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## Assessing the impact of using chatbot technology on the passenger experience at EgyptAir

**Hussein Abdel Wahab Abdel Rady**

Associate Professor, Tourism Studies Department, Faculty of Tourism and Hotels, Minia University

### Keywords

Airline, Chatbot, Artificial Intelligence, Passenger Experience, EgyptAir.

### Abstract

As passengers engage with airline chatbots, useful information about their preferences, actions, and worries is gathered. Airlines can use this information to make well-informed decisions. These choices help them provide better services and develop more focused marketing plans. They also improve the experience of customers.

The purpose of the research is to evaluate EgyptAir's usage of chatbots and how they improve traveler experiences. This study assessed the reasons for using airline chatbots, as well as their benefits and drawbacks. The research used a descriptive analytical technique through an online questionnaire. The questionnaire was disseminated using social media, namely Facebook, Instagram, and WhatsApp, among EgyptAir's passengers (N = 792). The study included several statistical techniques. The findings indicate that passengers' primary use of chatbots at EgyptAir is to obtain assistance or information regarding travel reservations. One of the most popular benefits of deploying chatbots, according to the study's analysis of the data, is that many travelers can easily plan and reserve a trip with a chatbot. According to the research, EgyptAir should use Hubtype's technology to specifically update its chatbot AI app to meet the needs of its passengers. In order to provide their customers with quick and effective customer care, it is fully interactive with graphical elements and automated using artificial intelligence.

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## **1. Introduction**

The use of chatbot technology in marketing to increase customer interactions is growing in popularity. Because digital platforms and distribution networks have grown exponentially, airlines now have creative ways to satisfy customers. Chatbots become essential for resolving customer issues because they provide automated customer support via an online chat system twenty-four hours a day, seven days per week. According to Shawar and Atwell (2007), a chatbot is a conversational agent that leverages artificial intelligence to enable a compelling human-like interaction.

Additionally, airlines are thinking about implementing chatbots because they are perceived to increase customer communication and enhance passenger satisfaction. Effective communication is a crucial tool and the foundation of business, in fact. It is an essential tool for managing relationships with stakeholders of all levels (Rajhans, 2018). Hence, it is imperative to ascertain whether chatbots are efficacious in providing customer support, particularly concerning air travel transactions, and whether the clients are content with the chatbot services rendered to them. Airlines and travelers can both benefit from an efficient chatbot, particularly when it comes to improved customer service, quicker response times to questions, higher levels of satisfaction, and increased engagement. However, as Radziwill and Benton (2017) discovered, chatbot implementations have only been assessed by concentrating on their functionality and technicality (Bozic et al., 2019; Nursetyo et al., 2018; Sabri, 2014; Petter, 2013), as seen from the perspective of the service providers. Therefore, it's important to evaluate EgyptAir's usage of chatbots and how they're improving the travel experience.

## **Research Problem**

The research problem focuses on the intricate nature of airline transactions. The dynamic business environment has led to a swift evolution in customer demands and expectations. This has resulted in a number of service-providing enterprises, particularly airlines, failing to recognize the actual needs and desires of their customers and continuing to operate under antiquated notions of what airline services entail. Furthermore, studies examining the features and purposes of airline chatbots are lacking in the literature. This illustrates a significant void in the literature that the current investigation fills. Therefore, the goal of this work is to examine how user motivations for utilizing chatbots relate to their level of satisfaction with their features.

## **Research Questions**

**RQ1:** How do the reasons for utilizing a chatbot influence satisfaction with the chatbot?

**RQ2:** What are the advantages of utilizing EgyptAir's chatbot for travelers?

**RQ3:** What are the disadvantages for passengers of using the chatbot at EgyptAir?

**RQ4:** What is the relationship between motives for using chatbots and satisfaction with airline chatbot characteristics?

## **Research Aim and Objectives**

This study's primary aim is to assess the use of chatbots and their impact on enhancing passenger experience at EgyptAir. In order to achieve the research's main aim, some objectives were targeted as follows:

1. Identifying the factors that influence customer experiences with chatbots for customer service.

2. Exploring the advantages for passengers of using the chatbot at EgyptAir.
3. Examining the disadvantages for passengers of using the chatbot at EgyptAir.
4. Analyzing the relationship between motives for using chatbots and satisfaction with airline chatbot characteristics.

