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An Implementation of Digital Platform to Enhance the Appointment Scheduling System

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Abstract

The high request for appointments and manually arranging the customer appointments became challenges for staff to manage the schedules. There was an increasing demand for customers visiting Company Z which lacked a proper platform to manage and keep the customer appointments. The purpose of the study is to implement a digital platform to enhance the appointment scheduling system. It was important to know and understand the practice and current process of appointment scheduling to improve the overall system to benefit the staff and customers. The action plan or intervention was proposed to use the digitalisation of the appointment scheduling system. The research design of the data collection method was qualitative data for semi-structured interviews and quantitative data for structured surveys. The intervention in cycle one did not achieve the targeted value due to the short period of intervention. Therefore, the intervention was improvised by categorising the services provided and simplifying the user interface to ease the process of scheduling appointments for cycle two. The overall interventions were successfully implemented and the new system enhanced the company service quality by reducing the customer wait time and streamlining the staff workflows.

Keywords: Appointment Scheduling, Digitalisation, Action Research

Introduction

The service industry is a business sector in that part of the economy that provides services to customers rather than tangible objects. Every business not only sells goods but mostly serves services to people. A system is a group of components that work together to form a network or process. It is a set of instructions or rules that specify the proper application of each algorithm and method employed in the system. The system does a fantastic job of making it simple for consumers to discover answers to their problems (Zulkifli & Abidin, 2020). Due to the growth in the retail and service industry, the emergence of practicing the appointment system is encouraging for business service providers. The application of appointment scheduling is an important task for all sizes of organisations from small businesses to big

enterprises. A common tool that is primarily used by service providers to match their service capabilities with uncertain customer needs is an appointment scheduling system (Liu et al., 2019).

An effective system for scheduling appointments is crucial for encouraging customer and service provider satisfaction. The success of the appointment scheduling system is the only factor that determines how efficiently services are delivered, which lowers staff error and the number of customer dissatisfaction (Ala & Chen, 2022). Appointment systems have been widely adopted to cut down on customer waiting times and improve the efficiency of delivering services. This system can decrease costs and minimise dissatisfaction among staff and customer resulting from unmet scheduling limitations, as well as increase access to service resources (Wu & Zhou, 2022). An appointment scheduling system is making the best use of available resources to cut down on wait times and give appointments top priority. This system also frees up fewer resources for the service provider because the appointments can be scheduled by customers without contacting the staff (Nalluri et al., 2023).

The need to adopt digital solutions in organisations is becoming more urgent as a result of the opportunities and problems in the era of digital (Martinez, 2019). Digitalisation is the integration of digital technology across all organisational functions and processes. This process results in infrastructure changes that affect how an organisation operates and provides value to its customers. Digitalisation can be defined as the use of digital technology and data to earn revenue, enhance businesses, and transform corporate processes. It calls for new forms of workplace communication and collaboration (Kraus et al., 2022). The company can reduce the need for manual processes, and automatically collect data that mine data for a deeper understanding of process performance by digitalising information-intensive operations (Parviainen et a., 2017). Many organisations have advanced by incorporating digital technology into their operations in addition to focusing on offering the finest services to customers.

With the widespread use of the Internet, where everyone can quickly access information and make an online appointment. People can use an online appointment system to make online reservations anywhere and anytime. From a business perspective, an online appointment scheduling system is an appointment system created by a service provider for its customers (Akinode & Oloruntoba, 2017). In the world of information technology, the method of online appointment systems has been widely used by organisations to give better services to their customers. The use of an online appointment system will result in better control over the booking process and operation with more precision, which also contributes to a reduction in errors caused by traditional manual processing (Pariyar et al. 2023). The online appointment system will be created to streamline the scheduling process to reduce the human error caused by manually booking appointments. It helps simplify many of the tasks people perform every day and make their lives easier (Olujulo, 2021).

Problem Statement

The problem is identified through conducting an informal interview with the department personnel. The company is facing a problem that using the manual method to record the customers' appointments is increasing their workload and less efficiency. Customers usually make appointments directly with staff through phone calls, WhatsApp, or email. This method brings some inconvenience to customers who are unable to contact the company during non-operating hours or when the office is out of manpower. For instance, the staff will need to travel to visit customer premises and the office will temporarily shut down. If the customer is

sending an email to schedule an appointment, they might get a late reply from the staff since the appointment is manually arranged.

