EVALUATING THE ROLE OF ROBOTICS TECHNOLOGY IN ENHANCING GUEST SATISFACTION IN HOTELS ACROSS SOUTH-EAST NIGERIA

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Abstract
This study examined the influence robotics technology on guest satisfaction in hotels in south-east Nigeria. The objectives of the study was to examine the influences that robotics technology has on guest satisfaction in hotels the Southeast region of Nigeria. The study employed a descriptive survey research design. The population of the study is an infinite population and the sample size of three hundred and eighty-four (384). The instrument for data collection was a 4-point Likert scale questionnaire. The data collected was analyzed using multiple regression Analysis**.** The findings of the study discovered that the use of robotics technology affect guest satisfaction, providing personalized services in areas such as room services, concierge and also aiding language translation and interpretation in hotels in south-east Nigeria. The finding also showed negative influences that the use of robotics in hotels makes guests feel uneasy and uncomfortable and the use of robotics will lead to job displacement in many areas in hotels in the south eastern Nigeria. The study suggests there should be striking a balance between automation and human interaction, ensuring that robots complement rather than replace human staff in delivering personalized and empathetic service in Hotels
Keywords: Robotics technology, guest satisfaction, Hotels, South-east.

Introduction
Robotics Technology is an interdisciplinary study of science and technology combining mathematics and science to produce machinery, technology, and software to make intelligent robots. The purpose of robotics is to construct intelligent machines that can help people in numerous ways. The term robotics is an expansion of the word robot. The word was initially established by Czech playwright Karel Ōapek in his 1920 drama Rossum's Universal Robots. Today, industrial robots, as well as many other types of robots, are utilized to perform monotonous jobs. These could be in the shape of a robotic arm, an exoskeleton built of robotics, a collaborative robot (cobot), or standard humanoid robots. A remotely operated manipulator, actuators, control systems, action, processing, and perception, real-time sensors, automation, and computer programming and algorithms are all necessary for a robot or robotic system to function. Robotic and automation is hardly a new technology in the hospitality industry. Robotics involves devices powered with specialized software to execute critical hotel functions. The use of robotics rapidly rose during the pandemic. However, it is anticipated to accelerate the post-COVID tourism industry due to heightened consumer awareness of interpersonal communication. The hospitality robots market is anticipated to reach $3,083 million by 2030, with a CAGR of 25.5% from 2021 to 2030 (Kamble & Deshmukh, 2021). As one of the major hotel and restaurant technology trends, robots can assist with check-ins, room service, food delivery, and concierge services. According to Zheldak, (2024), since robotics involves the automation of regular processes, hotels can boost operational efficiency and minimize labor expenses. In the tourism and hotel landscape, organizations refer to robots as an efficient technology in hospitality.

Literature Review
Robotics technology in Hotel
The field of robotics has advanced from being a concept in science fiction to becoming a tangible reality during the past few decades. The term "robotics" was initially mentioned by American science fiction author Isaac Asimov in 1942 in one of his stories titled "Runabout" (Huat, 2006). Asimov defined robotics is the scientific study of robots. The hotel sector has been affected by the advancement of robot technologies and the automation of service, leading to changes in many operational duties. Hotels have implemented self-service stands, sometimes known as kiosks that enable customers to complete the registration process automatically without the need for front desk staff.

The main purpose of robotics is to create robots or devices that can successfully carry out duties as specified by the client. The evolution of robotics during the last decades as an amalgamation of several generations of robots. The advancement of the initial transistor via integrated circuits (Laudon et al., 2007), ultimately resulting in the

creation of the digital computer (Bryson, 1996), has had a significant impact on the expansion of robotics. These ground breaking advancements enhanced the robots and brought about a substantial transformation in their development, shifting from purely mechanical or pressure-driven gadgets to adaptable frameworks that can now acquire knowledge about their surroundings. Robots are present in several offices within hotels, where they assist clients and help with tasks assigned to workers. Several hotels feature automated front desk agents, security personnel, in-room assistants, robotic vacuum cleaners, and a mechanical arm designed for handling bags (Julien, 2016; Revfine, 2020).

