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The Impact of COVID-19 on Technology in the Hotel Industry

Will the Changes in Technology That Were Caused by
the Pandemic Remain?

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Abstract

The purpose of this research is to determine if people would like to continue to use technological innovations that were introduced in hotels in response to the Covid-19 pandemic once the pandemic passes. For the research method, an online survey format was used for easier access to participants because of the pandemic. Participants were travelers and they were reached via online travel groups. The research results indicated that people prefer to use the technological changes in hotels now more, during the pandemic rather than once the pandemic passes. It was also revealed that some survey participants prefer in-person contact while others prefer the technological innovations that reduce in-person contact.

 Key Words: technology, hotels, technological innovations, high-tech, self check-in/out.

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The Impact of COVID-19 on Technology in the Hotel Industry

 The hospitality industry is one of the largest and most profitable industries in the world. (Loss, 2019). It grows very fast and it affects many different areas in economy as well as many professions.

This industry is significant by providing many working places all around the world as well as fast-growing profits for both individuals and government. This industry provides a huge number of work opportunities from many different jobs and positions. According to the article posted by Kendall College (2018), in 2017 the hospitality industry offered 313 million jobs, which resulted in 9.9% of total employment (Kendall College, 2018).

 The hospitality industry generates revenue when tourists spend money on their hotel accommodation and as well helps economy indirectly since the hospitality employees buy retail goods for their hotel services. Apart from overall economic value, hospitality industry also has significant importance and value for customers and employees. It is the major factor in every vacation, individual service, or business (Kendall College, 2018).
 According to the Kendall College article (2018), the primary aim of hospitality businesses is serving customers which is focused on hiring professional employees that provide high-quality services for their customers (Kendall College, 2018).

 When talking about the hospitality industry, the focus of the research will be on hotels. Especially today when the world introduced the worldwide pandemic Covid-19, staying in hotels is very significant, needed, and the most popular way of accommodation. The hotels' are moving to high-tech and technology is providing better and faster services (Lyons, 2017).

Introducing Technology into Hotels

Looking back in the 1900s, hot water was a luxury and it was considered as big improvement in the hotel industry (Soler, 2020). Elevators were considered a big step in the development of technology. In 1927, the first radio and telephone were provided in the hotel rooms. Another big innovation happened in 1958 when Sheraton introduced the first electronic reservation system. In the following years, from 1958 until 1994, hotels introduced optical-electronic key cards, in-room movies, 24h room service, and vending machines. In 1994, hotels launched websites on the Internet and online catalog, and from this point until today, technology has increased much faster than before. Wi-Fi becomes available to the majority of hotels in 2003, and today we cannot imagine any place without Wi-Fi, especially when talking about hotels. Nowadays, it is not easy to fully understand and grasp the concept of modern hotels without recognizing their changes in the past (Corbin, 2016).

Because of technology, our life today is much easier and faster. One of the things that contribute a lot to the enhancement of the hotel reservation process is social media. According to Draheim (2021), social media is creating connections with guests, and it becomes far more cost-effective than traditional advertising. Social media becomes a place where people share continually their experiences, posting photos and locations of their trips. That information is visible to many people, and can, later on, also serve as an excellent marketing tool.

 Today hotels have progressed much more than before, and they are not only providing necessities but also comfort and luxury. When comparing hotels in the past and now, it is

clear that hot water used to be luxury and comfort that not everybody could afford, while in modern hotels it is normal and customary to have a Jacuzzi or massage bath in your room. With the greater development of technology, guests have become more demanding and their needs have become bigger. Even if many things are processed through technology, there was and still is a need for human contact. High touch is much needed in hotels to complete guests' experience. Technology (high -tech) with a combination of human touch (high-touch) is considered as a winning combination to satisfy guests' needs and provide the expected experience (Zeng, Chan & Alan 2020).

Covid-19's Impact on Hospitality

In the last one and a half years, the hospitality industry, as well as guests' priorities, has changed since the onset of the worldwide Covid-19 pandemic. Covid-19 has had a major impact on the hotel industry since people became scared for their health and safety. When the world changes, it is necessary to adapt to it. The current situation has affected greatly all the operations of a hotel, and hotels have started to use technology more, having introduced significant changes with which hotels will be able to better take care of their guests and make them feel more safe and secure. New innovative strategies were invented not only to keep the guests safe and secure, but al well to keep their confidence (Sharma, Shin, Nicolau & Santa Maria, 2021). Some changes have already been made, and some new ones will probably be introduced soon. According to one researcher, Mr.Zeng, hotels are currently moving from high-touch to high-tech (Zeng, 2020.)