Furthermore, the current practice of scheduling customer appointments might take time to manage and fix an appointment. It is challenging for the staff to manually manage customers' appointments and there is a lack of a proper platform to keep the customers' appointment records. The staff must manually maintain all of the appointment records in the appointment books to ensure that the schedules will not overlap with other appointments. It is necessary to solve the current appointment scheduling system to ease the staff practices and improve the service quality in processing the customer's appointments.

This study used the Fishbone Diagram as illustrated in Figure 1 to analyse the potential reasons for the manual appointment scheduling method in Company Z, as mentioned in the previous section. Ishikawa (1990) developed the Fishbone Diagram, commonly known as the cause-and-effect diagram or Ishikawa diagram, in the management research sector. A fishbone diagram is a technique for visualising the various causes of an impact or issue. The diagram is used in process improvement techniques to pinpoint all of the underlying issues that might be contributing to a problem. Based on Figure 1, the issues are identified through interviews with the department personnel. The issues of the manual reservation system are classified into method, people, service, and material. The manual scheduling method caused to increase in the staff workload and slowed response to customer requests. Also, the manual scheduling method makes it difficult for staff to retrieve the appointment records.

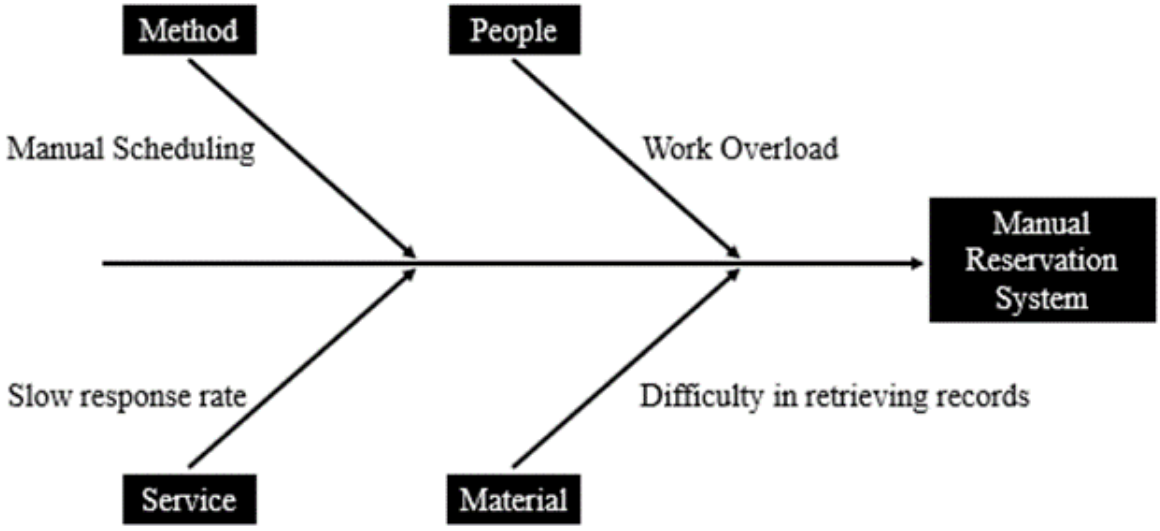

Figure 1 Fishbone Diagram

Research Questions

There are three (3) research questions as the following:

RQ1. What are the challenges in the current appointment scheduling system?

RQ2. What is the new effective appointment scheduling system can be implemented?

RQ3. What is the impact of the new digital appointment scheduling system to enhance the current process of appointment scheduling?