### **Research Importance**

Today's world is extremely fast-paced, with information sharing between parties happening instantly over the internet. Additionally, websites are always coming up with more inventive ways to engage and cater to consumer wants. Chatbots, among other technologies, are becoming more and more common on a range of websites, including airline websites. An emerging technology that has raised the standard of service in the aviation sector is the chatbot. The ongoing effort to deliver effective and high-quality services is what motivates this development, which is why it's critical to conduct research to evaluate EgyptAir's usage of chatbots and how they affect the traveller experience.

## **2. Literature Review**

### **2.1. Chatbots definitions**

Chatbots are defined as software systems that can communicate using natural language (Dale, 2016). Chatbots are software that can converse with humans using artificial intelligence (Alam et al., 2019). Chatbots, as described by Ho et al. (2018), are computer programs that replicate human-to-human discussion. Customer care chatbots are described as artificially intelligent software that may connect with customers via various messaging applications (Riikkinen et al., 2018).

An artificial intelligence-based chatbot is computer software designed to simulate human-to-human communication. The idea is to give users the impression that the chatbot can identify their questions and provide relevant, situation-specific responses that support the bot's main objectives. Natural language is frequently used in the dialogue, which can be conducted both orally and in writing (Deshpande et al., 2017). Airlines employ chatbots, which are AI-based systems, to respond to client inquiries. In response to consumers' service and information requests, chatbots provide a straightforward and user-friendly information resource (Kim & Chang, 2020; Lubbe & Ngoma, 2021). According to Prentice et al. (2020), chatbots have replaced human customer care representatives in handling inquiries and grievances from customers. According to Um et al. (2020), a chatbot is an automated system that simulates human-to-person communication via text or voice communications.

### **2.2. Chatbots in the Airline Industry**

Because of the enormous number of consumer contacts via queries and bookings, customer service in the airline sector is one of the first areas that might profit from chatbots. By automating activities and unclogging contact centers, a competent customer care bot might save money. It might assist customers in finding appropriate flight alternatives by collecting information such as time, date, destination, and other preferences (Agostinho, 2016). It might aid in flight booking, saving clients the time and effort of visiting the airline's website and entering page after page of information. It might provide flight status updates, such as information on delays or cancellations. It may also provide digital boarding passes (Power, 2020).

### **2.3. Airline Chatbots Importance**

The unique service characteristics of the airline industry will necessitate an awareness of client requirements, expectations, and preferences (Aksoy et al., 2003). Not only do passenger seat classes, upgrades, and add-ons form part of their inventory, but a plethora of other factors, including cost and fees, in-flight services, boarding, deplaning, baggage, flight crew, aircraft, check-in, and reservations (Power, 2020), are taken into account when measuring passenger satisfaction (Langford et al., 2019). Weather, air traffic control, technical difficulties, and crew time-outs are among the many uncontrollable factors that affect airlines (Margolis, 2014).

In the airline sector, service quality is the sum of many interactions between consumers and airlines. The airline sector has been exploring new business models to fit the competitive climate brought about by a globalized world (Kalemba & Campa-planas, 2015; Belobaba et al., 2009; Katsoni, 2015; Dougali et al., 2015). Chatbots are gradually being embraced by airlines due to the convenience they bring to their customers, such as fast replies, 24/7 operations (Veiga et al., 2017), and lower costs compared to human operators (Ene, 2018).

### **2.4. Airline Chatbots Benefits**

Applications for chatbots that provide customer service have many advantages. A chatbot is used to conveniently respond to rapidly evolving customer demands and expectations from any location, cutting down on wait times for customers (Trapero et al., 2020; Adamopoulou & Moussiades, 2020; Winkler & Soellner, 2018). Of all industries, the aviation sector receives the most consumer queries (Statista, 2020). Customer services have been severely pressured during this crisis period by the volume of inquiries regarding flight cancellations, postponements, or travel restrictions, which has made it challenging to provide customers with sufficient information in a timely manner (Kasinathan et al., 2020; Dixon et al., 2020). Through AI applications, chatbots have demonstrated that they offer superior support with fewer errors than their human counterparts (Kurachi et al., 2018). According to Brandtzaeg and Følstad (2017), chatbots reduce human error by using a historical database to enhance future purchase decisions and build customer trust in a reliable company.

