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Infinite Potential of AI Chatbots: Enhancing User Experiences and Driving Business Transformation in E-commerce: Case of Palestinian E-Commerce

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Abstract

In the much-evolving digital age landscape, it is difficult to overlook artificial intelligence's enormous role in people. This study entails an empirical examination of the impact of AI-powered chatbots on improving customer experience, customer satisfaction, and potential benefits in the digital era. This study was handled by the use of quantitative data collection methods through an online survey from 221 online users of AI-powered chatbots in Palestine. The collected data was then analyzed using descriptive statistics and structural equation modeling techniques. According to the results, it was shown that service quality significantly influenced the intention to use chatbots by customers or users thus indirectly influencing the net benefits enjoyed by users in the digital era. Similarly, the service quality provided by AI-powered chatbots was found to significantly influence the intention to use them, thus indirectly influencing the net benefits of AI-powered chatbots. Additionally, service quality was found to influence user satisfaction with chatbots, which indirectly influenced the net benefits enjoyed by users/customers in the digital era. On the other hand, user satisfaction significantly and directly influenced the net benefits of AI-powered chatbots in the digital era. In this regard, this study significantly contributed to the AI-powered chatbot's body of knowledge in the Palestinian digital context by identifying the factors that influence the use of chatbots in the digital era from the users' point of view with the capacity to help transform the Palestinian business landscape.

Keywords: *AI, Chatbots, System Quality, Net Benefits, User Experience.*

Introduction

In the much-evolving digital age landscape, it is difficult to overlook artificial intelligence's enormous role in people. For instance, Kaplan and Haenlein (2019) posit that artificial intelligence (AI) is a disruptive technology that, in a matter of few decades, has moved from being a subject of science fiction to a practical tool used across various sectors of an economy. Artificial intelligence seems to have taken over by storm in digital marketing, revolutionized the digital marketing landscape, and raised user experiences to high levels never witnessed before (Kaperonis, 2023). In a similar vein, the emergence of AIs has caused a profound change that has drastically altered the possibilities of digital marketing (Lee & Shin, 2018).

According to Bojanova et al. (2014), AI entails software or machine learning, natural language processing tools that mimic human intelligence. In this respect, businesses are constantly seeking innovative ways to improve customer experience as well as streamline interactions within the business. As such, AI has transformed the way businesses engage and provide customer support to their clients. Furthermore, AI-powered chatbots have become useful tools for companies across different sectors (Synviz Solutions, 2023). In the same vein, Sandil (2024) avers that the integration of AI into marketing activities has not just become a trend but a paradigm shift that has redefined customer engagement as well as customer support. Central to this paradigm shift or transformation is artificially powered Chatbots. Furthermore, it is predicted that by 2027, AI Chatbots will have become the core primary service channels for most businesses. Therefore, this underscores their significance in the business world specifically in digital marketing and customer

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engagement. This is hinged on the premise of simple automation, which elevates customer experience to new heights (Sandil, 2024).

Correspondingly, customer service has become much more important due to the competitive environment that businesses operate in, which is a key factor for business success. In this regard, gone are the days when customers would be forced to wait on hold for several hours on end (Rana et al., 2022). To overcome this, companies have now turned to AI-assisted tools to enhance their customer experience. In this regard, AI-powered chatbots have evolved to become important in providing quick solutions to most, if not all, customer problems (Rana et al., 2022). According to Wang et al. (2024), the use of AI chatbots comes with many benefits, which include but are not limited to helping create improved brand awareness, better customer relationships, marketing, or even personalized modifications of customer needs and wants.

On the other hand, it is considered that artificial intelligence has been beneficial in data collection, processing, and analysis, thus enhancing human decision-making processes. For instance, there are many algorithms that are used to collect and process data, learn from the collected data, and use the same data to reach informed decisions (Chatterjee et al., 2019). Employees of an organization are able to perform their jobs more easily and faster based on the fact that AI-powered chatbots are able to make use of more human interaction data than individuals can possibly manage on their own (Syam & Sharma, 2018). Arguably, businesses that adopt AIs in their operations and processes are able to automate routine functions more so in sales, thus boosting their sales revenue through customer inquiry personalization and improved customer service quality while at the same time increasing efficiency and effectiveness (Paschen et al., 2019). According to Jiang et al. (2022), another benefit of AI-powered chatbots in customer interactions is the ability to provide consistent and accurate information. However, for this to happen, the chatbots must be adequately trained so that customers can receive consistent and accurate information every day and at any time of the day. The reason is that chatbots are programmed to gather massive data, thus providing up-to-date, credible, and reliable responses to customer queries. Consequently, such consistency strengthens customer and brand loyalty, enhancing customer experience. In light of this, the current study sought to determine the impact of AI-powered chatbots on improving customer experience, customer satisfaction, and potential benefits in the digital era: Case of Palestine