Literature Review

Scheduling is the process of allocating jobs to resources for a set period of time. Computer networks and systems, production factories, and patient or customer appointments have problems with appointment scheduling. All these problems can be resolved manually or with

the help of heuristics personalized to the condition (Gomes, 2017). Appointment scheduling is a crucial accountability in the operations of many types of enterprises, from large organisations to small businesses. Over the years the way of scheduling appointments has changed from booking appointments via phone calls and taking the records in the appointment bookkeeping to utilise an electronic or online calendar like Google or Microsoft Outlook, the job is still time-consuming for organisations that remain to depend on these out-of-date and ineffective approaches (Ismail et al., 2017). People are relying on administrative staff to manage a complete schedule to ensure that appointments do not overlap in manual appointment scheduling systems. Online appointment scheduling relies on a computerised system to connect all scheduling which reduces the time and effort required to set up appointments (Pan et al., 2021).

The reservation is countable as an arrangement with a formal date or schedule to meet at the designated time. The appointment scheduling is times dedicated to medical appointments, business matters, etc. Many organisations are practicing the appointment scheduling method in operating their business. Scheduling appointments has become a difficult undertaking for many organisations and they are trying to manage customer journeys and preserve control of the arrival flow by using the appointment scheduling system (Akhtar, 2022). Manual scheduling is a traditional way of keeping track of customer appointments. For example, making numerous calls, manually recording information, gathering data, and manually sorting are all part of the manual appointment management process. Manually scheduling appointments seems to be easier as it takes a phone conversation with the customers to set up an appointment. The struggle will begin with coordinating several appointments, keeping a paper appointment book, and tracking the rescheduled and cancelled scheduled appointments (Zhao et al., 2017).

For many organisations, the planning process can take a few minutes, but this may not be an issue for overall planning. However, multiplying this by the number of regular appointments or bookings is able to reach a huge number like thousands in large organisations, and this rapid job can be a time-consuming problem for supervisors, managers, and employees. Time constraints might cause businesses to occupy less time on more important tasks or to increase operating costs by necessitating extra staff or paying overtime (Namdev et al., 2021). Moreover, there is a limited time frame for individuals to arrange appointments and reservations unless an organisation is open and staffed 24 hours a day. This not only makes it difficult for customers to schedule appointments since they may not be able to reach the organisations during typical business hours, but it also means that sales are missed when they are closed. Individuals who do not have time to call to make their appointments during business operating hours may find this difficult. Additionally, individuals can typically encounter long waiting periods to talk with an administrator due to the high volume of calls received. This causes customers inconvenience and makes administrators work harder (Olga, 2017).

Nowadays, many organisations are transferring their manual appointment scheduling method to an online appointment system (Srivastav & Sharma, 2022). The reason is to minimise their staff workload which requires fewer staff to handle the appointment process. By adopting online appointment systems people can save time instead of manually recording appointments (Pariyar et al. 2023). The online appointment scheduling system is a paperless electronic application with great flexibility and ease of use for some organisations such as faculty, administration, hospitals, clinics, and other business organisations to better manage customer appointments (Zulkifli & Abidin, 2020). The advent of the appointment system is

encouraging for business service providers given the expansion of the retail and service industries (Liu et a., 2019). Using an online appointment system will provide better control over the booking process and more precise functioning, which also helps cut down on errors brought on by manual processing (Jebamani et al. 2022).

Technology Acceptance Model

Figure 2 shows the Technology Acceptance Model (TAM), developed by Fred Davis has become the most widely used model for studying factors that influence the acceptance of technology by users. The TAM is one of the most influential study models in investigations of the determinants of information systems or information technology acceptance. Davis used the theory of Ajzen and Fishbein of reasoned action to demonstrate that beliefs affect attitudes that main to intentions, and create behaviours. Therefore, Davis envisioned that the relationships between TAM's beliefs, attitudes, intentions, and behaviours would predict the acceptance of information technology by users (Davis, 1989).