Mobile app

During the Covid-19 worldwide pandemic, where people want to avoid in-person contact, an interactive mobile app was created to make a touch-free check-in and check-out.Notifications about the current situation with the virus are part of the mobile app that shows guests the newest restrictions and measurements. The mobile app included all hotel departments and provided all detailed information for each of them (room service, concierge, booking, digital key card, and others). The app also helps hotel guests to find out where they can find necessities such as facemasks, housekeeping information or to determine how many guests are currently using hotel facilities such as fitness center, sauna, or pool. Everything that was a part of the relationship between guests and the employees is now available on different free mobile applications (Revfine, 2020).

Chatbot is a mobile app that consists of all hotel offers and can also be used for online communication between hotel staff and guests. The Chatbot is available at all times for guests' questions or needs. If other guests were using the same room for quarantine, through the app, guests can see when was last sanitized. Instead of providing guests with physical books and magazines, hotels are now providing online books, magazines, and games. In addition to providing information about customary hotel services, the app provides a different type of experience in that it shows guests real-time information about the restaurants, bars, and shops. All information that the application provides is being continually updated with a detailed explanation (Revfine, 2020). Customers are focused on safety and security and this app is able to ensure them that even if there is no human touch, hotel employees care about them. Hotel application that is able to offer all necessary information in one place can lead to customer satisfaction and loyalty (Aluri, 2021).

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Social media influence

Mobile phones have played a very important role in hospitality's recovery related to theCovid-19 pandemic. Even if people are staying at home, the use of mobile devices increased more than ever. During the quarantine, social networks such as Instagram and TikTok had very rapid growth (Peter, 2021). Influencer marketing has been developing all the time, and, especially through this crisis, influencers are becoming more effective than ever. More and more marketers are interested in using influencers to share their stories and offers in their social media postings. Their impact has increased so much so that they have become one of the best promotional voices for the hospitality industry. The newest trend is micro-influencers: individuals between 1000 and 10000 followers that are well known in their area with a huge number of positive feedbacks from their followers. They are focusing on the specific element they are interested in. The reason they are popular and their opinions are valid at the moment is that through their social media they are sharing their own experiences and details about the trips based on the current world situation. They will describe if the destination is safe, provide relevant data about what one can do there at the moment, and explain if the destination is convenient for certain activities. Not only is that more effective, but as well is more cost-effective. Instead of paying for commercials with limited and generic information, influencers are sharing their detailed stories and experiences, attracting many more people. The new trend as well becomes pictures, videos, and TikTok videos. The important factor is to choose an influencer with a well-targeted public. (Draheim, 2021).

Self check-in/out

 In addition to the mobile app for self check-in/out, hotels are also providing self-service kiosks. Travel Leaders Group surveyed guests to find out if they would like to have self-service kiosks in hotels and 78% of responses were positive. Self-service kiosks provide many benefits for both guests as well as employees. Those self-service kiosks save guests time if they are too tired to wait or they need to rush somewhere. Each of the kiosks is providing necessary information as well as a fast and secure check-in process. The whole process enables guests to decide whether they want regular check-in/out or self-service (Protel, 2020).

A recent survey that Travel Leaders Group conducted showed that more than one-third of people are more interested in using self-kiosk as opposed to the regular check-in process. Except for check-in/out, services kiosks can also be used to order food or some other hotel room service. One of the biggest benefits is a personalized guest experience even in this situation where people are avoiding in-person contact. The self-service kiosk allows people to choose which language they want to choose, what type of payment they prefer, or even which type of room they would like to have. In case the guests come back, the kiosk can remember the room preferences from the last time as well as their purchases and special needs. The kiosks are providing special packages with detailed information about the offers, so it is easier to present the offer to the guest without boring them. Even if people got used to the human touch, this service could reduce human mistakes. Sometimes hotel employees cannot find guest reservations or understand their preferences, and through the new innovative safe way, there is less chance for those mistakes to happen (Protel, 2020).

Room service

Hotels incorporated many options and changes to room service to maintain the quality of room service and as well as guests' loyalty. Since there is a big interest nowadays in using technology, managers enable a huge number of applications for guests to enjoy in their rooms and to be satisfied. Guests already have a big choice about picking the hotel and now they can have many choices and offers in their rooms. Mobile communication and apps provide guests to order room service without any in-person contact. Based on the research the guests consider that the guestroom technology is the most effective and important one (Kozmal, 2021).