A hotel in Japan, Henn-na Hotel is operated by robots. This hotel has already proved their cost saving potential of hiring robots. When the customers approach the reception counter the robots began speaking in a pre-set sequence to welcome them to the hotel. The robots can talk in Japanese, English, Korean and Chinese. After reception, clients can check-in at neighboring kiosks (Saravanakumar & Badri Narayanan, 2018). There is also an information robot from which customers might ask any information about hotel. There a particular robotic arm which is utilized for safe keep of precious products of clients and porter robot to transport the customer's bags to the room. In China, Flyzoo hotel has entered in the league of automation and staffed with robots hotels. In Flyzoo hotel, the room service robot serve customers by dropping fresh towels, pouring beverages (Singh, Kapoor, Sharman & Thakur, 2023). Hotels are utilizing robots that can investigate the facility, utilize the lift, and phone the visitor space to convey stated stuff to the client's entrance step. Robots are being utilized by lodgings to converse with the guests and replying to their inquiries regarding hotel advancements, benefits and giving suggestions to close by attractions and activities. According to Zhong, Coca-Stefaniak, Morrison, Yang, and Deng (2022), many hotels deployed robots during pandemic of COVID-19 to reduce the frequency of contact between customers and human staff. Also robotics can be seen in the travel sector in the form of TravelMate; TravelMate is a suitcase that moves by itself but more than that it's a robot in every sense of the world. It follows humans on its own. It avoids barriers on its own and thinks on its own. It's wonderfully represented a new era of practical robots intended to use travelmate like the smartphone's is ready to transform the way we go about our daily lives Also in Geneva airport, robots are seen meeting clients outside of the flight terminal, scanning their ticket, writing out luggage labels, and keeping the gear in an exceptional compartment (Hornyak, 2020).

Types of Robotic Technology
According to Yasar (2023), the following are some common types of robotics technology are;
i. Industrial robots: These are robotic used in manufacturing and warehouse with large programmable robots performing tasks such as welding, painting, assembling and material handling.
ii. Services robots: These robots are employed in many different industries and contexts, including healthcare, retail, hospitality, and housekeeping. Robots for entertainment, housekeeping, and personal help are a few examples.
iii. Medical Robots: In medical contexts, these robots assist with surgery, rehabilitation, and diagnosis. Medical robots include prosthetic limbs, exoskeletons, and systems for robotic surgery.
iv. Autonomous vehicles: Drones, self-driving automobiles, and autonomous delivery robots are examples of the robots that are primarily used for transportation. Using cutting-edge sensors and AI algorithms, they navigate and make choices.
v. Humanoid Robots: This are robots that have been designed to copy and replicate the gestures and behaviors of humans. They are used in human-robot interactions, entertainment, and research because they resemble humans.
vi. Agricultural robots: this are robots used in farming and agricultural applications. They can plant, harvest, treat crops with insecticides, and monitor their health.
vii. Cobots: This type of robots allow human workers to share a workspace and increase productivity. This is in contrast to most other types of robots, which perform jobs alone or in completely distinct work spaces. They are usually employed to eliminate expensive, risky, or time-consuming chores from daily operations. Every now and again, cobots can detect and react to human movements.
viii. Educational robots: These robots are designed to teach children about programming, robotics, and problem-solving. Educational robots are often used in academics as kits and platforms for experiential learning. Examples of educational robots include LEGO Mindstorms, Ozobots, Sphero, and various humanoid robots designed for educational purposes. These robots aim to make learning enjoyable, interactive, and applicable to real-world scenarios.
ix. Exploration and space robots: Exploration and space robots are specialized robotic systems designed for use in outer space environments. These robots find application in hostile areas of Earth as well as in space exploration missions. Examples include underwater exploration robots and rovers used on Mars expeditions.
x. Defense and military robots: Defense and military robots encompass a variety of robotic systems designed for applications in the defense and military sectors. These robots are developed to perform

tasks that enhance the capabilities of armed forces while minimizing risks to human personnel. These robots support military operations and duties such as bomb disposal, search and rescue, and surveillance. They are made especially to function in uncharted territory.

Review of Empirical Literature

Pizam, Ozturk, Balderas-Cejudo, Buhalis, Fuchs, Hara, Meira, Revillae, Sethi, Sheng, State, Hacikaraa, and Chaulagain, (2022) carried out a research on "Factors affecting hotel managers' intentions to adopt robotic technologies: A global study". The objective of this study was to identify the effects of technological, organizational, and environmental (TOE) factors on hotel managers' intentions to adopt robotic technologies in their hotels. Structural equation modeling (SEM) was utilized to test the study hypotheses. The results indicated that hotel managers' intention to adopt robotic technologies were positively influenced by their perceived relative advantage, competitive pressure and top management support and negatively influenced by their perceived complexity of the technology. The study results further demonstrated that the impacts of relative advantage, complexity, top management support, and competitive advantage on intention to adopt were moderated by innovativeness. The current study also addressed the theoretical and practical implications to existing knowledge and practice in the hotel industry.

