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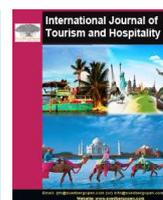
Research Paper

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Adaptation and Effectiveness of Artificial Technology Used by Selected Hotels in Quezon City

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Abstract

This quantitative study looks into the adaptation and efficiency of artificial technology in several hotels in Quezon City. Data from hotel security personnel were collected using a structured survey instrument to determine the amount of artificial technology integration and its impact on operational efficiency and guest happiness. The introduction of AI-powered features, such as smart room controls and security access, was a key determinant. Statistical techniques, such as correlation and regression, were used to examine the links between artificial technology usage and important performance measures like occupancy rates and customer ratings. The data show that artificial technology is widely used in the sampled hotels, and there is a favorable relationship between technology integration and operational success. The hotel sector has adopted technology to ensure the security and safety of their guests and company. The effectiveness of the technology ensures consumer satisfaction, and for security, the door cannot be opened by anyone. Hotels that have implemented artificial intelligence have seen improvements in their operations and performance. The study shows a measurable link between technology adoption and operational success, as well as providing valuable insights into the current state of artificial technology implementation in Quezon City hotels. The findings contribute to our understanding of artificial intelligence's role in the hospitality industry and have practical implications for hotel management looking to optimize their operations through smart technology investments.

Keywords: Artificial technology, Technology, Adaptation, Guest experience

1. The Problem and its Background

Artificial technology has grown in popularity in recent years, with more hotels implementing AI and robotics to automate tasks. AI-powered solutions are considered to be clever enough to replace all human duties while enhancing transaction speed and accuracy. According to Davenport and Ronanki (2018), in order to successfully deploy artificial technology in commercial activities, organizations must overcome numerous barriers. Furthermore, because it is still too expensive or dangerous to adopt, technology is new, and most managers lack knowledge and understanding of how to apply it. Furthermore, there is uncertainty about the technology's varied effects, which could have negative consequences.

Tussyadiah (2020) describes those which progress beyond the simple automation of chores to be able to learn and make their own.

Buhalis and Sinarta (2019) noted that the inventive character of these disruptive technologies has resulted in new innovations in technologies, services, and hospitality components such as co-creation, data-driven, real-time customer-focused, and experience-improving. The latest technologies, such as artificial intelligence (AI) and robots, have already been integrated into a number of famous hotels for operational chores ranging from back-office functions to guiding consumer interactions (Epiknetworks, 2018).

Hilton's unique concierge robot, popularly known as "Connie," shows the continued integration of modern technology in the hotel industry (Hilton, 2016). Connie, named after the hotel chain's founder Conrad Hilton, exemplifies the industry's commitment to improving guest experiences through automation and AI (Hilton, 2016). Connie expertly manages check-in processes, makes tailored eating recommendations, and provides helpful information about nearby activities, all while retaining a friendly and engaging approach (Hilton, 2016). Its presence highlights the developing landscape of hospitality, demonstrating how AI can supplement traditional guest services to deliver memorable and effortless stays for Hilton's customers (Hilton, 2016).

A few hotels in the Philippines now use artificial intelligence. Hotels in the Philippines had never used the new technology to secure their guests' safety. Security professionals constitute the major source of protection at hotels. The Philippines has steadily adopted contemporary technology.

Despite the fact that AI is still in its early stages in the Philippines, its impact on the economy is already being felt across a wide range of industries. To improve patient care and clinical outcomes, the healthcare industry has begun to employ AI technologies. The banking and finance sectors are also using AI to improve client experience. Because of the immense benefits that artificial intelligence can bring to the country, the Philippine government has begun to take action to expand the sector inside the country's economy. The Philippine Artificial Intelligence (PHAI) Roadmap is being created by the Department of Information and Communication Technology (DICT). Supporting the development and application of artificial intelligence.

This study seeks to analyze the many aspects of technological integration in the context of hotels. It seeks to evaluate the complicated interactions of artificial technology, shedding light on the challenges, opportunities, and consequences that arise when these technologies are utilized to improve hotel operations in a small group of hotels in Quezon City. This study seeks to provide a thorough understanding of the exciting possibilities of merging technology in the realm of hospitality operations by investigating the deployment strategy, results, and potential hurdles faced by hotels.

The study's gap lies from a lack of comprehensive, localized research that assesses how artificial technologies affect numerous areas of hotel operations and visitor experiences in Quezon City. While current studies frequently provide a broad overview of artificial technology in the hospitality industry, there is little research on specific technological implementations and their performance in the unique setting of Quezon City.

Therefore, the goal of this research is to assess how specific hotels use automation, machine learning, and artificial intelligence to improve company operations and, ultimately, the safety of employees, property, and visitors. This study aims to provide a full understanding of the many artificial technology platforms employed, such as chatbots, smart room systems, and facial recognition, as well as their efficacy in various hospitality situations, by focusing on a diverse variety of hotels. The study's goal is to identify best practices, challenges, and potential areas for improvement through in-depth assessments, as well as to provide useful insights for the hospitality industry to improve the integration and effectiveness of artificial technologies in hotels.

1.2. Background of the Study

Artificial Technology, often known as artificial intelligence, is one of the most advanced technologies available today. (Moisset, 2023) states that the application of AI in cybersecurity is rapidly expanding. As a result of the numerous cyber threats, the research is also said to underline the growing importance of AI in cybersecurity. Cybersecurity (Northport, New York, 2019) is excited to release the special inaugural year edition of the cybersecurity almanac, a handbook covering the most significant facts and statistics for tracking cybercrime and the cybersecurity sector.

The rapid progress of artificial technology has drastically impacted several sectors, including the hospitality business. In recent years, hotels all over the world have embraced AI and automation technologies to increase operational efficiency and guest experiences. This technological transition will involve the use of self-service kiosks, AI- powered

chatbots, smart room systems, and automated reservation tools. These advances are intended to expedite operations, save costs, and provide more personalized and responsive services to guests.

In addition, it now plays an important part in security and safety. Machine learning algorithms sift through enormous data sets to uncover trends and potential security issues. Using AI technology, hotel management may better monitor access points and increase client profiling skills. AI systems can predict possible security issues by sending out timely notifications, allowing for swift response. Rajabion *et al.* (2020) underline the critical role that artificial intelligence plays in upgrading security systems, which also helps to eliminate human oversight and maximize the effectiveness of resource allocation.

Furthermore, fast expanding technology has forced hotels and other hospitality-related companies to modify how they address safety and security issues. Hotels use various technological advancements, such as artificial intelligence, the Internet of Things, and enhanced monitoring systems, to create a safer atmosphere. We use technology to strengthen security procedures, speed up workflows, and, most importantly, ensure the well-being and delight of our hotel guests.

Furthermore, as technology, such as electronics, becomes more prominent in hotels, more considerations must be considered when considering safety and security. These components work together to create a complete safety framework. These technologies enhance visitor comfort and safety by remotely monitoring environmental conditions such as temperature, moisture, and air quality. Panic buttons with location tracking and IoT connection enable personnel to respond more swiftly to emergencies. In a study released in Atzori *et al.* (2010), stress the importance of IoT in the hotel industry by showing how it simultaneously boosts productivity and safety standards.

