

# The Impact of Chatbots on Customer Loyalty

Subjects: Behavioral Sciences

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More and more companies have implemented chatbots on their websites to provide support to their visitors on a 24/7 basis. The new customer wants to spend less and less time and therefore expects to reach a company anytime and anywhere, regardless of time, location, and channel. System quality, service quality, and information quality are crucial dimensions that a chatbot must meet to give a good customer experience. To make a chatbot more personal, companies can alter the language style. Human-like chatbots lead to greater satisfaction and trust among customers, leading to greater adoption of the chatbot. A connection between chatbots and customer loyalty is very likely. Besides, some customers suffer from the privacy paradox because of personalization.

Keywords: chatbots ; trust ; satisfaction ; commitment ; customer experience ; loyalty ; service quality ; information quality ; privacy

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## 1. Introduction

In the current era, wherein consumers spend more and more time in digital environments, companies prioritize being online anytime and anywhere to keep in touch with their customers <sup>[1]</sup>. In this digital age, customers have the opportunity to choose from numerous companies that provide the same service or product. As a result of this growing offer, consumers can afford to be choosy <sup>[2]</sup>. Companies are constantly challenged by competition to attract and retain customers to increase customer experience and thereby customer satisfaction <sup>[3]</sup>. Online communication is an essential factor in improving the customer experience <sup>[3]</sup>. A personal approach in digital customer contact is vital concerning the customer and the preservation thereof <sup>[3]</sup>. According to Siswi and Wahyono <sup>[4]</sup>, satisfaction is created by meeting customer expectations. By optimizing the customer experience, customer expectations and satisfaction can be exceeded. Customer satisfaction leads to customer loyalty, which has been important for decades <sup>[5]</sup>.

Due to digital developments and growing competition, companies are constantly challenging to attract and retain customers <sup>[1]</sup>. The 'new customer in 2021' wants to spend less and less time and therefore expects to be able to reach a company anytime and anywhere, regardless of time, location, and channel <sup>[2]</sup>. An instrument to respond to digitization and customer experience is the use of chatbots <sup>[6]</sup>. Offering visitors an additional means of communication increases customer contact <sup>[2]</sup>. By responding proactively as a company to questions and complaints from a customer, the customer receives a feeling of confidence and satisfaction <sup>[7]</sup>. Partly due to the use of a chatbot, a customer gains more confidence in an organization, leading to customer loyalty. The purpose is to provide insight into the role of chatbots by increasing customer loyalty.

The topic is partly inspired by the MSI Research Priorities <sup>[8]</sup>, wherein customer experience and loyalty were frequently mentioned. Customer loyalty is one of the most critical factors for a company to increase its market share and, therefore, interesting to investigate further <sup>[9]</sup>. There exist many studies on traditional customer loyalty. With the ever-innovating and growing digital world, it is interesting to dig into customer loyalty in the digital world <sup>[10][11]</sup>. Chatbots are an emerging development and are found to be interested here. There exist some studies about the relation between chatbots and customer satisfaction, but the connection between chatbots and customer loyalty is not frequently made. Besides, the existing studies are based on consumer support by humans and not by chatbots.

While in the past, companies could only reach their local customers through face-to-face contact or mass media, technology made it possible that companies are nowadays able to have online contact with their customers all day long. Therefore, companies prioritize being online anytime and anywhere to respond to the online competition and keep in touch with their customers to provide them with a satisfying online service and experience <sup>[12]</sup>. As stated earlier, customer loyalty has been playing an essential role for years. However, the way to achieve this has changed over the years due to online competition and technological developments. Stating this, in this digital age where the continuous availability of businesses is crucial, optimizing the customer experience is more important than ever before <sup>[11]</sup>. Proactive and personal

customer contact is a significant factor in the customer experience. A chatbot can respond to this by proactively and quickly responding to customer questions.

## 2. The Impact of Chatbots on Customer Loyalty

The constructs of service quality, system quality, and information quality belong to chatbots since these dimensions are seen as predictors of customer experience concerning chatbots. The constructs of personalization, privacy paradox, and customer complaint are seen as overlapping constructs and, therefore, not connected to customer loyalty or chatbots (Table 1).