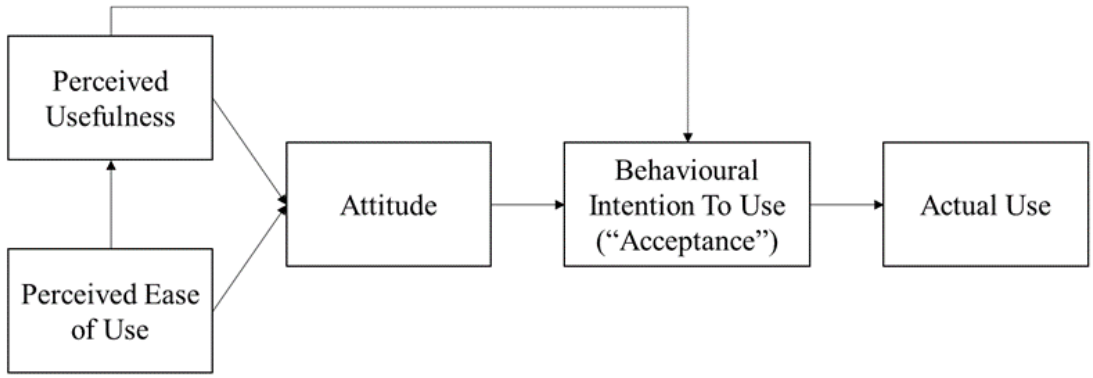

Figure 2 Technology Acceptance Model

The TAM hypothesizes and empirically supports perceived usefulness and ease of use as primary factors of user acceptance of particular information technology (Chau, 1996). An individual's perception of the technology's capability to improve work performance when finishing a job has been defined as perceived usefulness. A person's subjective perception of the effortless use of a technology system is called perceived ease of use. Perceived ease of use affects the perceived usefulness, it has an unintended impact on an individual's acceptance of technology (Karahanna & Straub, 1999). Attitude toward the use and behavioural intention to use are two (2) components of TAM. The user's assessment of the utility of using a certain information systems application is called attitude toward use. The likelihood that a person will utilize the application is measured by behavioural intention to use. Actual usage is TAM's dependent variable, it is usually a self-reported measurement of the application frequency of time usage (Azjen, 1980).

The beneficial traits of booking an appointment online are its speed, lower prices, and the opportunity to display more information in comparison to manual reservation channels. The online reservation or appointment system was created to be as user-friendly as feasible and in accordance with the best applications of online reserving channels used by European traveler cruise companies (Habibi et al., 2019). Furthermore, the confidentiality of a user's individual information is guaranteed to be limited to company mailings that the user has agreed to receive (Jaevelaeinen, 2003). Regardless of the perceived ease of use of the online appointment scheduling system is examined in this research. The TAM examined how the

attitude of Company Z's staff is being accepted to the perceived use of new technology before the actual use of the online appointment scheduling system.

Proposed Interventions

Figure 3 shows the process of the appointment scheduling system for pre- and post-intervention in Company Z. This study aims to implement the digital platform of appointment software to enhance the appointment scheduling system. From this, it is assumed that it can eliminate the manual reservation channel such as receiving customer phone calls or emails and manual arrangement for the customer appointments in the action research cycle one and further improve in action research cycle two. Overall, the intervention plans are expected to enhance the service quality in managing the customer appointment scheduling system and improving customer satisfaction.