Modern surveillance systems, on the other hand, have grown from crime-prevention tools to cutting-edge instruments focused on visitor safety. High-definition cameras and artificial intelligence can be used together to identify both current and prospective security threats, allowing for timely prevention measures. The study by Chen, and Wu (2021) discovered that monitoring systems that detect mishaps are vital to hotel safety.

Quezon City, as a major metropolitan hub in the Philippines, has a broad selection of hotels catering to various market sectors, ranging from luxury facilities to low-cost accommodations. Quezon City, with its lively hospitality sector and rising tourism economy, provides a unique background for exploring the application and efficacy of artificial technology in hotels. However, while worldwide and regional studies have investigated the overall benefits of such technology, there has been little research into how these innovations are used and their usefulness in the Quezon City hospitality environment.

Understanding the local adaption and effectiveness of artificial technology in this setting is critical for a variety reasons. First, it explains how technology can be adjusted to fit the individual needs and tastes of guests in Quezon City. Second, it assists hotel managers and owners in identifying best practices and methods for maximizing the benefits of technology while addressing any issues. Third, it provides essential information for technology suppliers to better tailor their products and services to the local market.

This study intends to close the knowledge gap by focusing on certain hotels in Quezon City and using a quantitative research method with a descriptive approach. The study will use structured questionnaires and performance measures to assess the influence of artificial technology on hotel operations, cost management, and guest happiness. By offering a complete examination of how various technologies are applied and their consequences, the study aims to provide practical insights and recommendations for improving the effectiveness of artificial technology in the hotel industry.

1.3. Statement of the Problem

1. What is the demographic profile of the respondents in terms of:

    a. Age

    b. Gender

    c. Educational Attainment

2. What is the level of effectiveness using artificial technology in daily operation of selected hotels in Quezon City in terms of:

    a. security

    b. safety, and

    c. human error?

3. What are the advantages of using artificial technology in selected hotels in Quezon City?

4. What are the issues and challenges in using artificial technology in selected hotels in Quezon City?

5. What are the recommendations of the researchers in the adaptation and effectiveness of artificial technology used by selected hotels in Quezon City.

1.4. Research Objectives

The researcher of this study conducted this research to identify the effectiveness of Artificial Intelligence in hotel establishments within the area of Quezon City. The following objectives that were identified and as follows:

1. Identify the demographic profile of the respondents.

2. Enumerate the levels of Artificial Technology in the hotels in Quezon City.

3. Identify the advantages in using Artificial Technology.

4. Identify the potential issues and challenges by using Artificial Technology.

5. Suggest recommendation and best practices of the Adaptation and Effectiveness of Artificial Technology used by hotels in Quezon City.

1.5. Significance of the Study

Since the research study deals with the Effectiveness of Artificial Technology used by selected hotels in Quezon City.

Further, this research may benefit the following stakeholders:

Hotel management and owners will receive insights into operational efficiency and strategic advantages, while hotel employees will benefit from a more positive work atmosphere and opportunities for professional development.

Guests will have more tailored experiences, resulting in higher pleasure and loyalty. Technology vendors will gain vital market input and discover new business opportunities. The hospitality industry will profit from best practices and benchmarking data, whereas academia will receive case studies and research opportunities.

Policymakers will have the data they need to develop supporting regulations, and the local economy will benefit from greater tourism and job creation.

The study will spur improvement and innovation throughout the hospitality industry, promoting economic and environmental sustainability.

1.6. Scope and Delimitation

The research study titled "Effectiveness of Artificial Technology Used by Selected Hotels in Quezon City" seeks to assess the influence of artificial technology on hotel operations and visitor experiences in the City. To provide a representative sample of the hospitality sector, the study covers a wide range of hotels in Quezon City, including luxury, mid-range, and budget places. The study will look into a variety of artificial technologies used in these hotels, including guest-facing solutions like self-service kiosks, AI-powered chatbots, and smart room systems, as well as back-end technology like automated reservation systems and energy management software.

The study will use a quantitative research strategy, collecting numerical data from hotel management, staff, and guests using structured surveys and questionnaires, with an emphasis on metrics related to operational efficiency, cost savings, and guest satisfaction. A descriptive technique will be used to carefully examine and summarize the obtained data, resulting in a detailed account of how these technologies are used and their impact. The study will look at both the operational benefits, such as workflow improvements and cost management, and the guest experience, measuring the convenience and satisfaction levels associated with technology-driven services. In addition, the study will look at the obstacles and limits that hotels experience while deploying and maintaining these technologies, providing a comparative analysis to find best practices and successful methods.

1.7. Definition of Terms

Artificial technology refers to modern technical systems and tools that use AI, machine learning, and automation to do jobs that traditionally need human intelligence. This study considers AI-powered chatbots, self-service kiosks, smart room systems, and automated reservation and management systems.

Effectiveness is the degree to which artificial technology achieves its intended results and aims. This includes increased operational efficiency, cost savings, higher visitor satisfaction, and an overall return on investment. Effectiveness is measured using a variety of metrics and performance indicators.

Operational Efficiency is a hotel's capacity to run its operations smoothly and effectively, as evaluated by the decrease in time, effort, and money necessary to complete activities. This includes things like faster check-in/check-out procedures, increased employee productivity, and optimized resource management.

Guest Experience refers to visitors' overall pleasure and perceptions of their hotel stay, which is influenced by a variety of elements such as service quality, amenities, and technological interactions. This encompasses the ease of use, customisation, and convenience offered by artificial technologies.

The quantitative research method is a systematic way to gathering and evaluating numerical data in order to measure the effectiveness of artificial technology. To collect measurable information, this strategy uses structured surveys, questionnaires, and performance indicators.

Descriptive Approach is a research strategy that seeks to provide a complete description and summary of current phenomena without changing factors. In this study, data is classified and summarized to illustrate how artificial technologies are deployed and their impact on hotel operations and visitor experiences.

Self-Service Kiosks are automated kiosks located in hotel lobbies or other places that allow visitors to check in or out, request services, and access information without having to deal directly with hotel staff.

AI-Powered Chatbots are artificial intelligence systems designed to replicate human communication and assist clients with inquiries, bookings, and other services via text or voice interactions.

Smart Room Systems technology enables customers to control different features of their hotel room, such as lighting, temperature, and entertainment systems, using voice commands, smartphone apps, or in-room panels.

Automated Reservation Systems are software solutions that handle and process hotel bookings, including room availability, price, and reservations, without requiring manual interaction from staff.

Energy Management Tools are technologies used to monitor and control energy usage in hotels, with the goal of lowering costs and environmental impact through energy consumption automation and optimization.

Cost savings refer to the reduction in expenses accomplished via the use of artificial technology, such as lower operational costs, reduced labor requirements, or enhanced resource management.

Return on Investment (ROI) is a financial benefit derived from investing in artificial technology that is calculated as the ratio of net return to investment costs. It evaluates the entire value and influence of technology on hotel performance.

Challenges and Limitations, challenges and hurdles experienced with installing and sustaining artificial technology, such as technical issues, high expenses, reluctance to change, and staff training requirements.

