

# Impacts of Information Technology (I.T.) Integration on Front Office Personnel's Productivity and Service Quality on Selected D.O.T. Accredited Hotels in the Province of Cavite

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**Abstract:** The goal of the study is to determine the influence of information technology. Integration of front-office staff productivity and service quality in selected Department of Tourism (DOT) accredited hotels in the province of Cavite. The hospitality industry, particularly hotels, is adapting to the technology that can be included within their establishments, which can impact their services in terms of productivity and quality. This research focused on quantitative data by conducting surveys to get the perspectives of the front office personnel, the front office manager, and guests. The result of this research can be used to formulate a strategy and an action plan for administering the impact of I.T. integration on the front office operation's productivity and perceived service quality. Finally, some recommendations have been provided about other demographic profiles that will show a significant relationship with the integration of I.T. in the front office operations.

**Keywords:** I.T. Integration, Productivity, Service quality, front office operations.

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## 1. INTRODUCTION

Information technology (I.T.) can be considered one of the greatest inventions that anyone has ever seen and has become part of the hospitality industry. According to Murtaza Ali (June 2020), IT has become a vital role in both commerce and business sectors, helping different organizations be proficient in their work to increase output.

In the Hospitality Industry, the front office can be considered as one of the departments that will benefit the most with the implementation of IT. Before its integration, the process of the front office department on record keeping of their guest's information is manual procedure, paper based and there is no precise procedure in keeping track of the information of their guests which lead them to evolve from paper-based system to complex computerized technology (Smith E., 2020) The front office technology provides the personnel with more accurate information to maximize their efficiency and minimize the turn-around time. (Smith, E. 2020) Therefore, the front office department, like technology that we all know and admire, is due for an upgrade and Information technology is seen to be one of the keys to the evolution of the front office department.

However, the implementation of technology in the workplace comes with a challenge. There is a learning curve to implementing new processes such as technology. (Harvey, G. 2020) According to Sean Galea-Pace, (2020), The increasing level of encouragement to adopt technology for all companies for the enhancement of their services, and keep in mind that before introducing new technology in the establishment, it is essential to be certain that there is a strategy for its use. Despite the imaginable need, the due process of learning the use of information technology may cause others to feel they are at a disadvantage.

In relation to this, the government has implemented an act regarding the introduction of technology not only in the hospitality industry, but unto the educational system as well.

The Republic Act (RA) Number 10844 also referred to as the Department of Information and Communications Technology (DICT) the Act of 2015 “An act creating the Department of Information and Communications and Technology, defining its powers and functions appropriating funds therefore, and for other purposes.” This supports Information and Communication Technology (ICT) which will develop and help the advancement of technologies and investment opportunities. The growth of ICT makes every firm to intensify competitiveness and help enhance workers for faster service. Information technology (IT) is a separate industry that uses computers, complex networks, software applications, and other electronic or digital equipment to manage and communicate data. (Julia, 2016) creating more opportunities for aspiring front office personnel to adapt to the advancement of technology.

With the above-mentioned literature and legal basis, this study aims to know whether the implementation of IT integration in front office operations can cause an impact of being high or low in productivity and provision of service quality depending on the demographic profile and information technology skills of front office personnel in selected commercial hotels in Cavite.

### CONCEPTUAL FRAMEWORK

*“Impact of I.T. integration in front office operations”*

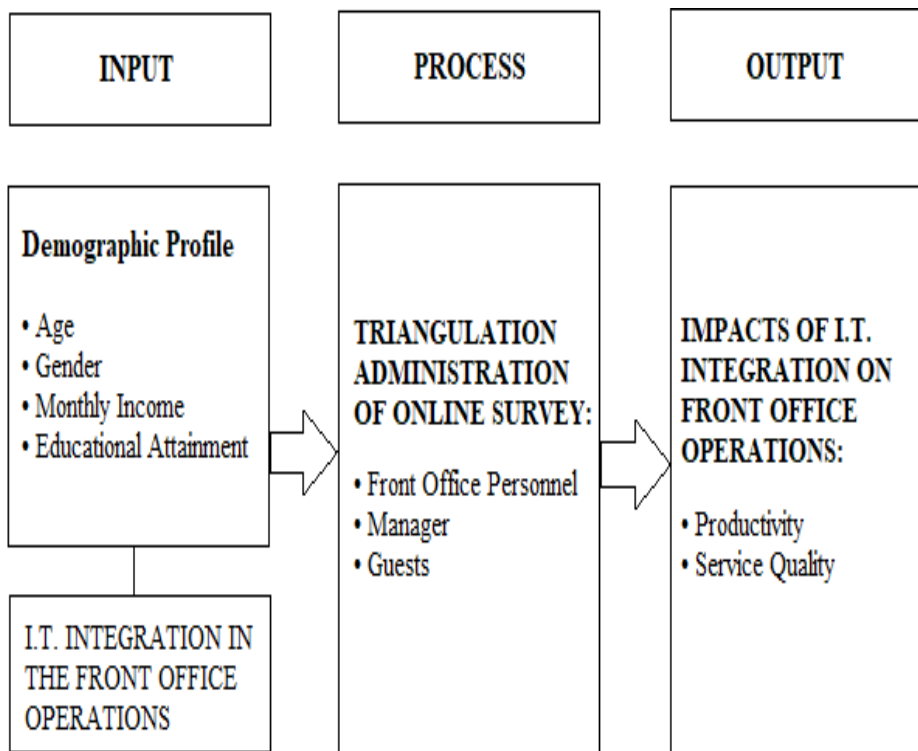


Figure 1

The diagram above shows that the productivity and provision of service quality are affected by the integration of information technology. It is assumed that distributing the survey to the front office personnel, management and guests via online application will show the impact of IT integration in the front office operations in terms of productivity and service quality. It is expected that after the integration of IT, front office operations, output will be improved

### **OBJECTIVE OF THE STUDY**

The aim of the study is to know whether the implementation of IT in front office operations can cause an impact of high or low in productivity and provision of service quality depending on the demographic profile and information technology skills of front office personnel in selected DOT Accredited hotels in The Province of Cavite.

