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The Role of Chatbots in Enhancing Customer Experience: Literature Review

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Abstract

Today's competitive world uses different marketing opportunities to achieve business goals. Customer experience is a core component in marketing studies; firms need to create strong and enduring customer experiences. To achieve this goal, enterprises can use technology, especially since it reshapes the nature of service, customers' experiences, and customer relationship management. In this sense, the purpose of the present article is to highlight the role of AI throughout chatbot in enhancing customer experience. We try to bring some answers to our following problematic: how do AI based Chatbots influence the customer experience? To do so, we conducted a systematic literature review. 23 marketing journals were reviewed from two prominent databases (Elsevier and Web of Science). Finally, Fourteen peer-reviewed journal publications in marketing field were analysed. The study found that the analysed marketing journals paid less attention to intelligent agents within the field of customer experience. Another observation is that most of research on chatbots and customer experience in these two databases were conducted between 2020 and 2021. Research implications and directions for future research across marketing field were suggested.

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1. Introduction

The modern-day marketing is progressively data driven, automated, and intelligent [1] whereby artificial intelligence (AI) is significantly reforming the marketing practices including customer experience [2]. AI has made it possible the human-machine interaction with the advent of intelligent agents' technologies. For instance, chatbots are capable of recording customer's input and offering customized services in real time [3].

Nowadays, firms are progressively developing chatbots in their direct interactions with customers to deliver a customized service [4] instead of one-sided purchases [5]. Yet, [6] argue that "firms also need to develop further insights about the impact of service usage on metrics like customer satisfaction, loyalty, and the intention to reuse service applications".

Chatbots are computer software with the abilities of mimicking human conversations by oral or text to function as users' virtual assistants [3]. Also known as artificial conversation entities, interactive agents, smart bots, and digital assistant [7], chatbots are the representation of the "dehumanization of what is human and humanization of technology" [3]. [8] defines a chatterbot as "an artificial construct that is designed to converse with human beings using natural language as input and output."

Chatbots have increased in quality and quantity during the past decade. They cover a wide range of industries and fields such as marketing, health care, entertainment, education, and cultural heritage [7]. According to [9], thousands of chatbots were developed for the big four of the technology, in leading social media platforms and research labs. In the US market alone, around 30,000 chatbots were launched on messaging platforms such as Facebook (as cited in Sproutsocial, 2019).

AI powered agents in the context of customer experience are grounded in two main streams of research: information systems (IS) and marketing [6]. However, studies on the importance of chatbots for enhancing customers experience are scarce. Therefore, the purpose of this study is two-fold:

- To provide insights from the literature of human-machine interaction from the lens of customer experience in interaction with artificial intelligence powered chatbots.
- To offer a road map for future research.

2. Research design

Systematic literature review is the process of identifying, collecting, and evaluating a high-volume of relevant published data [10] by ascertaining the research inclusion and exclusion criteria [11]. This study was conducted using Elsevier and Web of Science (WoS) a well-acknowledged search engine which provide high standard research papers in terms of quality and credibility. The data collection and analysis covered the period from January to April 2022 and followed a five-step process:

- Step 1: identification of inclusion and exclusion criteria (Table 1).
- Step 2: searching for marketing journals in Elsevier and WoS in order to investigate the literature on chatbots in the category of marketing. As a result, seven marketing journals were identified in Elsevier and 18 in WoS (including two were indexed in Elsevier).
- Step 3: searching the selected marketing journal using the pre-identified key words (see Table 1). As a result, 34 articles were found in Elsevier and 44 in WoS.
- Step 4: refining the search by scanning the abstract. As a result, six articles were retained from Elsevier and eight were selected from WoS for the final analysis.
- Step 5: analysis phase of the retained articles.

Table 1: Inclusion and Exclusion Criteria

Inclusion elements	Exclusion elements
Studies found using keywords “Chatbots”+ “customer experience” and/or “consumer experience” only in the title or in the abstract.	Non-English publications.
Peer-reviewed articles published in marketing journals from Elsevier and WoS.	Dissertation and conference papers.
Articles written in English.	

3. Results

As it was already mentioned, fourteen peer-reviewed journal publications were studied, the first paper dates back to 2019.

Table 2. Articles Frequency by Method and Year.

Method	2019	2020	2021	2022	Total
Qualitative			2		2
Quantitative	1	1	2	1	5
Mixed			1		1
Review		4	2		6
Total	1	5	7	1	14

Table 2 shows that most papers were published in 2021 (7) and 2020 (5) in this two databases within marketing Journals. This could be explained by the Covid-19 appearance. In this sense, many research papers were published during this period (2020-2021) about the topic of artificial intelligence and Covid-19 pandemic. Some articles underlined the use of AI in drug repurposing during Covid-19 [12], others treated AI applications for Covid-19 pandemic [13], and marketing journals were not an exception as we observe.

Another observation in that most studies used review (6) and quantitative (5) methods. For those that used a review method, four articles were published in 2020; this could be explained by the will to understand this unfamiliar topic related to AI in Marketing field especially the Customer Experience.

Table 3. Articles frequency by journal and year.

	2019	2020	2021	2022	Total
Journal of Business & Industrial Marketing		1			1
Marketing Science	1				1
Journal of Retailing		1	2		3
International Journal of Advertising			2		2
International Journal of Market Research			1		1
Asia-Australia marketing journal		1			1
Industrial Marketing Management			1	1	2
Journal of destination marketing and management			1		1
Journal of Interactive Marketing		2			2
Total	1	5	7	1	14

According to our results, there is no Marketing Journal that published more than three articles about Artificial Intelligence in Customer Experience field within WOS and Elsevier. The table shows that just three Marketing Journals published two or more articles each: Journal of retailing (3), International Journal of Advertising (2), Industrial Marketing Management (2), and Journal of Interactive Marketing (2).