Best Practices are established ways and tactics for leveraging artificial technology to achieve desired goals while also improving hotel operations and visitor experiences.

2. Review of Related Literature and Studies

This chapter includes literature and studies from local and foreign sources which provided the necessary background of this study. The literature presents theories related to Adaptation and Effectiveness of Artificial Technology used by selected hotels in Quezon City.

2.1. Artificial Technology

Artificial technology and robot-based applications are two examples of cutting-edge technology that the hospitality sector is gradually adopting. These technologies are having an impact on operational expenses and customer service quality. Robotic technologies have an impact on and revolutionize various aspects of hotel operations. Service robots come in two varieties: stationary and mobile. The immobile robots stay in their set places. They may therefore work in the lobby, kitchen, or bar. Robots that move about on wheels, have several limbs, fly, or do tasks underwater. They can carry out tasks including mowing lawns, bringing items to rooms, carrying luggage, cleaning floors and pools, and offering entertainment services (Ivanov and Webster, 2017).

Additionally, they are able to work nonstop and complete the same activity repeatedly hundreds of times without getting frustrated (Ivanov and Webster, 2018). The service robots used in hotels carry out duties like greeting visitors, taking orders, preparing food, giving room service, cleaning rooms, and checking guests in and out (Ivanov and Webster, 2017: 75; Hospitality Technology, 2017). The efficiency of the duties completed by the hotel staff is evaluated throughout time. The labor cost decreases when the time is reduced. As a result, the investment in the service robot will be smaller than the investment in people (Tussyadiah and Park, 2018).

Today, the hotel sector is the foundation upon which tourism is based, and it is currently regarded as one of the most significant and developed economic activities worldwide (Jawabreh, 2020). Perhaps the nature of hotel services, their diversity, and their degree of improvement lead us to the intended objective, which is the level of advancement of the hotel business. The effectiveness of hotel management, the degree to which they take into account the fundamentals of administrative organization, the value of the human factor, the consistency of the accounting method used, and the extent to which the information generated by the system was used all play a role in the success of the industry.

Meanwhile, in the article of GGRASIA (2022) At the City of Dreams Manila casino resort in the Philippines, AI technology is being utilized to count and verify casino chips. In addition, comparison to how the task was previously completed by staff workers, the AI-based "machine vision platform" is reported to have "eclipsed the human benchmarks," "reaching 99.7 percent accuracy while massively increasing speed." Palos (2022), senior vice president and global chief information officer at Melco Resorts, who is also cited in the release, added that the system scales have the capacity to process data, which significantly improves the loyalty program's operational accuracy, service quality, and guest experience.

On the other hand, Galea-Pace (2020) Okada Manila embraces technology to enhance the service it provides to its customers. Moreover, Paragon Digital Lifestyle was created by Okada as one of the most cutting-edge user interfaces that was used. A permission to use a user interface that is tablet-based in all hotel rooms. The tablet serves as the user's central point of control for all room elements, including running the TV, using the internet, and opening and closing the drapes. The visitor's tablet effectively serves as the room's interface for communication.

2.2. Security and Safety

The use of automation and personalization in AI is transforming the hotel sector by improving the client experience. Hotels are now able to provide their customers with individualized services and unique experiences thanks to the application of AI in the industry. The way guests engage with hotels has changed as a result of AI adoption in the hospitality sector. AI technologies start working as soon as a guest purchases a room, assessing their information and preferences to develop a customized experience.

According to Sabio (2023), The way guests engage with hotels has changed as a result of AI adoption in the hospitality sector. AI technologies start working as soon as a guest purchases a room, assessing their information and preferences to develop a customized experience. Hotels may also automate a number of activities using AI technology, including the check-in and check-out processes. This makes it unnecessary for visitors to wait in lengthy lines and speeds up the entire procedure, creating a seamless and effective experience. Hotels can increase operational efficiency, optimize staffing, and eventually improve client pleasure with the use of AI.

Additionally, AI is being used to raise hotel security and safety requirements. Unauthorized individuals can be found and potential security risks can be avoided using facial recognition technology. Real-time monitoring capabilities of surveillance systems driven by AI help to ensure the security of both workers and visitors. By utilizing artificial intelligence to offer a tailored and automated visitor experience, AI in hospitality is transforming the hotel business. AI is poised to transform the way hotels operate and engage with their visitors by analyzing data, providing specialized services, automating procedures, and enhancing security Sabio (2023).

2.3. Human Error

Cobanoglu *et al.* (2019), found that non-humanoid robots, rather than industrial robots, came to mind when the words "robot" or "service robot" were stated. The majority of hotel managers said they would not want to be served by a robot. They believe that human communication capabilities are crucial for the travel and tourism sector. They are quite interested in using service robots, despite the fact that they do not want to be served by one. Only one hotel manager gave an unfavorable answer to this query. It was clear that the managers believed that service robots had certain advantages over human workers but did not think that their departments should be contacted one-on-one for employment.

Furthermore, Braun *et al.* (2023), by offering new capabilities, AI radically alters the way employees work. The focus of human tasks shifts to supervision, when the person affirms or disputes the judgment that has been made. Also, analyze and clarify how the effectiveness of human mistake detection is influenced by particular information design using the signal detection theory. Senders *et al.* (2020), examines the nature of human error—its causes and origins, its classifications, and the extent to which it is possible to predict and prevent errors and their impact.

Barassi (2021), in the article of New York Times, Black guy Robert Julian-Borchak was only detained for a crime he didn't commit in Detroit due to a facial recognition AI system glitch. Law enforcement agencies and courts are increasingly

using AI systems to track, profile, and assess our potential guilt or innocence. The United States is not the only country impacted by these changes. Also in Europe, predictive policing and criminal justice systems are quickly adopting algorithmic logics.

Artificial intelligence has altered the Philippine economy and society Concepcion *et al.* (2019). AI impacted the human race so quickly that it now affects many facets of daily life. As a result of human error and lessening the error caused by employees, many businesses now use or plan to use this kind of technology. This technology is replacing human labor not only through digital systems but also through physical labor performed by everyday people. The advancement has a significant impact on humanity, allowing for speedier production and influencing industries all over the world. The Philippine government is still working on implementing an advanced technology system to improve and advance its policies.

2.4. Advantages of Using Artificial Technology

It has had a revolutionary impact on the field of information technology since artificial intelligence is a subfield of computer science and involves creating smart devices and programs that behave and interact like humans (Kajraman *et al.*, 2011). It is a term that is often used to refer to the area of science that aims to enable machines to perform functions like logic, planning, learning, and perception (Martnez-de-Pisón *et al.*, 2010; Prentice *et al.*, 2020; Schank *et al.*, 1991; Schulze-Horn *et al.*, 2020; Shrivastava and Mahajan, 2016; Wu et al., 2020; Wang *et al.*, 2022) As a result, the artificial technology could be expanded to include a range of associated abilities, such as self- awareness, emotional intelligence, and creativity (Wamba-Taguimdje *et al.*, 2020).