### **SCOPE AND DELIMITATION:**

The study will focus on impacts of IT integration in front office personnel's productivity and service quality on DOT accredited hotels in Cavite. The hotels will be then selected upon approval of their willingness to take part in the study. The study will specifically identify the front office department of the hotel, specifically the front office personnel, manager of the establishment and the clients/ guests of the establishment.

### **STATEMENT OF THE PROBLEM**

The study seeks to determine the impacts of the implementation of IT in the front office operations, which will lead to having high or low productivity and service quality of the front office personnel in selected DOT Accredited hotels in The Province of Cavite.

Specifically, the study pursues to answer the following questions:

1. What is the demographic profile of the front office personnel, hotel manager and hotel guest in terms of;
  - 1.1. Age;
  - 1.2. Gender;
  - 1.3. Monthly income
  - 1.4. Educational attainment;
2. What are the impacts of IT integration in the front office personnel, hotel manager and hotel guest in terms of productivity in its implementation on front office operations?
3. What are the impacts of IT integration in the front office personnel, hotel manager and hotel guest in terms of service quality in its implementation on front office operations?
4. Is there a significant relationship between the demographic profile and information technology integration that will impact the productivity and service quality output in the front office operations?
5. What are the impacts of IT integration in the front office operations in terms of service quality and productivity?

### **STATEMENT OF HYPOTHESIS**

Based on facts and articles that researchers have gathered. It can be hypothesized that in Cavite, there is no significant relationship between the front office personnel, front office manager, and guest profile and the implementation of IT to front office operations which will determine whether productivity and provision of service quality is high or low, hence, this proposal.

## **2. REVIEW OF THE RELATED LITERATURE**

This chapter discusses the literature and studies related to the current studies conducted.

### ***Uses of technology***

Technology is widely used in the entertainment, transportation and advertising industry since the 19th century until today. For the service industry, advanced technology has been recently introduced to fast-emerging countries in Asia. The corporate owners and leading service industry providers had recognized the advantages and benefits of applying machinery to their businesses. Even companies use advanced technology as a way of advertising their product to their chosen market. Sharma (2016) found that technological innovations contribute a positive impact to the customer/guest experience in India, resulting in a good result of applying it as an enhancement in hotels and restaurants. In hotels in the Philippines, the majority of the hotel industry are three-star hotels where technology is applied, but not very advanced. In countries like Singapore, Korea, and Japan, where technological innovation is more advanced, tourists are more inclined to visit these countries just for hotel accommodations alone because of the exquisite experience. Sharma's research

suggests that hotel owners and their managers should appreciate the contribution of technological innovation as a differentiator. To simply put, applying technology in the service industry should not in any way compromise the morale and productivity of its existing employees. The leader managing the transformation of a service industry to apply advanced technological innovation should put high importance in leading the employees with the vision of increasing productivity and understanding the need for advancement.

According to (Neelam, 2018) For the past 20 years, Information Technology has undergone tremendous changes that transform the hospitality industry with the continuous evolution of technologies that have made landmarks setting various benchmarks and breakthroughs for future advancements in coming years with automation and mechanization. (Neelam, 2018) which can empower the front office operations and strengthen the foundation of the service that they offer to people.

According to (Neelam, 2018) The IT structuring and the hospitality industry have been going hand in hand in ensuring a quality service for their guests. As a result, it strengthened the arrival of the internet and the IT world as we know it, the IT sector has secured very vitally in the hotel industry, and it will be incorrect to associate it without data processing in hospitality.

#### ***Why invest in technology?***

According to Williams and Savage (2019) A 2017 Report from Oracle Hospitality shows two-thirds of U.S. hotel guest respondents felt it was either "extremely important" or "very important" for hotels to continue investing in technology to enhance the guest experience. However, 60% of the guests preferred to speak person-to-person at the front desk or concierge office. (Yasuda, 2017 cited in Williams, 2019). There is a vast majority of U.S. hotel guests who are from countries with advanced technology. A wide range of tourist guests are used to a fast-paced environment. Different cultures and environments vary on each guest and the majority has high appreciation on the use of technology in their day to day lives. Whilst we do not discount that there is a 60% share in the market where the guest would still prefer to have a person-to-person interaction and experience good service with the help of the hotel employee's customer experience.