**Table 1.** Customer loyalty and chatbots construct summary.

Construct	Definition	Found Articles	Findings/Comments	Future Research	Practical Implications
Customer loyalty: Customer trust Included in 17 studies	Trust of a customer in a brand [13].	Hallowell [7]; Van Vuuren et al. [14]; Bryant and Colledge [13]; Mende et al. [15]; Sidaoui et al. [16]; Yen and Chiang [17]; Akhtar et al. [18]; Ba and Johansson [19]; Følstad and Skjuve [20]; Kormpho et al. [21]; Przegalinska et al. [22]; Araujo [23]; Chattaraman et al. [24]; Toader et al. [25]; Følstad et al. [26]; Youn and Jin [27]; Nguyen et al. [28].	Initial evidence that chatbots with human-like cues can significantly influence emotional connection and users' trust. The same outcome is not found for satisfaction. for chatbots, trust is a crucial factor because users do not want to share personal information if they have trust concerns.	The chatbot and its trust reduction may be more efficient in complex websites or with older people. That needs further research.	Companies should put into winning customers' trust by sharing reviews and being transparent.
Customer loyalty: Customer satisfaction Included in 12 studies	Satisfaction of customers with company's products, services, and capabilities [29].	Van Vuuren [14]; Herrmann et al. [29]; Yen and Chiang [17]; Følstad and Skjuve [20]; Kormpho et al. [21]; Araujo [23]; Youn and Jin [27]; Gnewuch et al. [30]; Rossmann et al. [31]; Hwang et al. [32]; Elsholz et al. [33]; Johari et al. [34].	Chatbots have a more substantial impact on word-of-mouth and reuse intent, while customer satisfaction obtained through traditional customer service has a stronger impact on customer loyalty.	The most important thing for customer satisfaction is helping the customer out and giving them a good experience. Studies found that chatbots improve the customer experience. Investigate the relationship between loyalty and chatbots.	Optimize the customer experience to raise customer satisfaction.
Customer loyalty: Customer commitment Included in 4 studies	Customers' engagement or continuous obligation to return to the same company [35].	Van Vuuren et al. [14]; Kotler and Armstrong [35]; Trivedi [36]; Akhtar et al. [18]; Araujo [23].	Customer loyalty can only happen if companies can build an emotional relationship with their customers.	Further analyze the role of the language of chatbots to create commitment.	Focus on social bonding tactics to improve customer commitment.

Construct	Definition	Found Articles	Findings/Comments	Future Research	Practical Implications
Chatbots: Service quality Included in 10 studies	Service quality is essential for companies because it influences customers' satisfaction, loyalty, and purchase intentions. Assurance, responsiveness, and empathy are the dimensions of service quality [36].	Brandtzaeg and Følstad [5]; Hoyer et al. [40]; Trivedi [36]; Yen and Chiang [17]; Kormpho et al. [21]; Følstad and Skjuve [20]; Følstad et al. [26]; Nguyen et al. [28]; Rossmann et al. [31]; Ashfaq et al. [37]; Kvale et al. [38].	Service quality positively affects customer experience, which in turn influences brand love. Chatbots impact stronger on word-of-mouth and intention to reuse, whereas customer satisfaction derived by a hotline is affecting stronger on customer loyalty.	Analysis to understand and improve chatbot dialogue to improve the customer experience.	The need for diligence in chatbot training to optimize service. Involve inter-disciplinary teams in training chatbots to optimize the chatbot service.
Chatbots: System quality Included in 8 studies	System quality consists of the dimensions: accuracy, response time, usability, reliability, availability, and adaptability to measure technical success [36].	Brandtzaeg and Følstad [5]; Trivedi [36]; Yen and Chiang [17]; Akhtar et al. [18]; Følstad and Skjuve [20]; Følstad et al. [26]; Gnewuch et al. [30]; Ashfaq et al. [37].	System quality has a significant relationship with customer experience, which influences customer loyalty. A chatbots' response time represents a social signal that elicits social responses shaped by social expectations. Dynamic response delays increase an individuals' perception of humanness in a chatbot and, in turn, lead to greater customer satisfaction.	Further research more different types of response delay by chatbots and their effects, e.g., dependent on the text length, static response delays.	The paper examines the importance of system quality toward creating a customer experience. To ensure that, the chatbots need to be highly relevant, reliable, and offer information quickly. Users often feel like the chatbot will harm their privacy. Companies should make the customers aware of the ease and risk-free use.
Chatbots: Information quality Included in 3 studies	Provide customers with clear, relevant, and valuable information [36].	Brandtzaeg and Følstad [5]; Trivedi [36]; Følstad and Skjuve [20].	The customer experience of using chatbots leads to satisfaction and loyalty for the organization.	Further analyze the age, gender, background differences of the understanding in chatbots and the experience with chatbots.	Companies should ensure that chatbots offer highly relevant, reliable, and quick information to consumers at the right time and the place where the customer needs it.
Complaint handling Included in 4 studies	Handling customer complaints within an organization and helping the customers out.	Carvajal [39]; Chung et al. [40]; Yen and Chiang [17]; Cheng and Jiang [41].	Chatbots offer customers an easier way to send their complaints to the company. Chatbots could decrease duplicate complaints by suggesting similar complaints to their customers.	Test chatbots in different contexts and different types of websites in terms of complaint handling.	In terms of complaint handling, companies could make use of chatbots as first-line support.
Personalization Included in 6 studies	Tailored communication based on information an organization has learned about an individual.	Carvajal [39]; Chung et al. [40]; Akhtar et al. [18]; Przegalinska et al. [22]; Hwang et al. [32]; Ashfaq et al. [37].	Chatbots can satisfy customers by offering personalized service and real-time conversation. Human-like chatbots with a personal approach have a positive influence on customer experience.	Further analyze how chatbots can make personal approaches.	Find the right balance between privacy issues and personalization.