According to Saleh *et al.* (2021), Interest in the growth of the communications and information technology sector began to grow globally. Artificial intelligence supports the human intellect within technologically advanced organizations and has assisted organizations in improving the flow of data and information across their many departments. Through computer programs that keep up with human behavior, artificial intelligence strives to become more human-like. These systems are distinguished by their intelligence, rapid electronic processing of operations, and quick delivery of data and information to users for use in making decisions. The ideal technique to achieve a suitable answer can now be determined by artificial intelligence, which can also use routine activities to get the best results in addition to downloading documents automatically and analyzing input data. Artificial intelligence is free from errors, does not feel tired, and does not know fatigue.

On the other hand, Barak (2023), by using AI, hotel companies may improve productivity, improve the guest experience, and boost revenue, giving them a competitive edge. simplifying the guest experience from booking to checkout to increase efficiency. Increased income through improved pricing, marketing, and upselling Improved guest service through personalization, recommendations, and chatbots.

All hotels in the Philippines accept payments by card or cash as a natural mode of payment, although the process is complex and takes a long time while waiting for the final receipt (Yamon *et al.*, 2022). As a result, building a system that makes use of tools or applications helps speed up hotel operations (Concepcion *et al.*, 2019). The Philippine industry and its society has been disrupted by Artificial Intelligence. AI struck the human race with a so much speed that it covers different aspect of life in this world, that's why many companies are implementing or employ this kind of technology for their business. This technology replacing the work of human not just by digital systems but also the physical job done by normal people. The improvement of research and development has a big impact to mankind for production in faster way and affecting the industries worldwide. The Philippine government is still in the process of adopting the advance technology system to boost and strengthen the policies and development.

2.5. Issues and Challenges in Using Artificial Technology

The hospitality sector is slowly changing as a result of AI by improving the visitor experience with individualized services, automatic check-ins, and more productive operations. But AI also has its own share of difficulties and constraints. The employment of AI technology in the hospitality sector can give rise to a number of challenges, including less contacts between people, job loss, privacy violations, and ethical dilemmas, among many others.

According to Krzak (2023) reduced human touch is one of the most obvious disadvantages of AI technology in the hospitality sector. AI-powered chat bots and virtual assistants are replacing human-to-human interactions, which might result in a loss of intimacy and empathy. Customers may become dissatisfied with the service if they think the communication is impersonal and robotic. In addition, the protection of customer data is one of the biggest issues with AI technology in the hotel sector. AI algorithms gather a ton of information about visitors, including their preferences, spending patterns, and private data. If the incorrect people obtain this knowledge, it could be used against them. Legal

repercussions for the hospitality business could emerge from unauthorized access to guest data. Moreover, when using AI in your hotel business, there are several dangers and difficulties to consider. They include difficulties with cost and execution, reliance on technology, the possibility of job displacement, and bias in favor of automation Barak (2023).

Furthermore, Travel Pedia (2023), Smart hotel visitors need to be aware of the potential of hacking. Smart keys, for instance, can be intercepted up to 15 feet away. Additionally, hackers have the ability to follow your whereabouts, take your digital signature, and run up bills in your name. Also, data security, protection, quality, and management are the main problems. Cybercriminals may target the data and use it against the owner. A few things to consider include the over-reliance on sensors, data security, and data authenticity. In addition, challenges are made worse by tourism businesses' poor data literacy. Data collecting, statistical analysis, machine learning operations, and moral AI design are talents that the majority of professionals lack.

According to Cabanoglu *et al*. (2019) the limitations of service robots operating in hotels include their inability to make decisions and handle specific difficulties unless specially equipped to do so. There is general consensus that there will be more robotics research, although some managers are worried about these advancements. One management claimed that the use of robots would make various professions obsolete, leaving their workers unemployed.

2.6. Related Studies

The study by Cobanoglu et al. (2019) discovered that managers had favorable interactions with technology and profited from it in both their personal and professional life. It was claimed that certain managers had to follow technology inexorably in their life due to the tourism industry's dynamic character. In practically every area of the hotels where they worked, it was evident that they benefited from technology. Customer service, accounting, and security departments have been found to use modern technologies, particularly in the front office. Despite their propensity for using technology, hotel management have described robots as unattractive and lifeless. It was found that non-humanoid robots, rather than industrial robots, came to mind when the words "robot" or "service robot" were stated. The majority of hotel managers said that they would not want to get service from a service robot.

2.7. Theoretical Framework

2.7.1. Social Cognitive Theory by Albert Bandura

This theory can be applied to understand how people's behaviors and perceptions are influenced by observing others. To examine how individuals' behaviors, attitudes, and perceptions are influenced by the adoption and effectiveness of AI, IoT, and surveillance systems in motel environments. It investigates how guests and motel employees observe and learn from the use of these technologies, with a focus on the impact of modeling, self- regulation, and environmental factors in molding their security-related decision-making processes. The research intends to investigate how these advanced technologies effect the perception of safety, the development of security practices, and ultimately lead to increased security measures within hotel businesses.

2.7.2. Security and Safety Theory by Ludek Lukas

These theories, which incorporate ideas from criminology and safety management, will aid in assessing the conceptualization of security and safety within motels, as well as the role of technology in strengthening or compromising them.

2.7.3. Interaction between Humans and Technology

Technology influences how people behave, engage, learn, and evolve, both in their personal lives and in their interactions with others and in their larger communities. Technology, at its best, enables people to bridge barriers, improve communication, and increase the efficiency of complex activities. However, growing absorption in the digital world surely introduces new issues and can have a negative impact on human-to-human connections.

2.8. Conceptual Framework

The conceptual framework for this research revolves around the interplay of demographic profile of the respondents, the benefits of the use of artificial technology in daily operation, advantages of using artificial technology, and issues and challenges in using artificial technology.

The conceptual framework is further explained as follows:

Box 1 shows the demographic profile of the respondents, the benefits of the use of artificial technology in daily operation, advantages of using artificial technology, and issues issue and challenges in using artificial technology.
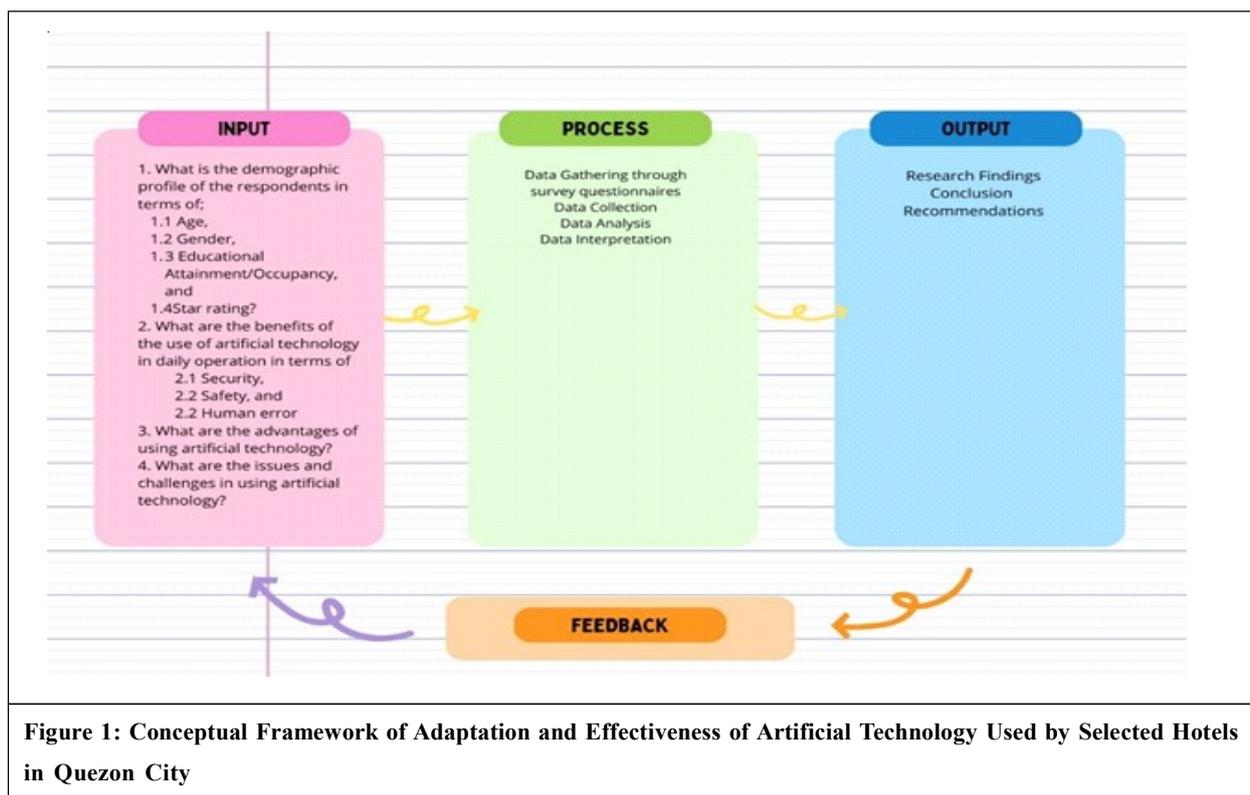
Figure 1: Conceptual Framework of Adaptation and Effectiveness of Artificial Technology Used by Selected Hotels in Quezon City

Box 2 shows the different process in the study such as data gathering, data collection, data analysis and data interpretation.

Box 3 shows the research finding, conclusion and recommendations of the researchers to the research study.

Box 4 shows the feedback from input, process and output.

3. Methodology of the Study

This section shows the methodology used in conducting the collection of data for the study. It demonstrates the methods and techniques utilized which depicts the kind of research and ensures that research questions are answered methodically. It also presents the locale of the research which explains the environment or place of the study. Thus, it specifically identifies the target population and the respondents. This section is also preceded by Research Instruments, which provides an explanation of the kind of instrument that is used to acquire data including the data gathering procedures undertaken to collect the information required for the research. It details the sequence of events that occurred while collecting information from the respondents. It also shows sampling techniques used including the distribution of the respondents in the study and its percentage. Lastly, the ethical consideration which protects the privacy of the respondents.

3.1. Research Design

To study the Effectiveness of Artificial Technology used by selected hotels in Quezon City, the researcher used the descriptive method utilizing the survey questionnaires in gathering data. Descriptive research gathers quantifiable information that can be used for statistical inference on the target audience through data analysis. It gives meaning to the quality and standing of facts that are going on such as the information. Descriptive research is concerned with conditions or relationships that exist, opinions that are held and effects that are evident or trends that are developing. It is primarily concerned with the present, although it often considers past events as they relate to current conditions.

Descriptive method was used because this research purports to present facts concerning the Effectiveness of Artificial Technology used by selected hotels in Quezon City.

3.2. Sampling Method

The research was conducted in Quezon City. In order to obtain reliable and specific results, it was participated by employees, particularly security staff as the respondents of the study. To produce valid and reliable results, sufficient representatives of the population and appropriate sampling procedures will be employed in the study. Random sampling will be use since the respondents will determine through the judgment of the researcher and the objective of the research.

3.3. Research Instrument

The survey questionnaire was the main source in getting the data needed to answer the statement of the problems. The questionnaire is anchored on the Effectiveness of Artificial Technology used by selected hotels in Quezon City. Hence, revisions were made in order to ensure that all indicators fit the study. The survey questionnaire is composed of 4 parts. Part 1 discusses the profile of the respondents, Part II obtains information about the assessment of the benefits of the use of artificial technology in daily operation, while Part III the advantages of using artificial technology and Part IV is the issues and challenges of using Artificial Intelligence. Further, interviews were also conducted to verify some information taken from the survey questionnaire.

In order to test the validity of the survey instrument, it was presented to experts for validation as follows: the first validator is a professor and designated as the head of security for the facilities, teachers and students in Bulacan State University Sarmiento Campus; the second validator is a Head of Security of a hotel; and the third validator is a Hotel Manager. Validation focuses on the applicability of the indicators for each of the variables. Content validity seeks to answer the question of whether the current test covers all relevant items needed to answer the research question.

3.4. Data Gathering Procedure

Based on the random sampling procedure. After the survey questionnaire was validated and verified and upon the approval of the researcher's adviser, the researcher proceeded to distribute copies of the questionnaires to the respondents, where the hotel is located. The questionnaires were hand-carried and collected after the survey.

3.5. Statistical Treatment of Data

Once the data is collected, it will be organized and classified based on the research design and the problem formulated. They will be tallied and tabulated to facilitate the presentation and interpretation of result using the following:

3.5.1. Frequency and Percentage

The percentage and frequency distributions will be used to gather information in the Effectiveness of Artificial Technology used by selected hotels in Quezon City.

On the other hand, percentage will be computed by dividing the frequency with the total number of respondents that participated in the survey.

The formula is presented below:

Percentage (%) = f/n

where

% = percentage;

f = frequency;

n = total number

3.5.2. Weighted Mean

The mean in each item will be multiplied by a number (weight) based on the item's relative importance. The result aggregate/summation will be divided by the total number of respondents. The formula is:

$$w = \frac{\sum_{i=1}^{n} wiXi}{\sum_{i=1}^{n} wiXi}$$

w = weighted average

Σ = summation

n = number of items to be averaged

wi = weights applied to x values

Xi = data values to be averaged.

The weighted means will give qualitative equivalents using the following set of values.

3.5.3. Ranking

This was used to analyze the challenges and problems regarding issues and challenges in using artificial technology.

Table 1: Weighted Mean		
Scale	**Weighted Mean**	**Degree of Agreement**
1	1.00-1.49	Not effective at all
2	1.50-2.49	Somewhat ineffective
3	2.50-3.49	Neutral
4	3.50-4.49	Somewhat effective
5	4.50-5.00	Very effective (VE)

3.6. Ethical Consideration

Bulacan State University - Sarmiento Campus has recently implemented the requirement for the identification and implementation of specific ethical considerations in all theses to ensure that ethical requirements are adhered to in order to protect the interests of research participants. As a result, the researcher got institutional approvals and authorization from the consulted studies and journals, as well as permission to modify the survey questionnaire.

The following ethical considerations informed the conduct of this research:

1. The confidentiality of respondents was respected. They were told that it won't happen. be revealed in any way.

2. The researcher got informed consent from the resort owners/managers of the required persons, which included the pertinent information described in the preceding sections of the study.