#### ***Factors IT implementation***

According to Ahmad, Scott (2019) A study about "Technology innovations towards reducing hospitality human resource costs." in Langkawi, Malaysia, identified some factors influencing the usage of technological innovations by the hotels. There is difficulty in identifying how to reduce the cost of operating expenses in the hotel industry during advanced technology adoption. Examples given are self-check-in/out kiosks. The examples stated are not valuable because they do not meet customers' service expectations. (Ahmad, Scott 2019). This shows that some services in the hotel industry need person-to-person interaction with the guest to meet customer expectations. According to Sharma, (2016) According to Sharma, understanding these dimensions will enable hotel owners and their managers to make careful decisions when allocating their resources for their technological innovation and ensure that their customers are being offered service with the right value-for-money.

#### ***Front office operations***

According to an article published by a school "Lord institute management" last 2017, "Front Office Department plays a vital role in a hotel, and it is the face of a hotel or hospitality establishment. It is the first and the last department where a guest interacts. The Front Office Department is responsible for creating first hand impressions regarding the level of services and facilities provided. The Front desk is responsible for answering enquiries, directing queries to correct personnel/department."

#### ***National Accommodation Standards***

The due process of being accredited by the "Department of Tourism" is supported by "the Republic Act No. 9593" It is also known as "The accreditation of accommodation establishments." that include hotels, resorts, and apartment hotels to follow rules and regulations to guide them to their suitable standards. According to the "Department of Tourism handbook" (2012), in book three, accreditation standards in establishments include seven (7) dimensions: arrival/departure, public areas, bedrooms, bathrooms, food and beverage, amenities and services, and business practices, which will be given points from 0 to 10 and rated from "Unacceptable" to "Outstanding" by the accreditor. And one factor that affects accreditation is time, such as in the check-in process, where an inefficient registration process with a wait time of 10 minutes or more is unacceptable and receives a score of 0 points, up to Outstanding, where there is no wait time for the registration process and receives a score of 10.

### *Example of software applications*

Below are a couple of software applications installed and used in some hotels in the Philippines according to Christian X Abrera, a Hotel Management Consultant.

**Symphony** is a Windows application running on top of Microsoft's .NET framework developed by Crevel International Incorporated. The .NET framework is stable, modern, well-supported and documented architecture that facilitates the development of business applications. It is multilingual, being able to accept entry data in any character set (Chinese, Mandarin, Thai, etc.) run by Microsoft SQL server which supports the "Windows" application for retrieving and protecting data. Symphony is designed to take advantage of the functions of .NET framework and SQL Server to ease process complex features.

Functionalities; Symphony has numerous features in terms of guest services, production tracking, management reports, security, etc. Booking multiple room types/number of rooms in a single reservation; handling of wait-listed reservations; define seasonal rates for each room type; auto-cancellations of transactions of no-guaranteed reservations at a certain time limit; batch check-in/out of tourist groups and comprehensive audit trails are some of the features of Symphony that it has to offer in the front office department reservation process.

Another example is **Jinisis Software Inc.** (a software engineering company). The firm was founded in response to a demand for software applications in the Philippine market. It provides property management systems to the hotel, real estate, and allied industries, as well as turn-key application development to over a hundred firms and corporations in the Philippines, since 2008.

"Kloud Hotels" is an application, a project developed by Jinisis Software Incorporated. It provides better management and ease of getting information for hotels and resorts, enhancing guest experience. It is an independent software downloadable on any mobile device whether iOS or Android. This software application has a wide variety of unique features; guests can perform direct reservation booking and payment; can call for room service requests; and can control door locks without the use of a keycard.

Crevel, who is the software developer of Symphony, has local installations at Parque España Residence Hotel in Alabang, Microtel in Boracay, Mall of Asia, Greenhills, Elan Hotel Modern, and many more.

### *The Impact of innovative practices*

According to the findings of Gumaste, et. al. (2015), the application of new practices, service quality, politeness, competency, and responsiveness of front-office workers have a beneficial influence on the hotel's customers' satisfaction level. The skill that should stand out in the mindset of every employee is the adaptability to cope with the changes in the firm and maintain service quality, attain operating reformation of practice, and gain competitive advantage. Making plans ahead of time to adjust the work practice of employees, learn different ways of serving guests, and maintain the quality of service in courtesy to the firm's practices.

### *Performance related pay*

Bun and Huberts (2018), claim that their study examines the effects of performance-related pay on productivity by taking advantage of a shift in the payment structure. The change in the salary of workers based on their performance and productivity on their job and which the workers depend on the salary and do the performance that suits their pay. They have a basis for what level of performance and productivity will best suit the payment, and productivity declines are fixed pay. Using shift-level data from individual workers, they discover that when the pay structure switches more to fixed compensation, average productivity declines (Bun & Huberts, 2018).

It is in this light that a current study is being conducted to determine the impacts of the implementation of IT integration in the front office operations, which will lead to the high or low productivity and service quality of the front office personnel in selected DOT-accredited hotels in the province of Cavite.

### *Customer feedback*

Feedback can be considered as an asset for the establishment, as it can be an insight on having a path forward for the improvement of the establishment, and it is also a source of information, insights, and issues shared by the guests about their experiences with the company. (E. Wellington, 2019)

### *Constant learning*

Every person that has experienced education and training during adult life has an important impact. Skill proficiency can be obtained in a significant role and even after finishing formal education, learning is constant, and we can learn from our work. Some people can differ on their capabilities based on the quality of education that they have learned (Vera-Toscano et al., 2017).

