BENEFITS AND CHALLENGES OF SELF-SERVICE CHECK-IN KIOSK AT KUALA LUMPUR INTERNATIONAL AIRPORT 2 (KLIA2) IN MALAYSIA

MUHAMMAD FAKHRI HAKIM BIN OMAR ZAI and INTAN FATIMAH SASILA Bt GHADZALI

Avionics Specialist, University Kuala Lumpur, Malaysian Institute Aviation Technology, Lot 2891 Jalan Jenderam Hulu, Jenderam Hulu 43900, Dengkil Selangor.
Corresponding Author Email: intanfatimah@unikl.edu.my

ABSTRACT

Airport check-in is the process by which passengers are accepted at the airport prior to travel by an airline. The check-in is usually checked by an airline itself or a handling agent working on an airline's behalf. The purpose of this research were to identify the benefits of using the self-service check-in kiosk and investigate the challenges of using the self-service check-in kioskat Kuala Lumpur International Airport2 (KLIA2) in Malaysia**.** 163 people of men and women between 18 and 40 years of age were randomly selected to be the respondents of the study. To gather the needed information, a set of questionnaire was designed to gain primary data from the respondents about their opinions and preferences on the aspect of using the self-service check in at the airport and the benefits that can be gained from using it. The overall findings of the study indicated that most of the passengers preferred to use the self-service check-in system because using the kiosk can reduce queuing and more privacy during the checking-in process. The self-service check-in also proved to be convenient to the passengers and the location of the kiosk itself was very near to the airport entrance. However, there were limited number of self-service check-in kiosk in the airport. The system also was hard to use for the older generation of passengers and the system itself was having a slow response time on its interface. In conclusion, some suggestions have been made to recommend people to use the self-service check-in at the airport.

Keyword: KLIA 2; check-in kiosk; quantitative research

I. INTRODUCTION

Airport check-in is the procedure by which an airline admits passengers at the airport before travelling. Typically, the airlines operate service counters found at airports. The check-in is usually checked by an airline itself or a handling agent working on an airline's behalf. Passengers usually hand over their baggage that not permitted to take in the aircraft cabin and receive a boarding pass at the counter check-in. An airline regulation require passengers to check in before a flight departs by certain times. Depending on destination and airline this length ranges from 15 minutes to 2 hours.

The disadvantages by using counter were the passenger need to face long queuing line at the counter especially during peak hours. At the same, the passenger also need to spend more time for check in due to slow processing period. AtKLIA 2,the peak hour check-in usually in the morning. This makes counter check-in less efficient as it requires the passengers to queue and wait for a long time for checking in, that is why the self-service check-in kiosk is build. According to Singh (2018), one of the most significant reason of using the self- service check in kiosk is to shorter the passenger processing time. Next, Seetanah et al(2018) stated that airports are now finding that a self-service check-in kiosk is a valuable tool in the reduction of queues. Theself-service check-in kiosk helps more airports to replace the processes of flight check-in and luggage check-in and greatly improves the air travel experience as a whole.Shin et al. (2019) mentioned that nearly all airlines have switched to self-service check-in kiosks.

However, self-check-in kiosk also has its challenges. A study by Yang et al. (2015) stated that most of the self-service technology (SST) in the airport does not meet passenger expectation. Airlines has lost a great deal of interpersonal with customer when there is no interaction with airline's staff. This research will focus on determine the benefits and challenges of the self-service check-in kiosk atKLIA2 in Malaysia. The respondents of the research will be the passengers KLIA2 who are using self-service check-in kiosk.

II.   LITERATURE REVIEW

Self-service check-in kiosks are popping up everywhere in the airport from departure hall to arrival hall. This new technology helps to ease the check-in process for both passengers and airline staffs. Many researches had proven that self-service check-in kiosk give more benefits than disadvantages to the users. Besides reducing the processing time for the check in, self-service check in kiosk also helps airline to reduce the operating and labour costs.