Belanche, Casaló, and Flavián, (2020) researched on "Frontline robots in tourism and hospitality: service enhancement or cost reduction?" The objectives was to explore how customers' attributions about the firm motivations to implement service robots (i.e. cost reduction and service enhancement) are affecting customers' intentions to use and recommend this innovation. The study employed Structural equation modelling is used to analyze data collected from 517 customers evaluating service robots in the hospitality industry and results showed that attributions mediate the relationships between affinity toward the robot and customer behavioral intentions to use and recommend service robots.

Wu, Sorokina and Putra (2023) carried a study on "Customer's satisfaction on Robots, Artificial intelligence and service automation (RAISA) in the hotel industry: A comprehensive Review'. This study aims to evaluate the current status of RAISA studies in the hotel industry and propose directions for future research. The findings reveal that most studies on RAISA in the hotel industry focus on RAISA's impacts on the hotel industry, RAISA service quality, customer acceptance of RAISA service, customer satisfaction and factors influencing Customers' Satisfaction on RAISA Service. The study showed five directions that cover outstanding themes, including: 1) strategic assessment of RAISA performance, 2) hotel financial impacts on RAISA employment, 3) customers' satisfaction and RAISA service quality, 4) macro environment impacts on RAISA in hotels, and 5) premium determinants on customers' acceptance on RAISA

Gupta, Modgil, Lee, Cho, and Park, (2022) researched on "Artificial intelligence enabled robots for stay experience in the hospitality industry in a smart city". The objective was to examine and explore artificial intelligence (AI) enabled robots in hospitality industry in order to enhance guest experience in a smart city. The methodology used for this study was a case study using systematic approach coding to identify AI enabled robots that facilitates the automation, information gathering, personalization and seamless service in the hospitality industry of a smart city. This study is said to be related to the present study as it looked at AI enabled robots influence guest experience in hospitality establishment in smart city.

Jabeen, Al Zaidi, and Al Dhaheri, (2022) carried a study on "Automation and Artificial Intelligence in Hospitality and Tourism". This study aims to develop a framework to identify and prioritize the key factors in automation and artificial intelligence (AI) implementation in the hospitality and tourism industry. This paper used the analytic hierarchy process, a multi-criteria decision-making method, to prioritize the factors influencing automation and AI implementation. The study developed a model with five criteria (human knowledge, services, robotics applications, internal environment and institutional environment) and 23 sub-criteria obtained from previous studies. The study designed a questionnaire in the form of pairwise comparisons based on the proposed hierarchical structure. The study used a nine-point ranking scale to show the relative significance of each variable in the hierarchy and tested the model among staff from 35 five-star hotels and top-rated tourism agencies in the United Arab Emirates. The finding showed that Human knowledge, services and robotics applications were the most significant factors influencing automation and AI implementation. Practitioners and researchers in the hospitality and tourism industry could apply the proposed framework to develop sustainable strategies for implementing and managing automation and AI.

Tung, and Au, (2018) Exploring customer experiences with robotics in hospitality. The objective of the paper was to explore consumer reviews with robotics based on five dimension; embodiment, emotion, human-oriented perception, feeling of security and co-experience on evaluating guest experience. The study used thematic analysis

to data collected from four hotels. The findings highlighted that robotic embodiment and human-oriented has influence on customer experience. The findings also suggest that users and robots can co-create novel experiences, with some guests even proactively seeking new opportunities to interact and communicate with robots to develop a certain level of "relationship" with them.

Theoretical Framework

Various theories have been developed by scholars to help explain the influence of various technologies on guest satisfaction in the hotel establishment**s.** The theories used for this study to evaluate the guest satisfaction and robotic influence on hotel establishment**s** are The Expectancy Disconfirmation Paradigm and Theory of Technology Dominance.

a. The Expectancy Disconfirmation Theory (EDT)