Table 4. Articles frequency by Topic and year.

Sector	Topic	2019	2020	2021	2022
B to B	AI in B to B		1		
	Employee's perception of Chatbots				1
	AI and Customer Experience			1	
Financial services	Chatbot Disclosure	1			
	Customer preferences		1		
Retailing	AI in retailing			1	
Charity	Smiling AI agents			1	
Tourism	AI and Customer experience			1	
Not identified	AI in marketing			2	
	Retail technologies		1		
	AI and Customer experience		1		
	AI and CRM		1		
	Consumer perceptions and patronage intentions			1	

Our analysis brings two main observations. First, the retained papers covered different sectors, which are B to B, finance services, and other services such as retailing, charity and tourism. We note that six articles did not mention the sector of their studies. Second, the most treated topics within Marketing field were AI and Customer Experience (3) and AI in marketing (2). Also, we discovered that Chatbot has many synonyms, the International Journal of Advertising for example presented twelve different synonyms, and Industrial Marketing Management employed 8 different ones. These synonyms help understand the human qualities mimicked by these bots examples are interactive intelligent agent, voice assistant, psychological assistant bots, human chatbots, emotional AI, sales agent, employee AI, customer service agent, embodied virtual agent, human-like, and smart. These adjectives or qualifications used to be utilized only for humans.

4. Discussion

The findings allowed us to observe that marketing journals have marginally addressed chatbots in customer experience compared to journals specialized in computer or management in general. In terms of business settings, research has primarily focused on B2B (e.g. [14]) and services context (e.g. [15]) and retail sector remains the sector the most effected by AI [16].

The six review articles have explored AI as an evolving field of research in marketing in general [1]; [17], in customer interactions [18]; [19], and in B2B industry [20]; [21]. [1] classified AI in marketing into five functional segments: (1) integrated digital marketing, (2) content marketing, (3) experiential marketing, (4) marketing operations, and (5) market research whereby experiential marketing is the dominant stream of research. Furthermore, [18] argued that AI-CRM will impact the customer journey from acquisition, development, to retention. In the same line, [21] highlighted the importance of collaborative AI in marketing area and provided a framework for categorizing retail technologies based on the consumer decision-making process where chatbots serve at the pre-purchase stage. Similarly, [19] proposed a framework of AI-powered technologies based on customer journey and stated that AI technologies impact each stage of the shopping journey. Meanwhile, [17] proposed a conceptual framework for human (i.e. marketers and consumers) and AI collaborative interaction. They supposed that human strength is dominantly contextual and biological while AI are based on mechanical and analytical strengths and they can augment the human intuitive to enhance the marketing decisions. However, [20] argued the human-machine interaction influence the activity and resources of both: host and guest, and that virtual assistants are perceived as an object that is manipulated by the host. [22] supported this idea in a quantitative study. They argued that three types of affordances (automatability, personalization, and availability) and disaffordances (limited understanding, lack of emotion, and null decision-making) could influence employee's perception of chatbots.

The eight empirical studies have studied in depth the human-chatbot interactions and their impact on the purchase process. The success of chatbots in a customer service context is determined by the quality of information, system, and service [23]. In B to B sector, [14] found out that customer experience, is indeed influenced by different factors which are Chatbots' overall system design, customers' ability to use technology, and customer trust towards brand and system. Also, [24] proposed a model known as "The Realms of AI Tourist Experiences" that could help organizations prepare and design for the future of AI-facilitated experiences in tourism destinations and wider service contexts. Their model emphasizes on the positive and negative valences of value formation through AI in tourist experiences. In other contexts, [15] stated that Chatbot disclosure decreases the customer purchase and reduces the phone call time whereas Chatbots with unrevealed identity are as productive as skilled employees and generate higher purchase rates. In the same line, [25] indicated that customers behave differently when interacting with humans versus chatbots and consider human employees more competent than the machine. Whereas [26] have demonstrated that customer preference could change depending on task complexity. Thus, high-complexity tasks are preferred to be performed by human service providers [26]. Another study by [27] explains why retailers tend to embrace non-customer-facing AI applications versus customer-facing AI applications.

Through our literature review, we could underline different weaknesses of a Chatbot agent compared with human agent such as limited understanding and knowledge, limited empathy and emotions or even null decision-making and usages' uneasiness [22]; [15]; [25]. However, AI is capable of continuously learning, interpreting and forecasting the customer purchase decisions eliciting greater automatization and customization [1]. [17] revealed that look like-human smiling chatbots motivate participants to donate more compared to look like robots. That is to say, that customization of chatbots enhance its effectiveness and problem solving ability [22] ; [26].

5. Research limitations and future research perspectives

Obviously, this research bears some limitations. The main ones depend on authors choices. First, the search process was limited to two databases and marketing journals. Given that, future research could consider other databases and more extended range of journal categories. Second, there were no synonyms used for chatbots while the literature revealed dozen of terms used as synonym of chatbots. Thus, future research may explore the topic by varying the keywords. Lastly, we only focused on the role of chatbots in customer experience. Thus, future research may consider other AI tools and stakeholders in non-covered sectors.

6. Conclusion

During our research, we contributed to the literature by identifying the most important factors that could help enhance the customer experience using chatbots. Based on systematic literature review, the findings revealed the importance of virtual assistants' customization in enhancing the customer experience, even though marketing journals within Elsevier and WoS databases did not cover the subject sufficiently subject to research limitations.

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