Literature

Artificial Intelligence-powered Chatbots

AI-powered chatbots leverage large language models to process large open-source or company-generated data that includes websites, inventories, and documents. The processed datasets is then used to provide conversational responses to chat questions, thus improving customer experience as well as lowering call center costs that would have come with hiring humans to perform the same roles. Similarly, it is argued that AI-powered chatbots have been trained on large data sets in addition to using machine learning to intelligently process-wide, non-scripted conversational responses to human text and voice input (Bharti et al., 2020). According to Aslam (2023), integrating technologies that include speech recognition is useful in enhancing chatbot abilities, thus boosting customer satisfaction and engagement. Nonetheless, it is argued that besides AI-powered chatbots significantly affecting customer experience, engagement and satisfaction have raised serious ethical and privacy concerns. In this sense, it is noted that prudent steps need to be taken to understand the role of AIs in transforming business landscapes as well as improving customer experience (Aslam, 2023). Therefore, by addressing all key ethical concerns, chatbots can significantly change business landscapes and boost customer experiences.

Kadasah (2023) avers that there are three main areas in business where chatbots are most used: marketing, e-commerce, and customer service. In this regard, most businesses use AI-powered chatbots to reduce costs, boost revenues, and improve customer experience. Skrebeca et al. (2021) posit that in business operations/processes, AI-powered chatbots are used to streamline processes like sales. The argument is based on the premise that chatbots can accomplish difficult tasks nowadays, thus making life much easier for users. To this end, online retailers have been found to use AI-powered chatbots to generate content and

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understand customer insights by personalizing customer messages and increasing engagement through contextual and behavioral data analysis/processing (Solis, 2017).

Customer Experience

Customer experience refers to the entire experience that customers get from a retailer or company based on their interactions (Ameen et al., 2020). According to Meyer and Schwager (2007), customer experience entails every aspect of a business offering such as the quality of customer care, packaging, advertising, service and product features, the ease of use of its products, and reliability of the business's products and services. On the other hand, customer experience can be understood to refer to the internal and subjective response that customers have to specific contact with a company, be it either direct or indirect (Meyer & Schwager, 2007).

Verhoef et al. (2009) argue that the creation of a superior customer experience seems to be one of the core objectives of today's retail business environments. Globally, retailers have adopted the concept of customer experience management by committing to ensuring a positive retail experience for customers by focusing on convenience, quality, and value (Verhoef et al., 2009). For instance, a report by IBM revealed that customer experience is the key factor in building brand loyalty, services, and channels for a company. Nevertheless, customer experience does not just culminate from the interaction in a store alone but is determined by a mix of experiences that develop over time based on a customer's search, purchases, product/service consumption, and after-sales experiences (Verhoef et al., 2009).

According to Gentile et al. (2007), there are six customer experience components: emotional, cognitive, sensorial, lifestyle, pragmatic, and relational. These components help customers interpret online retail stores' stimuli from both an emotional and cognitive perspective and, as such, make use of the components to form a core construct of their overall customer experience (Verhoef & Bijmolt, 2019). Relatedly, based on these four components, customer experience is said to be associated with rapidity, accessibility to a product or service, and usefulness. However, other factors, such as family, friends, and overall customers' public relationships, are associated with the social components of the customer experience (Hoyer et al., 2020).

AI-Powered Chatbot's Role in Customer Satisfaction

According to Lu et al. (2019), AI-powered chatbots are useful in improving a company's efficiency and effectiveness by substituting for and complementing frontline workers through technology-mediated training. For instance, retail chatbots tend to provide gamified ways to shop via a conversational interface that captivates and takes users' attention, encouraging customers to browse through an online store's products and services or information about products with a bid to enhance purchase intentions of customer (Przegalinska et al., 2019). In this regard, customer satisfaction is most often considered to be an ingredient of the success and long-term competitiveness of a business (Irfan et al., 2019). Customer satisfaction refers to the reaction and feeling associated with customer experience in e-commerce. For example, Chen et al. (2021) posit that it is more likely to result in customer satisfaction because of AI-powered chatbots' capability to search for information and identify products, thus meeting customer needs. In the same vein, Kraus et al. (2019) noted that customization, convenience, recommendation accuracy, and process efficiency as AI-powered chatbots are more likely to result in customer satisfaction. In this respect, once customers begin to enjoy themselves and have fun with the chatbot, they tend to feel more satisfied (Chen et al., 2021). Xi and Hamari (2019) posit that customer satisfaction can be measured by satisfying intrinsic needs such as autonomy, relatedness needs, and competence.