Expectation disconfirmation theory (EDT) or **Expectation Disconfirmation Theory (EDT)** aims to explain post-purchase or post-adoption pleasure in terms of expectations, perceived performance, and belief disconfirmation. The theory suggests that consumers form initial expectations about product performance before buying or using a product. Consumer satisfaction is impacted by the fact that the actual product performance they eventually receive does not match their initial expectations. That is, after using the good or service, results are measured versus what was anticipated. If the result is as expected, confirmation takes place. Oliver proposed the Expectancy-Disconfirmation Paradigm (EDP) or **Expectation Disconfirmation Theory (EDT)** in 1980 as the most promising theoretical framework for the assessment of customer satisfaction. Disconfirmation occurs where there is a difference between expectations and outcomes. A favorable or unfavorable discrepancy between expectations and perceptions might leave a customer either satisfied or contended. Therefore, in cases where service performance exceeds the customer's initial expectations, a positive disconfirmation between expectations and performance leads to satisfaction; conversely, in cases where service performance meets expectations, a confirmation between expectations and perceptions leads to satisfaction. In contrast, there is a negative disconfirmation between expectations and perceptions that results in dissatisfaction when service delivery is below what the consumer expected.

Expectation disconfirmation theory (EDT) or **Expectation Disconfirmation Theory (EDT**) involves four primary constructs: expectations, perceived performance, disconfirmation of beliefs, and satisfaction.

i. *Expectation:* Expectations are the qualities or traits that one believes or believes will be connected to an object, such as a technology artifact, service, or product. Expectations are proposed to mediate a mediational link through the disconfirmation construct, which in turn is proposed to indirectly influence post-purchase or post-adoption satisfaction. Expectations are proposed to directly influence both perceptions of performance and disconfirmation of beliefs.

ii. *Perceived Performance***:** Perceived performance refers to how someone interprets the true functionality of a service, or product or technology artifact. The expectation confirmation theory states that pre-purchase or pre-adoption expectations have a direct impact on perceptions of performance, which in turn has a direct impact on belief disconfirmation and post-purchase or post-adoption contentment. It is also proposed that perceived performance, via the disconfirmation concept, mediates a mediational link that subsequently influences post-purchase or post-adoption satisfaction.

iii. *Disconfirmation of beliefs:* Disconfirmation of beliefs refers to the assessments or decisions an individual makes concerning a product, service, or technology artifact. These assessments or decisions are rendered in relation to the individual's initial anticipations. The disconfirmation is positive when an item, service, or technological artifact performs better than the individual's initial expectations; this is posited to boost post-purchase or post-adoption pleasure. Negative disconfirmation is the result of a product, service, or technology artifact performing below the individual's initial expectations; this is posited to lower post-purchase or post-adoption contentment, or to raise dissatisfaction.

iv. *Satisfaction:* The degree to which an individual is satisfied or happy with a technology artifact, service, or product after having firsthand experience with it is known as post-purchase or post-adoption satisfaction. According to expectation confirmation theory, expectations and perceived performance both indirectly affect satisfaction through a mediational relationship that goes through the disconfirmation construct. Satisfaction is directly impacted by the disconfirmation of beliefs and perceived performance.

Expectation disconfirmation theory (EDT) or **Expectation Disconfirmation Theory (EDT** was used in this study to ascertain the guest's perception to robotic activities as regards guest expectation and customer satisfaction in hotel establishment.

b. Theory of Technology Dominance

The theory of technology dominance proposes that technology can have a dominant influence on organizational behavior, decision-making, and performance. It is theoretical framework that aims to comprehend how technology affects businesses and society is known as the theory of technological dominance. Theory of technology dominance explain how technology can shape organizational behavior and decision-making. The theory suggests that organizations may become more bureaucratic, centralized, and hierarchical as a result of their growing reliance on technology. Additionally, the theory proposes that the increasing use of technology can lead to organizations becoming more data-driven, with decisions being based on data rather than intuition or experience. The theory of technology dominance has been applied to several knowledge-work domains, the primary focus of the theory has always been on the professions. Information systems, organizational behavior, and management are just a few of the contexts where, the theory of technology dominance has been applied. Empirical studies have demonstrated the potential utility of this theory in comprehending the ways in which technology might influence organizational behavior and decision-making. In the field of information systems, the theory can be used to understand how technology can shape the way organizations manage and use information. In the field of organizational behavior, the theory can be used to understand how technology can shape the way organizations are structured and how they make decisions. The theory of technology dominance provides useful viewpoint for comprehending how technology such as robotic affects businesses and society and has become a dominant force in shaping organizational structures of many hotel establishment.