Since many hotels make a substantial profit from room service, during this pandemic, most hotels have decided to make room service as convenient as possible as well as to encourage guests to use it more often. A mobile app installed on a tablet in guests' rooms provided everything that guests need to order room service. Through this technology, guests can see menu offers, order, and customize their dishes. This order is directly sent to the hotel's kitchen and through the app, guests can follow each step of preparation (ex. when the order is received, when the meal is in progress, or when the order is finished). The pictures and ingredients of meals are also provided on the mobile app. Delivery without physical contact is one of the options when making the order. This type of room service gives guests more space and time to order food or some other service (Escobar, 2020).

A hotel tablet can allow guests to do more than order food from the hotel's dining options. These tablets can also be configured to allow guests to order food from different restaurants. The satisfaction scores from San Francisco hotels that enable this innovation jump from 50% to 85%. Except for the automatic minibars, room service also offers the option to order one or two glasses of wine which became very popular and attractive since guests can try different sorts of wines in their rooms. This technology solution provided many benefits through which guests can enjoy room service offers while feeling safe and secure (Escobar, 2020).

Concierge

Concierge service is one of the most popular departments in hotels. This department provides all the necessary information about everything a person needs during his or her stay in a hotel whether it is related to existing hotel services or the possibilities of entertainment in the city. The worldwide pandemic makes this job challenging in many ways since people started avoiding in-person contact. The guests who do not avoid close contact can visit the concierge respecting prescribed measures such as space restrictions or with a limited number of people allowed. For people who want to avoid the crowd and get information easier and faster, the mobile app, which also provides concierge service, is very practical and, by using this application, guests will be able to communicate directly with a concierge either by sending SMS messages or by phone. Another benefit is that these services can be paid for by credit card. The concierge role has not changed. They are still there for all the necessary information, requirements, ordering, or to contacting other staff. The only difference is that the service has moved "online". Since the Concierge provides hotel information and as well as destination attraction and entertainment information, the app is constantly updated (Travolution,2020).

The mobile app for Concierge service provides full-time accessibility, which means that guests can order anything anytime. All guest orders and requirements are sent directly to the corresponding department. There is the possibility to add a comment for some extra preferences. For those persons who like to plan things, the app provides the option to order a certain service at a certain period in advance. It is a new digital modern experience for a guest that enables them to make an order from anywhere. The time of service becomes much shorter since guests can order food from their app and came to the hotel once the order is finished. There is no more waiting for those who do not like it. The orders can be paid with cash, or as well through the mobile app on their Smartphone (Romashko, 2020).

Digital smart key

Mobile keys were once considered a luxury, but today because of the pandemic they have become a regular and necessary tool for hotel guests. Since the use of smartphones in hotels has increased, it has also become a necessary tool to meet guest expectations and to help them meet the hotel challenges caused by Covid-19. One of the things that became very popular during the pandemic is a digital smart key for guest room access. The digital key is sent to guests after the check-in and they are able to use it on their smartphones. It is used with a mobile application, the same one for the other hotels' operations such as check-in/out, room service, concierge, and others. It is necessary to be connected to Bluetooth in order to use the key in the application. Scanning the code on the smartphone, the process of locking and unlocking guests' rooms becomes much fast and easier. Guests can unlock the door by tapping on the button or holding the phone close to the door. The innovation of a new room key saves money and time and it is much more convenient than plastic key cards. Once the guests get the code on their Smartphone, the key is immediately connected to the specific phone number and it cannot be transferred to another phone number or device. The digital key is only active during the guests' stay, so there is no chance to abuse it (Webrezpro, 2020). These hotel keys are also very safe and secure. Physical keys can be lost or stolen, while people's phones are often locked with a password. Even if the phone is stolen and unlocked, it is necessary to put a password or fingerprint ID to unlock your digital key. This process is very efficient and provides guests with trust and security (Webrezpro, 2020). Smartphone code provided a new guest experience, personalization, and, for those that are introduced to technological advancements, it has also become a much more convenient and easier way to use (Torres, 2018).

Safety & security

Due to Covid-19, hotel guests have become more careful and cautious. Hotels are reducing health risks and taking care of their guests using technology (Shin & Kang, 2020). More people started paying attention to small details that will make them feel safe and secure while staying in hotels. They want to know about room sanitation and as well cleanliness. The mobile app that provides much more information about all opportunities and facilities in hotels also provides information about sanitation and safety measures. Guests can see on their mobile apps where the sanitation spray, gloves, and masks are located. It is also providing information on how to use specific bags for trash or how to keep items for laundry separated to avoid pandemic risks. All necessary details about housekeeping are provided for guests to choose whether they want room service to bring new and fresh linens. Since the technology has developed so much, the mobile app can show when was the last time that certain items such as TV remote controller or room telephone were sanitized.