Chatbot Dimensions of Service Quality and e-commerce Customer Experience

Service quality was initially understood to refer to the gap existing between expectations and customer's overall assessment of the services offered by a company (Gupta, 2016). According to Trivedi (2019), a business's service quality through chatbots is crucial because it tends to influence customer experiences. Positive customer experiences affect customer satisfaction and loyalty, affecting the success and future of

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the business. Moreover, a positive customer experience also can increase customer confidence, trust, and involvement. In this respect, Wahab (2023) adopted a four-service-quality dimensions approach that is suited for AI-powered chatbots in business processes. The dimensions include responsiveness, interactivity, usability, and reliability. Parasuraman et al. (1988) posit that the reliability of a service refers to the perception that a chatbot has the ability of delivering the desired customer service correctly and with consistency. This definition fits chatbots well chatbots because providing customers with high performance and accurate information is essential when using the services that chatbots provide (Chung & Park, 2019).]

In a study conducted by AlHagbani and Khan (2016), it was established that enhancing the reliability of services offered by chatbots could result in greater use of chatbots in online retail stores. Furthermore, reliability in chatbots boosts customer experience, which in most cases is measured by intrinsic and extrinsic values since it can satisfy both customers' enjoyment, fun, and accuracy (Sensuse et al., 2019). On the other hand, the service responsiveness of chatbots can be understood to refer to the willingness of the chatbot to provide a service that entails timely responses by providing immediate answers to customer queries or prompts. If a business enhances responsiveness through its chatbots, the perceived quality of its services and products increases, resulting in a good customer experience (Parasuraman et al., 1985).

Nevertheless, interactivity denote users' perception that their interactions with a chatbot mimic their conversation with human customer service agents, making users or customers believe that they control what they want when using AI-powered chatbot services (Wahab, 2023). Through interactivity, chatbots are able to deliver personalized assistance to customers (Neuhofer et al., 2015). Go and Sundar (2019) argue that interactivity is an important element in developing a human touch in chatbots, which is crucial in enhancing customer online experience, which is measurable in the form of intrinsic and extrinsic values. In the same way, Ren et al. (2019) argue that for chatbots to provide users with better experiences, the integration of usability is important for each interactive software. In this regard, usability refers to the features that entail the ease of the human-computer interface to achieve specific objectives with optimal efficiency, satisfaction, and effectiveness (Finstad, 2010). Furthermore, most customers perceive firms that have adopted the use of chatbots as being more innovative than cost cutting.

Conceptual Framework

In this study, the researcher considered several theories and frameworks to study the impact of AI-powered chatbots on improving customer experience, customer satisfaction, and potential benefits in the digital era: Case of Palestine. These theories and frameworks included the SERVQUAL model, Technology Acceptance Model, and the Information Systems Success model. The SERVQUAL model originally proposed by Parasuraman (1985) was not adopted in this study even though it is a good measurement tool of quality and service but it does not directly measure how customers/users evaluate their overall experiences (Klaus and Maklan, 2013) of which this study intends to determine. Furthermore, the Technology Acceptance Model (TAM) initially proposed by (SSS) was also considered for this study. Nonetheless, the updated Information Systems Success Model (DeLone and McLean, 2003) was selected for this study because it entails the dimensions associated with user behavior and other elements that impact the overall user/customer experiences for example through the use of chatbots in e-commerce digital platforms. In this respect, this model will be used in evaluating the quality of chatbots as used in customer service and their impact on customer experience.

The Information Systems Success Model

The updated DeLone and McLean model of information systems success is described by the information quality, system quality, and service quality, intention to use, satisfaction, and net benefits dimensions that it entails. Furthermore, this model proposes that information systems can be evaluated through the aforementioned dimensions or characteristics, which ultimately affect intention to use and customer/user satisfaction (DeLone and McLean, 2004). When the same is applied to AI-powered chatbots contextual environment, the use result is that the chatbots will eventually enable users to obtain major benefits that either negatively or positively influence the overall customer experience and satisfaction with the systems (Urbach & Muller, 2012).