   In addition, they were informed that participation was voluntary, ensuring that no one was coerced or tricked into taking part.

3. Throughout the study, the research data were kept confidential.

4. The researcher will inform the respondents briefly that the information they provided remained confidential.

   Lastly, the data that will be gathered from the respondents will be kept confidential in compliance with the Republic Act 10173 otherwise known as the Data Privacy Act 2012 and shall only be used for research purposes only.

4. Presentation, Analysis, and Interpretation of Data

This chapter discusses the data analysis and findings from 52 questionnaires completed by Hotel Security Personnel in Selected Hotels in Quezon City. This chapter consists of the result of the survey questionnaire. According to the specific questions on the statement of the problem, the said data were presented in tabular form. This research's analysis, presentation and interpretations are all covered in this chapter.

4.1. Profile of Respondents

Table 2 shows that the majority of the respondents (54.81%) were in the age range of 31-40 years old, followed by those who were in the age range of 41-45 years old (19.23%). The least number of respondents (1.92%) were in the age range of 51-55 years old.

Table 1: Frequency and Percentage Distribution of the Respondents		
Age	***f***	**%**
25-30	7	13.46%
31-35	15	28.85%
36-40	13	25.00%
41-45	10	19.23%
46-50	6	11.54%
51-55	1	1.92%
Total	**52**	**100.00%**

The data shows the gender distribution of the participants in the study. The total number of participants was 52, of which 36 were male and 16 were female (Table 3). This means that the male participants outnumbered the female participants by more than two to one. The percentage of male participants was 69.23%, while the percentage of female participants was 30.77%.

Table 2: Frequency and Percentage Distribution of the Respondents		
Gender	***f***	**%**
Male	36	69.23%
Female	16	30.77%
Total	**52**	**100.00%**

Table 4 shows that the majority of the respondents (65.38%) were in the range of College Undergraduate and High School, followed by those who were in the range of Others (19.23%). The least number of Educational Attainment (15.38%) were in the range of College Graduate.

Table 3: Frequency and Percentage Distribution of the Respondents		
Educational Attainment	***f***	**%**
College Graduate	8	15.38%
College Undergraduate	21	40.38%
High School	13	25.00%
Others	10	19.23%
Total	**52**	**100.00%**

4.2. Benefits of Artificial Technology

The data shows that the respondents moderately agree that artificial technology has benefits for security in the hotel industry. The highest weighted mean of 4.58 indicates that the respondents strongly agree that artificial technology can improve defense in the security department processes for ensuring security in the hotel. This suggests that artificial technology can enhance the efficiency and effectiveness of the security personnel and procedures in the hotel. The second highest weighted mean of 4.46 implies that the respondents moderately agree that artificial technology can be used as an alert system that detects threats of the hotel. This implies that artificial technology can provide early warning and notification of any potential danger or intrusion in the hotel premises. The third highest weighted mean of 4.29 reveals that the respondents moderately agree that artificial technology like A.I. the camera can face detection recognition and can analyze behavior. This implies that artificial technology can help identify and monitor the guests and staff of the hotel and their actions. The fourth highest weighted mean of 4.23 demonstrates that the respondents moderately agree that artificial technology can be used as a crime prevention inside hotel property. This implies that artificial technology can deter and prevent any criminal activity or violence in the hotel. The lowest weighted mean of 4.21 shows that the respondents moderately agree that the wireless cameras capture footage of the space to detect potential hazards. This implies that artificial technology can help detect and avoid any accidents or hazards in the hotel environment.

The overall weighted mean of 4.35 indicates that the respondents moderately agree that artificial technology has benefits for security in the hotel industry. This means that the respondents have a positive attitude and perception towards the use and application of artificial technology for security purposes in the hotel. This also means that the respondents recognize and appreciate the advantages and opportunities that artificial technology can offer for hotel security.

According to (Marques *et al.*, 2022), the hotel sector is progressively using technological advancements to improve safety and cleanliness standards. These technologies are meant to replace manual processes while also improving hotel security. The study aims to investigate how these advancements affect consumers' perceptions of hygiene and safety, which in turn influence their health risk and hotel selection behaviors. The study examines a variety of hotel technologies, including kiosk and mobile check-in systems, robot cleaning systems, and UV light cleaning systems. The findings show that robotics, artificial intelligence, and human-robot interactions are increasingly being employed to manage and maintain a safe and secure hotel environment for visitors and employees.

Table 4: Weighted Mean Scores of the Respondents of Hotel Security Personnel		
Benefits of Artificial Technology		
Security	**Weighted Mean**	**Verbal Interpretation**
Improving defense in the security department processes forensuring security in the hotel.	4.58	Strong Agree
Artificial technology is used as an alert system that detectsthreats of the hotel.	4.46	Moderately Agree
Artificial Technology like A.I. the camera can face detectionrecognition and can analyze behavior.	4.29	Moderately Agree
Used as a crime prevention inside hotel property.	4.23	Moderately Agree
The wireless cameras capture footage of the space to detectpotential hazards.	4.21	Moderately Agree
Overall	**4.35**	**Moderately Agree**

Table 5 data shows that the respondents moderately agree that Human Error has benefits for Artificial Technology in the hotel industry. The highest weighted mean of 4.29 suggests that respondents moderately believe that human error can eliminate mistakes when writing the guest information. The second highest weighted mean of 4.10 implies that the respondents moderately agree that Human trust in AT often leads to complacency and contributes to error. The third highest weighted mean of 4.06 reveals that the respondents moderately agree that Proper training and education can reduce human errors when working AT. The fourth highest weighted mean of 3.83 demonstrates that the respondents moderately agree that the errors in AT often stem from biased human data or input. The lowest weighted mean of 3.71 shows that the respondents moderately agree that human oversight can effectively mitigate most errors in AT systems.

The overall weighted mean of 4.00 indicates that the respondents moderately agree that Human error has benefits for the hotel industry. This means that the respondents have a positive attitude and perception towards the purposes of human error in the hotel. This also means that the respondents recognize and appreciate the advantages and opportunities that human error can do to hotel security.

According to Dyshkantiuk *et al.* (2020), technological advancements such as sophisticated multifunctional services that perform several purposes have had a substantial impact on the present hotel industry. Within a few months, adopting automation approaches can significantly improve room orders and eliminate human mistake in critical report processing. The essay discusses the use of modern hotel business management tools such as PMS, Channel Manager, booking module, Internet Acquisition, Website, and Chatbots. It also underlines the importance of a Revenue Management system, which uses complex algorithms and proven profitability methodologies to evaluate hotel data, identify growth opportunities, and forecast pricing modifications in order to maximize earnings. This system uses a variety of demand predicting algorithms to boost hotel profitability.