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It also allows guests to check if any of the rooms had been used for quarantine and when it was cleaned and sanitized last (Aluri, 2021).

The hotel staff makes a checklist to ensure all hygiene requirements. The checklist is available for all hotel staff and managers. Through this mobile app, employees can take care of each object, including daily line-up, security walk-through, clean suppliers, or room inspection. Employees are able to check all cleaning processes as well as all cleaning products, which is a very important measure at the moment in the given circumstances. This app helps hotel staff to handle the guests' security under control updating important and significant information to the guest mobile app in order to establish a better relationship with guests and to establish their trust and confidence. This digital solution for hygiene measurements makes guests feel safe and as well brings them a new kind of experience in this area (Fox, 2020).

According to Driedger (2020), it has become clear that if we have learned anything from this situation with the pandemics, it is the fact that we need to learn to adapt to new circumstances and we need to learn how to deliver our services to meet the changing needs of our guests. Contactless technology is surely one of the ways in which hotels can respond to these circumstances and adapt to them (Driedger, 2020).

People will get used to technology and introduce themselves with the advantages of digital technology. Nevertheless, some important questions need to be answered: When the whole pandemic ends, what will happen? Will people continue to focus on technology, or will they again yearn for a high-touch approach? Which of the technological changes that were caused and started during the pandemics will remain when the pandemic is over? This research seeks to determine which if any Covid-19 inspired innovations will remain after the pandemic and its associated social restrictions have passed.

Methodology

In this research, an online survey was used for the purpose of answering the research question "Which if any of Covid-19 technology innovations will remain after the pandemic pass? ". Additionally, this model was used to determine which technology changes people prefer to use once the pandemic pass and the safety restrictions were abolished.

The survey was made in an online format, as this format represented an easier and safer way to reach the survey participants during the Covid-19 pandemic period. The online survey was prepared in Google Forms and distributed in English. The answers were collected from March 27th, 2021 till April 8th, 2021 from different age groups. The survey was distributed via online travel groups and sent to friends that have traveled via email.

The survey consists of 21 questions: 5 questions about how familiar people are with new technology changes caused by Covid-19, 6 questions about what options people prefer the most (technology options or in-person), 6 questions about what option would people like to use once the pandemic pass and, lastly 4 demographic questions. For most questions the answer option was a 5-point Likert scale; (1) – Strongly Disagree, (2) – Disagree, (3) – Neither Agree nor Disagree, (4) – Agree, and (5) – Strongly Agree. The literature review provided source material pertaining to the technology advancements addressed in the survey. The last 4 demographic questions were focused on age, gender, and how often people traveled and stayed in hotels before and during the pandemic. To measure how often people

traveled, the answer option was; (1) – Once a month, (2) – Once every three months, (3) – Once every six months, (4) – Once a year, and (5) – Almost never. The end of the survey included an open-ended space of comment or question.

The survey was posted into few international travelers groups on Facebook with a huge number of participants, as well as sent to friends and family by email. It is not relevant to measure respondent rate since the part of my research was posting survey into travelers groups where is not possible to check how many people have viewed the survey. The online survey was short, participants needed only 4-5 minutes to complete it. For the participants, it was not necessary to include the name since the survey was completely anonymous and confidential. The keywords were focused on hotel technology innovations (check-in/out, room service, safety & security, concierge service, and digital room key) to measure whether people would like to use them once the pandemic pass.

Results

To collect answers, survey participants were reached by email, messages, and travel groups. The number of people that participated was 100. 74% of participants were female and 26% were males. Survey respondents came from a variety of different age groups. The biggest number of participants, 58 (or 58%), were between 18-24 years old. The next largest group of participants, 16 (or 16%), were aged between 25-34 years old, while the number of participants under 18 years old was 14 (or14%). The other participating age groups were small in number including 7 (or 7%) from 45 - 54 years old, 4 (or 4%) from 35 - 44 years old, and only one (or 1%) 55 – 64 years old. There are no participants 65 years or older. The focused audience was people who often traveled and stayed in hotels.