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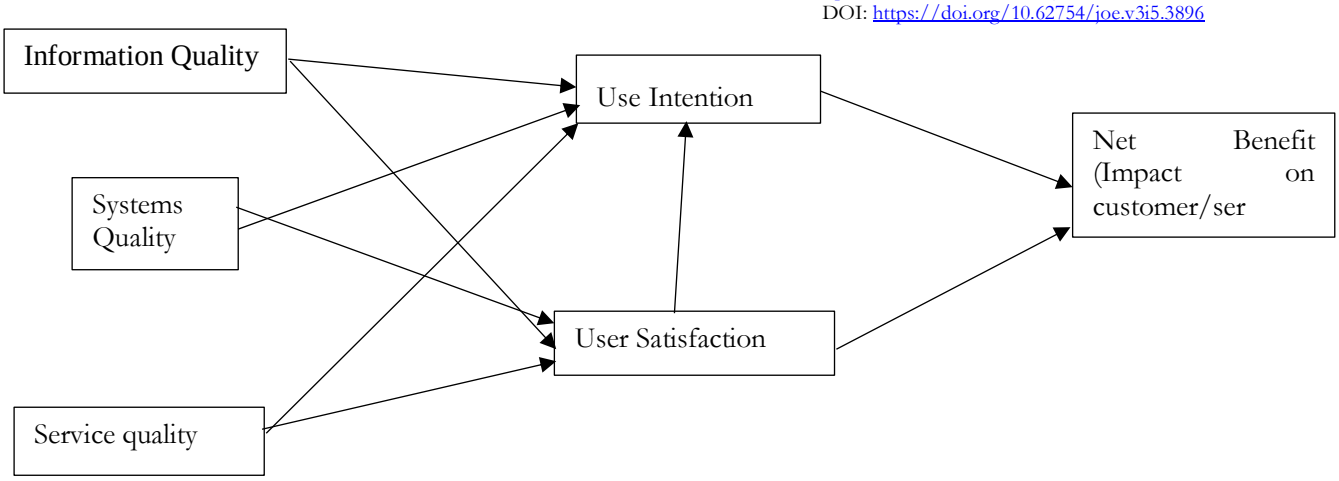

Figure 1. Conceptual Framework Modified from Delone and Mclean's (2003) Information Systems Success Model.

Information Quality

High-quality information is most often perceived to be a crucial antecedent of user satisfaction because it encompasses the usefulness generated by information systems such as chatbots following their use (Urbach & Muller, 2012). According to Trivedi (2019), Information quality describes how well an information system responds to user or customer requests for information about particular services or goods in a way that is relevant, helpful, and understandable (Gorla et al., 2010). Information quality of a system is measured by the accuracy, relevancy, timeliness of the information it provides (Lee & Haider, 2013). However, the information and recommendations offered by chatbots to users can make users uneasy if they cannot connect it to their preferences (Hoyer et al., 2020). Furthermore, the information provided also needs to be timely and presented in a prompt manner without which users would exit the interaction due to frustration.

Therefore, this study hypothesizes that the information provided by AI-powered chatbots will significantly influence customer experience and satisfaction, thus transforming businesses in the digital era.

H1a: The quality of information of AI-powered chatbots significantly affects the intention to use chatbots.

H1b: The quality of information of AI-powered chatbots significantly affects chatbot user satisfaction.

System Quality

According to Davis (1989), the success dimension 'system quality' entails the necessary attributes of an information system and therefore incorporates measures of the information system. In essence, the aforementioned measures typically focus on the usability aspect and performance attributes of the system under evaluation and then measure the technical performance of AI-powered chatbots. Urbach and Muller (2012) aver that three key system quality metrics that are relevant to chatbots are usability, availability, and dependability. With regard to the ease of use measure of chatbots, it entails how users perceive the use of the information provided by the chatbot information system. Therefore, this study hypothesizes that:

H2: System quality significantly influences customer satisfaction.

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Service Quality

The quality of services of AI-powered chatbots is anchored on the SERVQUAL model originally proposed by (Parasuraman, 1988). Reliability, responsiveness, interactivity, and usability are among the dimensions. Parasuraman et al. (1988) assert that a service's perceived dependability is determined by how well and consistently a chatbot performs the intended customer service. With regard to the aforementioned, this study hypothesizes:

H3a: The perceived service quality of chatbots significantly influences the use intention of chatbots.

H3b: The service quality of AI-powered chatbots significantly influences user satisfaction.