Methodology

The researchers adopted the survey research design, which is a variant of descriptive research design because it is best method available for collecting original data from a population that is too large to observe directly. The population for the study were guests of hotel establishments of Umuahia metropolis in Umuahia North and South local government of Abia State, Awka metropolis of Awka South local government of Anambra state, Enugu metropolis of Enugu East, Enugu North and Enugu South local government of Enugu state., Abakiliki metropolis in Abakiliki local government area of Ebonyi state and Owerri municipal local government area of Imo state. The total population of study was infinite population for guests of the hotel establishments to be covered. The sample size of 384 was determined from the population using Cochran's sample size formula for calculating for infinite population. The questionnaire was structured on a 4-Point Likert scale, with 4 for Strongly agreed (SA), 3 for Agreed (A), 2 for Strongly Disagreed (SD) and 1 for Disagreed (D). The cut-off mark of 2.5 was regarded as acceptable mark: Out of the 384 structured questionnaire given out, 319 was successfully returned and used for data analysis. The research questions were analyzed using frequencies, percentage, mean and standard deviations, while multiple regression was used to test the hypothesis at 0.01 level of significance.

Results and Discussion

Table 1: Presentation of Biographical Data

Biographical Data	Frequency	Percentage %
Sex		
Male	195	61.1
Female	124	38.9
Total	**319**	**100**
Age		
Below 20	9	2.8
21- 30	21	6.6
31- 40	138	43.3
Above 40	151	47.3
Total	**319**	**100**
Educational level		
WAEC/NECO/NABTECH	7	2.2
Diploma/Certificate	7	2.2
B.Sc/HND	168	52.7
MSc/MBA/PhD	137	42.9
Total	**319**	**100**
Occupation		
Student	25	7.8
Unemployed	24	7.5
Employed	270	84.6
Total	**319**	**100**

The finding revealed that all the respondents either had acquired one form of education or the other. The majority had a MSc/MBA/PhD (42.9%), this was followed by B.Sc/HND (52.7%) and the rest had a Diploma/Certificate and WAEC/NECO/NABTECH (2.2%). The high level of education among respondents, with 95.6% possessing

at least a Bachelor's degree, suggests a sample with a strong understanding of technology and its potential applications. This educational background likely influences their expectations and perceptions of technology within the hotel environment.

The occupation revealed that (95.4%) of the respondent were employed, about 3% were unemployed while others were student (1.6%). The high employment rate (95.4%) among respondents suggests a sample primarily composed of travelers or individuals with disposable income for leisure /travel.

Objective: Ascertain the influence of robotic technology on guest satisfaction in hotels

Table 1: The mean response of the influence of robotics technology on guest satisfaction in hotels in South-East, Nigeria

S/N	Influence of robotics technology on guest satisfaction in hotels in South-East, Nigeria	SA	A	D	SD	Total	Mean	Std .D	Remark
1.	The use of robotics in hotels will provide personalized services in areas such as room services, concierge etc	51 (16%)	147 (46.1%)	121 (37.9%)	0	319	2.78	0.702	Accepted
2.	The use of robotics will align language translation and interpretation	145 (45.5%)	103 (32.3%)	71 (22.3%)	0	319	3.23	0.791	Accepted
3.	The use of robotics in hotels makes guests feel uneasy and uncomfortable	101 (31.7%)	102 (32.0%)	116 (36.4%)	0	319	2.95	0.825	Accepted
4.	The use of robotics will lead to job displacement in many areas of hotels	111 (34.8%)	165 (51.7%)	43 (13.5%)	0	319	3.21	0.662	Accepted
	Clustered mean for decision rule: -						**3.04**		Accepted

Source: Field Survey, 2024.

Table reveals that 16% of the responses strongly agreed, 46.1% agreed, while 37.9% disagreed that the use of robotics in hotels will provide personalized services in areas such as room services, concierge etc. The responses was accepted with the standard deviation of 0.702 and mean value of 2.78 which is more than the acceptable mean level of 2.5. The result also showed that 45.5% of the respondents strongly agreed, 32.3% agreed, while 22.3% disagreed that the use of robotics will used for language translation and interpretation. The responses was accepted with the standard deviation of 0.791 and mean value of 3.23 which is more than the acceptable mean level of 2.5. The result also showed that 31.7% of the respondents strongly agreed, 32.0% agreed, while 36.4% disagreed that the use of robotics in hotels makes guests feel uneasy and uncomfortable. The responses was accepted with the standard deviation of 0.825 and mean value of 2.95 which is more than the acceptable mean level of 2.5. The result also showed that 34.8% of the respondents strongly agreed, 51.7% agreed, while 13.5% disagreed that the use of robotics will lead to job displacement in many areas of hotels. The responses was accepted with the standard deviation of 0.662 and mean value of 3.21 which is more than the acceptable mean level of 2.5.