Ages of participants

- Under 18
- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65+
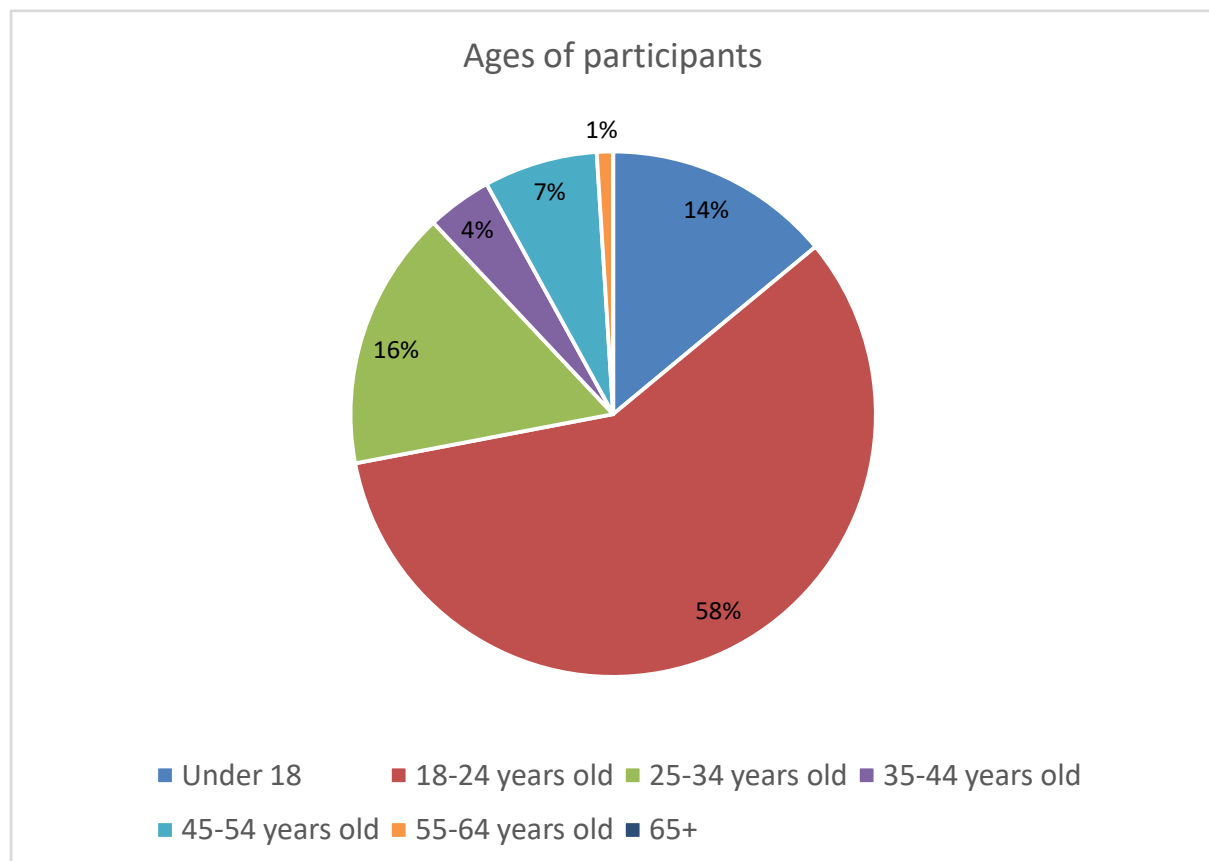
The focus of the 100 answers collected was to determine how familiar people are with the new technology changes, what people prefer, and what they would like to use once the pandemic and its restrictions pass. The survey focused on technological innovations and measures differences between people's opinions.

Before the pandemic, only 9% of survey participants indicated that they had almost never traveled. During the pandemic, however, this group of individuals (those that almost never traveled) increased to 42%.

A majority of survey participants were familiar with new operations at hotels in response to the pandemic pertaining to Check-in/out (M=3.38, SD=1.09). Over 57% of survey participants agreed that they are familiar with self-check-in/out, while 26% disagreed and 17% were neutral. Additionally, a majority of respondents were familiar with new operations at hotels in response to the pandemic pertaining to room service (M=3.42, SD=1.13). Note that over 54% agreed that the room service used by the mobile application is familiar for them, while 24% disagreed and 22% were neutral.

Overall, using a mobile app to obtain information about safety and security concerns at a hotel was found to be preferable to doing so in person (M=3.51, SD=0.95). Over 55% of participants agreed that obtaining safety and security using a mobile app is preferable to doing so in person, while 17% disagreed and 28% were neutral.

Influencers did not impact survey participants' travel decisions now more than they did before the pandemic (M=2.71, SD= 1.08). Note that over 44% of survey participants disagreed with the statement that the influencers now impact their decisions more than they did before the pandemic. 28% of survey participants agreed with this 28% were neutral.