### **2.5. The Challenges of Using AI Chatbots**

AI chatbots have benefits, but they also come with risks and disadvantages. To understand the customer's emotions, tone, or intent, for example, they might not have the human touch or empathy necessary to reply appropriately or sympathetically (Pillai & ivathanu, 2020). Additionally, they might not be able to handle delicate, unclear, or complex situations like emergencies, disputes, or complaints; instead, they might need to escalate the matter to a human agent, which could damage the customer's loyalty, trust, and satisfaction (Ivanov, 2017). Technical problems like bugs, glitches, or downtime can also affect AI chatbots and cause service disruptions as well as customer annoyance. Additionally, they might make mistakes that harm the chatbot's credibility and the company's reputation, like giving the customer misleading or irrelevant information, misinterpreting their question, or giving the same response twice (Luo et al., 2019). Finally, there are a number of ethical and legal concerns that AI chatbots may bring up, including how to safeguard customer privacy

and data, maintain the chatbot's accountability and transparency, and adhere to applicable laws and standards. It is imperative to give careful thought to and handle these matters to prevent future lawsuits, fines, or penalties (Rahman et al., 2017).

## **2.6. Travel Chatbots Types**

Sheffield (2016) has identified four distinct categories into which travel chatbots can be divided:

1. *Chatbots for reservations*: Travelers can now use chatbots from several reservation companies, such as Expedia and Booking.com, to look for a hotel and a flight via Facebook Messenger. Comparing these chatbots to other websites and search engines, the user experience is improved.
2. *Chatbots for customer service in travel*: These are comparatively simple travel chatbots that are integrated into the websites of travel service providers and are frequently used to answer questions from clients and assist them with navigating the website (e.g., "Alex," the chatbot from United Airlines).
3. *Chatbots on messaging apps for travel*: In terms of interaction, these travel chatbots are a little more sophisticated. Travel metasearch engines and OTAs primarily use them to assist users in booking travel via messaging apps (e.g., Skyscanner and Expedia Facebook Messenger chatbots).
4. *Chatbots with artificial intelligence for travel*: These are online assistants for travel. They are far more sophisticated than basic Facebook Messenger bots, despite still depending on instant messaging apps, since they employ algorithms to provide users with customized travel recommendations (e.g., HelloHipmunk chatbot).

## **2.7. Customer Experience**

Customer experience is the development of an individual's sensory, affective, cognitive, relational, and behavioral reactions to a company or brand through a series of touch points encountered in pre-, during, and post-purchase scenarios. This journey is continuously assessed against the response thresholds of concurrent experiences in the individual's surrounding environment (Homburg et al., 2017). Businesses have been putting money into technology with the intention of cutting customer support costs, raising customer satisfaction levels, and increasing company profitability (Köhler et al., 2011). In order to increase customer satisfaction, positive attitudes towards the product, and purchase intentions, these can be strategically used to socialize and educate prospects or customers (Holzwarth et al., 2006). The chatbot, sometimes referred to as a conversational agent, is one instance of how brands are using AI technology.

## **2.8. Horus Chatbot in EgyptAir Website**

Egypt Air's IT sector provides services to manage, implement, operate, and develop all technical solutions and services. EgyptAir aims to promote the continuous development of IT services, including AI-based chatbot services, to communicate directly with customers, especially with the immense technological development and high competition in the aviation industry in all its fields. The Horus Chatbot is now accessible on the EgyptAir website, offering both Arabic and English versions (EGYPTAIR, 2023):

- Search and book flights: An airline chatbot's primary function would be to expedite and streamline the flight search and booking procedure.
- Chatbot check-in: Chatbots can assist clients in avoiding hours of waiting in lines.
- Flight tracking and updates: Chatbot applications can assist in automatically informing travelers via their mobile device about any changes to their itinerary or the status of their flight.
- Upselling customized offers: Upselling and promoting extra goods, services, and experiences to current customers is one of the many benefits of chatbots for airlines. The AI chatbot can provide individualized or exclusive deals based on the traveler's profile, catered to their specific needs and travel goals.
- Baggage claims and refunds: By providing real-time information on the whereabouts of their luggage, airlines may speed up the baggage claims and refunds procedure. The chatbot can also help clients fill out the luggage reclaim form, as well as seek and handle refunds and reimbursements.
- Including codeshare information in the EgyptAir website's online chatbot so that users can easily and clearly obtain it.
- Incorporating frequent flyer and Star Alliance information into the online chatbot on the EgyptAir website to make it accessible to users with ease.
- Baggage Allowance, Excess Baggage, Visa & Health, and EgyptAir news information into the online chatbot on the EgyptAir website to make it accessible to users with ease.
- The chatbot on the EgyptAir website creates new pages on sustainability, groups, charters, PRM (passengers with reduced mobility), and customer feedback to provide EgyptAir's valued customers with more information.
- The chatbot provides information related to COVID-19 restrictions and is a general guide to almost all main EgyptAir services.