Self-service check-in kiosks have proven a revolutionary innovation in making life easier and effective for people. Protus et al. (2016) in his research mentioned that the use of self-service check-in kiosks allows the processing of a significant number of passengers to be decentralised from the airport itself. Other than that, passengers often have to wait in line for hours to check-in at check-in counter during peak holiday season.In Kamarudin(2017) studied, with the availability of self-service check-in kiosk technologies, passengers have an extra expectation in the airport as the airport can deliver efficient operations and excellent customer service. Next, passengers in airport always chase time and tends to anything's that can facilitate their work. According to Galanda (2016), mobile check-in has become a more efficient way of checking in because it eases the user for checking in. Besides that, when travelling by aircraft,

passenger must alert with the time to depart. Thus, this self-service check-in kiosk system can reduced the time spent on check-in process than the counter check-in. According to Sulej (2016), services involved in it fast and efficiently so as to avoid idle times or delays during the procedures potentially resulting in delay of flight.A few airport sometimes locate the self-service check-in system at inconvenient location. This make passenger does not know where the exact location of the kiosks is. According to Duerte Felix (2015), it is found out that kiosks near the entrances are the ones chosen by the vast majority.

Although there were a lots of advantages regarding self-service check-in kiosk, but certain communities may disapproves the technology on how they operate. Many disagreement have been shown by the consumer on self-service check-in kiosk. Some says the technology were not helpful at all. Others may say the system are not convenient for continuous use, especially on busy airport because it may cause the system malfunction or freeze. This matter cannot be tolerate because the purpose of self-service check-in kiosk is to reduce traffic at the airport and ease the routine of the consumer. All of this should be analyzed for future benefits. Passengers with special needs or disabilities are a form of passenger requiring further attention. Since the June 2006 European Council, new regulations have been organized to support disabled passengers, making airports important to assist these passengers through the terminal processes-from their arrival to aircraft entry-and air carriers important to assist them during the flight. Then, customers who worry about personal information loss prefer to stay away from technology that causes insecurity like this. Moreover, Bogicevic et al(2017) agreed that not all customers are willing adopters, and instead, they are customers who value traditional human interaction.

III.   METHODOLOGY

The main purpose of this research is to review feedback from passengers regarding their use of the KLIA 2 self-service check-in kiosk. On top of that, to asses and evaluate self-service check-in kiosk uses among KLIA 2 airport passenger. Data were collected via questionnaire by using Google form to achieve the purpose of this research.

This research utilized the methodology of quantitative research. The questionnaire used different type of question, such as ranking, scale for quantifiable data, listing, category and open-ended questions. The separate portion of the questionnaire were demographic background, benefits of self-servicecheck-in kiosk, challenges of self-service check-in kiosk and the best way to encourage passengers to use airport self-service check-in kiosks.

Section A were the demographic background of the passengers that is gender, age, occupation and how often they travel by airplane. Next, for section B the passengers

needed to rate the benefits of using self-service check-in kiosk. The benefits had been listed so the passengers needed to rate. Section C were the challenges of using self-service check-in kiosk. For this section, they must choose for the challenges of using self-service check-in kiosk. Lastly, section D the passengers can give their recommendation for the best way to encourage passengers to use self-service check-in kiosk at airports.

IV. RESULTS

Figure 1 shows the benefits of using self-service check-in kiosk at KLIA2. Out of 167 respondents, 43% strongly agreed that self-service check-in kiosk could reduce time for check-in process respectively.Next,41%strongly agreed that self-service check-in kiosk could eliminate unnecessary queuing line. On top of that, 34% strongly agreed that self-service check-in kiosk could give more privacy and security and increase revenue with multiple language options respectively. Besides,32% strongly agreed that self-service check-in kiosk could reduce number of staff to serve passengers. Meanwhile,29% strongly agreed that self-service check-in kiosk can enhance customer experience and loyalty and improves space utilization at airports. Then, 28% strongly agreed that self-service check-in kiosk could reduce number of staff to serve passengers. Finally, the25% strongly agreed that self-service check-in kiosk could give more enjoyment for passenger while check-in and delivering excellent customer service.