Overall, survey participants indicated that using a mobile app to obtain necessary information for room service is preferable to doing so in person (M=3.34, SD=0.91). Over 49% of survey participants agreed that using a mobile app for room service is preferable to in-person, while 21% disagreed and 30% were neutral (See Chart 1).
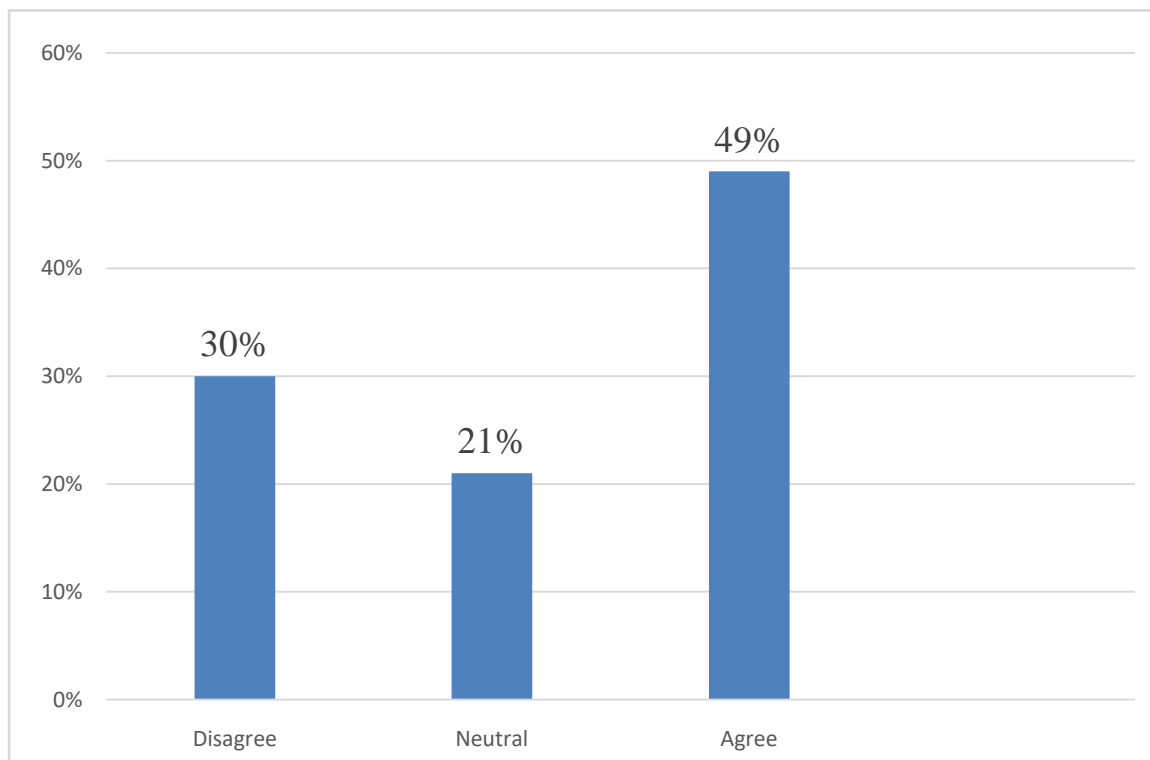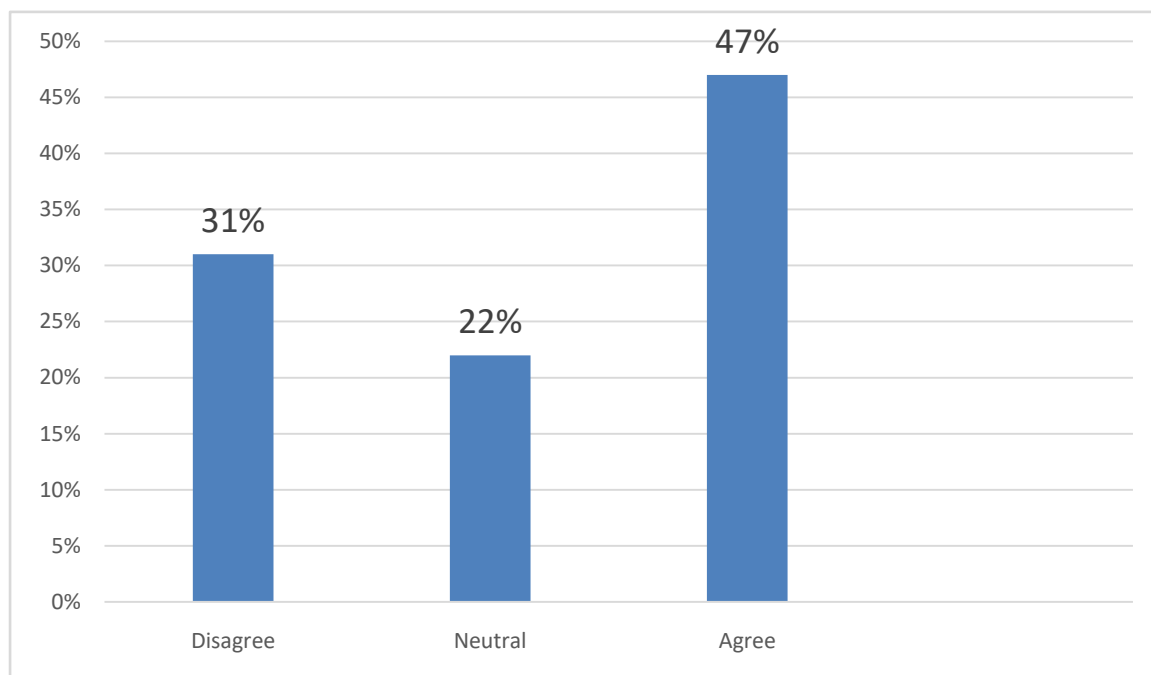
Chart 1. Showing results in percentage of participants preferences to use Digital Room Service during the pandemic (now).