### **3. Research Methodology**

The research employs a descriptive analytical approach, whereby quantitative data is collected and analyzed through a questionnaire. The survey was made available to EgyptAir customers online. The survey intends to explore the impact of using chatbot technology on the customer experience at EgyptAir. To accomplish the overall goal of the study and its objectives, survey principles and the creation of the relevant questionnaire are provided below.

#### **3.1. Data Collection**

Online surveys were used to gather data, and they were designed in a way that was pertinent to the circumstances in order to reduce the number of unreliable responses. They were distributed to 792 passengers on EgyptAir from July to October 2023.

#### **3.2. Questionnaire Design and Measure**

The study aims to evaluate EgyptAir's usage of chatbots and their effect on improving the passenger experience. As a result, the concerning characteristics need to be classified according to the extent of their influence on satisfaction. Additionally, it's important to record and evaluate the reasons behind a chatbot's use. Therefore, the creation of the aforementioned questionnaire is required and has the following

structure: The survey is divided into seven primary sections. Section one is about demographic information, which provides general information about passengers at EgyptAir, such as their gender, age, educational level, and the number of flights they have taken during the last 12 months. The second section included four variables representing experience with chatbots. The third section included 13 variables representing motives for using a chatbot. The fourth section included 13 variables representing the advantages of using chatbots. The fifth section included nine variables representing the disadvantages of using chatbots. The sixth section included four variables representing travel chatbot use intentions. The seventh section included six variables representing satisfaction with chatbot characteristics. The questionnaire items were anchored according to the three-point Likert scale: "1 = disagree, "2 = neutral, and "3 = agree.

**3.3.Data Validity and Reliability**

The questionnaire of motives for using a chatbot developed for this research was subjected to internal reliability tests and validation procedures. For this purpose, Cronbach’s alpha and factor analysis were applied.

**3.3.1. Data Validity**

The researcher gave the questionnaire instrument to a total of 25 EgyptAir passengers in order to confirm the format, readability, and measurement capabilities of the data collection tool used in this study. After that, the questionnaire was improved and updated to take into account the feedback that the domain passengers had provided.

**3.3.2. Data Reliability**

Cronbach's Alpha ( $\alpha$ ) was computed for the sections of the questionnaire about reasons to use a chatbot in order to assess reliability. Despite the fact that different research has been done on acceptable Cronbach's Alpha values, a scale is considered appropriate for statistical model analysis if its value is greater than 0.7.

The following table shows the Cronbach's Alpha value for each dimension of the relevant questionnaire section. The scale has a mark greater than 0.7, indicating very good reliability. Since this scale was created on its own using the reviewed literature as a guide, the results are extremely relevant.

**Table (1) Cronbach’s Alpha Value**

<b>Variables</b>	<b>No. of items</b>	<b>Cronbach’s Alpha</b>	<b>Validity Coefficient*</b>
Experience with chatbots	<b>4</b>	<b>0.741</b>	<b>0.861</b>
Motives for using a chatbot	<b>13</b>	<b>0.958</b>	<b>0.979</b>
Advantages of using chatbots	<b>13</b>	<b>0.950</b>	<b>0.975</b>
Disadvantages of using chatbots	<b>9</b>	<b>0.891</b>	<b>0.944</b>
Travel chatbot use intention	<b>4</b>	<b>0.842</b>	<b>0.918</b>
Satisfaction with chatbot characteristic	<b>6</b>	<b>0.897</b>	<b>0.947</b>
<b>Total</b>	<b>49</b>	<b>0.951</b>	<b>0.975</b>

\* Validity coefficient =  $\sqrt{\text{Reliability coefficient}}$

The results of determining Cronbach's alpha reliability are displayed in Table 1. According to the test results, the validity coefficient for all sections of the EgyptAir

questionnaire is equal to 0.951, and the reliability coefficients for passengers are equal to 0.975. These findings demonstrate the instrument's suitability for use.