Table 5: Weighted Mean Scores of the Respondents of Hotel Security Personnel		
Human Error	**Weighted Mean**	**Verbal Interpretation**
Eliminate mistakes when writing the guest information.	4.29	Moderately Agree
Human trust in AT often leads to complacency andcontributes to errors.	4.10	Moderately Agree
Proper training and education can reduce human errorswhen working with AT.	4.06	Moderately Agree
Errors in AT often stem from biased human data or input.	3.83	Moderately Agree
Human oversight can effectively mitigate most errors in ATsystems.	3.71	Moderately Agree
Overall	**4.00**	**Moderately Agree**

Table 6 data shows that the respondents moderately agree that the use of Artificial Technology increases the safety of the hotels. The first weighted mean is 4.29 moderately agreed shows that Artificial Technology helps the hotels for identifying the potential risks that may happen. It means Artificial Technology has helped security personnel to identify risks. The second and the highest weighted means for safety is 4.48 moderately agreed shows that Artificial Technology alerts hotel employees when something happens like intruding the hotel. It shows that Artificial Technology is useful when someone is suspicious and they will immediately know what's happening. The third weighted means is also 4.29 and it shows that Artificial Technology reduces incidents and injuries that may occur in the hotel. The fourth weighted mean is 4.19 moderately agreed shows that Artificial Technology secures the guests information, it also helps to protect guests and their information for any cyber-attacks that may happen. The last weighted mean is 4.21 and it shows to foster a culture of proactive safety awareness, encourage open communication about safety concerns, provide regular training sessions, recognize and reward safety-conscious behaviors, and establish clear safety protocols throughout the organization.

According to (Sábio, 2023). AI is revolutionizing the hotel industry by enhancing the guest experience through personalization and automation. With the implementation of AI in hospitality, hotels can now offer tailored services and customized experiences to their guests.

The use of AI in the hotel industry has transformed the way guests interact with hotels.

From the moment a guest books a room, AI technologies kick into gear, analyzing data and preferences to create a personalized experience. For example, AI-powered chatbots can assist guests in booking rooms, answering questions, and providing recommendations for dining and local attractions.

Additionally, AI technology enables hotels to automate various processes, such as check- in and check-out procedures. This eliminates the need for guests to wait in long queues and speeds up the overall process, resulting in a seamless and efficient experience. With the help of AI, hotels can optimize staff allocation, improve operational efficiency, and ultimately enhance guest satisfaction.

Table 6: Weighted Mean Scores of the Respondents of Hotel Security Personnel		
Safety	**Weighted Mean**	**Verbal Interpretation**
The use of Artificial Technology is identifying potential risks.	4.29	Moderately Agree
Artificial Technology alerts hotel employees when something happened like intruding the hotel	4.48	Moderately Agree
Reduce accidents and injuries.	4.29	Moderately Agree
Artificial Technology safeguards personal information of theguest.	4.19	Moderately Agree
Create a culture of proactive safety awareness.	4.21	Moderately Agree
Overall	**4.29**	**Moderately Agree**

4.3. Advantages of Artificial Technology

The hotel Improves Check-in/Check-out Respondents moderately agree Weighted Mean: 4.13 that Artificial Technology often enhances the effectiveness of the check-in and check-out procedures. Chatbots Respond Effectively. There is a higher level of agreement Weighted Mean: 4.21 that chatbots powered by Artificial Technology frequently respond quickly and effectively to client requests. Identification of Unauthorized Access: Respondents moderately agree Weighted Mean: 4.12 that Artificial Technology often helps in identifying unauthorized access in the hotel. Energy Efficiency and Sustainability There is a modest level of consensus Weighted Mean: 3.79 regarding the potential of AI to increase energy efficiency and sustainability in hotels, showing some opportunity for improvement. Privacy and Security of Guest Data Respondents moderately agree Weighted Mean: 4.19 that Artificial Technology often enhances the privacy and security of guest data at hotels. The overall weighted mean of 4.09, coupled with the verbal interpretation "Often Encountered," suggests a generally positive and frequently observed impact of Artificial Technology across the surveyed areas in hotel management. This analysis indicates that while there is an overall positive sentiment, some areas, such as energy efficiency and sustainability, might benefit from further attention or improvement.

Table 7: Weighted Mean Scores of the Respondents of Hotel Security Personnel		
Advantages of Artificial Technology		
Advantages of Artificial Technology	**Weighted Mean**	**Verbal Interpretation**
Improves the effectiveness of the check-in and check-outprocedures.	4.13	Often Encountered
Chatbots powered by AT respond to client requests quicklyand effectively	4.21	Often Encountered
Helps in the identification of unauthorized access in thehotel.	4.12	Often Encountered
Artificial Technology can improve energy efficiency andsustainability in hotels.	3.79	Often Encountered
Improves the privacy and security of guest data at hotels.	4.19	Often Encountered
Overall	**4.09**	**Often Encountered**

According to Yfantidou *et al.* (2019), the goal of this study is to look into the impact of innovative components on the efficiency of hotel services. It is a review of the literature on hotel innovation, emphasizing the significance of unique product differentiation and enhanced tourist experiences. The essay provides new research and development concepts for hotel services. Hotels must be competitive and strategic as the competitive climate changes, adopting creative ideas and personalized products to deliver unique experiences for each customer. Being unique and competitive is a strategy for success, not just a notion.

Table 7 data shows that issues and challenges in using artificial technology are encountered by hotels. The overall weighted mean is 3.03 with the verbal interpretation of sometimes encountered. The issue of who gets the highest mean of 3.88 is the high cost of maintenance and the lowest mean of 1.65 is the privacy leakage of information.

According to (Nam *et al.*, 2020) the usage of cutting-edge systems such as AI and robot-based applications and services in the hotel business has come from the advancement of technology. Recently, there has been some debate about the deployment of such technologies and their impact on hotel operational costs as well as customer service quality. Given the significance of these new technologies, this article explores the trend of AI and robotics adoption in the hotel business. We used an in-depth case study method to interview senior hotel asset managers for this aim. The scenario is Dubai-based hotels, as Dubai has already established itself as one of the world's leading smart cities (Khan *et al.*, 2017).

Table 8: Weighted Mean Scores of the Respondents of Hotel Security Personnel		
Issues and Challenges		
Issues and Challenges	**Weighted Mean**	**Verbal Interpretation**
High cost of maintenance to keep it to date and operate if smoothly.	3.88	Often Encountered
Privacy leakage of information.	1.65	Rarely Encountered
Volatility of generation by product and its use.	3.45	Sometimes Encountered
Too much advancement of technology that others can't adapt that leads to frustration.	3.16	Sometimes Encountered
Malfunction when performing or using its function.	3.18	Sometimes Encountered
Difficulty in usage of the technology that leads to delay.	3.16	Sometimes Encountered
The technology's operating program has been infected by viruses.	2.92	Sometimes Encountered
Overall	**3.03**	**Sometimes Encountered**

5. Summary, Conclusion and Recommendations

5.1. Summary

The findings answered the study's problem statement. The researchers gathered information from various papers, journals, and studies linked to this subject and discovered that: The chapter includes data analysis and findings from 52 questionnaires filled out by hotel security personnel in Quezon City. The data were presented in tabular form and discussed in terms of analysis, presentation, and interpretation.

The majority of respondents (54.81%) were aged 31-40, followed by 41-45 (19.23%) and 51-55 (1.92%). The study had 52 participants, 36 of whom were male and 16 of whom were female, for a gender distribution of 69.23% male and 30.77% female. The majority of respondents (65.38%) were from college undergraduate and high school, followed by others (19.23%) and college graduates (15.38%).