### *Gender towards technology*

Information technology has become an integral aspect of human life. From a gender viewpoint, the study looks at how people use technology and how they intend to utilize it. It claims that gender has a substantial impact on the willingness to accept new technology in some circumstances, but not in others (Goswami & Dutta, 2016).

### *Digital exclusion*

Information technology has become an integral aspect of human life. From a gender viewpoint, the study looks at how people use technology and how they intend to utilize it. It claims that gender has a substantial impact on the willingness to accept new technology in some circumstances, but not in others (Goswami & Dutta, 2016).

## 3. METHODOLOGY

This chapter describes the design, locale, participant sampling, instruments, procedure, and analysis of research. It strengthens the means of the research that includes the design which will measure respondents' answer to the questions and understand more about the research wherein the hotels which will support the study who implement information technology in their establishment will meet the objectives on determining the impact of IT on front office personnel's productivity and service quality.

### *Research Design*

The Research design of the study will employ **quantitative research**. There are numerous studies on ICT adoption in the hotel sector that use quantitative approaches to examine its impact on productivity and business performance (Ahmad & Scott, 2019). The impact of using IT will show in the quantitative approach if the front office personnel cope with the change and view the implementation of technology as being capable of raising productivity and service quality, thus contributing to complying with the needs of innovation in the industry. The **research method** is **descriptive research** which will identify the conditions of the hotel on the implementation of technology in the front office and to see how productive the personnel of an establishment will be and will their provision of service quality improve.

### *Research Locale*

Research locale wherein the study will be administered to DOT-accredited hotels and their front office departments in Cavite, specifically the front desk guest service agents and communications agents, who integrate IT into their front office operations in serving their clients. With the advent of technology nowadays, large hotels may implement systems or applications to improve the provision of service and meet clients' needs. Based on the list of DOT in 2020, there are eighteen (18) accredited hotels in Cavite, wherein the researchers will only select the accredited commercial hotels on the list and upon approval of their participation in the study.

### *Participants of the Study and Research Sampling*

The participants will be the front office personnel, managers, and hotel guests. **Purposive sampling** will be the technique administered for the study since the respondents are a limited number of primary data sources that can contribute to it upon approval of the hotels to participate in it.

### *Research Instrument & Data Gathering Procedures*

The researchers will administer a **survey questionnaire** as a means to collect the data needed. To be specific, the Likert scale will be used in administering the survey. The questionnaire was adopted and modified from a questionnaire in research entitled "Information Technology's (IT) Influence on Productivity." (J. Smith, 2008), which will then be administered to the respondents using online platforms due to the current pandemic situation in the country.

**The data gathering procedure** Consent forms have already been sent to several DOT-accredited hotels in Cavite and are waiting for their approval to allow their front office personnel to be participants. Attached with that consent form is an



endorsement letter from the DOT Provincial Officer of the Province of Cavite. Online survey questionnaires will be administered to the participants in coordination with the hotel's Human Resource Department (HRD) and Front Office Manager.

#### *Data Treatment and Analysis*

The data that will be collected from the online survey will utilize the following statistical treatment and analysis:

SOP 1 on demographic profile, frequency, percentage, and weighted mean will be utilized;

SOP 2 on Front Office Personnel's IT Competencies, the weighted mean and standard deviation will be used;

SOP 3 A Chi-square test will be utilized to analyze the relationship between the front office personnel's demographic profile and their IT competencies with an impact on IT integration as to whether they are high or low on two variables: productivity and provision of service quality;

SOP 4 on the impact of front office personnel's IT integration and their productivity and provision of service quality, weighted mean and standard deviation will be utilized.

SOP 5 on the impact of IT integration on the front office operations in terms of service quality and productivity, the weighted mean and standard deviation will be utilized.

#### **DOT accredited hotels as of 2020:**

1. Abagatan Hotels Inc.
2. Hotel Dominique
3. Hotel Kimberly Tagaytay
4. Taal Vista Hotel
5. Microtel by Wyndham-Eagle Ridge
6. Microtel by Wyndham-South Forbes
7. Hotel Monticello
8. One Tagaytay Place Hotel Suites
9. The Bayleaf Hotel
10. Tagaytay Viewpark Hotel
11. Tagaytay Wingate Manor
12. The Junction Tagaytay
13. Tanza Oasis Hotel and Resort
14. Splash Suites
15. Summit Ridge Hotel
16. White Woods Convention & Leisure Hotel
17. Brizo Hotel & Mountain View Resort
18. Quest Hotel Tagaytay

#### **4. RESULTS AND DISCUSSION**

This chapter will present and discuss the interpreted descriptive result and quantitative data gathered from the respondents, which will answer the research objectives stated in the previous section. Findings in this section will be the basis for the research conclusion and recommendation. The aim of the study is to know whether the implementation of information technology (IT) in front office operations can cause high or low impact in the productivity and provision of service quality, depending on the demographic profile and IT skills of front office personnel in selected DOT Accredited hotels in the Province of Cavite.

**DEMOGRAPHICS**

**Type of respondent interpretation:**

**Table 1.1: Type of Respondents**

<b>TYPE OF RESPONDENTS:</b>	
<b>Guests</b>	47
<b>Front office personnel</b>	14
<b>Manager</b>	6
<b>TOTAL:</b>	67

Types of respondent Interpretation:

We received more responses from guests after handing out survey questionnaires to previous guests who had gone to the select hospitality industry in Cavite. However, due to the pandemic, the number of front office personnel and managers has decreased by nearly half in order to comply with the reopening of premises, COVID-19 Inter Agency Task Force for the Management of Emerging Infectious Diseases requirements are used.