The Chatbot Use Intention and Satisfaction

According to Urbach and Muller (2012), the intention to use is regarded as a success factor that denotes how much information is used. Considering this present study, the measurement items of importance are the frequency, actual, and the intention to use because they represent user views of AI-powered chatbots as information systems. Moreover, they indicate the outcomes of user experiences regarding the chatbots. Additionally, an essential measure of user experiences, user satisfaction encompasses an additional success dimension (LaRose, 2015). The measurement items in regard to this dimension are chatbot enjoyment, information, and system satisfaction (Urbach & Muller, 2012). Therefore, based on the aforementioned, this study hypothesizes:

H4: AI-powered chatbot user satisfaction significantly impacts the continued use intention of information system chatbots.

2.5.1.5 Net benefits

The net benefits dimension in this study refers to individual impacts in order to account for the success of the various stakeholders. In the updated information system success model, the societal and individual impact have been joined to create net benefits. Thus, the overall user satisfaction in this study is represented by the net benefits. Further, user satisfaction denotes user experience in the form of feelings of gratitude following the use of AI-powered chatbots.

H5: Perceived user satisfaction significantly influences net benefits.

Research Method

This study was carried out in Palestine using an online survey and a cross-sectional research design. The online questionnaire was posted to a conveniently selected sample of 280 Palestinian e-commerce customers/users over the period extending from March 22nd to April 15th, 2024. This study targeted those respondents who had interacted with AI-powered chatbots to obtain necessary information. To increase the number of responses, the survey was advertised on several social media sites. The data collection exercise involved a structured questionnaire with written items that study participants were expected to respond to by selecting the available options best representing their opinions. The questionnaire was divided into two sections with the first section containing the demographic information and the second focusing on the variables relevant to this study. The second section data was in the form of a Likert scale with numbers ranging from 1 to 5, reflecting a range of agreement levels, from "totally disagree" to "totally agree". The collected data was analysed using structural equation modeling and descriptive statistics.

Data Analysis

In order to conduct descriptive statistics on the respondents, IBM SPSS 26 (Statistical Package for Social Sciences) was utilized in this study. STATA 14-SEM was then used to test the IS Success model in an AI-powered chatbot environment. Convergent and discriminant validity assessments were used to evaluate the

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measurement model, construct validity, and reliability using the software. To find the strongest correlation and test the theories, the software also evaluated the structural (inner) model.

Results

Data Visualization

Out of the 290 questionnaires distributed to respondents, only 250 were returned. A total of 220 questionnaires were used in the final data analysis because all respondents were required to answer every question. After careful examination, 30 questionnaires were disregarded because they were found to be incomplete.

Demographic Variables

According to the demographic variable analysis below on Table 1, the results revealed numerous notable findings. Firstly, the majority of the respondents were females, accounting for 66.8% of the total respondents, while males followed at 33.2%. With regard to the marital status of the respondents, the results showed that a majority of the respondents were single at 48.6%, married at 36.8%, the separated at 12.7%, while the widowed were only 1.8%. These results then imply that based on the fact that the respondents between 18.24 were the majority, then they had not gotted married. Regarding the age distribution, majority of the respondents were those between 18 to 24 years old at 37.3%, followed by those between ages 25-34 years old at 30.9% , 35-44 years old at 20.0% and lastly, those between ages 65 years and above were merely 2.3% only and the least in the sampled population. From these results, it is evident that respondents below 50 years represent 80% of the entire sample size and those above 50 years representing a low figure of 20% only. In terms of educational status, the results showed that those with a bachelor's degree were the majority at 45.9%, followed by those with a master's degree at 25.5% implying that a majority of the respondents approximately 71% had degrees and therefore it is prudent to conclude that they are well educated. Those with a high school diploma came in third at 20.5% only and those with doctorate degrees or professional degrees were last with 8.2%.

Table 1: Demographic Variables

		Frequency	Percent percentage
Gender	Male	73	33.2
	Female	147	66.8
Marital Status	Single	107	48.6
	Married	81	36.8
	Separated	28	12.7
	Widowed	4	1.8
Age	18-24 years old	82	37.3
	25-34 years old	68	30.9
	35-44 years old	44	20.0
	45-54 years old	10	4.5
	55-64 years old	11	5.0
	Above 65 years old	5	2.3
Educational attainment	High school diploma	45	20.5
	Bachelor's Degree	101	45.9
	Master's Degree	56	25.5
	Doctorate or Professional	18	8.2
Employment Status	Full-time employee	42	19.1
	Part-time employee	54	24.5

