and Christoph Stürmer. 2025. “Gen Z Is Talking. Are You Listening?” *PwC Europe Consumer Insights Series*, 2025. Accessed April 21, 2025. https://www.pwc.de/de/handel-und-konsumguter/so-tickt-die-generation-z.html.

Blut, Markus, Cheng Wang, Nancy V. Wünderlich, and Christian Brock. 2021. “Understanding Anthropomorphism in Service Provision: A Meta-analysis of Physical Robots, Chatbots, and Other AI.” *Journal of the Academy of Marketing Science* 49 (4): 632–58. https://doi.org/10.1007/s11747-020-00762-y.

Brandtzaeg, Petter Bae, and Asbjørn Følstad. 2017. “Why People Use Chatbots.” In *Lecture Notes in Computer Science*, 377–92. https://doi.org/10.1007/978-3-319-70284-1_30.

Brandtzaeg, Petter Bae, Marita Skjuve, and Asbjørn Følstad. 2022. “My AI Friend: How Users of a Social Chatbot Understand Their Human–AI Friendship.” *Human Communication Research* 48 (3): 404–29. https://doi.org/10.1093/hcr/hqac008.

Brinkmann, Svend. 2020. “Unstructured and Semistructured Interviewing.” In *Oxford University Press eBooks*, 424–56. https://doi.org/10.1093/oxfordhb/9780190847388.013.22.

Broadbent, Elizabeth. 2016. “Interactions With Robots: The Truths We Reveal About Ourselves.” *Annual Review of Psychology* 68 (1): 627–52. https://doi.org/10.1146/annurev-psych-010416-043958.

Burleigh, Tyler J., Jordan R. Schoenherr, and Guy L. Lacroix. 2013. “Does the Uncanny Valley Exist? An Empirical Test of the Relationship Between Eeriness and the Human

Likeness of Digitally Created Faces." *Computers in Human Behavior* 29 (3): 759–71. https://doi.org/10.1016/j.chb.2012.11.021.

Cardona, Davinia Rodríguez, Oliver Werth, Svenja Schönborn, and Michael H. Breitner. 2019. "A Mixed Methods Analysis of the Adoption and Diffusion of Chatbot Technology in the German Insurance Sector." *Americas Conference on Information Systems*, January. http://dblp.uni-trier.de/db/conf/amcis/amcis2019.html#CardonaWSB19.

Castelo, Noah, Maarten W. Bos, and Donald R. Lehmann. 2019. "Task-Dependent Algorithm Aversion." *Journal of Marketing Research* 56 (5): 809–25. https://doi.org/10.1177/0022243719851788.

Chaves, Ana Paula, and Marco Aurelio Gerosa. 2020. "How Should My Chatbot Interact? A Survey on Social Characteristics in Human–Chatbot Interaction Design." *International Journal of Human-Computer Interaction* 37 (8): 729–58. https://doi.org/10.1080/10447318.2020.1841438.

Chen, Jiahao, Fu Guo, Zenggen Ren, Mingming Li, and Jaap Ham. 2023. "Effects of Anthropomorphic Design Cues of Chatbots on Users' Perception and Visual Behaviors." *International Journal of Human-Computer Interaction* 40 (14): 3636–54. https://doi.org/10.1080/10447318.2023.2193514.

Cheng, Xusen, Ying Bao, Alex Zarifis, Wankun Gong, and Jian Mou. 2021. "Exploring Consumers' Response to Text-based Chatbots in E-commerce: The Moderating Role of Task Complexity and Chatbot Disclosure." *Internet Research* 32 (2): 496–517. https://doi.org/10.1108/intr-08-2020-0460.

Cheng, Yang, and Hua Jiang. 2020. "How Do AI-driven Chatbots Impact User Experience? Examining Gratifications, Perceived Privacy Risk, Satisfaction, Loyalty, and

Continued Use." *Journal of Broadcasting & Electronic Media* 64 (4): 592–614. https://doi.org/10.1080/08838151.2020.1834296.

Chih, Wen-Hai, Kai-Yu Wang, and Hope Wilfred Banda. 2025. "Chatbots at the Frontline: Unveiling Antecedents of Customers' Willingness to Accept Chatbot Intervention in Service Recovery." *Journal of Retailing and Consumer Services* 84 (February): 104254. https://doi.org/10.1016/j.jretconser.2025.104254.

Chong, Terrence, Ting Yu, Debbie Isobel Keeling, and Ko De Ruyter. 2021. "AI-chatbots on the Services Frontline Addressing the Challenges and Opportunities of Agency." *Journal of Retailing and Consumer Services* 63 (August): 102735. https://doi.org/10.1016/j.jretconser.2021.102735.

Choung, Hyesun, Prabu David, and Arun Ross. 2022. "Trust in AI and Its Role in the Acceptance of AI Technologies." *International Journal of Human-Computer Interaction* 39 (9): 1727–39. https://doi.org/10.1080/10447318.2022.2050543.

Coheur, Luisa. 2020. "From Eliza to Siri and Beyond." *Www.Academia.Edu*, January. https://www.academia.edu/72061737/From_Eliza_to_Siri_and_Beyond.

Cui, Yuanyuan, Patrick Van Esch, and Steven Phelan. 2024. "How to Build a Competitive Advantage for Your Brand Using Generative AI." *Business Horizons* 67 (5): 583–94. https://doi.org/10.1016/j.bushor.2024.05.003.

Dorussen, Han, Hartmut Lenz, and Spyros Blavoukos. 2005. "Assessing the Reliability and Validity of Expert Interviews." *European Union Politics* 6 (3): 315–37. https://doi.org/10.1177/1465116505054835.

Feine, Jasper, Ulrich Gnewuch, Stefan Morana, and Alexander Maedche. 2020. "Gender Bias in Chatbot Design." In *Lecture Notes in Computer Science*, 79–93. https://doi.org/10.1007/978-3-030-39540-7_6.

Følstad, Asbjørn, Cecilie Bertinussen Nordheim, and Cato Alexander Bjørkli. 2018. “What Makes Users Trust a Chatbot for Customer Service? An Exploratory Interview Study.” In *Lecture Notes in Computer Science*, 194–208. https://doi.org/10.1007/978-3-030-01437-7_16.

Francis, Tracy, and Fernanda Hoefel. 2020. “Gen Z and the Latin American Consumer Today.” McKinsey & Company. December 10, 2020. https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/gen-z-and-the-latin-american-consumer-today.

Gaudiello, Ilaria, Elisabetta Zibetti, Sébastien Lefort, Mohamed Chetouani, and Serena Ivaldi. 2016. “Trust as Indicator of Robot Functional and Social Acceptance. An Experimental Study on User Conformation to iCub Answers.” *Computers in Human Behavior* 61 (March): 633–55. https://doi.org/10.1016/j.chb.2016.03.057.

Gewiese, Jan, Stefan Rau, and Jilson Varghese. 2025. “Target Audience: Gen Z / Generation Z in Germany.” *Statista*. Statista. Accessed April 21, 2025. https://www.statista.com/study/118744/target-audience-gen-z-generation-z-in-germany/.

Gläß, Rainer. 2018. *Künstliche Intelligenz Im Handel 2 – Anwendungen*. *Essentials*. https://doi.org/10.1007/978-3-658-23926-8.

Gnewuch, Ulrich, Alexander Maedche, and Stefan Morana, eds. 2017. *Towards Designing Cooperative and Social Conversational Agents for Customer Service*. Thirty Eighth International Conference on Information Systems. Korea, Republic of: ResearchGate. https://www.researchgate.net/publication/320015931_Towards_Designing_Cooperative_and_Social_Conversational_Agents_for_Customer_Service.

Go, Eun, and S. Shyam Sundar. 2019. “Humanizing Chatbots: The Effects of Visual, Identity and Conversational Cues on Humanness Perceptions.” *Computers in Human Behavior* 97 (January): 304–16. https://doi.org/10.1016/j.chb.2019.01.020.

Habib, Muhammad Danish, Rekha Attri, Mohammad Asif Salam, and Muhammad Zafar Yaqub. 2024. “Retail Consumers’ Conundrum: An In-depth Qualitative Study Navigating the Motivations and Aversion of Chatbots.” *Journal of Retailing and Consumer Services* 82 (November): 104147. https://doi.org/10.1016/j.jretconser.2024.104147.

Haleem, Abid, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, and Rajiv Suman. 2022. “Artificial Intelligence (AI) Applications for Marketing: A Literature-based Study.” *International Journal of Intelligent Networks* 3 (January): 119–32. https://doi.org/10.1016/j.ijin.2022.08.005.

Han, Min Chung. 2021. “The Impact of Anthropomorphism on Consumers’ Purchase Decision in Chatbot Commerce.” *Journal of Internet Commerce* 20 (1): 46–65. https://doi.org/10.1080/15332861.2020.1863022.

Haugeland, Isabel Kathleen Fornell, Asbjørn Følstad, Cameron Taylor, and Cato Alexander Bjørkli. 2022. “Understanding the User Experience of Customer Service Chatbots: An Experimental Study of Chatbot Interaction Design.” *International Journal of Human-Computer Studies* 161 (February): 102788. https://doi.org/10.1016/j.ijhcs.2022.102788.

Heinemann, Gerrit. 2024. “Formen Des Online-Handels.” In *Springer eBooks*, 199–295. https://doi.org/10.1007/978-3-658-45119-6_3.

Hox, Joop J., and Hennie R. Boeije. 2005. “Data Collection, Primary Vs. Secondary.” In *Elsevier eBooks*, 593–99. https://doi.org/10.1016/b0-12-369398-5/00041-4.

Joshi, Himanshu. 2025. “Integrating Trust and Satisfaction Into the UTAUT Model to Predict Chatbot Adoption – a Comparison Between Gen-Z and Millennials.” *International Journal of Information Management Data Insights* 5 (1): 100332. https://doi.org/10.1016/j.jjimei.2025.100332.

Kamoonpuri, Sana Zehra, and Anita Sengar. 2023. “Hi, May AI Help You? An Analysis of the Barriers Impeding the Implementation and Use of Artificial Intelligence-enabled Virtual Assistants in Retail.” *Journal of Retailing and Consumer Services* 72 (January): 103258. https://doi.org/10.1016/j.jretconser.2023.103258.

Kang, Ju-Young M., and Dooyoung Choi. 2023. “Artificial Intelligence-powered Digital Solutions in the Fashion Industry: A Mixed-methods Study on AI-based Customer Services.” *International Journal of Fashion Design Technology and Education* 17 (2): 162–76. https://doi.org/10.1080/17543266.2023.2261019.

Kang, Kyeong, and Ahlam Alnefaie. 2024. *Cultural Transformations of E-commerce Consumer Behavior and Intention Toward Using Artificial Intelligence (AI) Assistants*. Proceedings of the 57th Hawaii International Conference on System Sciences. HICSS. https://opus.lib.uts.edu.au/rest/bitstreams/8b9c9ec3-1fd4-4403-99e9-aa8d24a68aab/retrieve.

Kim, Tae Woo, Li Jiang, Adam Duhachek, Hyejin Lee, and Aaron Garvey. 2022. “Do You Mind if I Ask You a Personal Question? How AI Service Agents Alter Consumer Self-Disclosure.” *Journal of Service Research* 25 (4): 649–66. https://doi.org/10.1177/10946705221120232.

Kim, Woo Bin, and Hee Jin Hur. 2023. “What Makes People Feel Empathy for AI Chatbots? Assessing the Role of Competence and Warmth.” *International Journal of Human-Computer Interaction* 40 (17): 4674–87. https://doi.org/10.1080/10447318.2023.2219961.

Klein, Katharina, and Luis F. Martinez. 2022. “The Impact of Anthropomorphism on Customer Satisfaction in Chatbot Commerce: An Experimental Study in the Food Sector.” *Electronic Commerce Research* 23 (4): 2789–2825. https://doi.org/10.1007/s10660-022-09562-8.

Klein-Ellinghaus, Funda, Sinja Alexandra Ernst, and Nataliya Makarova. 2015. “WIE LASSEN SICH FREMDSPRACHIGE QUALITATIVE INTERVIEWS ÜBERSETZEN? EIN VERGLEICH VON DREI TRANSLATIONSMETHODEN.” Journal-article. *Leibniz Institut Für Präventionsforschung Und Epidemiologie – BIPS*. Vol. 2016/9. Accessed May 9, 2025. http://www.nachwuchswissenschaftler.org/2016/1/5/ZfN-2016-1-5.pdf.

Landim, A. R. D. B., A. M. Pereira, T. Vieira, E. De B Costa, J. a. B. Moura, V. Wanick, and Eirini Bazaki. 2021. “Chatbot Design Approaches for Fashion E-commerce: An Interdisciplinary Review.” *International Journal of Fashion Design Technology and Education* 15 (2): 200–210. https://doi.org/10.1080/17543266.2021.1990417.

Le, Hoang Tran Phuoc Mai, Jungkun Park, and Sangwoo Lee. 2023. “Emotion and Trust in Virtual Service Assistant Design for Effective Service Recovery.” *Journal of Retailing and Consumer Services* 74 (May): 103368. https://doi.org/10.1016/j.jretconser.2023.103368.