Construct	Definition	Found Articles	Findings/Comments	Future Research	Practical Implications
Privacy paradox Included in 9 studies	Concerns about the exposure of personal information. At the same time, those concerns fade into the background in the face of a reward or offer [42].	Mende et al. [15], Sidaoui et al. [16], Kokolakis [42], Yen and Chiang [17], Kormpho et al. [21], Przegalska et al. [22], Cheng and Jiang [41], Nordheim et al. [43], Martin et al. [44].	Individuals might trust machines even more than personal information humans, with users providing more personal information even when they are concerned about their privacy.	Further analyze privacy paradox with chatbots and explore the relationship between privacy concerns, machine heuristic and privacy protection behaviors.	As a company, finding the right balance for customers in terms of their personal information and exposing this in exchange for an offer. There are privacy concerns about chatbots because of unawareness. When customers have more knowledge about chatbots, they will have fewer trust issues.

## 2.1. The Drivers of Customer Loyalty: Satisfaction, Trust, and Commitment

As stated earlier, customer satisfaction, trust, and commitment are the three main drivers of customer loyalty [45][14]. Customer satisfaction is a crucial predictor in fostering the retention of customers [13]. At the same time, customer satisfaction influences customer trust, which both affect customer commitment [14]. In turn, customer loyalty has a significant relation with profitability [7] and is therefore highly relevant for every organization [9]. To satisfy the customers and raise the organization's overall customer satisfaction, a good customer experience is necessary [13]. Therefore, customer experience is seen as a predictor of customer satisfaction.

## 2.2. The Role of Chatbots within Customer Experience: System Quality, Service Quality, and Information Quality

With the introduction of chatbots, companies aim to provide their customers with a good customer experience, wherein the chatbot provides a new layer of fast service and relevant information on the internet at any time, from any location [46][47]. Multiple studies stated that integrating a chatbot in a website positively affects the customer experience [10][36][17]. Trivedi [36] citing DeLone and McLean [48], claimed that system quality, service quality, and information quality are critical dimensions for chatbots to create a good customer experience that leads to customer satisfaction. This is in line with a study by Ashfaq and colleagues [37].

By diving into the underlying five dimensions of system quality, Trivedi mentioned that individuals use Information Technology systems, such as chatbots, to perform tasks effectively and efficiently [36]. As system quality measures the technical success of the chatbot, 24/7 availability and reliable information at the right place and time are essential to comply with the customer expectations [36]. Users expect information systems to constantly work on every internet connection [36]. The same applies to the adaptability of a chatbot, which means that the developers of the chatbots need to keep their systems up-to-date and need to adapt to necessary developments in the environment. The same study by Trivedi stated that responding as quickly as possible increases the customer experience and that delays negatively impact the customer experience. However, Gnewuch and colleagues declared that being faster is not always better [30]. The results of their study proved that chatbots with dynamic response delays have a positive effect on the customer experience. The reason for this outcome is that dynamically delayed messages from chatbots were perceived as more natural and human-like than instantly sent messages [38]. Chatbots have the purpose of providing the customers with a good experience on a website or app while helping the customers with their comments and or questions in real-time [18]. Ashfaq and colleagues declared that chatbots are used to make it easier for both the customers and organizations because of the accessibility, response time, and availability [37]. That is in line with the studies by Ba and Johansson and Van Der Goot and Pilgrim which declared that a website's ease of use leads to a more extraordinary customer experience [19][49]. At the same time, when individuals perceive the use of a chatbot as complex, the consumer experience is affected negatively [36].