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	Self-employee	46	20.9	
	Unemployed	47	21.4	
	Student	31	14.1	
	Have you heard of			
Chatbots before?	Yes		148	67.3
	No	72	32.7	
	I have never heard of			
	chatbots before or			
Experienced them	Yes		83	37.7
	No	137	62.3	
	I do not have experience			
	With chatbots, but I have			
heard of them	Yes		72	32.7
	No	148	67.3	
	I do not have experience			
	with chatbots but I have			
heard of them	Yes		73	33.2
	NO	147	66.8	

Source: Mai Zakaria (2024)

On the other hand, concerning employment status, respondents in full-time employment were 19.1% while the majority who were on part-time employment were 24.5% followed by those under self-employment at 20.9%; the unemployed were the second majority at 21.4%. These results show that formal and or full-time employment in Palestine among the youths is low despite the fact that they are a well-educated lot. Finally, when the respondents were asked whether they had heard of chatbots before, a majority (148) said yes at 67.3% while the remaining (72) 32.7% said no. The reason for this could be because the majority of the respondents are well educated and thus technology savvy who interact with different platforms online in the digital era. Similarly, when asked whether they had never heard of chatbots before or experienced them, a majority of them answered on the contrary with those saying No 62.3% while those agreeing with the statement was 37.7%. This implies that a majority had heard of chatbots and experienced them. Finally, when asked whether they had not had any experience with chatbots but heard of people using them, a majority of the respondents answered on the contrary 66.8% implying that they had had some experience with chatbots besides hearing of people using them.

The Measurement Model Assessment

Prior to performing the structural equation model analysis, the researcher ascertained the validity and reliability of the data, as was previously indicated in the methodology section. According to Heale and Twycross (2015), validity refers to the extent to which a concept is measured accurately in quantitative research. On the other hand, reliability refers to the accuracy and consistency of a research instrument in producing the same results if used in the same situation and in repeated succession. Numerous tests, including composite reliability (CR), Cronbach alpha, squared Shared Variance (ASV), factor loadings, Maximum Shared Variance (MSV), and Average Variance Extracted (AVE), were used in this study to evaluate convergent validity. Table 2 presents the discriminant validity and correlation matrix.

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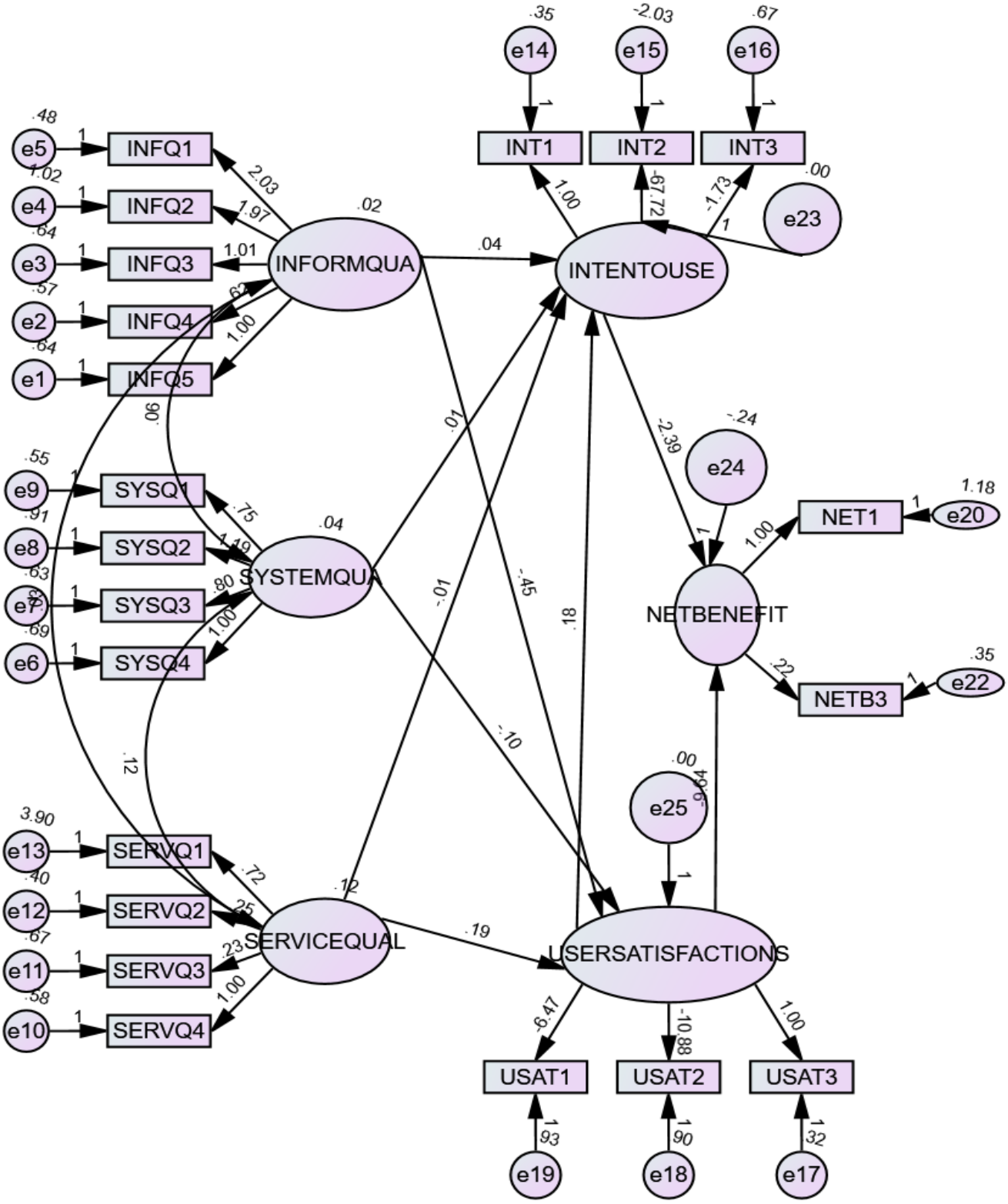