The majority of respondents believe that artificial technology can improve hotel security by increasing the efficiency and effectiveness of security people and processes. It can also function as an alert system, detecting dangers and providing early notice of potential danger or incursion. Artificial intelligence can assist in the identification and monitoring of guests and employees, as well as the prevention of crime. Wireless cameras can record footage to help spot potential threats. Overall, respondents are pleased about the use and deployment of artificial technology for hotel security. The hospitality business is adopting technological innovations to improve safety and cleanliness standards, such as kiosk check-in systems, robot cleaning systems, and UV light cleaning systems. The study is to investigate how these advancements affect consumers' perceptions of hygiene and safety, which in turn influence their health risk and hotel selection behaviors. Robots, artificial intelligence, and human-robot interactions are rapidly being employed to manage and safeguard hotel environments for both guests and employees.

Respondents are moderately convinced that human mistake offers advantages for artificial intelligence in the hotel industry. Human error can help to eliminate errors while writing guest information. Proper training and education can help to prevent human error while working AT. The aggregate weighted average of 4.00 suggests that the respondents have a good view about the purposes of human error. High-tech advancements have had a huge impact on the modern hotel industry. The study explores the use of current hotel business management systems.

Artificial intelligence improves hotel safety by identifying possible problems and informing personnel when they occur. It also decreases mishaps and injuries, protects visitor information, and promotes a culture of proactive safety awareness. AI in hospitality provides individualized services and experiences to guests. AI-powered chatbots let guests book rooms, answer questions, and provide recommendations for restaurants and local attractions. AI technology helps hotels to automate a variety of activities, giving visitors a more seamless and efficient experience.

Artificial technology can improve the effectiveness of check-in and check-out procedures, chatbots, unwanted access detection, energy efficiency, sustainability, privacy, and guest security. Respondents are marginally convinced that chatbots can reply swiftly and efficiently to client requests. There is still opportunity for development in energy efficiency and sustainability. Overall, artificial intelligence has a generally good and commonly observed impact.

Technology is used in all aspects of hotel management that were surveyed. Hotels must be competitive and strategic, using creative concepts and personalized products to deliver unique experiences for each customer. Being unique and competitive is an effective success technique. Hotels confront obstacles in using artificial intelligence, with high maintenance costs and privacy breaches being the most serious issues. Hotels deploy artificial technology and robot-based services, but there is dispute regarding how they affect operational expenses and customer service quality.

Hotels confront obstacles in using artificial intelligence, with high maintenance costs and privacy breaches being the most serious issues. Hotels deploy artificial technology and robot-based services, but there is dispute regarding how they affect operational expenses and customer service quality. This article delves into the trend of artificial technology and robotics adoption in the hotel industry using an in-depth case study of Dubai-based hotels. The aggregate weighted mean is 3.03, and the verbal interpretation is Sometimes Encountered. Dubai has emerged as one of the world's leading smart cities.

5.2. Conclusion

The study titled "Effectiveness of Artificial Technology Used by Selected Hotels in Quezon City" sheds light on how artificial intelligence and automation technologies affect the hospitality industry in this particular setting. The findings show that the use of artificial technology considerably increases operational efficiency, lowers costs, and improves the overall visitor experience in the hotels evaluated.

Artificial technologies such as self-service kiosks, AI-powered chatbots, and smart room systems have shown promise in improving hotel operations, allowing for faster check-ins and check-outs, and providing individualized guest experiences. These improvements lead to increased guest pleasure by offering convenience, efficiency, and bespoke experiences that fit modern expectations.

The report also emphasizes that, while the incorporation of artificial technology has numerous advantages, there are significant problems, such as high implementation costs, technical difficulties, and the need for staff training. Addressing these problems is critical for optimizing the beneficial impact of technology and ensuring its long-term use in the hospitality industry.

Furthermore, comparative research of several hotel categories in Quezon City highlights the diverse levels of success and use of artificial technology. Luxury hotels, mid- range hotels, and economy accommodations all use technology differently, reflecting their specific operating requirements and guest expectations. This difference reveals optimal practice. Finally, the study underlines the significance of tailoring technology deployment to each hotel's individual needs and setting. It makes concrete recommendations for hotel management and technology providers to increase the effectiveness of artificial intelligence, operational methods, and guest experiences. Hotels in Quezon City can better leverage the potential of artificial technology to achieve sustained growth and a competitive advantage in the shifting hospitality market by resolving identified obstacles and implementing best practices and areas for improvement particular to each type of hotel.

5.3. Recommendation

Based on the findings of the study "Effectiveness of Artificial Technology Used by Selected Hotels in Quezon City," the following recommendations are made to improve the application and impact of artificial technology in the hospitality sector:

1. Tailor Technology Solutions to Hotel Type should choose and integrate artificial intelligence technology depending on their distinct category and operational requirements. Luxury hotels may benefit from advanced, high-touch technologies such as personalized AI assistants, whilst budget hotels may opt for low-cost options such as self-service kiosks. Tailoring technology to the hotel's profile maximizes relevance and efficacy.

2. Invest in Staff Training to fully realize the benefits of artificial intelligence, hotels should prioritize thorough staff training programs. Ensuring that personnel are proficient in the use of new technologies will aid in overcoming technical problems and increasing overall efficiency. As technology advance, it is important to provide regular training updates.

3. Hotels should create methods for regularly monitoring and evaluating the functioning of artificial technologies. This includes tracking key performance indicators (KPIs) like visitor happiness, operational efficiency, and cost savings. Regular reviews will assist identify areas of improvement and ensure that the technologies deliver the promised advantages.

4. Address adoption Challenges Hotels should devise ways to overcome common obstacles to the adoption of artificial technology. This includes funding for initial and ongoing maintenance, dealing with technological challenges, and overcoming employee reluctance to change. Collaboration with technology suppliers for assistance and troubleshooting can help to mitigate these issues.

5. Enhance visitor Interaction with technology to increase visitor happiness, hotels should prioritize improving the user experience of artificial technologies. This includes ensuring that self-service kiosks, chatbots, and smart room systems are easy to use, intuitive, and capable of giving accurate and prompt assistance. Soliciting visitor input on these technologies can provide useful insights for future improvements.

6. Hotels should use data obtained via artificial intelligence to personalize guest experiences. Hotels may improve overall guest happiness and loyalty by researching guest preferences and behavior to provide personalized services and recommendations.

7. Adopt Best Practices from Industry Leaders Hotels should stay current on industry developments and best practices relating to artificial intelligence. Learning from successful case studies and industry experts will help you understand how to use technology effectively and create unique solutions.

8. Hotels should address the long-term ramifications of implementing artificial technology, such as its sustainability and changing role in the sector. Planning for future upgrades and technical advances will guarantee that the technology remains relevant and provides value throughout time.

9. Encourage Collaboration with Technology suppliers Establishing good ties with technology suppliers can lead to greater support, customization, and integration of artificial technologies. Regular communication with providers can assist fix any concerns quickly and ensure that the technology is aligned with the hotel's operational objectives.

10. Explore developing technology Hotels should be aware of developing technology and trends in the hospitality business. Exploring and experimenting with new ideas can lead to further opportunities to improve visitor experiences and operational efficiency.

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