**Age Interpretation:**

**Table 1.2: Age**

<b>AGE OF RESPONDENTS:</b>	
<b>GUESTS:</b>	
Under 20	1
20-25	17
26-30	4
31-35	3
36-40	3
41 and above	19
<b>TOTAL:</b>	47

With a total of 47 respondents most of the the guests' age is from "41 and above" while the least of the guests age is from the "Under 20"

**Table 1.3: Age**

<b>AGE OF RESPONDENTS:</b>	
<b>Front office personnel</b>	
Under 20	0
20-25	7
26-30	2
31-35	3
36-40	1
41 and above	1
<b>TOTAL:</b>	14

With a total of 14 respondents, most of the front office personnel's age is from "20-25" while the least of the front office personnel's age is from "41 and above."

**Table 1.4: Age**

<b>AGE OF RESPONDENTS:</b>	
<b>Manager</b>	
Under 20	0
20-25	1
26-30	2
31-35	1
36-40	1
41 and above	0
<b>TOTAL:</b>	6

With a total of 6 respondents most of the Manager's age is from "26-30" while the least of the Manager's age are from the "20-25", "31-35", "36-40"



**Gender Interpretation:**

**Table 1.5: Gender**

<b>GENDER OF RESPONDENTS:</b>	
<b>Gender of Guests:</b>	
Male	20
Female	27
<b>TOTAL:</b>	47

With a total of 47 respondents most of the guests' gender is from "Male" while the least of the guest's gender is from "female."

**Table 1.6: Gender**

<b>GENDER OF RESPONDENTS:</b>	
<b>Gender of front office personnel:</b>	
Male	8
Female	6
<b>TOTAL:</b>	14

With a total of 14 respondents most of the front office personnel's gender is from "Male" while the least of the guest's gender is from "female."

**Table 1.7: Gender**

<b>GENDER OF RESPONDENTS:</b>	
<b>Gender of Manager:</b>	
Male	4
Female	2
<b>TOTAL:</b>	6

With a total of 6 respondents most of the Manager's gender is from "Female" while the least of the guest's gender is from "Male."

**Monthly income Interpretation:**

**Table 1.8: Monthly Income**

<b>MONTHLY INCOME OF RESPONDENTS:</b>	
<b>Guests:</b>	
Php 1,000 – 10,000	3
Php 10,001–15,000	5
Php 15,001 – 20,00	4
Php 20,001 – 25,000	4
Php 25,001 – 30,000	5
Php 30,001 and above	29
<b>TOTAL:</b>	47

With a total of 47 respondents most of the guest's monthly income is from "Php 30,001 and above" while the least of the guest's monthly income is from "Php 1,000 – 10,000"

**Table 1.9: Monthly Income**

<b>MONTHLY INCOME OF RESPONDENTS:</b>	
<b>Front office personnel:</b>	
Php 1,000 – 10,000	3
Php 10,001 – 15,000	2
Php 15,001 – 20,00	6
Php 20,001 – 25,000	2
Php 25,001 – 30,000	1
Php 30,001 and above	0
<b>TOTAL:</b>	14

With a total of 14 respondents most of the front office personnel’s monthly income is from “Php 15,001 – 20,00” and above” while the least of the guest’s monthly income is from “Php 30,001 and above”

**Table 1.10: Monthly Income**

<b>MONTHLY INCOME OF RESPONDENTS:</b>	
<b>Manager:</b>	
Php 1,000 – 10,000	0
Php 10,001–15,000	0
Php 15,001 – 20,00	0
Php 20,001 – 25,000	0
Php 25,001 – 30,000	3
Php 30,001 and above	3
<b>TOTAL:</b>	6

With a total of 6 respondents the Manager’s monthly income is a tie between “Php 25,001 – 30,000” and “Php 30,001 and above”

**Educational Attainment Interpretation:**

**Table 1.11: Highest educational attainment**

<b>HIGHEST EDUCATIONAL ATTAINMENT OF RESPONDENTS:</b>	
<b>Guests:</b>	
Undergraduate	10
Bachelor’s degree	20
Master’s/ Doctoral degree	17
<b>TOTAL:</b>	47

With a total of 47 respondents most of the guest’s highest educational attainment is from “Bachelor’s degree” while the least of the guest’s monthly income is from “Undergraduate”

**Table 1.12: Highest educational attainment**

<b>HIGHEST EDUCATIONAL ATTAINMENT OF RESPONDENTS:</b>	
<b>Front office personnel:</b>	
Undergraduate	0
Bachelor’s degree	12
Master’s/ Doctoral degree	2
<b>TOTAL:</b>	14

With a total of 14 respondents most of the front office personnel’s highest educational attainment is from “Bachelor’s degree” while the least of the guest’s monthly income is from “Master’s/ Doctoral degree”

**Table 1.13: Highest educational attainment**

<b>HIGHEST EDUCATIONAL ATTAINMENT OF RESPONDENTS:</b>	
<b>Manager:</b>	
Undergraduate	0
Bachelor’s degree	4
Master’s/ Doctoral degree	2
<b>TOTAL:</b>	6

The majority of the respondents' educational attainment is between a bachelor's degree and a master's or doctoral degree. They are generally workers of the establishment and visitors who are visiting hotels for business meetings; undergraduate responses are under the age of 20 and are most likely students.