Figure 1: Standardized Regression Coefficients of The Proposed Model

Source: Researcher (2024).

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Model Fit

To test the study's hypotheses, a two-step structural equation modeling (SEM) was conducted through SPSS version 26 and AMOS version 26. To assess the measurement's quality, a confirmatory factor analysis (CFA) was first carried out. Second, the researcher used SEM to test the proposed relationships between the latent variables by employing a maximum likelihood estimator (Anderson and Gerbing, 1988Additionally, a number of fit indices were employed, including the normed fit index (NFI), comparative fit index (CFI), and root means square error (RMSEA). As stated by the results in Table 2, the measurement model had acceptable fit with regard to the Normed chi-square statistic at (λ^2 = 256.748; degrees of freedom [df] = 177; λ^2/df = 1.451) at a level (P = 0.000), in this case, the results were below the cut off-value of 3.0. In addition, the fit indices showed a good model fit to the data (GFI = 0.924; AGFI = 0.901) since the indices were above 0.90 cut-off value for both the GFI and the adjusted goodness of fit (AGFI). Furthermore, RMSEA = 0.039; and RMR = 0.045 values were below the cut-off values of 0.08

Table 2: Model Fit Stats for The Structural Equation Model

Index	Fit value	Cut-off value
Normed chi-square χ^2 (χ^2/df)	1.451	<3.00
Goodness of Fit Index (GFI)	0.918	>0.90
Adjusted goodness of fit index (AGFI)	0.901	>0.90
Normed Fit Index (NFI)	0.488	>0.90
Comparative Fit Index	0.726	>0.90
Root mean Square Error of Approximation (RMSEA)	0.039	<0.08
Root Mean Square Residual (RMR)	0.048	<0.08

According to the results in Table 3 below, the internal consistency and convergent validity metrics for each of the constructs. The results showed that the composite reliability for system quality (0.912) and information quality (0.898) were above the cut-off value of 0.7, but for service quality construct (0.123), the results showed that they did not achieve the cut-off point of 0.7. Nonetheless, the average variance extracted (AVE) for the three selected constructs was also considered to determine whether they were convergent. All three constructs achieved the minimum cut-off value of 0.5. The AVE values for system quality were 0.907, information quality 0.851, and service quality 0.635, therefore indicating that the convergent validity for the three was reasonable.

Table 3: Internal Consistency and Convergent Validity

	CR	**AVE**	**MSV**	**MaxR(H)**	**SYSTEMQUA**	**INFORMQUA**	**SERVICEQUAL**
SYSTEMQUA	0.912	0.907	0.520	1.120	**0.952**		
INFORMQUA	0.898	0.851	0.520	-1.991	-0.721	**0.923**	
SERVICEQUAL	0.123	0.635	0.019	1.206	0.021	0.138	**0.797**