Survey participants revealed that once the pandemic and its restrictions pass, they would not prefer to use Concierge services through a mobile app versus in-person (M=2.83, SD=0.99). Over 45% of survey participants disagreed that they would prefer to use concierge service through the mobile app versus person, while only 30% agreed and 25% were neutral.

Survey participants indicated that once the pandemic and its restrictions pass, a small percentage of them, 3%, would prefer to check-in/out via a technological solution and not in-person (M=3.06, SD=1.09). Notably, 41% of people agreed that they would prefer to check-in/out via technological solution and not in-person once the pandemic passed and 38% of people disagreed while 21% were neutral.

Survey respondents suggested that once the pandemic and its restrictions pass, they would prefer to use a code on their smartphone rather than a mechanical key (M= 3.11, SD=1.15). Over 47% of people agreed that they would prefer to use a code on their smartphone rather than a mechanical key once the pandemic pass, while 31% disagreed and 22% were neutral (See Chart 2).

Chart 2. Showing results in percentage about participants' preferences to use Digital Room Key once the pandemic passes.

To conclude the research results, below are provided three tables that are showing results of mean and standard deviation for each type of questions; awareness, preferable changes during the pandemic, and people's preference once the pandemic passes.

Familiar with:	Mean	Standard Deviation
Digital Check -in/out	3.38	1.09
Digital Room Service	3.42	1.13
Digital Concierge Service	3.12	1.09
Digital Room Key	3.09	1.19
Dgital Safety & Security	3.28	1.10

Preferable during the pandemic:	Mean	Standard Deviation
Digital Check -in/out	3.36	1.05
Digital Room Service	3.34	0.91
Digital Concierge Service	3.07	0.95
Digital Room Key	3.41	1.10
Digital Safety & Security	3.51	0.95

Preferable once the pandemic passes:	Mean	Standard Deviation
Digital Check-in/out	3.06	1.09
Digital Room Service	3.11	1.15
Digital Concierge Service	2.83	0.98
Digital Room Key	3.32	1.18
Digital Safety & Security	3.04	1.03

Discussion

The purpose of this study was to gain a better understanding of new technology changes in hotels due to Covid-19 and to determine whether or not people would like to see those new technology changes remain after the pandemic has passed.

To better understand participants' opinions, the survey provides two questions about how often they have traveled and stayed in hotels before and during the pandemic. Before the pandemic, the highest percentage was 36% of people that traveled once a year. The smallest percentage was 9% of people who answered that they have almost never traveled and stayed in a hotel. The second question, focusing on survey respondents' travel during the pandemic, reveals a substantial change in survey respondents' travel patterns where 42% of them answered that they have not traveled and stayed in hotels. The percentage of people that have traveled once a year, during the pandemic is 34%. Through these two demographic questions, it is easier to understand how many people have actually experienced these new technological innovations and how many have only heard or read about them.

Survey participants agreed that all technological innovations are familiar to them. The most familiar technological change is Check-in/out with 57%, while the least familiar one is Digital Concierge Service with 42%. The reason for his can be that almost every article that I found for the literature review included Check-in/out as a technological change while Digital Concierge Service was mentioned only in two articles.