Lee, Jung-Chieh, and Liang Nan Xiong. 2024. “The Impact of Informational Antecedents on Generation Z Consumers’ Evaluations of Cross-border E-commerce Transaction Costs and Purchase Decisions.” *Information Technology and People*, September. https://doi.org/10.1108/itp-10-2023-1035.

Lemon, Katherine N., and Peter C. Verhoef. 2016. “Understanding Customer Experience Throughout the Customer Journey.” *Journal of Marketing* 80 (6): 69–96. https://doi.org/10.1509/jm.15.0420.

Liu, Yingchia, Yang Xu, and Shiji Zhou, eds. 2024. *Enhancing User Experience through Machine Learning- Based Personalized Recommendation Systems*. Proceedings of the 5th International Conference on Signal Processing and Machine Learning. *Behavior Data-Driven UI Design*. Research Gate. https://doi.org/10.13140/RG.2.2.16540.60806.

Lu, Yangyang, and Jing Zhang. 2024. "Balancing Identity Diversity and Product Contexts: Understanding Consumer Trust in AI-enhanced Chatbot Services." *Journal of Retailing and Consumer Services* 84 (December): 104205. https://doi.org/10.1016/j.jretconser.2024.104205.

Lv, Xingyang, Yufan Yang, Dazhi Qin, Xingping Cao, and Hong Xu. 2021. "Artificial Intelligence Service Recovery: The Role of Empathic Response in Hospitality Customers' Continuous Usage Intention." *Computers in Human Behavior* 126 (August): 106993. https://doi.org/10.1016/j.chb.2021.106993.

Mara, Martina, Markus Appel, and Timo Gnambs. 2022. "Human-Like Robots and the Uncanny Valley." *Zeitschrift Für Psychologie* 230 (1): 33–46. https://doi.org/10.1027/2151-2604/a000486.

Mayring, Philipp, and Thomas Fenzl. 2019. "Qualitative Inhaltsanalyse." In *Springer eBooks*, 633–48. https://doi.org/10.1007/978-3-658-21308-4_42.

McCusker, K, and S Gunaydin. 2014. "Research Using Qualitative, Quantitative or Mixed Methods and Choice Based on the Research." *Perfusion* 30 (7): 537–42. https://doi.org/10.1177/0267659114559116.

Miclau, Christina, Oliver Gast, Julius Hertel, Anja Wittmann, Achim Hornecker, and Andrea Müller. 2020. "Nutzerprobleme Beim E-Commerce Sehen Und Hören." In *Springer eBooks*, 57–72. https://doi.org/10.1007/978-3-658-29456-4_4.

Mittler, Heidrun, Thomas Klaus, and Matthias Mahr. 2024. “Marktkonsolidierung.” Lebensmittelpraxis.de. June 5, 2024. Accessed April 17, 2025. https://lebensmittelpraxis.de/quick-commerce.html.

Mori, Masahiro, Karl MacDorman, and Norri Kageki. 2012. “The Uncanny Valley [From the Field].” *IEEE Robotics & Automation Magazine* 19 (2): 98–100. https://doi.org/10.1109/mra.2012.2192811.

Nass, Clifford, and Youngme Moon. 2000. “Machines and Mindlessness: Social Responses to Computers.” *Journal of Social Issues* 56 (1): 81–103. https://doi.org/10.1111/0022-4537.00153.

Norman, Donald A. 2013. *The Design of Everyday Things.: Revised and Expanded Edition.* 2nd ed. New York, United States of America: Basic Books. https://dl.icdst.org/pdfs/files4/4bb8d08a9b309df7d86e62ec4056ceef.pdf. ISBN 978-0-465-05065-9

Oehlrich, Marcus. 2022. *Wissenschaftliches Arbeiten Und Schreiben*. *Springer eBooks*. https://doi.org/10.1007/978-3-658-34791-8.

Orzoł, Michał, and Katarzyna Szopik-Depczyńska. 2023. “Development Trends in E-commerce Sector.” *Procedia Computer Science* 225 (January): 4157–66. https://doi.org/10.1016/j.procs.2023.10.412.

Pereira, Tércio, Pablo Flôres Limberger, and Carlos Marcelo Ardigó. 2021. “The Moderating Effect of the Need for Interaction With a Service Employee on Purchase Intention in Chatbots.” *Telematics and Informatics Reports* 1–4 (January): 100003. https://doi.org/10.1016/j.teler.2022.100003.

Prentice, Catherine, Sergio Dominique Lopes, and Xuequn Wang. 2020. “The Impact of Artificial Intelligence and Employee Service Quality on Customer Satisfaction and

Loyalty." *Journal of Hospitality Marketing & Management* 29 (7): 739–56. https://doi.org/10.1080/19368623.2020.1722304.

Pröllochs, Nicolas. 2023. "Chatbots Im Vertrieb Und E-Commerce." In *Edition Sales Excellence*, 503–19. https://doi.org/10.1007/978-3-658-38433-3_19.

Radtke, Rebecca. 2020. "FMCG: Hohes Umsatzpotenzial Für Onlinehandel." IFH KÖLN. July 27, 2020. Accessed April 17, 2025. https://www.ifhkoeln.de/fmcg-hohes-umsatzpotenzial-fuer-onlinehandel/.

Rahman, Md. Shahinur, Md. Mahiuddin Sabbir, Jing Zhang, and Linghua Zhang. 2025. "I Sense My Digital Assistants! Assessing the Impact of Customers' Immersive Experience and Perceived Social Presence on Purchase Intention." *Behaviour and Information Technology*, April, 1–19. https://doi.org/10.1080/0144929x.2025.2490668.

Ramachandran, K K. 2024. "Impact of Artificial Intelligence (AI) and Machine Learning on Customer Relationship Management (CRM) in the Future of FMCG and Food Industries." *International Journal of Customer Relationship Marketing and Management* 2 (1). https://iaeme.com/Home/issue/IJCRMM?Volume=2&Issue=1.

Rose, Susan, Moira Clark, Phillip Samouel, and Neil Hair. 2012. "Online Customer Experience in e-Retailing: An Empirical Model of Antecedents and Outcomes." *Journal of Retailing* 88 (2): 308–22. https://doi.org/10.1016/j.jretai.2012.03.001.

Saarijärvi, Hannu, Leigh Sparks, Elina Närvänen, Maijaliisa Erkkola, Mikael Fogelholm, and Jaakko Nevalainen. 2023. "From Transactions to Transformations: Exploring Transformative Food Retailing." *The International Review of Retail Distribution and Consumer Research* 34 (1): 104–21. https://doi.org/10.1080/09593969.2023.2213423.

Saeed, Khawaja A., Varun Grover, and Yujong Hwang. 2005. "The Relationship of E-Commerce Competence to Customer Value and Firm Performance: An Empirical

Investigation." *Journal of Management Information Systems* 22 (1): 223–56. https://doi.org/10.1080/07421222.2003.11045835.

Saunders, Mark, Philip Lewis, and Adrian Thornhill. 2016. *Research Methods for Business Students*. *EconBiz*. 7th ed. Harlow : Pearson. https://www.econbiz.de/Record/research-methods-for-business-students-saunders-mark/10011304005.

Sboui, Mariem, Ons Baati, and Nadia Sfar. 2024. "Influencing Factors and Consequences of Chatbot Initial Trust in AI Telecommunication Services: A Study on Generation Z." *The TQM Journal*, December. https://doi.org/10.1108/tqm-02-2024-0085.

Schmitt, Bernd. 2019. "From Atoms to Bits and Back: A Research Curation on Digital Technology and Agenda for Future Research." *Journal of Consumer Research* 46 (4): 825–32. https://doi.org/10.1093/jcr/ucz038.

Schuetzler, Ryan M., G. Mark Grimes, and Justin Scott Giboney. 2020. "The Impact of Chatbot Conversational Skill on Engagement and Perceived Humanness." *Journal of Management Information Systems* 37 (3): 875–900. https://doi.org/10.1080/07421222.2020.1790204.

Singh, Sonali Uttam, and Akbar Siami Namin. 2025. "A Survey on Chatbots and Large Language Models: Testing and Evaluation Techniques." *Natural Language Processing Journal*, January, 100128. https://doi.org/10.1016/j.nlp.2025.100128.

Song, Shuangyong, Chao Wang, Siyang Liu, Haiqing Chen, Huan Chen, and Hongyun Bao. 2020. "Sentiment Analysis Technologies in AliMe — an Intelligent Assistant for E-commerce." *International Journal of Asian Language Processing* 30 (04): 2050016. https://doi.org/10.1142/s2717554520500162.

Song, Stephen Wonchul, and Mincheol Shin. 2022. "Uncanny Valley Effects on Chatbot Trust, Purchase Intention, and Adoption Intention in the Context of E-Commerce: The

Moderating Role of Avatar Familiarity." *International Journal of Human-Computer Interaction* 40 (2): 441–56. https://doi.org/10.1080/10447318.2022.2121038.

Statista. 2025. "FMCG-Markt Deutschland: Statistik-Report zum Markt für FMCG in Deutschland." did-6369-1. *Statista*. Statista. Accessed March 21, 2025. https://de-statista-com.eu1.proxy.openathens.net/statistik/studie/id/6369/dokument/fmcg-im-ueberblick---statista-dossier/.

Stummeyer, Christian. 2025. "Der Einsatz Von Künstlicher Intelligenz (KI) Im Handel Der Zukunft." In *Springer eBooks*, 193–200. https://doi.org/10.1007/978-3-658-46881-1_17.

Tamara, Christania Armagita Julia, Willem J. F. Alfa Tumbuan, and Emilia Margareth Gunawan. 2023. "CHATBOTS IN E-COMMERCE: A STUDY OF GEN Z CUSTOMER EXPERIENCE AND ENGAGEMENT – FRIEND OR FOE?" *Deleted Journal* 11 (3): 161–75. https://doi.org/10.35794/emba.v11i3.49501.

Vollmer, Anna-Lisa, Robin Read, Dries Trippas, and Tony Belpaeme. 2018. "Children Conform, Adults Resist: A Robot Group Induced Peer Pressure on Normative Social Conformity." *Science Robotics* 3 (21). https://doi.org/10.1126/scirobotics.aat7111.

Wagh, None Dr. Vijay, and None Dr. G. Ramesh. 2024. "A Study on the Role of AI in Hyper-Personalization Marketing of FMCG Products." *Economic Sciences.* 20 (2): 267–78. https://doi.org/10.69889/kpr5pr58.

Wang, Cuicui, Yiyang Li, Weizhong Fu, and Jia Jin. 2023. "Whether to Trust Chatbots: Applying the Event-related Approach to Understand Consumers' Emotional Experiences in Interactions With Chatbots in E-commerce." *Journal of Retailing and Consumer Services* 73 (March): 103325. https://doi.org/10.1016/j.jretconser.2023.103325.

Wang, Shensheng, Scott O. Lilienfeld, and Philippe Rochat. 2015. “The Uncanny Valley: Existence and Explanations.” *Review of General Psychology* 19 (4): 393–407. https://doi.org/10.1037/gpr0000056.

Weizenbaum, Joseph. 1966. “ELIZA—a Computer Program for the Study of Natural Language Communication Between Man and Machine.” *Communications of the ACM* 9 (1): 36–45. https://doi.org/10.1145/365153.365168.

Yen, Chiahui, and Ming-Chang Chiang. 2020. “Trust Me, if You Can: A Study on the Factors That Influence Consumers’ Purchase Intention Triggered by Chatbots Based on Brain Image Evidence and Self-reported Assessments.” *Behaviour and Information Technology* 40 (11): 1177–94. https://doi.org/10.1080/0144929x.2020.1743362.

Yim, Myungok Chris. 2023. “Effect of AI Chatbot’s Interactivity on Consumers’ Negative Word-of-Mouth Intention: Mediating Role of Perceived Empathy and Anger.” *International Journal of Human-Computer Interaction* 40 (18): 5415–30. https://doi.org/10.1080/10447318.2023.2234114.

Yonemitsu, Fumiya, Kyoshiro Sasaki, Akihiko Gobara, and Yuki Yamada. 2021. “The Clone Devaluation Effect: A New Uncanny Phenomenon Concerning Facial Identity.” *PLoS ONE* 16 (7): e0254396. https://doi.org/10.1371/journal.pone.0254396.

Yuan, Jingyi, Xixian Peng, Yichen Liu, and Qiuzhen Wang. 2024. “‘Don’t Look at Me!’: The Role of Avatars’ Presentation Style and Gaze Direction in Social Chatbot Design.” *Computers in Human Behavior* 164 (November): 108501. https://doi.org/10.1016/j.chb.2024.108501.

Yuviler-Gavish, Nirit, Rotem Halutz, and Liad Neta. 2024. “How Whatsappization of the Chatbot Affects Perceived Ease of Use, Perceived Usefulness, and Attitude Toward Using in a Drive-Sharing Task.” *Computers in Human Behavior Reports*, November, 100546. https://doi.org/10.1016/j.chbr.2024.100546.

Zia, Adil, and Abdulaziz Alotaibi. 2024. “Navigating the Customer Experience Landscape: Unraveling the Dynamics of AI-driven Chatbot Services for FMCG Retailers.” *Deleted Journal*, September. https://doi.org/10.47852/bonviewjcbar42023726.