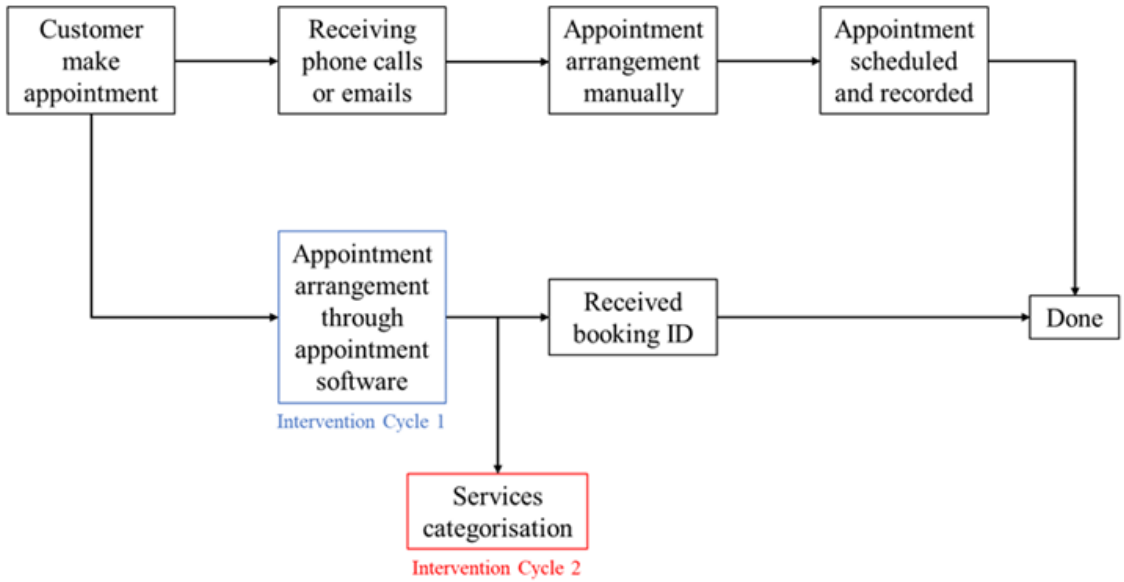

Figure 3 The Process of Appointment Scheduling System in Company Z

Methodology

A methodology is a grouping of accepted procedures, techniques, and tools used to achieve a research objective. It must be noted that methodology plays an important role in any research-based project because it may be quite helpful in determining the correct method of collecting primary and secondary data on the research topic. The research philosophy of the pragmatic approach was applied in this action research. The inductive approach is the most appropriate method to achieve the research objectives.

Research Design

A descriptive cross-sectional research design was used in this action research study. The researcher used a mixed method approach within participative action research, it offers a comprehensive understanding by integrating both qualitative and quantitative data within the research study. A better knowledge of research challenges is the goal of mixed methods research. This approach acknowledges the complexity of the issues being studied, allowing for a deeper exploration of the problem while also quantifying certain aspects to support the qualitative findings. The participative action research involves the stakeholders which are the employees and customers as active participants in the research process to align with the goals of addressing issues and effecting change.

Data Collection

The primary research data in this research were collected from interviews and questionnaires. The data collection method for qualitative data was conducted the semi-structured interview with two (2) departmental staff in the pre- and post-intervention. The departmental staffs are the person-in-charge in arranging the customer requests. The interview was conducted before pre-intervention to understand their current practices in managing the customer appointment scheduling system. The qualitative data of the interviewee's responses were collected for data analysis. For quantitative data, the data collection method was the online distribution of the questionnaires to the customers in the pre-intervention stage. The customer profile is the existing customers with the company. An estimated 73 customers took part in the questionnaires. The questionnaires were used to understand the preferences of customers making appointments in implementing the new strategy. For post-intervention, the questionnaire was distributed again to the customers to measure the impact of implementing the new appointment scheduling system. The quantitative data of participants' responses were collected for data analysis.

Data Analysis

Data analysis in qualitative research is the process of classifying and interpreting the statement, using various materials or cases to increase the understanding of the phenomenon (Flick, 2014). The non-numeric information is the qualitative data, for example, interview transcripts, notes, and recordings. The phases for analysing the qualitative data are transcribing the recorded interview, coding the transcriptions, reviewing the notes, and interpreting the data. Analysing the data involves labelling, categorising, and grouping the data that have been collected. Data analysis for this study consisted of three (3) processes which are coding, categorisation, and theme identification. Semi-structured interviews were used as the qualitative research approach, and it was recommended that the data be analysed thematically. In this study, the information collected from interviews was analysed and interpreted using coding techniques and thematic analysis. Using this technique allows for a better understanding of phenomena, the development of categories and themes, and the development of final theories. Data analysis in quantitative research is a systematic process of analysing, collecting, and evaluating measurable and verifiable numerical data by using various statistical techniques. The descriptive analysis used the Statistical Package for Social Sciences (SPSS) to analyse the quantitative data. Questionnaires were used as the quantitative research approach and the data collected from the participants were analysed the reliability by the SPSS.

Findings and Discussion

In this section, the qualitative and quantitative findings have been discussed based on the three (3) research questions identified earlier.

Qualitative Findings

The criteria for selecting the participants were based on the job titles and job scopes. The demographic profiles were collected during the interview session such as name, age, gender, education level, job titles, and the number of years servicing. The participants' profiles were shown in Table 1.