### 3.4. Data Analysis

The research uses the Statistical Package for Social Sciences (SPSS) to process data statistically in order to meet the study's objectives, including the following statistical methods: Frequency distributions, percentages, means, standard deviations (SD), factor loading, Cronbach's alpha test, and Pearson correlation analyses

## 4. Results and Discussion

### 4.1. Descriptive Analysis of Research Variables

#### First Section: Respondent Demographic Characteristics

**Table 2: Demographic profile of sample elements**

Variable	Frequency	Percentage (%)
<b>Gender</b>		
Male	414	52.3
Female	378	47.7
<b>age group</b>		
18-28 years old	323	40.8
29-39 years old	188	23.7
40-50 years old	57	7.2
51-59 years old	224	28.3
60 and More	0	0
<b>Education level</b>		
Bachelor Degree	342	43.2
Master Degree	114	14.4
PhD degree	336	42.4
<b>Numbering of flights had during the last 12 months</b>		
1 to 2	473	59.7
3 to 5	57	7.2
6 to 10	19	2.4
more than 10	243	30.7

According to Table (2), the sample size of 792 replies is dominated by males, with 414 responses representing 52.30% of the total. Females received 378 replies, accounting for 47.70% of the total. The majority of responses (323) are between 18 and 28 years old, with 40.80%, and then the 51–59 age range comes in second with 28.3% (224 responses). Furthermore, 188 participants (23.70%) of the sample are between 29 and 39 years old, and 57 participants (7.20%) are between 40 and 50 years old. the participant's level of education, 43.20% of the responses (342) got a bachelor's degree, and then 42.40% of respondents disposed of a PhD degree (336). Also, 14.40% of participants (114) had a master's degree. Table 2 shows the number of flights respondents had during the last 12 months: 59.70% had 1 to 2 flights, while 30.70% had more than 10 flights, and 7.20% travelled from 3 to 5 flights. Whereas, the table results indicate that only 2.40% of respondents had 6–10 flights with EgyptAir.



**Section 2: Experience with chatbots**

**Table 3: Experience with chatbots**

Variables	Mean	SD	Factor loading	Rank	Attitude
I am aware of the idea of chatbots.	2.29	.702	.767	2	Neutral
I have previously utilized chatbots.	1.91	.813	.774	4	Neutral
I utilized chatbots on a regular basis.	2.05	.786	.701	3	Neutral
I'm interested in learning more about chatbots.	2.57	.584	.953	1	Agree
<b>Total Mean</b>	<b>2.21</b>				<b>Neutral</b>

Table 3 displays the user experience with chatbots, together with mean and standard deviation values ranging from 2.57 to 1.91. In comparison to the field's overall instrument mean of 2.21, the item "I'm interested in learning more about chatbots" has a mean of 2.57 and a standard deviation of 0.584, and it is followed by the item "I am aware of the idea of chatbots," which has a mean of 2.29 and a standard deviation of 0.702.

**Section 3: Motives for using a chatbot**

**Table 4: Motives for using a chatbot**

Variables	Mean	SD	Factor loading	Rank	Attitude
I utilize chatbots to get help or information on reservations for trips.	2.29	.825	.770	1	Neutral
I utilize chatbots for reserving flights, hotel rooms, limousines, and other services.	2.12	.764	.854	2	Neutral
I utilize chatbots to obtain prompt responses.	2.01	.874	.801	3	Neutral
I utilize chatbots because they are simple to operate.	1.96	.786	.874	4	Neutral
I use it because I can customize a travel chatbot to my personal requirements.	1.81	.765	.835	12	Neutral
Travel chatbots are handy since they are always available—24/7/365—which is why I use them.	1.86	.834	.821	11	Neutral
I've utilized chatbots for travel since I enjoy the conversational experience they provide.	1.86	.744	.745	10	Neutral
Chatbots have helped me improve my communication abilities.	1.91	.869	.716	8	Neutral
I use chatbots to experiment with new technologies.	1.96	.873	.762	5	Neutral
I use chatbots to evaluate my ability to travel.	1.81	.825	.763	13	Neutral
I use chatbots because I find travel chatbots interesting and exciting because they are new and different.	1.89	.824	.733	9	Neutral
I use chatbots because I am interested in learning about new technology.	1.91	.813	.731	7	Neutral
I utilize chatbots because I prefer to be up to date with the newest tools available for technology.	1.93	.857	.810	6	Neutral
<b>Total Mean</b>	<b>1.95</b>				<b>Neutral</b>

Table 4 shows passengers motivation for using a chatbot. Travelers see it as one of the most important reasons for using chatbots at EgyptAir: "I utilize chatbots to get help or information on reservations for trips" (M = 2.29, SD = 0.825), followed by "I utilize chatbots for reserving flights, hotel rooms, limousines, and other services" (M = 2.12, SD = 0.764). The item "I use chatbots to evaluate my ability to travel" was rated last, with a mean of (1.81) and a standard deviation of (0.825).