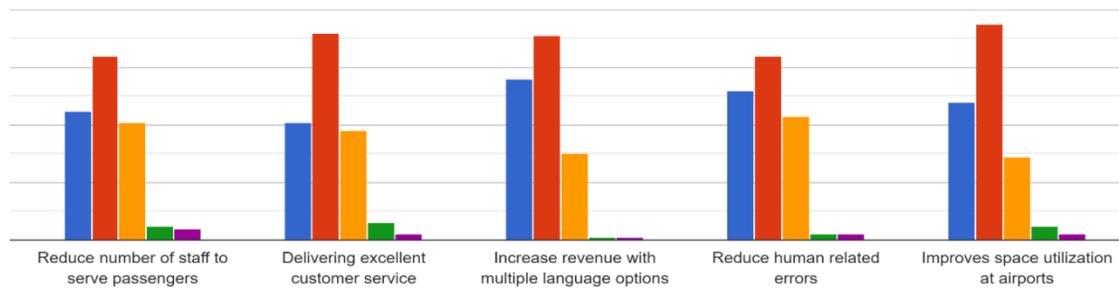This section asked you to rate the benefits of using self service check-in kiosk
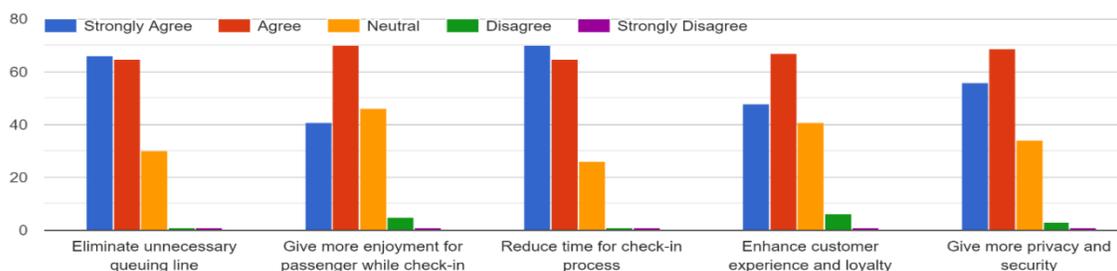
Figure 1: The Benefits of Self-service Check-In Kiosk

Figure 2 shows the challenges of using self-service check-in kiosk at KLIA2. Out of 167 respondents, 68% of the respondents claimed that needs passenger to have knowledge on how to use the machine. Next,44% stated that limited number of check-in kiosk was the challenges of using the self-service kiosk.37% agreed the unserviceable check-in kiosk. Meanwhile, 33.1% said that lack of personal interactions with airline staffs. Lastly, 28% claimed that slow response time of the interface respectively.
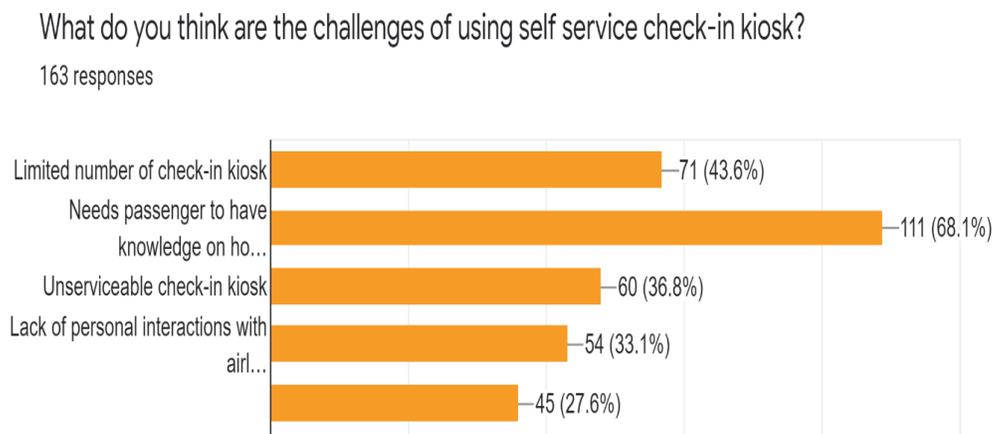