**PERCEIVED FACTORS ON THE IMPACTS OF INFORMATION TECHNOLOGY IN TERMS OF PRODUCTIVITY**

The interpretation used for Descriptive Statistics:

RANGE	VERBAL INTERPRETATION FOR THE LEVEL OF IMPACT
1.00—1.49	<b>No impact</b>
1.50-2.49	<b>Slight Impact</b>
2.50-3.49	<b>Considerable Impact</b>
3.50-4.00	<b>Great Impact</b>

**DESCRIPTIVE STATISTICS**

The table below shows the descriptive statistics for statements. The total number of respondents (N), the mean value of responses (Mean), the standard deviation (Std. Deviation), and the verbal interpretation are all included in this report. The table below shows the verbal interpretation that was employed.

**Table 2.1: Impacts of IT integration in the front office operations in terms of productivity.**

<i>Staff Productivity</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Verbal Interpretation</i>
1. Improvement of internal and external communication with stable Wi-Fi connection.	3.72	0.545	Great Impact
2. Easier communication within the establishment using smart phones and emails.	3.66	0.509	Great Impact
3. Speedy transactions of reservation through point of sale (POS) and automated systems.	3.75	0.532	Great Impact
4. Improvement on the levels of production with online scheduling and automation.	3.57	0.679	Great Impact
5. Success of the employees through the provision of information technology tools such as computers, laptops, and smartphones.	3.58	0.555	Great Impact
6. Better communication among functional front office sections within the establishment with telephone and radios.	3.69	0.528	Great Impact
7. Improvement on productivity of labor through automation.	3.69	0.583	Great Impact
8. Smooth transaction of payment through credit card validator and computer for accounting	3.75	0.438	Great Impact
9. Trouble-free check in and check out using smartphones, e-mail and software applications.	3.61	0.627	Great Impact
10. Reviewing customer feedback through mobile applications and websites.	3.54	0.703	Great Impact
<b>Overall Assessment of staff productivity</b>	<b>3.65</b>	<b>0.37</b>	<b>Great Impact</b>

Table 2.1 above presents the perceived impact of information technology integration in the front office operations by the front office personnel, managers, and guests using the statement indicators. The overall assessment of staff productivity has a total mean score of 3.6500. In this table, the statement indicators "Smooth transaction of payment through credit card validator and computer for accounting" and "Speedy transactions of reservation through the point of sale (POS) and automated system". have the highest mean score with 3.7500. Before the IT integration in the front office operations, the process of record-keeping of their guests' information was a manual procedure, which was taking more time than usual (Smith E. 2020). Since they are working paper-based in the front office, there is no precise procedure for keeping track of their guests' information, which leads them to evolve from a paper-based system to complex computerized technology (Smith E., 2020), which shows that the implementation of the POS, credit card validator, and computer has had a great impact on the front office operations, lessening the time spent on checking the reservations of their guests.

Customer feedback via websites is a traditional method of gathering information about a customer's experience in a business. Based on the survey, it garnered a mean of 3.540. The statement indicator "Reviewing customer feedback through mobile applications and websites" has the lowest mean. According to Wellington (E. 2019), feedback is a powerful guide that can provide insights on the path that can bring forward the improvement of the establishment. Moreover, it is also the articulation of information, insights, and issues shared by the guests about their experiences with the company. Despite the said statement indicator having the lowest mean, it has an assessment of having a great impact on the front office operation in terms of productivity.

The standard deviation (SD) describes the consistency of the responses. In the case of the productivity impact, the respondents are consistent in their answers to statement number 8, which obtained the lowest SD of 0.438. On the other hand, the statement that has the most variety of answers (with the highest SD) with the standard deviation of 0.703, statement number 10 is the most accurate. The total mean describes the degree to which information technology integration has impacted front-office operations.. The overall assessment of staff productivity is **3.6500**, with a verbal interpretation of **Great Impact**, implying that the integration of information technology in the front office operations, in terms of staff productivity, has a great impact on the staff productivity of selected DOT accredited hotels in the province of Cavite.

**Table 2.2: Impacts of I.T. integration in the front office operations in terms of service quality.**

<i>Service Quality</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Verbal Interpretation</i>
1. Adoption of new information technology, such as artificial intelligence and smart machines.	3.46	0.659	Considerable Impact
2. Routinely looks for new ways to use technology such as processing, storing, and recovering information.	3.63	0.487	Great Impact
3. The effective use of information technology for business innovation, such as data storage, faster processing, and wider information distribution.	3.72	0.486	Great Impact
4. Means of communication towards clients through the telephone, e-mails, and smartphones.	3.76	0.43	Great Impact
5. Better coordination among functional units in the company through automation (i.e., telephone and radios).	3.79	0.445	Great Impact
6. Up-sell of the hotel's product and services through the point of sale (POS) systems.	3.61	0.549	Great Impact
7. Work towards establishing a service-oriented architecture.	3.63	0.573	Great Impact
8. Empowerment of employees by providing them with stable Wi-Fi, computers, and smart machines.	3.75	0.503	Great Impact
9. The increase in the ability to anticipate customer needs through online Customer Relationship Management (CRM) tools	3.72	0.517	Great Impact
10. Serve new market segments with smart machines and artificial intelligence (A.I.), and computer visions.	3.37	0.756	Considerable Impact
11. Facilitate higher level of responsiveness to customer needs with the use of websites and email for concerns.	3.76	0.464	Great Impact
12. A clear understanding of word processing, e-mail, and websites.	3.82	0.52	Great Impact
13. Exert innovative effort to understand information technology.	3.73	0.665	Great Impact
14. Increase satisfaction with fast, efficient, and quality service through automated system operations.	3.64	0.542	Great Impact
15. Create a competitive website and social media platform to further strengthen the connection and repeat business with clients.	3.7	0.523	Great Impact
<b>Overall Assessment of service quality</b>	<b>3.67</b>	<b>0.38</b>	<b>Great Impact</b>