List of Abbreviations

AI	Artificial intelligence
CD	Conversational design
e-commerce	Electronic commerce
FMCG	Fast-moving consumer good
Gen Z	Generation Z
NLU	Natural language understanding
PwC	PricewaterhouseCoopers
UI	User interface
UX	User experience

List of Appendices

Appendices

1. Survey

1.1. Survey: Hey GenZ – How should chatbots talk to you?

Introduction

Thank you for participating in our research study😊

The survey will take less than 5 minutes to complete. For convenience, we recommend that you complete it on a laptop. However, it can also be accessed on a mobile phone.
The results of this study will be used for scientific purposes only and may be shared with Nova SBE representatives. Your participation is voluntary and all responses will be kept anonymous.

This survey is about GenZ's opinion on chatbots in online shopping, especially when it comes to everyday consumer goods (e.g. snacks, beverages, personal care products, etc.). We want to understand how chatbots should be designed to be helpful and enjoyable for young consumers.

By clicking 'continue' you confirm that you have read and understood the above information and wish to participate in the study.

If you have any further questions, please contact 61919@novasbe.pt

---

Start chapter: Demographics

Q1 What is your age?

- < 13 (1)
- 13 - 18 (2)
- 19 - 24 (3)
- 25 - 30 (4)
- > 30 (5)

Q2 What is your gender?

- Female (1)
- Male (2)
- Diverse (3)
- Prefer not to say (4)

Q3 What is your highest completed level of education?

- High School (1)
- Vocational training (2)
- Bachelor's degree (3)
- Master's degree or higher (4)
- Other (5)

Q4 Is Germany your intended long-term place of residence?

- ○ Yes (1)
- ○ No (2)

End chapter: Demographics

Start chapter: General

Q5 Have you ever interacted with a chatbot online?

- ○ Yes (1)
- ○ No (2)

Q6 How useful do you generally find chatbots online?

	0 10 20 30 40 50 60 70 80 90 100
(0) Not useful at all - (100) very useful	

Q7 What was the reason you rated the general online experience with chatbots as not useful / very useful? (Please explain your choice or use keywords)

_____

_____

_____

_____

_____

End chapter: General

Start chapter: FMCG online shopping experience with chatbots

Information Fast-Moving Consumer Goods (**FMCG**) are low-priced products with high turnover, such as snacks, soft drinks, toothpaste, or cleaning supplies, that are consumed and repurchased regularly.

Q8 Have you ever actively visited a mentioned website with the intention to purchase an FMCG? Brand names in the answers are given as examples; please replace them with any name you can imagine. (Multiple answers possible)

- ☐ Yes: Directly from the provider (D2C – Direct-to-Consumer) – e.g. Dr. Oetker, Yfood, TrueFruits, Holy (1)
- ☐ Yes: Online marketplaces – e.g. Amazon, eBay, Otto (2)
- ☐ Yes: Instant delivery services / Quick-commerce – e.g. Flaschenpost, Flink, Getir (Gorillas), HelloFresh (3)
- ☐ Yes: Online supermarkets – e.g. Rewe Onlineshop, Edeka24, Knuspr, Picnic (4)
- ☐ Yes: Specialized online stores – e.g. (Cosmetics) Douglas.de, Sephora.de / (Beverages) Bierothek / (Drugstore items) dm.de, rossmann.de (5)
- ☐ Yes: Social Commerce and Apps - e.g. Instagram Shopping, TikTok Shop (6)
- ☐ No: Never bought anything online (7)

Q9 How often do you shop for FMCG products online?

- ○ Very frequently (more than 3x per month) (1)
- ○ Occasionally (1-3x per month) (2)
- ○ Rarely (less than 1x per month) (3)
- ○ Never (4)

End chapter: FMCG online shopping experience with chatbots

Start chapter: Chatbot Design Preferences

Q10 Have you ever experienced a chatbot interaction on a website that felt more detailed or complicated than you expected for a simple request?

- ○ Yes, I have had some encounters like this. (1)
- ○ Yes, but it didn't affect me. (2)
- ○ No, I was actually always very satisfied. (3)
- ○ No, I haven't come across anything like that. (4)

Information In the following section, we want to understand how you imagine the ideal chatbot when shopping FMCG (groceries, beverages and personal care products) online – how the chatbot should behave and what it should look like.

Q11a How important is the general "User Experience (UX)" for you? – Expectations for Functionality and Feel

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
I expect a chatbot to assist me quickly and efficiently during online shopping. (1)	○	○	○	○	○
A chatbot should be easy to use without requiring much thought. (2)	○	○	○	○	○
Interacting with a chatbot should feel smooth and pleasant. (3)	○	○	○	○	○
It's important to me that I can easily switch to a real human if needed. (4)	○	○	○	○	○
I would like a chatbot to personalize my shopping experience, for example by offering relevant product recommendations. (5)	○	○	○	○	○
The chatbot should be intuitive to use on mobile devices as well. (6)	○	○	○	○	○

Q11b How important are the above-mentioned aspects **functionality** and **feel** for your decision to return to the shop's website for future purchases?

	0 10 20 30 40 50 60 70 80 90 100
(0) Not important at all - (100) very important ()	

Q12a How important is the "User Interface (UI)" for you" – Expectations for Visual Appearance and Design

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
I prefer a minimalistic and clean design for a chatbot. (1)	○	○	○	○	○
It's important to me that the colors and fonts look appealing and modern. (2)	○	○	○	○	○
A chatbot with an avatar or visual element appears more friendly to me. (3)	○	○	○	○	○
The chatbot's design should integrate well with the rest of the website. (4)	○	○	○	○	○
I appreciate it when the chatbot feels personalized – e.g., by using my name or shopping history. (5)	○	○	○	○	○
Having a dark mode or customizable design options is important to me. (6)	○	○	○	○	○

Q12b How important are the above-mentioned aspects of **visual appearance** and **design** for your decision to return to the shop's website for future purchases ?

	0 10 20 30 40 50 60 70 80 90 100
(0) Not important at all - (100) very important ()	

Q13a How important is "Conversational Design" for you? – Expectations for Dialogue and Communication

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
A chatbot should feel like a natural conversation, not like filling out a form. (1)	○	○	○	○	○
The chatbot should speak my language – using slang or emojis when appropriate. (2)	○	○	○	○	○
I like it when a chatbot includes small rewards – like a quiz or a discount code. (3)	○	○	○	○	○
The communication should be clear, friendly, and easy to understand. (4)	○	○	○	○	○
The chatbot should make it transparent that I am talking to an AI. (5)	○	○	○	○	○
The chatbot can offer suggestions, but shouldn't pressure me into decisions. (6)	○	○	○	○	○

Q13b How important are the above-mentioned aspects of **dialogue** and **communication** for your decision to return to the shop's website for future purchases ?

	0 10 20 30 40 50 60 70 80 90 100
(0) Not important at all - (100) very important	

End chapter: Chatbot Design Preferences

Start chapter: Final

Q14 How likely are you to return to a website to buy your consumer goods with a chatbot that you find a pleasant assistant?

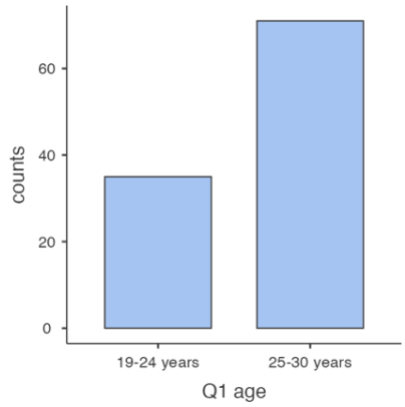
0 5 10152025303540455055606570758085909 5100

(0) unlikely - (100) very likely	

End chapter: Final

1.2. Survey evaluation and results

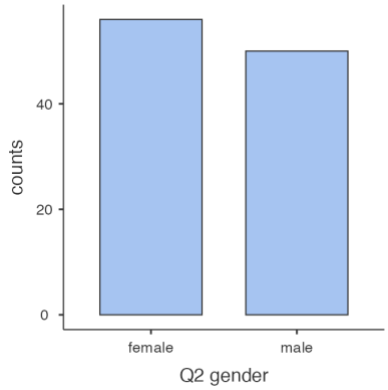
Q1 Age



Frequencies of Q1 age

Q1 age	Counts	% of Total	Cumulative %
19-24 years	35	33.0%	33.0%
25-30 years	71	67.0%	100.0%

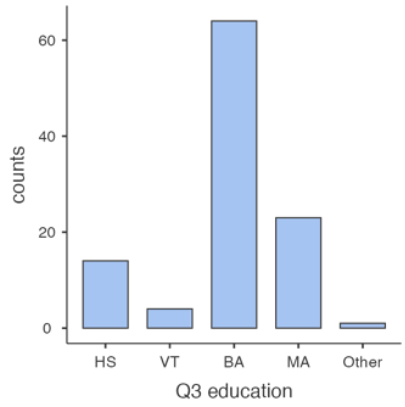
Q2 Gender



Frequencies of Q2 gender

Q2 gender	Counts	% of Total	Cumulative %
female	56	52.8%	52.8%
male	50	47.2%	100.0%

Q3 Educational background



Frequencies of Q3 education

Q3 education	Counts	% of Total	Cumulative %
HS	14	13.2%	13.2%
VT	4	3.8%	17.0%
BA	64	60.4%	77.4%
MA	23	21.7%	99.1%
Other	1	0.9%	100.0%

Q4 Place of long term residence

Frequencies of Q4 Place of long term residence

Q4 Place of long term residence	Counts	% of Total	Cumulative %
Germany (Yes)	106	100.0%	100.0%

Q5 Chatbot interaction

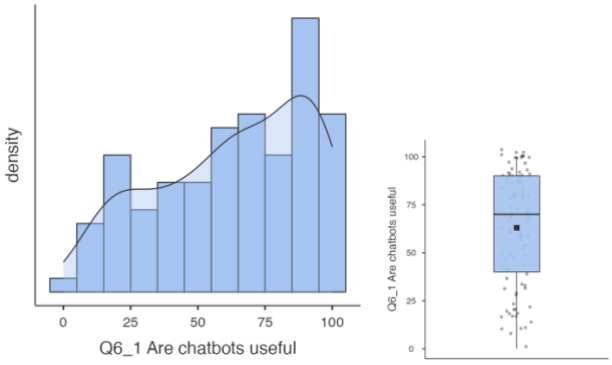
Frequencies of Q5 Chatbot interaction (online)

Q5 Chatbot interaction (online)	Counts	% of Total	Cumulative %
Yes	106	100.0%	100.0%

Q6 Are chatbots useful?

Descriptives

	Q6_1 Are chatbots useful
N	106
Mean	63.0
Median	70.0
Standard deviation	28.4
Minimum	0.00
Maximum	100



Q7 What was the reason you rated the general online experience with chatbots as not useful / very useful? (Please explain your choice or use keywords)

100	• Chatbots (if made and designed thoughful and user oriented) help me a lot to navigate websites, especially those I never visited before. They also make purchase suggestions and provide additional info sometimes which I really appreciate, because they give me the feeling to be personalized even in the very unpersonal internet. Like a service assistant but online • Very helpful, a lot of information, convenient • I use Chat GPT Daily, so I like the way it works for my job • It can be really helpful with different parts of life, works quicker and more efficient than googling • Very useful in countless ways: text improvement, research, topic exploration... • In most cases they provide a quick and understandable explanation/ answer to the questions you ask them.
90	• Helped me understand interactions of hormones and electrolytes in the human body. It made studying medicine easier, I don't have to browse all the internet for getting the information that I need • It helps a lot for doing my university stuff • Most of the time they have a solution to my problem/what I am asking for • Lösungen und antworten werden schnell gegeben und sind meist sinnvoll und bringen neue Erkenntnisse

	• Easier, faster, more Information fast response -useful informations- easy access
80	• very fast and individual way to get information. not always reliable. • Useful when responses are carefully crafted and are not simply reproducing the FAQ page of a website. • Getting inspired to solve problems • For easy problems or not high level topics ac chat ist helpful to solve the problems. Therefore employees are not nessessary (saving costs) • The availablity and fastness • Very individual answers; opportunity to adjust the question • The Chatbots gibt's Great insights for Research purposes for specific topics at work or for informational purposes for university • They always agree with everything you say but in general super helpful with different kinds of tasks • They refunded my money. Very short time to answer "
70	• They were able to give basic information about the company and policies but unhelpful when solving a complex issue • Nicht aussagekräftig/ genaue Informationen fehlen • Get information quickly, but not always entirely the information I need to answer the question completely

	• I find it very time efficient since they are always available. But they can't help you in every case which might be frustrating… • Time efficiency • I asked my question and got the answer I needed • Chatgpt helps me in writing and preparing emails for work and uni. • I hat some specific Individual questions the bot was not ablehnen to answer. It seemed to be specialised in general answers. • Lately I have used some AI chat bots (eg. From Qualtrics) and it was awesome! Really helped me a lot. But the "old" chat bots are usually a little disappointing • Pros: Fast way of gaining Knowledge, Data scraping of multiple sources, good way to find a structure; Cons: Wrong answers / incorrect data, Generic answers / Not detailed enough, intransparent sources / hard to double check • That I get a fast answer is helpful • It takes in general way longer to receive the information you want to get. • Fast Solution • Depending on the requests entered, chatbots generally give answers and support on a sufficient level. • It can help a lot, especially when you can't reach a hotline or else. But I can't fully rely on the answers.