Table 1
The Profile of Participants

Participant's Name (Pseudonym)	Age	Gender	Education Level	Job Title	Years of Servicing
Jenny	35	Female	Bachelor's Degree	Application Engineer	9 years
Benny	39	Male	Diploma	Sales/Application Engineer	3 years

The five (5) main themes were the adoption of new technology, appointment channels, staff productivity, customer satisfaction, and a centralised database. Table 2 shows the summary of the five (5) main themes and the evidence.

Table 2
The Summary of Key Themes and Evidences

Key Themes	Evidence
Adoption of new technology	"It could be a possible way since the online appointment scheduling system is quick and simple to use." "If using the new appointment scheduling system is easy and fast as compared to the manual appointment method."
Appointment channels	"Currently, our customers will make an appointment with us via phone call, WhatsApp, or email. Out of the three platforms, we use email to communicate most frequently." "Most of the customers will schedule and arrange the appointment by calling or emailing us. But some will directly contact the person in charge to arrange an appointment for renting or training purposes."
Staff productivity	"The overall process might be time taken and needed staff to arrange the booking slot. Sometimes the time availability does not match the customer and needs to reschedule." "The digital appointment can reduce the need for extra human resources created by the process of appointment scheduling and is a whole day convenient."
Customer satisfaction	"The online appointment scheduling system might allow customers to create and cancel appointments online. Customers can make appointments at any time anywhere it is simple and safe to use an online appointment scheduling system."
Centralised database	"Yes, when we are using a manual appointment system to arrange appointments for customers. The schedule might be overlapping since we do not have a proper record-keeping system and all the appointments are bookkeeping which caused staff difficulty tracking and checking the record. I believe that using an online appointment system allows companies to keep track of customer details or scheduled appointments. Also, all the appointments will not be overlapped and are well-recorded and traceable in the system." "All the appointments will be recorded in a book and marked on the office calendar."

Quantitative Findings

In the dataset consisting of 75 responses, it is remarkable that all the participants are Malaysian whereas 48% of the participants are male and 52% are female participants. The majority of the respondents are between the ages 21 to 30 years old which is 46.7% followed by 31 to 40 years old at 32%. The participants' races are 34.7% Malay, 37.3% Chinese, and 28% Indian. The education level of participants who hold with Bachelor's Degree is 57.3% followed by a Diploma at 26.7%. Table 3 presents the demographic information of the respondents where these respondents are the customers of Company Z.

Table 3
Demographic of Respondents

Category	Indicator	Frequency	Percentage (%)
Gender	Male	36	48.0
	Female	39	52.0
Age	20 years old and below	1	1.3
	21 – 30 years old	35	46.7
	31 – 40 years old	32	32
	41 – 50 years old	7	9.3
	51 years old and above	0	0
Nationality	Malaysian	75	100.0
	Non-Malaysian	0	0
Race	Malay	26	34.7
	Chinese	28	37.3
	Indian	21	28.0
	Other	0	0
Education Level	SPM/STPM or Equivalent	7	9.3
	Skills/Academic Certificates	3	4.0
	Diploma	20	26.7
	Bachelor's Degree	43	57.3
	Master's Degree	2	2.7
	Doctorate	0	0

Table 4 presents the post data of time spent making an appointment for cycle one and cycle two. Based on the result shown in Table 4, the waiting time of more than 30 minutes but less than one (1) hour was reduced by 14.7% from 17 to 6, and more than one (1) hour but less than one (1) day was reduced by 14.9% from 13 to 2. However, the waiting time between 15-30 minutes showed an increase of 6.6% from 29 to 34, and the waiting time of less than 15 minutes rose from 15 to 32 after the implementation of the improved appointment system in cycle two.