The quality of the information sent by the chatbot is of high importance. The information must be accurate, relevant, and valuable. If the chatbot does not understand the customer and provides the wrong information, the accuracy and reliability failed, which gives the customer a bad experience [36][50]. Other studies stated that a response that was not that accurate

enough is not immediately linked to a bad experience, as long as the chatbot provided a follow-up conversation with a human agent <sup>[18][20]</sup>.

Service quality consists of both information and system quality and refers to the assurance, responsiveness, and empathy during a conversation <sup>[36]</sup>. Van Vuuren et al. cited Balaji by stating a significant relationship between the total perceived quality and customer experience and, in turn, on customer satisfaction <sup>[14]</sup>. Besides, chatbots impact stronger on word-of-mouth and intention to reuse <sup>[31]</sup>. Overall, if a chatbot works (system quality), is accurate and provides quality information (information quality), and lastly, provides a good service (service quality), the customer experience will stimulate a consumer to continue using chatbots in the future.

### **2.3. Complaint Handling**

Complaint handling might be one of the most critical factors to gain customer experience, from minor to big complaints. It is crucial to handle complaints as fast as possible to keep the customer satisfied <sup>[21]</sup>. Even due to handling complaints, a company can improve the quality of its service <sup>[39][21]</sup>. As multiple studies described, a chatbot serves as an excellent way to support customers. According to Hwang et al., customer service by chatbots needs to involve responsiveness, customization and guarantee a good customer experience to satisfy the users <sup>[32]</sup>. That statement is similar to studies by Chung and colleagues and Trivedi <sup>[36][40]</sup>. Besides, exceeding customers' expectations while taking care of their problems positively affects the customer experience and satisfaction <sup>[32]</sup>. Cheng and Jiang stated that chatbots might be better at problem-solving than human agents because chatbots are more accurate and efficient <sup>[41]</sup>.

### **2.4. Privacy Paradox and Personalization**

An experiment by Brandtzaeg and Følstad revealed that ease of use, speed, and convenience are the main reasons customers could use a chatbot <sup>[5]</sup>. Mentioning this, productivity seems to be a fundamental reason to make use of a chatbot. Besides, the results of the experiment by Brandtzaeg and Følstad declared that the assistance and access to information that chatbots provide were reasons to use a chatbot. Although chatbots are predicted to play a significant key role nowadays and in future customer support, researchers noticed that the chatbot adoption among consumers is lower than expected <sup>[43]</sup>. Reasons for the low chatbot adaption might be that conversations with chatbots are perceived as unnatural, impersonal, and too informal <sup>[51]</sup>. Besides, Nordheim and colleagues' experiment showed that the majority would use the innovative chatbot <sup>[43]</sup>. However, not all their participants adopted the chatbot; about one-third of their participants did not want to communicate with the chatbot, mainly because it would cost individuals' jobs. At the same time, privacy concerns lead to resistance of chatbots, and in turn to negative usage frequency <sup>[52]</sup>.