60	• It can help with general questions/problems, but for some things, it's necessary to have someone who can specifically address the problem. Often, you notice that the robots aren't yet well-trained enough. • Because not every question asked is being recognized by the bot and therefore answered. • Whenever a chatbot is able to answer more complex questions, I find it very helpful. When I type in a certain issue and the chatbot can only show me results that are already in easily accessible on a website and only reacts to very specific and short key words, that do not capture any complexity, I get annoyed. So the usefulness depends on the effectiveness and complexity of the chatbot • Nützlich, um Theorien oder Konzepte aufzustellen, Texte/Notizen zusammenfassen. Nicht nützlich für detaillierte Recherche • Easy questions are mostly handled well but they struggle with individual questions • I prefer to get in touch with human being as the conversation is more suffiant than the database out of a Chatbot. Often I had to repeat the question to get a realiable answer. • not on point information • good for general questions but not for specific ones • Good for simple questions but when it get’s more conplex its useless

	• somethimes they do not understand my question or provide inadequate answers. For retail they are useful for filtering and showing the rigth products. But for problem solving, which is more complex they are mostly useless and I have to contact a human agent and explain everything all over. Sometimes the chatbot is to hidden on the website and you have to search the icon.
50	• Long questions from the chatbot and not mainly not helpful for my request • Great 1st level support / high level repetitive questions - struggling with complex questions" • Not specific • Depends on the chatbot and the „issue“ - e.g for easy and quick questions it has been very helpful, for more complex issues (issues with invoices, defective products e.g.) it sometimes has been frustrating • sometimes chatbots can provide really relevant information, sometimes it’s no useful at all • Sometimes solved problems but sometimes also not intuitive • Quick feedback, but not helpful with very specific requests • sometimes they don't understand the question, but if they do the answer is useful
40	• didnt get my answer as I wished for • wrong answers • Not satisfied with answer

	• I rarely receive the ideal responses or the solution that I am looking for. The responses are also quite standard and repetitive. • They just have a few helpful answers • Didn't need one but it was on the right corner interrupting my online shopping. • Chatbots are a good way to simulate a human conversation. It often takes a long time to reach an assistant by phone because you're stuck in a queue, or it takes a long time to get a reply to your email. Therefore, chatbots are a good alternative to answer your questions or clarify other things. I classify them as partially useful, as in my experience they are only helpful for really basic problems and standardized procedures. They often can't help you with more complex problems. All in all, they can be used for standard questions and thus create more time for the assistant for more complex things where chatbots cannot assist.
30	• Only deals with a limited amount of most common issues. Not capabale of operating outside of that. No replacement for actual customer support with a human - Generic answers, not tailored towards specific requests • Chatbots did not help with specific complex problems • They often cannot help with specific problems and those are the ones where I need help • normally they can only help with very basic questions • It did not help my specific problem and was just a better „Q&A“

	• I only used it when I needed an information with urgency, like return… usually it just tells you where you can find the information. But it improved a bit with ai, some company's still require customer service support in form of a phone call and have cut costs to much. • - difficult communication • - could not solve the entire problem, only partial aspects
20	• Dumb answers no real help when there is a problem • Too standardized; usefulness depends on the website • The answers generated were too mainstream • they oftentimes don't understand what I want and give me general answers • I hated, that I couldn't talk to a real human in customer support, when needed • If I have a basic question I can usually google it etc.. I iusually use chat bots for very specific questions and usually they cannot provide these answers. • I had a specific problem the chatbot couldn't solve. • It was not helpful at all and referred me to a mail to send an inquiry :(• It is generally a stupid bot that only reacts to certain key words in the request and throws back the best fitting Response which offen does not help at all. • Doesn't understand my problem, suggests unhelpful things, often only option of support although preferred to speak to a person

	• they give very general answers, most of the time they can not help you with specific problems
10	• They only know generic answers I also already know • even if I am angry the chatbot can just give neutral answers, while what I really want is to talk to the customer support. • I dont't like the way chatbots using prepared answers. • They just feel unnatural • Generic answers • Not giving the information I'm asking for

Q7 What was the reason you rated the general online experience with chatbots as not useful / very useful? (Please explain your choice or use keywords)

Inductive qualitative content analysis based on Mayring (Mayring and Fenzl 2019):

1. Usefulness for Simple Tasks

1.1 Fast responses / Efficiency

- "Very fast and individual way to get information"
- "Time efficiency"
- "That I get a fast answer is helpful"
- "Fast solution"
- "Quick feedback, but not helpful with very specific requests"
- "Very short time to answer"

1.2 Helpful for basic/general questions

- "Helpful for easy problems or not high-level topics"

- “Good for general questions but not for specific ones”
- “Easy questions are mostly handled well”
- “In most cases they provide a quick and understandable explanation”

1.3 Cost-saving by reducing human workload

- “No employees are necessary (saving costs)”

2. Limitations with Complex Issues

2.1 Inability to solve individual/specific problems

- “The chatbot couldn't solve my specific issue”
- “Did not help with specific complex problems”
- “Struggling with complex questions”
- “Only deals with common issues. No replacement for actual customer support”

2.2 Standardized / generic answers

- “Generic answers”
- “They just have a few helpful answers”
- “Didn’t get my answer as I wished for”
- “Too standardized; usefulness depends on the website”

2.3 Lack of understanding / poor conversation abilities

- “They often don’t understand what I want”
- “Not every question asked is being recognized and answered”
- “Dumb answers – no real help when there is a problem”

3. Perceived Answer Quality

3.1 Unreliable / incorrect answers

- “Not always reliable”

- “Wrong answers”
- “Sometimes they don’t understand the question”

3.2 Too superficial / lacking detail

- “Answers were too generic”
- “Not specific”
- “Not meaningful / lacking precise information”
- “Not detailed enough”

4. Perception & User Experience

4.1 Frustration / preference for human contact

- “I hated that I couldn’t talk to a real human”
- “I prefer talking to a human because it's more efficient”
- “Even if I’m angry the chatbot just gives neutral answers – I want human support”

4.2 Positive personal experience / daily support / helpful for learning / researching

- “ChatGPT helps me write emails for work and university”
- “I use ChatGPT daily – I like the way it works for my job”
- “Helped me understand hormones and electrolytes – studying medicine became easier”
- “Very helpful for research topics at work or for university”
- “Useful to understand concepts, structure ideas, summarize notes”

5. Chatbot Design & Usability

5.1 Personalization / positive interaction

- “They give me a personalized feeling in the impersonal internet”
- “Very individual answers; opportunity to adjust the question”

5.2 Design flaws / poor accessibility

- "Sometimes the chatbot is too hidden on the website"
- "Interrupting my online shopping"
- "Difficult communication"

6. Overall Evaluation

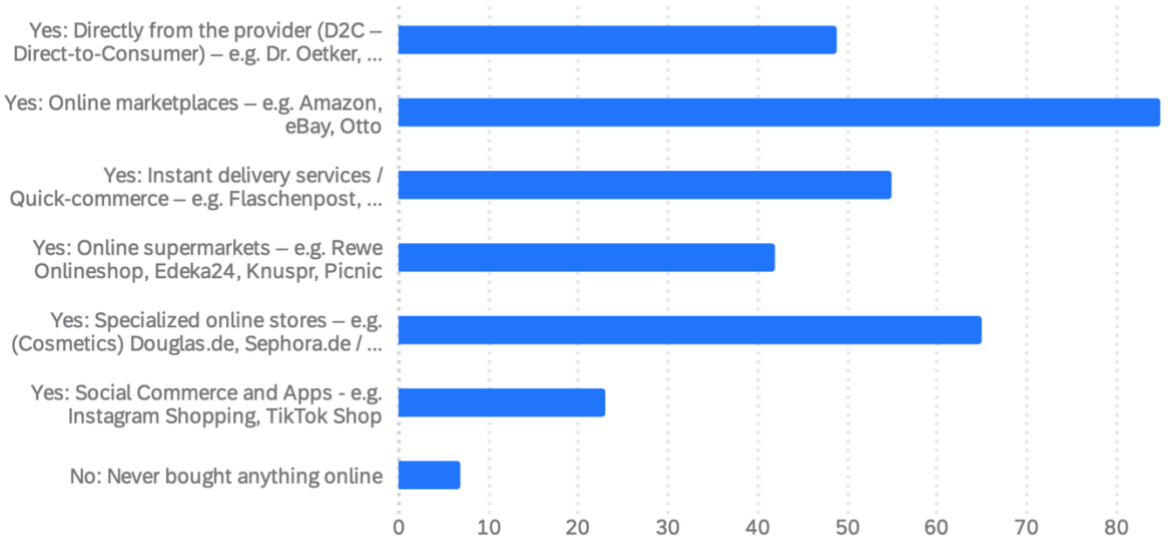
6.1 Positive with limitations

- "Partially useful – helpful for simple questions, frustrating for complex ones"
- "I classify them as partially useful"

6.2 Negative

- "It was not helpful at all and referred me to send an email"
- "I rarely receive the ideal response or solution I'm looking for"

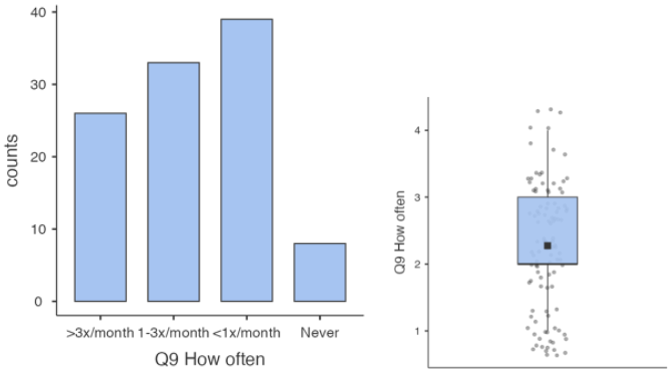
Q8 Have you ever actively visited a mentioned website with the intention to purchase an FMCG? Brand names in the answers are given as examples; please replace them with any name you can imagine. (Multiple answers possible)



Q9 How often do you shop for FMCG products online?

Descriptives

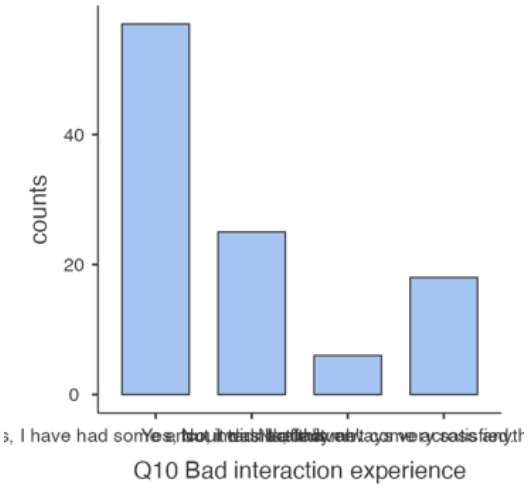
	Q9 How often
N	106
Mean	2.27
Median	2.00
Standard deviation	0.921
Minimum	1
Maximum	4



Q10 Bad interaction experience

Descriptives

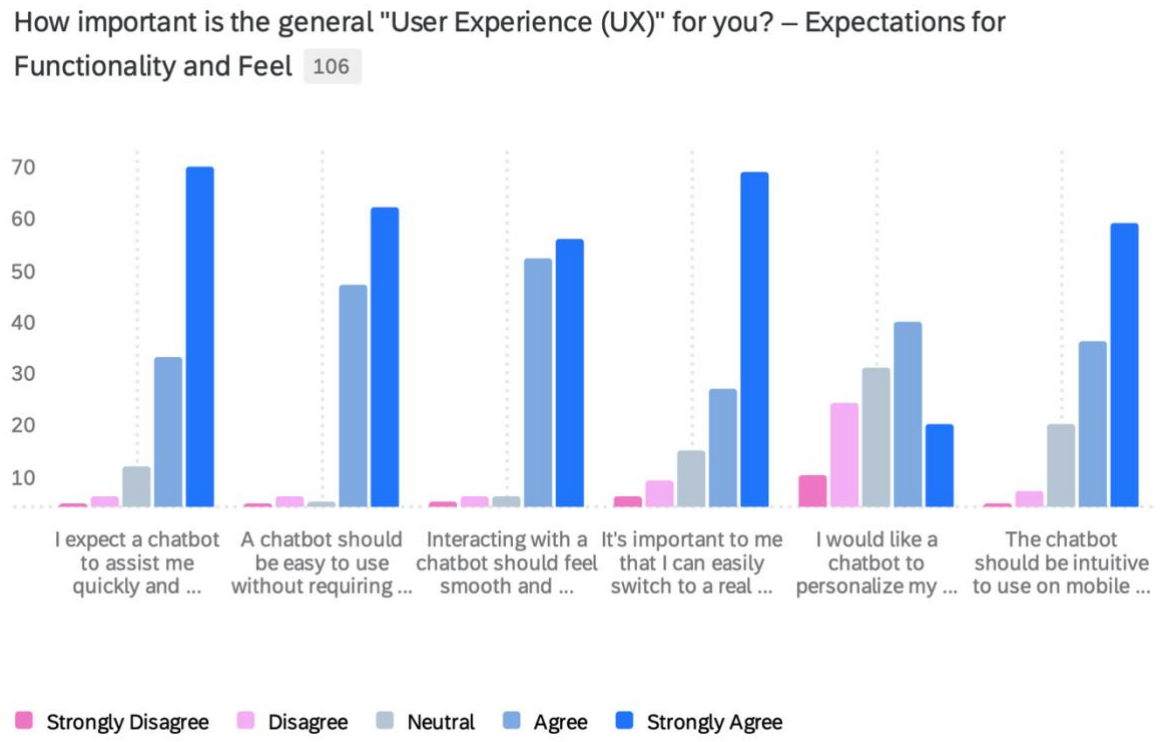
	Q10 Bad interaction experience
N	106
Mean	1.86
Median	1.00
Standard deviation	1.12
Minimum	1
Maximum	4