The grand mean value of the items was 3.04 which is greater than the acceptable mean value of 2.5. This implied that the use of robotics in hotels will provide personalized services and translate languages for guests, replacement of jobs in hotels in South-East, Nigeria. The finding revealed that that the use of robotics in hotels will provide personalized services and translate languages for guests, replacement of jobs in hotels in South-East, Nigeria. This supports Belanche, Casaló and Flavián, (2020) that posited that there is a strong connection between humans and robots and there is a customer behavioral intentions to use and recommend service robots in hospitality service. Tung and Au, (2018) also support the assertion that that guests and robots can co-create novel experiences and some guests even want to interact and build a connection with robots. Also, Gupta, Modgil, Lee, Cho, and Park, (2022) asserted that AI enabled robots facilitates automation, gathers information, and provide personalization and seamless service in the hospitality industry. While, Pizam, et al (2022) argued that it takes users long time to comprehend and implement the technology due to the complexity aspect of robotics technology. They asserted that it is imperative that complexity of robotic technology be addressed before it can be successfully implemented in a hospitality setting.

Hypothesis

H$_O$: Robotics technology has no significant influence on guest satisfaction in hotels.

Table 2: Regression analysis for test of hypothesis

Variables	Coefficient	Std. Error	z-test
(Constant)	1.406	0.059	23.959***
Robotics technology	0.485	0.024	20.322***
R^2	0. 752		
R^{-2}	0. 566		
F-ratio	412.977***		

Source: SPSS Output 2024

From the regression analysis in Table 4.12, the value of the value of the F-stat, according to the result of the regression is given as (412.977). From the regression analysis above, the value of the R^2 is 0.752, this suggest 75.2% of the changes in guest satisfaction is caused by the independent variables (Robotics technology). The decision rule for the F-stat is goodness of fit statistic is satisfactory. The intercept β_0 (1.406) shows the value of guest satisfaction when the values of the independent variable are indeterminate or when they are zero; this means that when the independent variable (Robotics technology) is 1.406. On the specific, the co-efficient Robotics technology was significant at 1% and positively related to guest satisfaction, this implies that an increase in Robotics technology will increase the guest satisfaction in in hotels in South East Nigeria, also a unit increase in Robotics technology will lead to 0.848 increase in guest satisfaction. Hence, since sig (p = 0.000 < 0.01) is less than the 0.01 alpha, thus the rejection of the null hypothesis, meaning that robotics technology has a significant influence on guest satisfaction in hotel. The implication is that the use of robotics will align language translation and interpretation, the use of robotics in hotels makes guests feel uneasy and uncomfortable and the use of robotics will lead to job displacement in many areas of hotels.

This result of the hypothesis aligns with Tung, and Au, (2018) who states that there is a growing trend of technology integration in the hospitality sector and the increasing guest expectation for seamless and tech-driven experiences and hotels are increasingly adopting robotic solutions for various tasks, from check-in and concierge services to room service delivery and cleaning. This shift is driven by the potential of robotics to enhance efficiency, personalize services, and offer novel experiences, ultimately contributing to higher guest satisfaction. The positive perception of robotics in hospitality can be attributed to several factors. Moreover, robots can provide consistent service quality, eliminating human errors and variability, which aligns with the findings of Çallı, Çallı, Çallı, and Çallı, (2022) who highlighted the importance of service consistency in guest satisfaction.
However, the successful integration of robotics in hotels requires careful consideration. While the technology holds immense potential, guest acceptance and satisfaction depend on factors like robot design, functionality, interaction quality, and the overall service context. This compliments Pizam, Ozturk, Balderas-Cejudo, Buhalis, Fuchs, Hara, Meira, Revillae, Sethi, Sheng, State, Hacikaraa, and Chaulagain, (2022) and Marković, and Gjurašić, (2020) that stated that hotels need to strike a balance between automation and human touch, ensuring that robots complement and enhance the guest experience without feeling intrusive or impersonal.

Recommendations
Robotics technology demonstrated a significant influence on guest satisfaction, hotels should explore innovative ways to integrate robots into their operations. This could include utilizing robots for tasks like luggage delivery, room service, concierge services, or even entertainment. However, striking a balance between automation and human interaction is crucial. Ensuring that robots complement and enhance, rather than replace, human staff in delivering personalized and empathetic service is essential for maximizing guest satisfaction.

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