Figure 2: The Challenges of Self-service Check-In Kiosk

Figure 3 shows the respondents recommendation on the best way to encourage passengers to use self-service check-in kioskat KLIA2. From the167 respondents, 25% of the respondents recommended that they preferred to do campaign and promotion. 22% of them suggested that must have staff monitor at every kiosk, while18% recommended that airline needed to educate their passengers to use self-service check-in kiosk, 15% of them suggested that to increase the number of kiosks, 12% recommended that to close the check-in counters. Only 8% of the respondents suggested that the kiosk must be user-friendly system respectively.
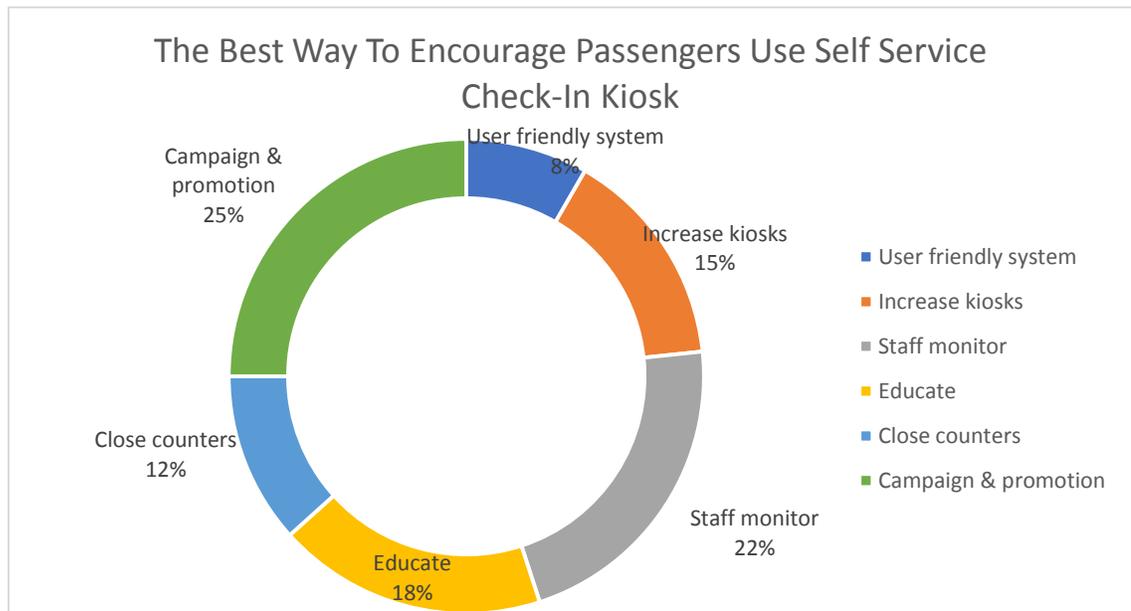
Figure 3: Best Way To Encourage Passengers Use Self-service Check-In Kiosk

V. DISCUSSION

From the results, it shows that the entire research question have been answered. Based on Figure 1, 43% of them strongly agreed that self-service check-in kiosk had reduce time for check-in process. This may be due to the time they spent at the check-in counter was longer compared to the self-service check-in kiosk. These results of this study seem to confirm the findings of a study by Sabatova (2016) which stated that self-check-in kiosk mainly save a time. Besides that, 41% of them strongly agreed that self-service check-in kiosk could eliminate unnecessary queuing line. This perhaps that the passengers did not have to waste their valuable time in queuing. There are similarities between the attitudes expressed by Roelen (2016) said that the traditional check-in process is associated with long waiting times and long queues, causing stress and nuisance. Next, 34% of them strongly agreed that self-service check-in kiosk can give more privacy and security and increase revenue with multiple language options. This perhaps that when the passengers check-in at counter, the data will be given to the staff. Passengers also have multiple language options when check-in at kiosk. This finding agrees with Singh (2018) findings which stated that miscommunication due to different languages will cause dissatisfaction and stress.

Next, Figure 2 shows that there were 68.1% respondents claimed that needs passenger to have knowledge on how to use the machine. This may be the effect of the lack of guidance from airlines staffs to help them using self-service check-in kiosks. This result is consistent with previous research by Gibbs (2014) who found that airport

depersonalization cite kiosks and less human interaction as two of the major changes to airports in recent times. Then, 43.6% of respondents stated that limited number of check-in kiosk was the challenges of using the self-service kiosk. This may be due to the large number of passengers that want to use the self-service check-in kiosk instead of check-in at the counter. This finding of this research is consistent with Roelen (2016) suggested that a research on the market basic requirements such as the need to facilitate enough kiosks to accommodate certain amount of traffic, to the aim to include flexibility or resilience in the process. Finally, 36.8% respondents mentioned that unserviceable check-in kiosk. This may be due to the technology of the kiosk is not advanced enough causing lagging while the customer is using it. The present findings did seem consistent with other research by Radoslav Sulej (2016) where the research found that services involved in the self-service check-in kiosk fast and efficiently so as to prevent idle times or delays during the check in procedures.

Based on Figure 3, 25% of the respondents recommended that they preferred to do campaign and promotion to encourage passengers to use self-service check-in kiosk at the airport. This may due to the fact that some of them have difficulties in using the kiosk such as they were not IT savvy, not familiar with the interface and they have trouble understanding English. Next, 22%of the respondents suggested that must have staff monitor at every kiosk. This is because not all passengers know to use the self-service check-in kiosk. They must be guided by airline staffs so they process will be easier. This finding is similar to Abdel Aziz(2010)which stated that most passengers needed assistance in completing the check-in process. Finally, 18% of the respondents recommended that airline needed to educate their passengers to use self-service check-in kiosk. This may be the effect of the lack of knowledge and exposure for them to use the self-service check-in kiosks. According to Yang et al. (2015), most of the self-service technology (SST) in the airport does not meet passenger expectation.