#### **Section 4: Advantages of using chatbots**

**Table 5: Advantages of using chatbots**

<b>Variables</b>	<b>Mean</b>	<b>SD</b>	<b>Factor loading</b>	<b>Rank</b>	<b>Attitude</b>
I thought this chatbot system's different features were well integrated with one another.	2.19	.665	.739	12	Neutral
I think a large number of passengers can effortlessly organize and book a journey utilizing a chatbot.	2.57	.495	.738	1	Agree
I feel secure and confident booking trips through a chatbot.	2.17	.689	.740	13	Neutral
I needed to learn the chatbot app to know how to use this system to book my journey.	2.29	.667	.707	10	Neutral
Chatbot services were available around the clock.	2.53	.588	.730	4	Agree
Chatbots show immediate answers to flights	2.50	.546	.883	5	Agree
Chatbots offer solutions to commonplace queries.	2.53	.546	.911	3	Agree
Chatbots facilitate communication between the airline and the passenger	2.55	.544	.853	2	Agree
Chatbots used to handle complaints promptly	2.45	.587	.741	7	Agree
Chatbots enhance A positive passenger experience	2.50	.589	.806	6	Agree
Chatbots provides detailed answers to flights provided by the airline	2.41	.581	.742	8	Agree
Chatbots responded to difficult queries.	2.38	.617	.760	9	Agree
Friendship and approachability were supplied via chatbots.	2.26	.694	.841	11	Neutral
<b>Total Mean</b>	<b>2.41</b>				<b>Agree</b>

Table 5 displays travellers' perspectives on the benefits of employing chatbots. The results show that one of the most common benefits of using chatbots is that "I think a large number of passengers can effortlessly organize and book a journey utilizing a chatbot" was first mean ranked (M = 2.57, SD = 0.495), while "I feel secure and confident booking trips through a chatbot" had the lowest mean value of 2.17 and a standard deviation of 0.689.

**Section 5: Disadvantages of using chatbots**

**Table 6: Disadvantages of using chatbots**

Variables	Mean	SD	Factor loading	Rank	Attitude
The use of chatbots or similar technologies while booking trips could potentially pose problems for me.	1.93	.829	.720	5	Neutral
I am not able to keep up with the latest developments in technology.	1.55	.764	.748	9	disagree
Using technology like chatbots when booking trips makes me feel worried.	1.96	.786	.780	4	Neutral
It appears that using a chatbot to plan trips is too complicated.	1.71	.702	.735	7	Neutral
I require assistance from the technical support team in using a chatbot to make a travel reservation.	2.00	.691	.906	2	Neutral
The system was difficult for me to utilize.	1.81	.665	.786	6	Neutral
I found the system to be rather inconsistent.	1.69	.637	.754	8	Neutral
I think utilizing chatbots for travel poses a risk to privacy and data security.	2.19	.589	.793	1	Neutral
I believe that there are worldwide concerns linked with AI in the future, which makes employing travel chatbots problematic.	1.95	.690	.862	3	Neutral
<b>Total Mean</b>	<b>1.86</b>				<b>Neutral</b>

A series of questions on the drawbacks of employing chatbots were posed (see Table 6). According to the findings, one of the most common disadvantages of using chatbots were that "I think utilizing chatbots for travel poses a risk to privacy and data security" (M = 2.19, SD = 0.589), followed by "I require assistance from the technical support team in using a chatbot to make a travel reservation" (M = 2.00, SD = 0.691). "I am not able to keep up with the latest developments in technology" was placed last (M = 1.55, SD = 0.764).

**Section 6: Travel chatbot use intention**

**Table 7: Travel chatbot use intention**

Variables	Mean	SD	Factor loading	Rank	Attitude
In the future, I expect to utilize or continue to employ travel chatbots.	2.26	.539	.797	4	Neutral
I believe that in the future, a growing number of travellers will make use of travel chatbots.	2.29	.503	.706	3	Neutral
I strongly encourage passengers to utilize travel chatbots.	2.41	.621	.729	2	Agree
I will recommend to travellers that they utilize travel chatbots to organize their future trips.	2.41	.581	.705	1	Agree
<b>Total Mean</b>	<b>2.34</b>				<b>Agree</b>

Table (7) displays the means and standard deviations of travel chatbot usage intention, with means ranging from 2.41 to 2.26. When contrasted to the field's overall instrument mean (2.34), the item "I will recommend to travellers that they utilize travel chatbots to organize their future trips" had a mean of 2.41 and a standard deviation of 0.581. "In the future, I expect to utilize or continue to employ travel chatbots," the last-ranked, with a mean of (2.26) and a standard deviation of (0.539).