Table 2.2 above presents the perceived impact of information technology integration in the front office operations by the front office personnel, managers, and guests using statement indicators in terms of service quality. The overall assessment of the service quality has a total mean score of 3.6700. In this table, the statement indicator "Clear understanding of word processing, e-mail, and websites" has the highest mean score of 3.8200. IT is defined as a field that uses computers, complex networks, software applications, and other electronic or digital equipment to manage and communicate data, (Julia, 2016). The front-office staff must demonstrate proficiency and a thorough understanding of various computer applications, providing the statement indicating a significant impact on the front-office personnel's service quality.

The two statement indicators, "Adoption of new information technology such as artificial intelligence and smart machines" (3.46), and "Serve new market segments with smart machines and artificial intelligence (AI) and computer vision" (3.37), had a verbal interpretation of considerable impact. Two-thirds of hotel visitors in the United States believe it is "very important" or "extremely important" for hotels to keep investing in innovations to enhance the guest experience, according to a 2017 survey from Oracle Hospitality. 60% of customers, on the other hand, preferred to speak with a person at the front desk or concierge office. (Yasuda, 2017, cited in Williams, 2019). There is a 60% share in the market where the guest would still prefer to have a person-to-person interaction and experience good service with the help of the hotel employees' customer experience. (Yasuda, 2017, cited in Williams, 2019).

The standard deviation (SD) describes the consistency of the responses. In the case of the service quality impact, the respondents are consistent in their answers to statement number 4, which obtained the lowest SD of 0.430. On the other hand, the statement that has the most variety of answers (with the highest SD) is statement number 10, with a 0.756 standard deviation. In terms of service quality, the overall mean describes the significance of information technology integration in front office operations. The overall assessment of the service quality is **3.6700**. With a descriptive rating of "Great Impact," this means that integrating information technology into front-office operations will have a significant impact in terms of staff productivity. It has a great impact on staff productivity on selected DOT accredited hotels in the Province of Cavite.

**Chi-square test interpretation: Service quality and staff productivity.**

**Table 3.1: Staff productivity Chi-square interpretation:**

<i>Staff Productivity vs</i>	<i>Chi-square Value</i>	<i>p-value</i>	<i>Interpretation</i>
Age	4.608	0.466	Not significant
Gender	0.013	0.91	Not significant
Income	4.46	0.485	Not significant
Educational Attainment	1.383	0.709	Not significant

Interpretation: Because of chi-square values of 4.608, 0.013, 4.460, and 1.383 have p-values greater than 0.05, there is no significant relationship between age, gender, income, and educational attainment on the respondents' assessment of the impact of information technology integration on staff productivity, as shown in Table 3.1. No relevant link is considered as the null hypothesis. This shows that age, gender, income, and educational attainment have no relation to the impact of IT integration on employee productivity.

**Table 3.2: Service Quality Chi-square interpretation:**

<i>Service Quality vs</i>	<i>Chi-square Value</i>	<i>p-value</i>	<i>Interpretation</i>
Age	3.632	0.962	Not significant
Gender	1.821	0.402	Not significant
Income	11.101	0.35	Not significant
Educational Attainment	5.261	0.511	Not significant

Interpretation: Because the chi-square values of 3.632, 1.821, 11.101, and 5.261 have p-values greater than 0.05, there is no significant relationship between age, gender, income, or educational attainment on the respondents' assessment of the impact of information technology integration on service quality, as shown in Table 3.2. No relevant link is considered as the null hypothesis. This shows that age, gender, income, and educational attainment have no relation to the impact of IT integration on service quality.

*Gender:*

Information Technology has been integrated into our daily lives. From a gender viewpoint, the study looks at how people use technology and how they intend to utilize it. It asserts that in some situations, gender has a significant impact on the ability to consider new technologies, but not in others (Goswami & Dutta, 2016). Gender employee engagement refers to female and male staff being treated equally and having equal access to opportunities and business resources (Susan M., 2020), which can lead to a lack of substantial correlation in both staff productivity and service quality.

*Age:*

When it comes to technology, older people are often disengaged, and they are said to be at risk of 'digital exclusion.' The rapid growth of digital technology is linked to the shared opinions of the questioned participants based on the opportunities and risks related to age and involvement. The empowerment of the elderly community is tackling the issue of age-related engagement in technology (Fleming et al., 2018).