Frequencies of Q10 Bad interaction experience

Q10 Bad interaction experience	Counts	% of Total	Cumulative %
Yes, I have had some encounters like this.	57	53.8%	53.8%
Yes, but it didn't affect me.	25	23.6%	77.4%
No, I was actually always very satisfied.	6	5.7%	83.0%
No, I haven't come across anything like that.	18	17.0%	100.0%

Q11a 1-6



Linear Regression

Model Fit Measures

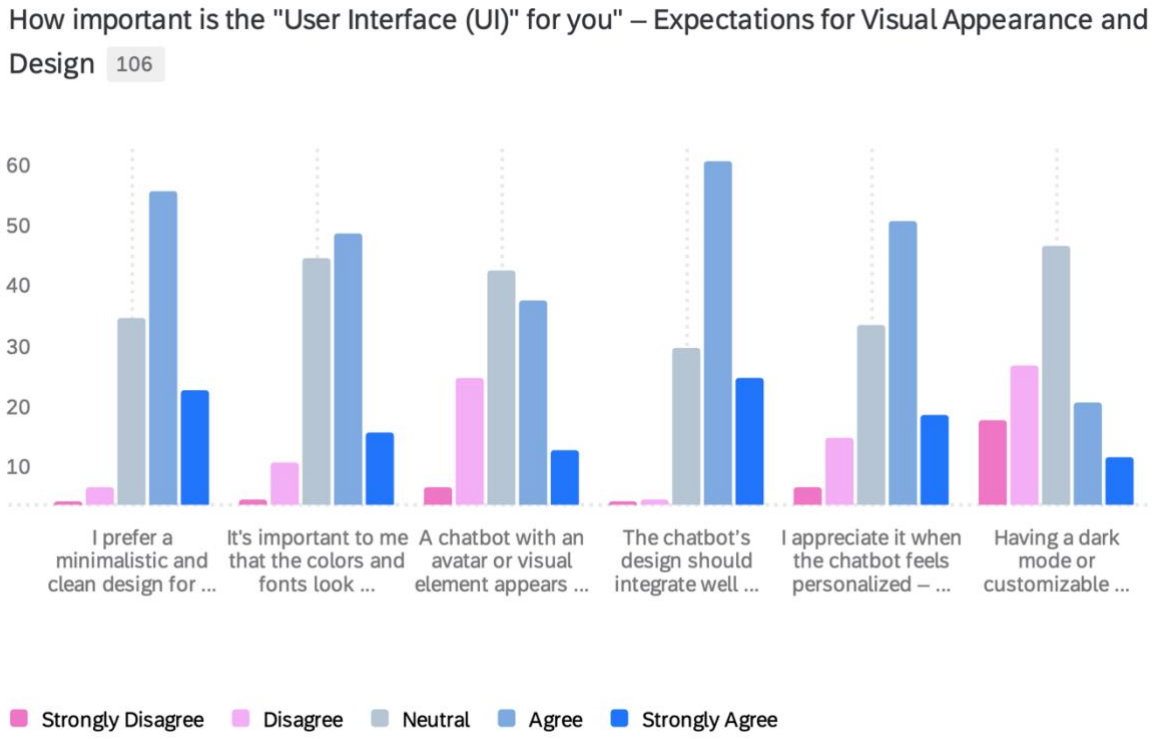
Model	R	R^2
1	0.440	0.194

Note. Models estimated using sample size of N=106

Model Coefficients - Q11b_1 UX

Predictor	Estimate	SE	t	p
Intercept	35.61	17.99	1.980	0.051
Q11a_1	3.66	3.47	1.053	0.295
Q11a_2	2.36	4.31	0.547	0.585
Q11a_3	-5.33	3.61	-1.477	0.143
Q11a_4	-1.63	2.25	-0.728	0.469
Q11a_5	7.33	1.89	3.872	<.001
Q11a_6	4.18	2.77	1.509	0.135

Q12a 1-6



Linear Regression

Model Fit Measures

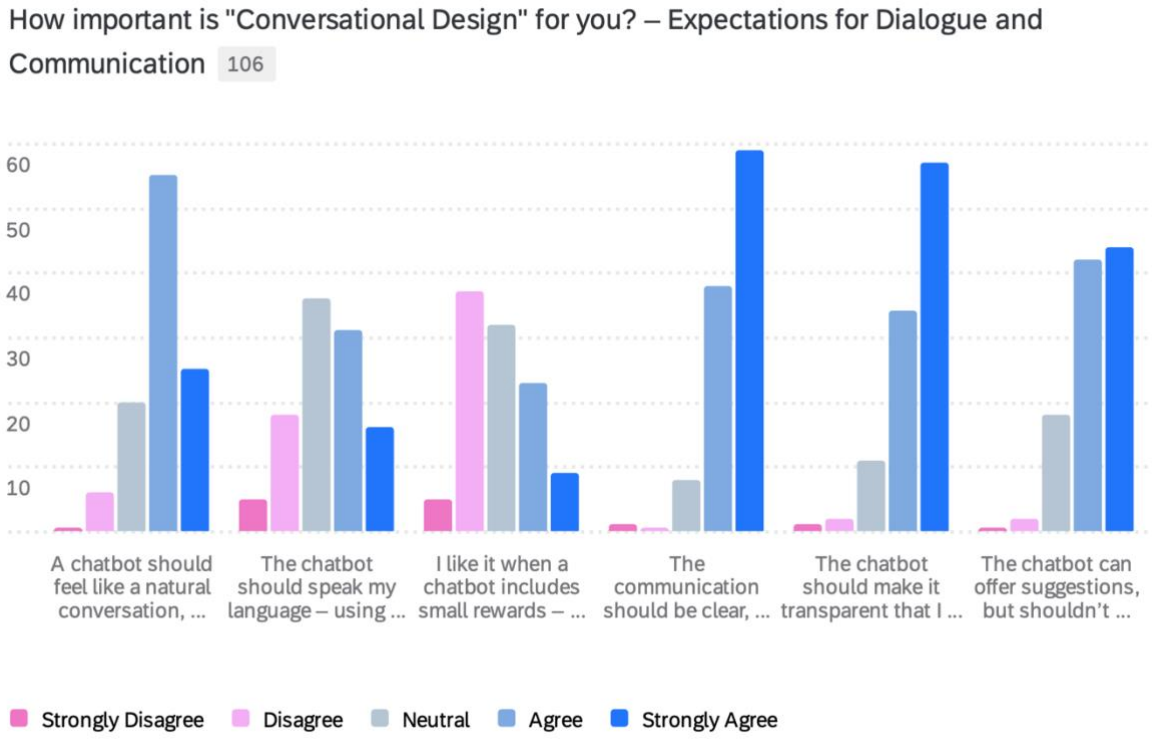
Model	R	R^2
1	0.654	0.428

Note. Models estimated using sample size of N=106

Model Coefficients - Q12b_1 UI

Predictor	Estimate	SE	t	p
Intercept	-51.36	14.26	-3.601	<.001
Q12a_1	2.90	3.20	0.905	0.368
Q12a_2	8.76	3.25	2.693	0.008
Q12a_3	4.06	2.70	1.503	0.136
Q12a_4	4.44	3.76	1.181	0.241
Q12a_5	4.20	2.51	1.675	0.097
Q12a_6	6.04	2.13	2.832	0.006

Q13a 1-6



Linear Regression

Model Fit Measures

Model	R	R^2
1	0.521	0.271

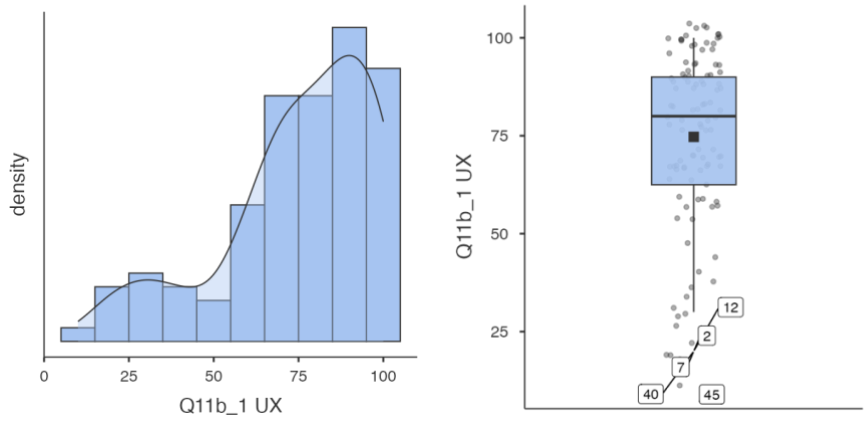
Note. Models estimated using sample size of N=106

Model Coefficients - Q13b_1 CD

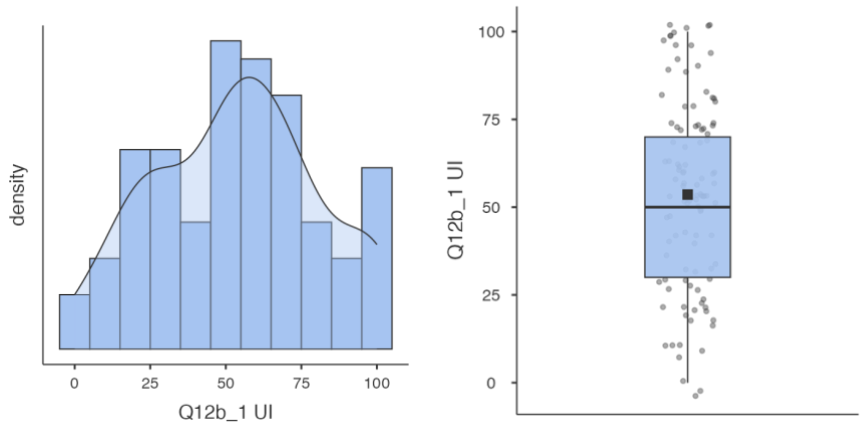
Predictor	Estimate	SE	t	p
Intercept	9.773	14.99	0.652	0.516
Q13a_1	9.794	2.34	4.184	<.001
Q13a_2	0.739	1.83	0.405	0.687
Q13a_3	2.064	1.68	1.226	0.223
Q13a_4	1.057	2.54	0.416	0.678
Q13a_5	4.441	2.09	2.120	0.037
Q13a_6	-1.434	2.34	-0.613	0.541

Descriptives	Q11b_1 UX	Q12b_1 UI	Q13b_1 CD	Q14_1 Factors UX, UI, and CD
N	106	106	106	106
Mean	74.7	53.6	74.9	76.1
Median	80.0	50.0	80.0	80.0
Standard deviation	22.7	26.8	19.3	22.6
Minimum	10	0.00	20	10
Maximum	100	100	100	100