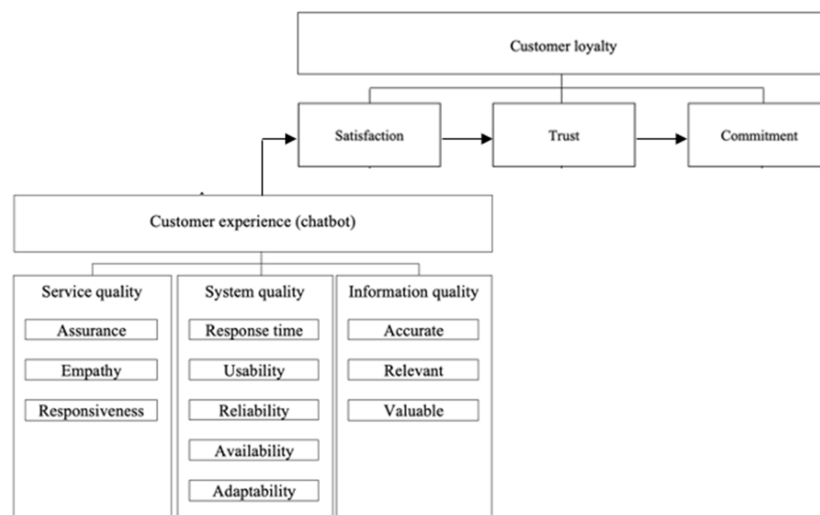
The construct privacy paradox can be related to customer trust <sup>[44][53]</sup>. Websites that offer personalized services might create concerns about the collected personal information <sup>[22][53][54]</sup>. The social presence of a chatbot is a significant driver for trust on a website <sup>[23][24][25][26]</sup>. At the same time, those personalized services might bring convenience while using a website <sup>[41]</sup>. For the use of chatbots, trust is a crucial factor because users do not want to share too much personal information if they have privacy concerns <sup>[5][41][55]</sup>. An essential part of trust consists of anthropomorphism, which is all about attributing human traits to chatbots <sup>[56]</sup>. For instance, if a chatbot is more human-like and approaches customers personally, it can reduce the privacy issues and raise the trust in the chatbot <sup>[22][26][57]</sup>. Przegalinska and colleagues argued that individuals nowadays might trust information systems, such as chatbots, more than humans because automation might make fewer mistakes <sup>[22]</sup>. Araujo stated that a human-like conversation felt better for customers and is enlarging customer trust <sup>[23]</sup>. Besides, giving the chatbot a name and image fosters the chatbot's human likeness <sup>[26]</sup>.

Chatbots can offer a new dimension of support by providing personalized service where customers' needs are met anytime and anywhere <sup>[40]</sup>. Stating this, the personalization of chatbots is playing an increasingly important role because multiple studies argued that customers prefer personalized conversation with chatbots <sup>[18][27][33]</sup>. To personalize a chatbot to make it more human-like <sup>[58]</sup>, its language style needs to be altered <sup>[32][51][57]</sup>. Overall, chatbots' human-like and personalized approach has a significant impact on the customer experience, which in turn can lead to customer loyalty <sup>[39][59]</sup>.

### **2.5. Customer Experience and Customer Loyalty**

A connection between customer experience and customer loyalty can be made. A chatbot with high system quality and high-quality service and information leads to a more remarkable customer experience. In turn, when customers are experiencing good service, they are satisfied with the service they received <sup>[28]</sup>. Based on this customer satisfaction, the customers will get more trust in that specific organization, leading to commitment. Satisfaction, trust, and commitment in

and with a company have customer loyalty as a result [2]. **Figure 1** visualizes the connection between customer experience and customer loyalty.



**Figure 1.** Customer experience and

customer loyalty.

### 3. Conclusions

Herein obtains insight into the influence of chatbots on customer loyalty and how chatbots can respond to the changing needs of today's customers. The endless online offer and the ease of online developments have changed the wishes and needs of the customer today, which has changed the achievement of customer loyalty as well. The "new customer in 2022" expects to be able to reach a company anytime and anywhere, regardless of time, location, and channel, and expects to spend less time doing so. In this digital age where the continuous availability of businesses is crucial, optimizing the customer experience is more essential than ever to achieve customer loyalty.

Herein provides an overview of the state of the art of the influence of chatbots on customer loyalty and boosts researchers to continue with empirical studies to advance in this line of research. More and more companies have implemented chatbots on their websites to provide support to their visitors all day. System quality, service quality, and information quality are crucial dimensions that a chatbot must meet to provide good customer experience. Further, a good customer experience results from a focus on customer satisfaction. Because satisfaction leads, in turn, to loyalty, a chatbot likely has an impact on customer loyalty.

Although the chatbot market is on the rise, there has been low adoption of the chatbot. Customers argue that a chatbot is unnatural and impersonal. To make a chatbot more personal, companies can alter the language style. Human-like chatbots lead to greater satisfaction and trust among customers, leading to greater adoption of the chatbot. Therefore, the role of anthropomorphism and the perceived social presence of chatbots should be further studied. Besides, some customers suffer from privacy paradoxes because of personalization. Companies should find the balance for customers regarding their personal information and expose this in exchange for an offer.

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