*Monthly income interpretation:*

The monthly income of the employees can be affected by their performance-related pay on productivity that may change their payment structure. Productivity may decrease, or may fit their performance, based on the pay that they are going to receive that is suitable to their salary. When the payment system switches more to fixed pay, average productivity drops (Bun & Huberts, 2018). Based on the results, the monthly income that the personnel receive is not significant and does not affect the productivity and service quality of the front office personnel. Their work performance is not based on how much they make.

*Highest Educational attainment interpretation:*

Based on the results, the educational attainment is rendered not significant on the front office personnel's productivity and service quality. According to the Republic Act No. 10844, policy and initiative development in collaboration with the Department of Education (DepEd), the Commission on Higher Education (CHED) and the Technical Education and Skills Development Authority (TESDA) to develop and promote information and communication technology in education that is consistent with national goals and objectives and responsive to the ICT and ICT-ES sectors' human resource needs. This means that regardless of the highest educational attainment obtained, there will be a way to learn and grasp information technology in the workplace.

Every person that experiences schooling and training during adulthood has an important impact. The proficiency obtained contributes even after finishing formal education. The learning is constant and we can learn from our work. Some people can differ on their capabilities based on the quality of education that they have learned (Vera-Toscano et al., 2017). Based on the results, educational attainment is not significant to front office personnel's productivity and service quality.

## **5. CONCLUSIONS**

The aim of the study is to know whether the implementation of I.T. in front office operations can cause an impact of high or low in productivity and provision of service quality depending on the demographic profile and information technology skills of front office personnel in selected DOT accredited hotels in the province of Cavite.

With the demographic profile, out of 67 respondents from 6 hotels, most of the respondents are from the guests. 20-25 years old came in with the highest age group from the respondents, while for the sex of the respondents, the majority are female. The group with the highest educational attainment is respondents with bachelor's degrees.

Statement indicators for staff productivity and service quality, the staff productivity with the highest mean of 3.75 are statement indicators, number 3, and 8 resulting in having a great impact on the IT integration in the front office operation in the staff productivity that has "speedy transactions of a reservation through a point of sale (POS) and automated systems" and "smooth transaction of payment through credit card validator and computer for accounting".

On the other hand, the statement indicator for the service quality that garnered the highest mean of 3.82 is statement indicator number 12 with a result of having a great impact on IT integration in the front office operations in terms of service quality that have a clear understanding of the word processing, email, and websites.

Therefore, the researchers can conclude, the demographic profile of front office workers, the front office manager, and guests has no significant link with the implementation of IT in front office operations, according to the Chi-square test and survey questionnaire results. However, IT integration in the front office personnel's productivity and service quality on selected DOT accredited hotels in the province of Cavite has a general result of great impact.



## 6. RECOMMENDATIONS

“Human Intelligence – Artificial Intelligence Interface program.”

### VISION

“The program is eager to promote and amplify the strengths and skills of hotel staff on evaluating their interaction with colleagues and guests while utilizing technology in their establishment.”

### THE MISSION

“The program focuses on the development of hotel staff based on their skills by training and enhancing them and developing new ones that can best help with interacting with colleagues and guests with the use of technology.”

AREA	OBJECTIVE	STRATEGY	RESOURCES	PERSON RESPONSIBLE
Develop emotional intellect	To develop emotional intellect to express feelings towards colleagues and guests.	Re-skilling/ Up-skilling	Human/ Facilities/ Money	Human resources
Develop creativity	To develop creativity in the workplace through sharing ideas and involving employees in the thinking phase.	Up-skilling	Human/ Facilities / Money	Human resources/ Marketing department
Building relationship	To build a relationship by collaborating with colleagues and showing care to the customers.	Re-skilling / Up-skilling	Human/ Facilities/ Money	Human resources/ Manager
Develop empathy	To develop empathy and understand what it is to be in the shoes of others (i.e., guests and colleagues).	Re-skilling	Human/ Facilities/ Money	Human resources
Thinking outside the box	To analyze context and think critically through the complicated scenarios, developing complex strategies.	Up-skilling	Human/ Facilities/ Money	Human resources/ Marketing department
Upgrading skills from AI related interface program	Upgrade skills by using an AI interface-related program, while acquiring knowledge with a sense of logic, reasoning, understanding, learning, and experiencing.	Capacity building	Human/ Facilities/ Money	ICT Department

Survey results showed that the front office personnel, the front office manager, and guests’ demographic profile had no significant relationship with the integration of information technology (IT) into operations. For future researchers, it is recommended to look for other demographic profiles such as IT skills, the number of children, and marital status.

The statement indicator for staff productivity that has the lowest mean is statement indicator number 10, despite the said statement indicator having the lowest mean of 3.54 on "reviewing customer feedback through mobile applications and websites", it is still the result have a great impact on the integration of information technology in the front office operations in the staff productivity.

While statement indicators for service quality have the lowest means are numbers 1 with 3.46 on “adopting of new information technology such as artificial intelligence and smart machines” and 10 with 3.37 on “serve new market segments with smart machines and artificial intelligence (A.I.) And computer visions” both garnered a result of considerable impact.

The statement indicator number 10 of staff productivity has a mean of 3.54, although it has a result of great impact, it is recommended to be utilized in future research have relation to I.T integration on front office operations. Statement indicators, numbers 1 and 10 of service quality that have a mean of 3.46 and 3.37, it is highly recommended that it is further observed by future researchers have relation to I.T integration on front office operations. In comparison to the overall results of all statement indicators, these two statement indicators are the only results of considerable impact.

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