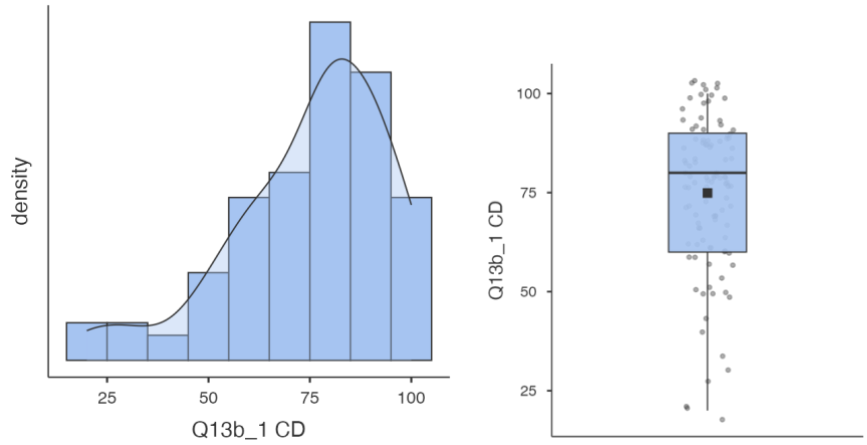
Q11b_1 UX



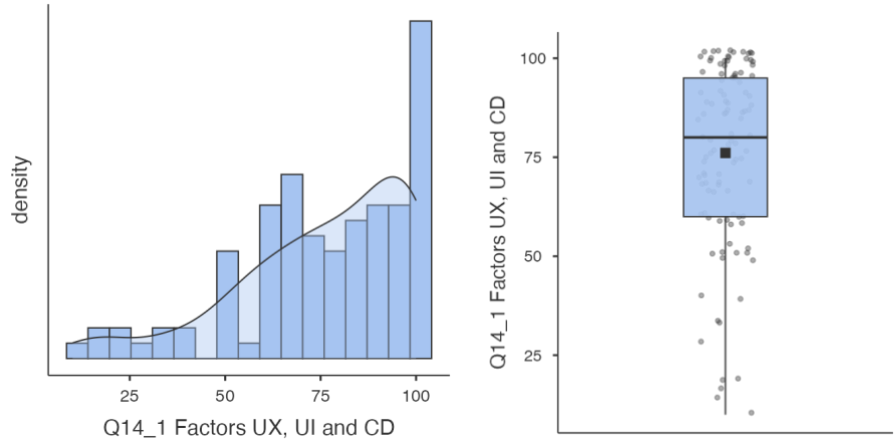
Q12b_1 UI



Q13b_1 CD



Q14_1 Factors UX, UI, and CD



Linear Regression

Model Fit Measures

Model	R	R^2
1	0.700	0.491

Note. Models estimated using sample size of N=106

Model Coefficients - Q14_1 Factors UX, UI, and CD

Predictor	Estimate	SE	t	p
Intercept	17.75191	6.5614	2.7055	0.008
Q11b_1 UX	0.55371	0.0965	5.7367	<.001
Q12b_1 UI	-0.00460	0.0682	-0.0673	0.946
Q13b_1 CD	0.22973	0.1158	1.9844	0.050

2. Interviews

2.1. Interview: Gen Z (Prof. Dr. Andrea Hüttmann)

2.1.1. Originaltranscript Interview: Gen Z (Prof. Dr. Andrea Hüttmann)

Einleitung: Danke, dass Sie sich die Zeit genommen haben, mir einige Fragen zu meiner Masterthesis zu beantworten. Darin geht es, wie Chatbots im Onlinehandel, speziell für Fast Moving Consumer Goods (also Lebensmittel, Kosmetik, Getränke usw.), besser auf der Webseite gestaltet werden können, damit sie die Gen Z wirklich ansprechen. Ich will dabei herausfinden, was in Sachen UX-Design wichtig ist: z. B. wie ein Chatbot aussehen und sich verhalten sollte, damit junge Leute ihn als angenehm und hilfreich wahrnehmen. Sie können mir als Expertin in Bezug auf die Gen Z einige Einblicke dahingehend.

Frau Prof. Dr. Andrea Hüttmann, Sie sind Professorin an der accadis Hochschule Bad Homburg, leiten dort den Fachbereich Communication Skills sowie die Interne Hochschulkommunikation. Gleichzeitig sind Sie Expertin für Soft Skills, Persönlichkeitsentwicklung und Unternehmenskommunikation begleiten Sie Unternehmen und Privatpersonen in Veränderungsprozessen – sei es als Coach, Beraterin oder als Trainerin für Präsentations- und Gesprächskompetenz. „Sie sind Expertin für Brücken zur Kommunikation“. In Ihrem dritten und aktuellen Buch „Workation, Work-Life-Balance, Workaholic – Wie die Gen Z und Unternehmen ein Match werden“ setzen Sie sich intensiv mit der Gen Z auseinander und werben für mehr gegenseitiges Verständnis zwischen den Generationen. Sie haben die prägenden Erfahrungen, Werte und Kommunikationsmuster der Gen Z herausgearbeitet und mit denen anderer Generationen verglichen. Besonders spannend im Hinblick auf meine Masterthesis ist dabei, dass Sie sich intensiv mit der Gen Z und deren Hintergründen auseinandergesetzt haben.

In welchem Rahmen haben Sie sich mit der Gen Z beschäftigt?

Ich setze mich täglich mit der Gen Z auseinander, sowohl in meiner Funktion als Professorin für Communication Skills und Unternehmenskommunikation an der accadis Hochschule Bad Homburg als auch in meiner Tätigkeit als Coach und Trainerin, wenn es um das Thema Persönlichkeitsentwicklung geht. Zudem bin ich selber Mutter von zwei Kindern der Gen Z. Ich habe mich auch in meinem Buch mit den Hintergründen der Gen Z beschäftigt im Hinblick auf deren Berufseinstieg. Durch die enge Arbeit mit Studierenden bekomme ich sehr direkt mit, wie diese Generation denkt, fühlt und handelt. Ihre Werte, ihre Kommunikationsweise und ihre Haltung zur Welt erlebe ich nicht theoretisch, sondern ganz praktisch im Hörsaal, in Gesprächen, in der Beratung. Das ist nicht immer erfreulich, was man da so erlebt.

Wie definieren Sie die Gen Z?

Zur Gen Z zähle ich in der Regel die Jahrgänge ab etwa 1995 bis 2010. Es handelt sich um junge Menschen, die von klein auf mit digitalen Medien aufgewachsen sind und eine Welt erlebt haben, die stark von Krisen, Unsicherheiten und schnellen Veränderungen geprägt ist. Sie sind digital sozialisiert, sehr gut vernetzt, kritisch und reflektiert. Gleichzeitig wächst diese Generation mit einem starken Bedürfnis nach Sinn, Selbstbestimmung und Lebensqualität auf. Sie stellt sich früh zentrale Fragen: Was erfüllt mich? Wofür lohnt es sich, meine Zeit zu investieren? Sie sucht Orientierung, will aber gleichzeitig frei und flexibel bleiben und sie hat ein feines Gespür für Authentizität, sei es im gesellschaftlichen Diskurs oder im persönlichen Umfeld.

Welche Beobachtungen haben sich in Ihrer Arbeit besonders deutlich im Umgang mit dieser Generation herauskristallisiert und was macht die Gen Z Ihrer Meinung nach besonders (im positiven wie im herausfordernden Sinne)?

Was ich an der Gen Z wirklich bemerkenswert finde, ist ihr starkes Bewusstsein für Themen wie Selbstfürsorge, Lebensqualität und eine gesunde Balance im Leben. Die wissen ganz genau, was ihnen guttut – und was nicht. Sie haben ein feines Gespür für Authentizität. Wenn da irgendwas nicht stimmig ist, wenn eine Marke oder ein Unternehmen nicht das lebt, was es verspricht, dann sind die ganz schnell wieder weg, dabei ist der Kontext egal: das ist so bei Produkten als auch bei Stellenbeschreibungen. Die Generation merkt, wenn ihnen Unwahrheiten erzählt werden und aufgrund ihres großen Angebotes an anderen Marken und Firmen werden sie sich ohne lange zu Zögern nach einer Alternative umsehen.

Gleichzeitig treten sie mit sehr klaren Vorstellungen auf – da wird im Bewerbungsgespräch auch mal direkt nach dem Sabbatical gefragt oder gesagt: „Mittwochs hab ich Yoga, da müsste ich früher gehen." Für Außenstehende wirkt das manchmal fordernd oder naiv, aber dahinter steckt ein völlig anderes Werteverständnis. Sie wollen nicht einfach nur Geld verdienen, sie wollen, dass ihre Arbeit Sinn macht, dass sie sich damit identifizieren können. Und ganz ehrlich: Ich kann das gut nachvollziehen.

2.1.2. Translated Transcript Interview: Gen Z (Prof. Dr. Andrea Hüttmann)

Introduction: Thank you for taking the time to answer a few questions for my master's thesis. It focuses on how chatbots in online retail, specifically for fast-moving consumer goods (such as food, cosmetics, beverages, etc.), can be better designed on websites to truly appeal to Gen Z. I want to find out what's important in terms of UX design: for example, what a chatbot should look like and how it should behave so that young people perceive it as pleasant and helpful. As an expert on Gen Z, you can offer some valuable insights.

Prof. Dr. Andrea Hüttmann, you are a professor at accadis Hochschule Bad Homburg, where you head the Department of Communication Skills as well as Internal University Communication. You are also an expert in soft skills, personal development, and corporate communication, supporting companies and individuals through change processes—whether as a coach, consultant, or trainer in presentation and conversation skills. You are considered an "expert in building bridges to communication." In your third and latest book, "Workation, Work-Life Balance, Workaholic – How Gen Z and Companies Can Become a Match", you explore Gen Z in depth and advocate for greater mutual understanding between generations. You have analyzed the formative experiences, values, and communication patterns of Gen Z and compared them with those of other generations. Particularly relevant for my thesis is that you've explored the background of Gen Z extensively.

In what context have you dealt with Gen Z?

I engage with Gen Z on a daily basis, both in my role as Professor of Communication Skills and Corporate Communication at accadis Hochschule Bad Homburg and in my work as a coach and trainer in the field of personal development. I'm also the mother of two Gen Z children. In my book, I explored the background of Gen Z with regard to entering the workforce. Through

my close work with students, I gain very direct insights into how this generation thinks, feels, and acts. I don't experience their values, communication style, and worldview in theory, but very practically in lectures, conversations, and consultations. And I must say, it's not always pleasant what one encounters.

How do you define Gen Z?

I generally consider people born between around 1995 and 2010 to be part of Gen Z. These are young people who grew up with digital media from an early age and have experienced a world shaped by crises, uncertainties, and rapid change. They are digitally socialized, well connected, critical, and reflective. At the same time, this generation grows up with a strong desire for meaning, autonomy, and quality of life. They start asking key questions early on: What fulfills me? What is worth investing my time in? They seek orientation, but also want to remain free and flexible, and they have a keen sense for authenticity, whether in societal discourse or in their personal environment.

What observations have emerged most clearly in your work with this generation, and what do you think makes Gen Z special (both positively and in terms of challenges)?

What I find truly remarkable about Generation Z is their strong awareness of topics like self-care, quality of life, and a healthy balance in life. They know very well what is good for them and what is not. They have a fine sense for authenticity. If something doesn't feel right, if a brand or company doesn't live up to its promises, they'll walk away quickly, regardless of the context. That applies to both products and job descriptions. This generation senses when they're being misled, and thanks to the wide range of available alternatives, they won't hesitate to look elsewhere.

At the same time, they come with very clear expectations, someone might ask about a sabbatical during a job interview or say, “I have yoga on Wednesdays, so I’d need to leave earlier.” To outsiders, that can seem demanding or naive, but behind it lies a completely different value system. They don’t just want to earn money, they want their work to be meaningful and something they can identify with. And honestly, I can completely understand that.

2.1.3. Gen Z Expert Interview: Deductively categorized according to Mayring

Qualitative content analysis (Mayring and Fenzl 2019). Codes are from the literature Review in chapter 2: Digital Socialization, Values and Attitudes, Media and Buying Behavior, Expectations toward Digital Services.

Digital Socialization

- "Young people who have grown up with digital media from an early age" (30).
- "They are digitally socialized, well connected, critical, and reflective" (31-32).

Values and Attitudes

- "This generation has a strong need for meaning, self-determination, and quality of life" (32-33).
- "They ask: What fulfills me? What is worth my time?" (33).
- "They have a keen sense of authenticity – if something doesn't feel right, they quickly disengage" (35 & 42).
- "They have very clear expectations, e.g., asking about sabbaticals in job interviews" (47-48)
- "They don’t just want to earn money – they want meaningful work they can identify with" (50-51).

Media and Buying Behavior

- "If a brand or company doesn't live up to what it promises, they leave immediately" (42-43).
- "This applies to both products and job ads" (44).

- "Given the wide range of alternatives, they quickly switch to other options" (45-46).

Expectations toward Digital Services

- A keen sense of inconsistency → suggests high expectations for clear, consistent communication and design (42-44).
- "Seeking orientation while wanting flexibility" (34-35). → implies a need for intuitive and adaptable systems

2.1.4. Declaration of Consent Prof. Dr. Andrea Hüttmann

NOVA SCHOOL OF BUSINESS & ECONOMICS

Declaration of Consent

I, Andrea Hüttmann , hereby agree that the planned conversation with Sophia Feldmann may be audio recorded and subsequently transcribed and translated into written form. I will have the opportunity to review the final version of the transcript.

Furthermore, I give permission for the use of the statements I make during the conversation as direct quotations in the Master's thesis to be written. I understand that my statements may be cited by others within the context of the thesis. I acknowledge that providing this consent is voluntary and that I have the right to refuse or withdraw my consent at any time. I have read this declaration carefully and understand its content and implications.

Andrea Hüttmann	Bad Homburg, 10.05.2025
Signature	Place, Date

*German Version:

Einverständniserklärung

Ich, (Name) erkläre mich hiermit einverstanden, dass das geplante Gespräch mit Sophia Feldmann auf der Tonspur aufgezeichnet und nachträglich in einem Protokoll verschriftlicht werden darf. Eine finale Version des Protokolls kann von mir eingesehen werden.