**Section 7: Satisfaction with chatbot characteristics**

**Table 8: Satisfaction with chatbot characteristics**

Variables	Mean	SD	Factor loading	Rank	Attitude
I am satisfied with chatbot's responses to my queries.	2.29	.667	.744	6	Neutral
I am satisfied with chatbot's simplicity of access to the service.	2.36	.650	.750	3	satisfied
I am satisfied with the chatbot's kindness and warmth.	2.29	.590	.703	5	Neutral
I am satisfied with chatbot's professionalism and skill.	2.33	.605	.717	4	Neutral
The chatbot's speed of service has met my needs.	2.41	.581	.786	1	satisfied
I am satisfied with chatbot's performance.	2.36	.571	.793	2	satisfied
<b>Total Mean</b>	<b>2.34</b>				<b>satisfied</b>

According to the table above, the majority of the research participants were satisfied with "The chatbot's speed of service has met my needs." (M = 2.41, SD = 0.581), followed by "I am satisfied with chatbot's performance" (M = 2.36, SD = 0.571). Whereas the opinions about passenger satisfaction with chatbot characteristics "I am satisfied with chatbot's responses to my queries" have the lowest satisfaction from the participants (M = 2.29, SD =.667).

**4.2. Pearson Correlation analyses**

**Table (9): Correlations between the experiences, motives, advantages, and travel chatbot use intention and satisfaction with chatbot characteristics**

	satisfaction with chatbot characteristics
<b>Experience with chatbots</b>	<b>(R =.842, p ≤.01)</b>
<b>Motives for using a chatbot</b>	<b>(R =.597** - sig = 0.000)</b>
<b>Advantages of using chatbots</b>	<b>(R =.797, p ≤.01)</b>
<b>Travel chatbot use intention</b>	<b>(R = 0.646, P-value ≤ 0.0001).</b>

According to table (9), there is a significant relationship between satisfaction with chatbot characteristics and experience with chatbots (R =.842, p ≤.01), motives for using a chatbot (R =.597\*\* - sig = 0.000), advantages of using chatbots (R =.797, p ≤.01), and travel chatbot use intention (R = 0.646; P-value ≤ 0.0001). These results indicate that there is positive relationship between experience with chatbots, motives for using a chatbot, advantages of using chatbots, travel chatbot use intention, and satisfaction with chatbot characteristics

**Table (10): Correlations between the experiences, motives, and advantages with chatbots and satisfaction with chatbot characteristics**

	<b>Travel chatbot use intention</b>
<b>Experience with chatbots</b>	<b>(R =.800, p ≤.01)</b>
<b>Motives for using a chatbot</b>	<b>(R =.663** - sig = 0.000)</b>
<b>Advantages of using chatbots</b>	<b>(R =.563, p ≤.01)</b>

As seen in Table 10, there is a significant relationship between travel chatbot use intention and experience with chatbots ( $R = .800, p \leq .01$ ), motives for using a chatbot ( $R = .663^{**} - sig = 0.000$ ), and advantages of using chatbots ( $R = .563, p \leq .01$ ). These results indicate that there is a positive relationship between experience with chatbots, motives for using a chatbot, advantages of using chatbots, and travel chatbot use intention.

## 5. Conclusion and summary

This research aims mainly to assess the impact of using chatbot technology on the passenger experience at EgyptAir. Hence, the research got the following results: the primary motive for employing chatbots at EgyptAir is that passengers use chatbots to receive assistance or information on trip reservations. According to the survey findings, one of the most prevalent benefits of employing chatbots is that a large number of passengers may easily organize and book a trip using a chatbot. Another important result is that one of the most prominent downsides of using chatbots for travel is that it compromises privacy and data security. The study's findings also suggest that the majority of travellers advocate using travel chatbots to plan their future travels.