Table 4
The Time Spent for Making an Appointment

	Cycle 1 Post-Data		**Cycle 2 Post-Data**	
	Frequency	Percent	Frequency	Percent
Less than 15 minutes	15	20.0	32	42.7
15 minutes – 30 minutes	29	38.7	34	45.3
More than 30 minutes but less than 1 hour	17	22.7	6	8.0
More than 1 hour but less than 1 day	13	17.3	2	2.7
More than 1 hour but less than 1 day	1	1.3	1	1.3

Table 5 shows the usage of the new appointment system for post-implementation of cycle one and cycle two. Based on the result, there were about 65 out of 75 customers or 86.7% of the respondents were using the new appointment system after continuing to implement it in cycle two. There is only 10 out of 75 customers have not used the online appointment system. The results have increased by 26 customers who have used the online appointment system from cycle one to cycle two.

Table 5
The Usage of the New Appointment System

	Cycle 1 Post-Data		**Cycle 2 Post-Data**	
	Frequency	Percent	Frequency	Percent
Yes	39	52.0	65	86.7
No	36	48.0	10	13.3

Normality Test

An evaluation of a data sample's representativeness for a population with a normal distribution is done using a normality test. Table 6 presents the normality test for cycle one and cycle two. Based on the values stated in Table 6, the skewness and kurtosis values for effectiveness in cycle one were -0.162 and -0.223 while in cycle two were –0.071 and -0.746. The values of skewness and kurtosis for convenience in cycle one were -0.036 and -0.705 and the values changed to -0.422 and -0.864 in cycle two. The skewness and kurtosis values for customer satisfaction in cycle one were -0.284 and -0.449 while -0.201 and -0.925 in cycle two. Hence, the Skewness and Kurtosis values for the three (3) variables were normally distributed as the values are between -2 and +2.

Table 6
Normality Test for Cycle One and Cycle Two

		Cycle 1 Post-Data		**Cycle 2 Post-Data**	
		Statistic	Std. Error	Statistic	Std. Error
Effectiveness	Skewness	-.162	.277	-.071	.277
	Kurtosis	-.223	.548	-.746	.548
Convenience	Skewness	-.036	.277	-.422	.277
	Kurtosis	-.705	.548	-.864	.548
Customer Satisfaction	Skewness	-.284	.277	-.201	.277
	Kurtosis	-.449	.548	-.925	.548

Reliability Test

The three (3) variables were effectiveness, convenience, and customer satisfaction. Based on Cronbach's alpha value in Table 7, the values for cycle one post-intervention were 0.948, 0.946, and 0.913 while the values for cycle two post-intervention were 0.968, 0.965, and 0.944 respectively. The questionnaire's Likert scale was reliable since Cronbach's Alpha is greater than 0.7.

Table 7
Reliability Test for Cycle One and Cycle Two

Variables	**Cycle 1 Post-Data**		**Cycle 2 Post-Data**	
	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
Effectiveness	.948	6	.968	6
Convenience	.946	4	.965	4
Customer Satisfaction	.913	4	.944	4

T-Test Analysis

Table 8 shows the paired sample statistics for the cycle one and two post-intervention. The mean value has increased after implementing the new appointment system for cycle two post-intervention. Based on the results stated in Table 8, the mean results in cycle one post-intervention for effectiveness, convenience, and customer satisfaction were 2.8578, 3.1433, and 2.9133, while the intervention in cycle two the results improved to 3.9711, 4.2067, and 4.0567 respectively.

Table 8
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	AR1_PostEffectiveness	2.8578	75	.55120	.06365
	AR2_PostEffectiveness	3.9711	75	.62444	.07210
Pair 2	AR1_PostConvenience	3.1433	75	.67680	.07815
	AR2_PostConvenience	4.2067	75	.67079	.07746
Pair 3	AR1_PostCustomerSatisfaction	2.9133	75	.58485	.06753
	AR2_PostCustomerSatisfaction	4.0567	75	.62813	.07253

The impact of the intervention was determined for the T-Test Analysis based on the findings of the Paired Samples T-Test. The study data's relevance was determined using the t-value. Table 9 presents the Paired Samples T-Test and the t-value for effectiveness, convenience, and customer satisfaction are -11.821, -9.659, and -11.684 respectively. According to the student's t-value distribution table, the t-value for all variables was higher than the critical value of 1.9925 with the degree of freedom being 74. Furthermore, the p-value for effectiveness, convenience, and customer satisfaction were lower than 0.001. Hence, the p-value was lower than 0.05 and the data indicates statistically significant. Based on the findings, p-value and t-value showed a significant result. Thus, the new implementation had significance and improved the company's overall appointment system.