VI.   CONCLUSION

Self-service check-in kiosks seem to be a very important tool for assessing the perceived service quality of passengers using counters or kiosks to check in at airports. According to observations, more passengers who check in at the self-service counters than those who check in at the counter. However, the study was able to determine the influence of boarding methods on the intention of passengers who use the counter to recommend services to their friends and colleagues and go through the process again, as well as the perceived service quality dimensions, such as enjoyment and the design and design of the service delivery system. . Therefore, from the study shows that the passengers who use self-service kiosks and receive higher service quality are more likely to recommend the airline's services and go through the process of using the airline's boarding service again. In addition, passengers who feel that the transaction is

safe when using the self-service kiosk are more likely to recommend the service, re-use the service and re-engage in the service.

Believe that the airline's self-service check-in kiosks put the best interests of passengers at heart, so the passengers' intention to recommend and reuse the airline's services and the process of using the self-service check-in kiosks again is even better. The behavioral intentions of customers play an active role in the service provider or airline in retaining existing customers and expanding their customer base. Therefore, if service providers want to increase the adaptability of self-service technical systems and further reduce their costs, they must focus on the functions, design and convenience of self-service check-in kiosks. According to the passenger's understanding of the privacy policy declared by the airline, another important phenomenon was discovered.Since passengers are dissatisfied with the same thing mainly because they do not know its existence, airlines can emphasize making passengers more clearly aware of their privacy policies.

REFERENCES

1) Self-service Technologies At Airports
https://repository.asu.edu/attachments/201444/content/Singh_asu_0010N_18011.pdf
2) Destination Satisfaction and Revisit Intention of Tourists: Does the Quality of Airport Services Matter? https://journals.sagepub.com/doi/abs/10.1177/1096348018798446
3) Self-Service Technology Research: A bibliometric co-citation visualization analysishttps://www.sciencedirect.com/science/article/pii/S0278431918302901
4) Passengers Expectations of Airport Service Quality: A Case Study of Jeju International Airport

https://ideas.repec.org/a/mir/mirbus/v5y2015i7p30-37.html

5) Managing airport service quality–the impact of self-service technologies
http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?C21COM=2&I21DBN=UJRN&P21DBN=UJRN&IMAGE_FILE_DOWNLOAD=1&Image_file_name=PDF/imfi_2016_13_3(contin.2)__13.pdf
6) Managing Customer Expectation for Passenger Service at Airport.
http://www.aci-asiapac.aero/services/main/18/upload/service/18/self/55cc68cb431f0.pdf
7) Micro-simulation of check-in operations: case study of Terminal 1 of Lisbon's Airport
https://fenix.tecnico.ulisboa.pt/downloadFile/1126295043834580/dissertacao.pdf
8) The impact of traveler-focused airport technology on traveler satisfaction
https://www.sciencedirect.com/science/article/pii/S0040162517304596
9) Effects of new technologies on customer satisfaction –DiVA

http://www.diva-portal.org/smash/get/diva2:1431024/FULLTEXT01.pdf

10) Implications of Language Barriers for Healthcare
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7201401/
11) Passenger Perceptions of Depersonalisation of the Airport Experience
https://ourarchive.otago.ac.nz/bitstream/handle/10523/4620/GibbsJesseWW2014MTour.pdf?sequence=1&isAllowed=y

12) The Application of Online Check-in in the Process of Passenger Handling in Air Transportation
https://www.researchgate.net/publication/321053336_The_Application_of_Online_Check-in_in_the_Process_of_Passenger_Handling_in_Air_Transportation

13) Study of airport self-service technology within experimental research of check-in techniques case Study and concept
https://www.researchgate.net/profile/Djamel_Eddine_Saidouni/publication/46093542_Distributed_Maximality_based_CTL_Model_Checking/links/548049250cf250f1edc009fc/Distributed-Maximality-based-CTL-Model-Checking.pdf#page=25

14) Passengers Expectations of Airport Service Quality: A Case Study of Jeju International Airport
https://ideas.repec.org/a/mir/mirbus/v5y2015i7p30-37.html