Darüber hinaus gestatte ich die Verwendung der darin enthaltenen Aussagen als Zitate in der zu anfertigen Masterarbeit. Mir ist bewusst, dass meine getroffenen Aussagen in der Arbeit von anderen zitiert werden können. Ich verstehe, dass die Verwendung meiner Aussagen freiwillig ist und dass ich das Recht habe, die Einwilligung zu verweigern. Ich habe diese Einwilligungserklärung sorgfältig gelesen und verstehe ihre Bedeutung.

Campus de Carcavelos
Rua da Holanda 1,
2775-405 Carcavelos, Portugal

(+351) 213 801 600
info@novasbe.pt
novasbe.pt

2.2. Interview: UX-Design (Anastasija Semtsiv)

2.2.1. Originaltranscript Interview: UX-Design (Anastasija Semtsiv)

Einleitung: In meiner Masterarbeit geht es darum, wie Chatbots im Onlinehandel – speziell für Fast Moving Consumer Goods (also Lebensmittel, Kosmetik, Getränke usw.) – besser auf der Webseite gestaltet werden können, damit sie die Gen Z wirklich ansprechen.

Ich will dabei herausfinden, was in Sachen UX-Design wichtig ist: z. B. wie ein Chatbot aussehen und sich verhalten sollte, damit junge Leute ihn als angenehm und hilfreich wahrnehmen.

Deine Erfahrung im UX-Design ist super wertvoll für mich, weil ich von dir lernen möchte, worauf es bei einer richtig guten Nutzererfahrung ankommt – auch wenn es bei dir nicht direkt um Chatbots oder die FMCG-Branche geht.

Interviewleitfaden – UX-Design Fokus

Einleitung *(Im Folgenden gebe ich einen Überblick über -für diesen Kontext- relevante Hintergrundinformationen zur Person):*

Aktuelle Position: Duale Studentin bei Accenture seit (September 2022) Bachelor of Science - BS, Business Informatics - International Management for Business and IT an der Dualen Hochschule Baden-Württemberg (Okt. 2022–Sept. 2025).

Aufgabenbereiche:

Account Management / Strategie

Sales

Release Management

Testing

Risikomanagement bei KI System

Projekt Virtuelle Assistenz (mit Avatar): Produktkonzeption, Projektmanagement Aktivitäten, Conversational Design, Entwicklung der Conversational Flows in Conversational AI Plattform, UI/UX Design, Testing, Recherche, Forschung zu Verbesserung der Nutzererfahrung und Vertrauenswürdigkeit des AI Agents.

Fragen zur Persona: Seit wann arbeitest du im Bereich UX-Design und welche Aufgaben und Schwerpunkte hast du bei der Arbeit?

Ich habe 6 Monate mich mit UX auf dem Projekt für eine KI gestützte Virtuelle Assistenz gearbeitet. Schwerpunkt war die VA bezüglich Design und Konversationsfluss so vertrauenswürdig wie möglich zu gestalten.

UX

Was sind aus deiner Sicht die wichtigsten Elemente guter UX bei digitalen Interaktionen? Welche Rolle spielt Vertrauen im UX-Design, insbesondere bei interaktiven Systemen wie Chatbots? (Stichworte: Vermenschlichung und Uncanny Valley)

Meine Antworten basieren vor allem aus meiner Erfahrung auf dem Projekt für den Embodied Conversational Agent. Aus meiner Sicht sind folgende Elemente entscheidend für eine gute User Experience:

Klarheit und Verständlichkeit: Nutzer müssen jederzeit wissen, wo sie sich befinden, welche Optionen sie haben und wie sie mit einer Technologie interagieren können – ohne lange nachdenken zu müssen. Es soll intuitiv sein. Außerdem sollte im Idealfall auch transparent sein, wie die Antworten entstehen/woher sie stammen um die Validität der Antworten zu beweisen.

Reaktionsfähigkeit und Geschwindigkeit: Eine zügige Reaktion auf Eingaben trägt zu einem flüssigen Gesprächsfluss bei. Verzögerungen können frustrieren und das Vertrauen in das System verringern. Und wenn es lade/warte -Zeiten gibt, dann sollte dem User irgendwie klar gemacht werden, dass noch eine Antwort kommt bzw. Das System gerade “denkt”

Kontextbezogene Personalisierung: Wenn ich auf individuelle Anliegen eingehe und dabei z.B. vorherige Angaben berücksichtige, entsteht eine relevante und wertschätzende Interaktion.

Fehlertoleranz: Nutzer dürfen Fehler machen. Systeme sollten fähig sein diese abzufangen und wenn sie Sprache verarbeiten z.B. Aussprache/Grammatik Fehler abfangen zu können oder höflich nachzufragen, wenn etwas unklar ist, anstatt evtl. eine Fehlantwort zu geben.

Emotionale Intelligenz: Eine positive Gesprächsatmosphäre, kleine Aufmerksamkeitkeiten (z. B. ein Lächeln oder ein motivierender Satz), können den Unterschied machen. Sprach Stil, Ton,…Aussehen von einem Avatar, Mimik, Gestik, Farben, Design sind einflussstarke Elemente für Emotion.

Antworten sollten nicht zu lange sein, es gibt unterschiedlichste Best Practices für Conversational Design, die sich auf Antwortenlänge, Stil, Arten der Rückfragen… beziehen.

Verlässlichkeit: Das System muss konsistent funktionieren, korrekte Informationen liefern und transparent kommunizieren, was es kann – und was nicht.

Sicherheit und Datenschutz: Nutzer vertrauen solchen Systemen nur, wenn sie das Gefühl haben, dass ihre Daten geschützt sind. Diese Systeme muss also transparent machen, wie mit ihren Informationen umgegangen wird.

Vermenschlichung/Anthropomorphismus: Anthropomorphismus bezeichnet die Zuschreibung menschlicher Eigenschaften an nicht-menschliche Entitäten, wie etwa digitale Assistenten oder Roboter. Im UX-Kontext wird dies gezielt genutzt, um soziale Nähe, Sympathie und Vertrauen

zu fördern. Elemente wie: eine menschenähnliche Stimme, visuelle Darstellungen mit Augen, Mimik oder Körpersprache, oder sprachliche Merkmale wie Empathie und Höflichkeit können dazu beitragen, dass Nutzer den Eindruck haben, mit einem "sozialen Gegenüber" zu interagieren. Studien zeigen, dass moderate Formen von Anthropomorphismus insbesondere bei Erstkontakten oder in öffentlichen Umgebungen (z.B. Flughäfen) die Nutzungsbereitschaft erhöhen können.

Eine menschlich wirkende Kommunikation kann Vertrauen fördern, aber:
Uncanny Valley: Beschreibt ein Phänomen, bei dem eine zunehmende Ähnlichkeit zu echten Menschen zunächst zu steigendem Vertrauen und Akzeptanz führt – bis zu einem bestimmten Punkt. Wenn ein System fast menschlich wirkt, aber kleine Abweichungen (z. B. in Mimik, Sprachrhythmus oder Bewegungen) auftreten, wird es als unheimlich oder irritierend empfunden. Ein Beispiel ist ein ECA mit realistischer Darstellung und nahezu natürlicher Sprachausgabe, dessen Augenbewegung jedoch leicht asynchron ist oder dessen Reaktionen minimal verzögert wirken, kann bei Nutzern ein Gefühl des Unbehagens auslösen. Der Bruch zwischen Erwartung und tatsächlichem Verhalten lässt das System "falsch" oder "unmenschlich" wirken – obwohl es visuell fast perfekt ist.

Wenn es zu menschlich wirkt, ohne es wirklich zu sein, kann das Verunsicherung oder sogar Ablehnung auslösen. Deshalb ist ein bewusst gestalteter gradueller Vermenschlichungsgrad wichtig: glaubwürdig, aber nicht täuschend.

Es muss eine Balance gefunden werden. Systeme sollen empathisch und nahbar wirken – ohne zu versuchen, ein echter Mensch zu sein. Die tatsächliche Empfindung dieser Technologien ist

auch sehr individuell bzw. subjektiv und stark von der Zielgruppe und unterschiedlichen demographischen Faktoren abhängig.

UI

Welche UI-Elemente stärken deiner Erfahrung nach das Vertrauen jüngerer Nutzer in digitale Assistenten?

Wie wichtig sind visuelle Reize wie Avatare, Animationen oder Farbschemata für die Nutzer?

In meiner Projekterfahrung habe ich an einer Virtuellen Assistenz gearbeitet, der den Zielgruppe nicht eingeschränkt ist. Dem entsprechend habe ich mich nicht mit einer spezifischen Zielgruppe, wie GenZs beschäftigt. Darum kann ich hier auch nur mir bekannte allgemeine Best Practices nennen die auch die GenZs als Zielgruppe abholen sollen.
Intuitive Bedienbarkeit: Klare Navigation, visuelles Feedback (z. B. animierte Ladeindikatoren/Progress Indicator), reduzierte Komplexität.

Responsive Design: Optimierung für Mobilgeräte ist essenziell – insbesondere für Chatbots, die häufig mobil genutzt werden.

Interaktive Elemente: Quick Replies und Buttons fördern das Gefühl von Kontrolle und Sicherheit.

Datentransparenz: Klare Icons oder UI-Bausteine, die zeigen, ob und wie Daten verarbeitet werden (z. B. Datenschutzhinweise).

Abbruch/Restart Möglichkeit

Conversational Design

Was ist bei der Gestaltung von dialogischen Elementen (Conversational Design) besonders wichtig, um Nutzer anzusprechen?

Welchen Einfluss haben Sprachstil und Tonalität auf das Nutzungserlebnis und das Vertrauen in Chatbots?

Klarer Gesprächseinstieg: Begrüßung, Vorstellung des Zwecks und ggf. Grenzen des Chatbots helfen, Erwartungen zu setzen.
Strukturierte Dialogführung: Optionen statt Freitext fördern Orientierung, gezielte Rückfragen steigern Präzision.
Kontextsensitivität: Der Bot sollte Eingaben erkennen, korrekt verarbeiten und bei Bedarf intelligent nachfragen.
Fehlertoleranz: Nutzerfreundlicher Umgang mit Missverständnissen oder unerwarteten Eingaben erhöht Akzeptanz.
Redegeschwindigkeit.
Antwortlänge.

Sprachstil und Tonalität beeinflussen die soziale Wahrnehmung des Systems stark. Tonalität sollte der Zielgruppe und dem Nutzungskontext entsprechen – z. B. freundlich-locker bei jungen Nutzern, sachlich-hilfsbereit im professionellen Umfeld. Mit einer Personalisierung (z. B. Anrede mit Namen/ Siezen oder duzen) und eine konsistente Sprachebene schaffen Wiedererkennung und Nähe. Außerdem erhöht Empathie (z. B. „Das klingt ärgerlich – ich helfe gerne weiter“) die emotionale Bindung und sympatisierung mit dem System. Jedoch muss hier auch darauf geachtet werden, dass man solche füllenden Aussagen die einer Seite schon eine Funktion haben nicht zu oft vorkommen, weil sie manchmal auch als störend/wiederholden/zeitverschwäderisch empfunden werden können.

Vertrauen und Wiederkaufabsicht

Welche Designfaktoren wirken sich deiner Einschätzung nach positiv auf die Wiederverwendung eines Chatbots oder die Rückkehr auf eine Website aus?

Nützlichkeit und Problemlösungsfähigkeit

Der Chatbot muss relevante Aufgaben zuverlässig lösen können - z. B. Informationen schnell liefern oder einfache Buchungen ermöglichen.

Klar kommunizierte Kompetenzen („Ich kann dir bei XY helfen") verhindern Frustration und fördern zielgerichtete Nutzung.

Einfache, schnelle Bedienung - z. B. durch Quick Replies, strukturierte Dialoge und Vermeidung unnötiger Eingaben.

Konsistentes, erwartungskonformes Verhalten (z. B. sofortige Reaktionen, klarer Abschluss) stärkt das Vertrauen.

Vertrauenswürdiges Erscheinungsbild durch professionelles Ul, klare Markenzuordnung (Logo, Farben) und dezente Animationen.

Mobile Optimierung und responsives Design erhöhen die Nutzungswahrscheinlichkeit auf verschiedenen Geräten.

Ein freundlicher, zielgruppengerechter Sprachstil sorgt für emotionale Bindung.

Empathische, verständnisvolle Reaktionen - auch bei Fehlern oder Unklarheiten - stärken die Nutzerbeziehung.

Offene Kommunikation über Datenschutz, Speichern von Daten oder Weiterleitung an Menschen (bei Eskalation) schafft Sicherheit.

Einbindung von Vertrauenssignalen wie Siegeln, Datenschutzhinweisen oder Verlinkung zu echten Ansprechpartner

Personalisierte Begrüßung, gespeicherte Präferenzen oder Konversationsverläufe (wenn gewünscht) steigern die Wiederverwendungsabsicht. Das System wirkt dadurch „lernfähig" und erinnert sich – ein Zeichen für Qualität.

Hinweise auf weiterführende Services („Willst du auch XY wissen?") oder Call-to-Actions am Ende der Interaktion animieren zur Rückkehr.