Table 4: Correlation and Discriminant Validity

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Correlations

		INFORMATION	SYSTEMQUALITY	SERVERQUALITY	INTENTTOUSE	USERSATISFACTION	NETBENEFITS
INFORMATION	Pearson Correlation	1	.297**	-.153**	-.055	.002	-.106
	Sig. (2-tailed)		.000	.008	.338	.978	.064
	N	304	304	304	304	304	304
SYSTEMQUALITY	Pearson Correlation	.297**	1	-.188**	.226**	.115*	.082
	Sig. (2-tailed)	.000		.001	.000	.046	.151
	N	304	304	304	304	304	304
SERVERQUALITY	Pearson Correlation	-.153**	-.188**	1	.069	-.185**	-.309**
	Sig. (2-tailed)	.008	.001		.231	.001	.000
	N	304	304	304	304	304	304
INTENTTOUSE	Pearson Correlation	-.055	.226**	.069	1	.045	.087
	Sig. (2-tailed)	.338	.000	.231		.431	.131
	N	304	304	304	304	304	304
USERSATISFACTION	Pearson Correlation	.002	.115*	-.185**	.045	1	.217**
	Sig. (2-tailed)	.978	.046	.001	.431		.000
	N	304	304	304	304	304	304
NETBENEFITS	Pearson Correlation	-.106	.082	-.309**	.087	.217**	1
	Sig. (2-tailed)	.064	.151	.000	.131	.000	
	N	304	304	304	304	304	304

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

In order to evaluate the discriminant validity of the constructs, correlations between the variables were estimated to see if they differed from 1 significantly. The results showed that the study's measurement model had discriminant validity because the confidence intervals for the correlations did not contain 1. This is because the results were satisfactory suggesting that it was appropriate to proceed with the model

Table 5: Hypotheses Testing

Hypothesis	Variable		Variable	Estimate	t-statistic	p-value
H1a	Information quality	→	Intent to use chatbots	-813	-1.576	0.115
H1b	Information quality	→	User satisfaction	1.278	0.929	0.353
H2	System quality	→	User satisfaction/experience	-31.480	-.0434	0.664
H3a	Quality of services	→	Intention to use	0.439	2.227	0.026*
H3b	Service quality	→	User satisfaction/experience	-0.906	-4.211	0.000***
H4	User satisfaction	→	Intention to use chatbots	0.469	2.227	0.026*
H5	User satisfaction	→	Net benefits	0.263	2.667	0.008**

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According to the results presented in Table 5, the service quality of AI-powered chatbots was found to significantly influence the net benefits of chatbots, such as user experience as well as the intention to use chatbots. Additionally, customer satisfaction was also observed to significantly influence the net benefits of chatbots. In the same way, the service quality of AI-powered chatbots was found to influence user experience or satisfaction significantly, thus implying that the respective hypotheses were accepted while the remaining hypotheses were rejected. The argument is that the constructs or factors were determined not to affect the net benefits of chatbots in the digital era by users or customers.

Discussion and Conclusion of the Results

This study entails an empirical examination of the effect of AI-powered chatbots on improving user experience, customer gratification, and potential benefits in the digital era. Based on the conceptual framework of this study, user net benefits of chatbots, such as positive user experiences, were predicted to be impacted by the quality of the information, the system, and the services, with user satisfaction and the intention to use chatbots powered by AI serving as mediating variables. According to the results, it was shown that service quality significantly influenced the intention to use chatbots by customers or users, thus indirectly influencing the net benefits users enjoy in the digital era. Similarly, the service quality provided by AI-powered chatbots was observed to impact the intention to use them significantly, thus indirectly influencing the net benefits of AI-powered chatbots. Additionally, service quality was found to influence user satisfaction with chatbots, which indirectly influenced the net benefits enjoyed by users/customers in the digital era. On the other hand, user satisfaction was found to significantly and directly influence the net benefits provided by AI-powered chatbots in the digital era. Therefore, this proves that the use integration and the use of AI-powered chatbots in customer service provision in the form of customer agent AIs significantly influence user experience. These results coincide with those of (Ashfaq et al., 2020 Lee and Choi, 2017), who found that some crucial factors had a stronger influence on the intention to use chatbots compared to others and that user satisfaction had the highest impact on the intention to use chatbots and user experience.

Limitations and Future Research

This study has a number of limitations that future studies can cover. For instance, this study mainly did not zero in on any particular sector such as online retail, education, service or the banking sector but generally considered all sectors so long as the respondents had experienced the use of chatbots. Furthermore, this study concentrated on four dimensions of the quality of chatbot services: system, information, service quality, and user satisfaction. In this respect, it is recommended that future studies examine other factors that influence the user experience of AI-powered chatbots. For instance, chatbots' ease of use and perceived usefulness factors could be investigated in the context of Palestine.

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