Table 9
Paired Samples T-Test Result

Paired Samples Test

		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			One-Sided p	Two-Sided p
Effectiveness										
Pair 1	AR1 - AR2	-1.11333	.81565	.09418	-1.30100	-.92567	-11.821	74	<.001	<.001
Convenience										
Pair 2	AR1 - AR2	-1.06333	.95338	.11009	-1.28269	-.84398	-9.659	74	<.001	<.001
Customer Satisfaction										
Pair 3	AR1 - AR2	-1.14333	.84747	.09786	-1.33832	-.94835	-11.684	74	<.001	<.001

Discussion of the Research Findings

In this research, the online questionnaire was delivered to the respondents through Google Form after the intervention. The SPSS software was used by the researcher to analyse the quantitative data. Based on the results shown in the previous section, the t-value for effectiveness was -11.821 (df=74, p<.05), convenience was -9.659 (df=74, p<.05) and customer satisfaction was -11.684 (df=74, p<.05). After analysing the quantitative data, the Paired Sample t-test presented that there was a significant difference between the post-intervention of cycle one and cycle two where the degree of freedom is 74 and the t-value for all variables were higher than the critical value of 1.9925. The new appointment system helps to improve the current practice of appointment scheduling system where the mean value for three (3) variables has been increased.

According to Akinode and Oloruntoba (2017), researchers mentioned that the company will gain benefits by utilising the online appointment system. Abu, Jasmisham and Abu Mangshor (2022) claimed that the online booking system will shorten the customers waiting time and ease staff in managing the appointments. The overall research has similar findings to the literature review from previous researchers. Abu Bakar and Said (2019) stated that the customers will feel the convenience of reserving based on their preferred time slot during off-business hours. The analysis proved the new system has been effectively implemented in Company Z which brought a great impact on the appointment scheduling system.

Conclusion

In conclusion, the intervention of an online appointment scheduling system has been successfully implemented in the organisation for two cycles. There are 75 respondents participated in the survey questionnaire. After the execution, the usage of the new appointment scheduling system has been capped at 86.7% which achieved the targeted 80%. The findings show a positive sign which is effective to the company appointment scheduling system. Based on the results of the Paired Sample t-test, the p-value and t-value showed a significant difference between the post-intervention of cycle one and cycle two. The p-values for effectiveness, convenience, and customer satisfaction were lower than 0.001. Hence, the p-value was lower than 0.05 and the data indicates statistically significant. Furthermore, the t-values for effectiveness, convenience, and customer satisfaction are -11.821, -9.659, and -11.684 respectively. The overall findings of this research have significant ramifications for the practice of scheduling appointments in company and client contexts.

The online appointment system is used to create effectiveness for the employees and customers to enhance the appointment process. The new intervention showed a positive impact on the company in enhancing the current appointment system. This change promotes a workplace culture where workers may work more strategically, eventually leading to a more efficient and effective workflow. With the new approach, customers no longer have to adhere to standard business hours and may conveniently schedule appointments. Appointment wait times are significantly decreased by the system's real-time availability information. It was proven that implementing the new intervention improves the appointment process where the system is convenient to use, customers feel satisfied and the employees can manage the customer appointments easily.

However, there is room for improvement in the strategy such as the security of the system needs to be enhanced in the long run. Based on the research, using the online scheduling platform can improve the booking process and bring up the company’s service quality among employees and customers. The research future recommendation is to expand the research area to other regional offices. It helps to perform a comparison study amongst regions regarding how different regional offices have used online platforms for scheduling appointments. When developing an online appointment scheduling system, businesses should give user-centered design concepts top priority for long-term success. A user-centric approach to design promotes a good user experience, lowers the learning curve for both employees and customers, and ultimately raises user satisfaction levels. It enables organisation to modify the system in response to changing user preferences and new technological developments, ultimately enhancing its usability and efficiency.

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