Integration von Gamification-Elementen (z. B. Punkte sammeln, Empfehlungen) kann besonders bei jüngeren Nutzern die Rückkehrrate erhöhen.

2.2.2. Translated Transcript Interview: UX-Design (Anastasija Semtsiv)

Introduction: My master's thesis focuses on how chatbots in online retail – especially for fast-moving consumer goods (such as groceries, cosmetics, beverages, etc.) – can be better designed on websites to effectively appeal to Gen Z.

I want to find out what matters in terms of UX design: for example, how a chatbot should look and behave so that young people perceive it as pleasant and helpful. Your experience in UX design is extremely valuable to me, as I want to learn from you what constitutes truly good user experience – even if your work is not directly related to chatbots or the FMCG sector.

Interview Guide – UX Design Focus

(The following provides an overview of background information relevant to this context about the person):

Current position: Dual Student at Accenture since (September 2022), Bachelor of Science - BS, Business Informatics - International Management for Business and IT an der Dualen Hochschule Baden-Württemberg (October 2022–September 2025).

Areas of Responsibility:

- Account management / strategy
- Sales
- Release management
- Testing
- Risk management in AI systems
- Project Virtual Assistant (with avatar): Product conception, project management

- Activities, conversational design, development of conversational flows in conversational AI platform, UI/UX design, testing, research, studies to improve user experience and trustworthiness of the AI agent.

Questions about the Persona:

Since when have you been working in UX design, and what are your tasks and focus areas?

I worked on UX for 6 months on the project for an AI-based virtual assistant. The focus was to design the VA to be as trustworthy as possible in terms of design and conversational flow.

UX

What do you think are the most important elements of good UX in digital interactions?

What role does trust play in UX design, particularly with interactive systems like chatbots? (Keywords: anthropomorphism and uncanny valley)

My answers are primarily based on my experience with the project for the embodied conversational agent. From my point of view, the following elements are crucial for a good user experience:

Clarity and comprehensibility: Users must always know where they are, what options they have, and how they can interact with a technology – without having to think much. It should be intuitive. Ideally, it should also be transparent how the answers are generated/where they come from to prove the validity of the answers.

Responsiveness and speed: Prompt reactions to inputs contribute to a smooth conversation flow. Delays can be frustrating and reduce trust in the system. If there are load/wait times, it should be made clear to the user that a response is still coming or that the system is currently "thinking".

Contextual personalization: Addressing individual concerns and, for example, considering previous inputs, creates relevant and appreciative interaction.

Error tolerance: Users must be allowed to make mistakes. Systems should be able to catch these and, if they process language, for example, catch pronunciation/grammar errors or politely ask again if something is unclear instead of possibly giving a wrong answer.

Emotional intelligence: A positive conversational atmosphere, small gestures (e.g., a smile or a motivating sentence), can make a difference. Speaking style, tone, appearance of an avatar, facial expressions, gestures, colors, design are influential elements for emotion.

Answers should not be too long, there are various best practices for conversational design that relate to answer length, style, types of follow-up questions.

Reliability: The system must function consistently, provide correct information, and communicate transparently what it can – and what it cannot.

Security and data protection: Users only trust such systems if they feel their data is protected. These systems must therefore make transparent how their information is handled.

Anthropomorphism/Human-likeness:

Anthropomorphism refers to attributing human characteristics to non-human entities, such as digital assistants or robots. In the UX context, this is purposefully used to foster social closeness, sympathy, and trust. Elements such as: a human-like voice, visual representations with eyes, facial expressions or body language, or linguistic features such as empathy and politeness can contribute to users feeling like they are interacting with a “social counterpart”. Studies show that moderate forms of anthropomorphism – especially during first interactions or in public environments (e.g., airports) – can increase willingness to use.

Human-like communication can build trust, but:

Uncanny Valley: Describes a phenomenon where increasing similarity to real humans initially leads to growing trust and acceptance – up to a certain point. When a system appears almost

human, but small deviations (e.g., in facial expression, speech rhythm, or movements) occur, it is perceived as eerie or unsettling. An example is an ECA with realistic appearance and almost natural speech, whose eye movement is slightly asynchronous or whose responses appear slightly delayed, which can trigger a sense of discomfort in users. The break between expectation and actual behavior makes the system feel “wrong” or “inhuman” – although it is visually almost perfect.

If it seems too human without truly being so, it can cause uncertainty or even rejection. That’s why a consciously designed level of anthropomorphism is important: credible, but not deceptive.

A balance must be found. Systems should appear empathetic and approachable – without trying to be a real person. The actual perception of these technologies is also very individual and subjective and strongly depends on the target group and different demographic factors.

UI

Which UI elements, in your experience, strengthen younger users' trust in digital assistants?

How important are visual stimuli such as avatars, animations, or color schemes to users?

In my project experience, I worked on a virtual assistant that wasn’t limited to a specific target group. Accordingly, I didn’t focus on a specific group like Gen Z. Therefore, I can only share known general best practices that are also intended to appeal to Gen Z users:

Intuitive usability: Clear navigation, visual feedback (e.g., animated loading indicators/progress indicators), reduced complexity.

Responsive design: Optimization for mobile devices is essential – especially for chatbots, which are often used on mobile.

Interactive elements: Quick replies and buttons foster a sense of control and security.

Data transparency: Clear icons or UI components that show whether and how data is processed (e.g., privacy notices).

Abort/restart option

Conversational Design

What is especially important when designing dialog elements (conversational design) to engage users?

What impact do language style and tone have on the user experience and trust in chatbots?

Clear conversation start: Greeting, explaining the purpose and possible limitations of the chatbot help set expectations.

Structured dialog guidance: Options instead of free text promote orientation; targeted follow-up questions increase precision.

Context sensitivity: The bot should recognize inputs, process them correctly, and ask intelligent questions if needed.

Error tolerance: User-friendly handling of misunderstandings or unexpected inputs increases acceptance.

Speaking pace.

Answer length.

Language style and tone strongly influence the social perception of the system. Tone should match the target group and use context – e.g., friendly and casual for young users, factual and

helpful in professional settings. Personalization (e.g., addressing by name or using informal/formal tone) and consistent language level create familiarity and closeness.

Empathy (e.g., “That sounds frustrating – I’m happy to help”) strengthens the emotional bond and sympathy with the system. However, it’s also important not to use such filler statements too often, as they can be perceived as annoying/repetitive/time-wasting.

Trust and repurchase intention

Which design factors, in your view, positively influence the reuse of a chatbot or return to a website?

Usefulness and problem-solving ability

The chatbot must reliably solve relevant tasks – e.g., quickly provide information or enable simple bookings.

Clearly communicated capabilities (“I can help you with XY”) prevent frustration and promote purposeful use.

Simple, fast usability – e.g., through quick replies, structured dialogs, and avoiding unnecessary inputs.

Consistent, expectation-compliant behavior (e.g., immediate responses, clear closure) strengthens trust.

Trustworthy appearance through professional UI, clear brand assignment (logo, colors), and subtle animations.

Mobile optimization and responsive design increase the likelihood of use on various devices.

A friendly, target group-oriented tone ensures emotional connection.

Empathetic, understanding reactions – even in cases of errors or uncertainties – strengthen the user relationship.

Open communication about data protection, data storage, or forwarding to humans (in case of escalation) creates security.

Integration of trust signals such as seals, privacy notices, or links to real contacts

Personalized greeting, stored preferences, or conversation history (if desired) increase reuse intention. The system appears “capable of learning” and remembers – a sign of quality.

References to additional services (“Would you also like to know about XY?”) or call-to-actions at the end of the interaction encourage return.

Integration of gamification elements (e.g., collecting points, recommendations) can especially increase return rates among younger users.

2.2.3. UX Design Interview: Deductively categorized according to Mayring

Qualitative content analysis (Mayring and Fenzl 2019). Codes are from the literature Review in chapter 2: UX, UI, CD, Anthropomorphism, Uncanny Valle, Trust and Factors for Return.

UX

- Clarity & Comprehensibility: Users must intuitively understand how to navigate and interact with the system (38-39).
- Responsiveness & Speed: Timely replies avoid frustration and support a smooth interaction (42-44).
- Personalization & Context Awareness: Addressing users individually increases relevance (45-46).
- Error Tolerance: The system should handle mistakes gracefully and offer polite corrections (47-49).
- Emotional Intelligence: Friendly tone, small gestures (e.g., a smile), and empathic language enhance the overall experience (50-52).
- Reliability & Transparency: Users must understand what the chatbot can and cannot do (55-56).
- Data Security: Trust depends on clear communication about data protection and handling (57-58).

UI

- Intuitive Design: Visual feedback, clear navigation, and low complexity are crucial (94-95).
- Mobile Optimization: Responsive design is especially important for Gen Z users (96-97).
- Interactive Elements: Quick replies, buttons, and restart options increase user control (98).
- Trust-Building UI Features: Icons indicating privacy/data use, data processing, and abort/restart option (99-101).

CD

- Clear Introduction & Structure: Clearly state the chatbot's purpose and limitations (108-109).
- Options Instead of Free Text: Guided dialogue helps users stay oriented (110-111).
- Error Tolerance & Follow-Up Questions: Misunderstandings should be resolved politely (112-115).
- Tone & Language Style: Should match the target group—friendly/casual for Gen Z (119-122).
- Personalization: Use of names, memory of preferences, and consistent language build familiarity (121-122).
- Balance in Filler Phrases: Empathic phrases are helpful but should not feel repetitive or waste time (123-125).

Anthropomorphism

- Attribution of human traits to non-human entities such as digital assistants or robots (61).
- Purpose in UX context: to foster social closeness, sympathy, and trust (62).
- Relevant elements: human-like voice, visual representation with eyes, facial expressions, body language, linguistic features such as empathy and politeness (63–65).
- These characteristics promote the feeling of interacting with a social counterpart (65).
- Moderate forms are especially effective during first contact or in public settings (e.g., airports) – increase willingness to use (66–67).

Uncanny Valley

- Increasing resemblance to real humans initially promotes trust – up to a critical threshold (70–71).
- Small deviations (e.g., in facial expression, speech, or movement) then appear disturbing or eerie (72–73).
- Example: Emodied Chatbot with realistic appearance, but slightly asynchronous eye movements or delayed responses (74–75).
- The gap between expectation and actual behavior makes the system appear "wrong" or "inhuman" (76–77).

Trust

- Consistent, expectation-compliant behavior (e.g., immediate responses, clear closure) strengthens trust (137–138).
- Trustworthy appearance through professional UI, clear brand assignment (logo, colors), and subtle animations (139–140).
- A friendly, target group-oriented tone ensures emotional connection (142).
- Emotional Bonding: Empathetic, understanding reactions – even in cases of errors or uncertainties – strengthen the user relationship (143–144).
- Open communication about data protection, data storage, or forwarding to humans (in case of escalation) creates security (145–146).
- Integration of trust signals such as seals, privacy notices, or links to real contacts (147).

Factors for Return

- Usefulness and problem-solving ability – The chatbot must reliably solve relevant tasks – e.g., quickly provide information or enable simple bookings (130-132).
- Clearly communicated capabilities (“I can help you with XY”) prevent frustration and promote purposeful use (133-134).
- Simple, fast usability – e.g., through quick replies, structured dialogs, and avoiding unnecessary inputs (135-136).
- Mobile optimization and responsive design increase the likelihood of use on various devices (141).

- Personalized greeting, stored preferences, or conversation history (if desired) increase reuse intention. The system appears “capable of learning” and remembers – a sign of quality (148-149).
- References to additional services (“Would you also like to know about XY?”) or call-to-actions at the end of the interaction encourage return (150-151).
- Integration of gamification elements (e.g., collecting points, recommendations) can especially increase return rates among younger users (152-153).

2.2.4. Declaration of Consent Anastasija Semtsiv

NOVA SCHOOL OF BUSINESS & ECONOMICS

Declaration of Consent

I, Anastasija Semtsiv , hereby agree that the planned conversation with Sophia Feldmann may be audio recorded and subsequently transcribed and translated into written form. I will have the opportunity to review the final version of the transcript.

Furthermore, I give permission for the use of the statements I make during the conversation as direct quotations in the Master's thesis to be written. I understand that my statements may be cited by others within the context of the thesis. I acknowledge that providing this consent is voluntary and that I have the right to refuse or withdraw my consent at any time. I have read this declaration carefully and understand its content and implications.

Signature

Stuttgart, 09.05.2025

Place, Date

**German Version:*

Einverständniserklärung

Ich, (Name) erkläre mich hiermit einverstanden, dass das geplante Gespräch mit Sophia Feldmann auf der Tonspur aufgezeichnet und nachträglich in einem Protokoll verschriftlicht werden darf. Eine finale Version des Protokolls kann von mir eingesehen werden.

Darüber hinaus gestatte ich die Verwendung der darin enthaltenen Aussagen als Zitate in der zu anfertigen Masterarbeit. Mir ist bewusst, dass meine getroffenen Aussagen in der Arbeit von anderen zitiert werden können. Ich verstehe, dass die Verwendung meiner Aussagen freiwillig ist und dass ich das Recht habe, die Einwilligung zu verweigern. Ich habe diese Einwilligungserklärung sorgfältig gelesen und verstehe ihre Bedeutung.