The research results suggested that respondents are familiar with new operations at hotels in response to the pandemic pertaining to room service. These results were expected for the room service since nowadays people are all the time ordering food through mobile applications. Over 54% of participants agreed that they are familiar with new operations pertaining to room service and 29% of them are between 18-24 years old. This finding makes sense as young individuals are already familiar with new technology.

Moreover, over 49% of participants agree that using a mobile app to obtain necessary information for Room service is preferable as opposed to 21% that prefer to do this in-person. Taken together, these findings indicate that people know about new technology advancement for using room service and they prefer using it.

The results imply that using a mobile app to obtain information about safety and security concerns at a hotel is preferable to doing so in person. This result was not surprising since people are scared of the pandemic and they want to feel safe and be informed at the same time which this option provides.

The result did not support the notion that Influencers did not impact participants' travel decisions now more than they did before the pandemic. Over 44% of participants disagreed that the influencers impact their opinions more now than before the pandemic. This finding may be explained by the idea survey respondents feel that influencers are primarily posting about destinations and hotels as a way for the influencers to make more money. Influencers are usually sharing their honest suggestions and previous experiences. Due to Covid-19, many influencers started sharing information about the Covid situation in a certain area and based on the present results it is interesting to see that people do not trust them in a way they are sharing it honestly and not for their personal profit.

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It is interesting that once the pandemic and its restrictions pass, people would not prefer to use Concierge services through the mobile app. Over 45% of participants responded that they would not prefer to use app-based concierge services while only 30% indicate that they would. The results of his findings are a bit confusing since people would prefer to use a mobile app for room service and not for concierge service. Concierge service as well provides information about the resort, and as well different purchasing options. Based on the literature review presented in the introduction, people seek high-touch and this finding may be explained by the idea that they prefer something to be explained to them rather than reading much information on their phone. Choosing a tour, restaurant or any other attraction is a much more complex decision and people might prefer a more personal and interactive discussion.

An interesting result was that there was only a small difference between the number of respondents who would like to check-in/out via technological solution and not in-person once the pandemic passes. The percentage of people who preferred to check-in/out via technological solution is 42%, while 38% of people disagreed with the statement. Compering the results by age provided very interesting and confusing results. The younger generation under 18 years old agreed with 3% and disagreed with 5%. Over 25% of participants between 18-24 years old agreed with the statement while 21% of the same age disagreed. The participants between 25-34 years old agreed with 5% and disagreed with 8%. Since 58% of survey participants were generation between 18-24 years old, it was decided to calculate the age percentage for the older group such as 34-65 years old and their results were 5% for agreeing and 7% for disagreeing. Overall, comparing the answers by group age did not lead to any conclusion since the percentage for all generations, for both answers agree and disagree are very similar with the minimum difference. This present research question shows an issue and it should be examining in further researches, with more participants to determine which option would people like to prefer.

Finally, it was observed that people would prefer to use a code on their smartphone rather than a mechanical key once the pandemic passes. Over 47% of respondents agreed that they would prefer to use a code on their smartphone rather than a mechanical key and 29% out of this 47% are participants between 18-24 years old. These results were not expected considering the provided literature review which describes technological growth in the last few years. The younger generations are already introduced and raised with technology and it is not surprising that they would prefer to have a code on their smartphone while entering into their room rather than a mechanical key.

Based on the presented results, comparing preferable questions there is a result that people prefer to use more all technological innovations now rather than once the pandemic pass. The reason for this is that people want to feel safe now, during the pandemic and they prefer to use technology. After the pandemic and its restrictions pass, people would not prefer to use technology innovations because they prefer high-touch over high-tech. They want more attention and more human touch. From these results, the conclusion is that certain things are preferable while some are refused. For some things (intangibles) people want more input. Even if many things proceed through technology, there is still a need for human contact.

The limitations for this research will be; a short period of time to collect more answers, it is hard to reach participants because of the Covid-19 restrictions, people travel less because of the pandemic so there are no many people that experienced those changes and it is very hard to reach older generations to see what they think and what would they prefer. Despite these

limitations, the present study has enhanced our understanding of the relationship between technological changes and people's view of them. It is hoped that the current research will stimulate further investigation of this important area.

In terms of future research, it would be useful to extend the current findings by examining more participants of different ages to better understand and determine which generations would like to keep and use technological changes caused by Covid-19. It would be necessary to compare the results by the age groups to easier understand the preferences of each generation. Besides, the best to do in the future will be to visit hotels once the pandemic pass and check are hotels keeping these new technological innovations.

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