The findings of this study give EgyptAir insight into passengers' motivations and behavioral intents to use new technologies, such as travel chatbots. Such comprehension would aid airlines in designing and delivering high-quality online travel experiences to their consumers. One technology that can help businesses with automated customer service is chatbots, which have become popular in recent years. Businesses can benefit from the use of chatbots when they provide a positive customer experience. This paper aims to analyze the overall customer experience with customer service chatbots in order to pinpoint the primary factors that influence this experience and pinpoint the dimensions of the resulting customer experience. This article introduces Horus Chatbot, a travel chatbot that helps EgyptAir create an engaging environment and give customers the best possible service. It has been successfully demonstrated that Horus Chatbot offers a user-friendly interface that requires little to no technical knowledge on the part of the user to operate. Additionally, Horus Chatbot offers its users a few noteworthy extra features.

## 6. Recommendation

The efficiency and capability of chatbots in the airline industry need to be enhanced to match the expectations of travelers, as these bots are still in the early stages of development. In addition, the experience of air travelers should be enhanced in terms of completing transactions linked to air travel with the least amount of time and effort in comparison to traditional methods.

Egyptair should also consider improving the chatbot's ability to understand and process transactions expressed and entered in languages other than English, such as transactions written in Arabic, to better serve travellers who can only express their concerns in that language.

Chatbots ought to be observable, accessible, and available across all platforms, such as social media (e.g., Facebook Messenger), which can load quickly and light-weight even with a sluggish or unreliable internet connection. This enables travelers who lack access to a high-speed internet connection to easily communicate with a chatbot and voice their concerns about flying.

Finally, the chatbots used by Egyptair ought to be enhanced so that they can recognize emotions and respond to queries beyond simply producing pre-written responses. This advice is based on the idea that empathy encourages customer loyalty. Customers are more likely to remain loyal to an airline company and to trust the service when they feel understood.

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## تقييم تأثير استخدام تقنية روبوت الدردشة على تجربة المسافرين في مصر للطيران

أ. م. د. / حسين عبدالوهاب عبدالراضي

أستاذ مساعد – قسم الدراسات السياحية – كلية السياحة والفنادق – جامعة المنيا

### المستخلص

يتيح إدخال خدمات روبوت الدردشة القائمة على الذكاء الاصطناعي لمصر للطيران التواصل مباشرة مع العملاء، مما يؤدي إلى تحسين العمليات وأوقات استجابة أسرع. وتحرص مصر للطيران على تحسين علاقتها مع العملاء، بدءًا من عملية الحجز باستخدام روبوتات الدردشة، حيث يمكن للعملاء البحث عن معلومات الرحلة، والعثور على خيارات الرحلات التي تناسب احتياجاتهم، وحجز التذاكر. ليس هناك شك في أن روبوتات الدردشة هي أداة مهمة لمصر للطيران في مجال الذكاء الاصطناعي للتكيف مع احتياجات العملاء ومن المفترض أن تولد في النهاية المزيد من الإيرادات. وقد اعتمدت الدراسة الميدانية على المنهج الوصفي التحليلي من خلال تصميم وتوزيع استمارات الاستبانة عبر الإنترنت، وذلك لمعرفة رأي عينة الدراسة في تقييم تأثير استخدام تقنية روبوت الدردشة على تجربة المسافرين في مصر للطيران وقد تم توزيع عدد 792 استمارة على عينة من مسافرين مصر للطيران، تضمنت الدراسة العديد من الاساليب الإحصائية مثل المتوسط الحسابي، الانحراف المعياري، الثبات والصدق، التحليل العاملي، تحليل ارتباط بيرسون. تشير النتائج إلى أن الاستخدام الأساسي للركاب لروبوتات الدردشة في مصر للطيران هو الحصول على المساعدة أو المعلومات المتعلقة بحجوزات السفر. إحدى الفوائد الأكثر شيوعًا لنشر روبوتات الدردشة، وفقًا لتحليل الدراسة الميدانية، هي أن العديد من المسافرين يمكنهم بسهولة التخطيط لحجز رحلة مع روبوت الدردشة. وينبغي على مصر للطيران تعزيز كفاءة وقدرة روبوتات الدردشة لتناسب مع توقعات المسافرين، حيث لا تزال هذه الروبوتات في المراحل الأولى من التطوير. بالإضافة إلى ذلك، ينبغي تعزيز تجربة المسافرين جواً من حيث إنجاز المعاملات المرتبطة بالسفر الجوي بأقل قدر من الوقت والجهد مقارنة بالطرق التقليدية.

### الكلمات الدالة

شركات الطيران،  
روبوت الدردشة،  
الذكاء الاصطناعي،  
تجربة المسافر، مصر  
للطيران.