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Evaluation of the Level of Use of IT Helpdesk Application: A Case Study

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Abstract. Seeing the number of user growth decreasing from year to year, there needs to be an evaluation of the level of use of the IT Helpdesk application at XYZ University. This study aims to determine the factors that have a positive effect on the level of use of the IT Helpdesk application by employees at XYZ University. With this evaluation, it is expected to increase the number of users and their total use and no more complaints or requests for IS/IT services are found that are not recorded by the IT Helpdesk application. The model used in this study is a combination of the DeLone McLean IS Success model and the UTAUT model with the independent variables of Trust and Loyalty, where the DeLone McLean IS Success model uses six variables, namely Information Quality, System Quality, Service Quality, User Satisfaction, Behavioral Intention, and Use. Then the UTAUT model uses two variables: Performance Expectancy and Effort Expectancy. Questionnaire data collection was carried out using a simple random sampling technique with a total of 352 employees and partial least square (PLS) with Structural Equation Modeling (SEM) was used as a data analysis technique. Based on the research results, Behavioral Intention and Loyalty have a direct positive influence on the level of use of the IT Helpdesk application at XYZ University, which is 60.7%. Where Behavioral Intention itself is positively influenced by Information Quality, System Quality, Service Quality, and Trust, then Loyalty is positively influenced by Trust, then Trust is positively influenced by User Satisfaction, and User Satisfaction is proven to be positively influenced by Information Quality, System Quality, and Service Quality. Thus it is concluded that several things can be done to create user loyalty and intention to increase the level of use of the IT Helpdesk application at XYZ University, such as: (a) ensuring that the same problem does not occur in the application after the solution is implemented and the service ticket is resolved, (b) ensuring that users can initiate IS/IT services using personal devices such as mobile phones and tablets and not limited to company-owned laptop/pc devices, (c) ensuring that IS/IT services provided are in accordance with the requests submitted by users with the promised timeframe, and (d) simplifying the appearance and flow of the

IS/IT service submission process so that users do not have difficulty knowing the current status of previously initiated tickets.

Keywords: Helpdesk, Evaluation, DeLone & McLean IS Success Model, UTAUT Model, Trust, Loyalty, Use

1. Introduction

In today's technological era, the use of information systems is very common and a necessity in the company's business environment. Information systems are heavily relied upon in business to provide company competitiveness in this competitive environment. To increase competitiveness, companies must have a good and sustainable strategy to face and adapt to changing conditions that can occur at any time. One strategy that is of particular concern so that companies can survive in a dynamic era is to pay attention to the level of use of information systems.

One very important element in efforts to improve business performance is the level of use. By knowing the level of use, companies can measure the extent of the success of the implemented information system, which can then be evaluated to determine future improvements. Determining the level of use of the helpdesk ticketing system is one method businesses can use to measure the success of information systems.

Helpdesk is a complementary service function component and is responsible for resolving issues. At the same time, ticketing is a tool used by companies to identify, communicate and resolve various problems (Iswara et al., 2018). So a helpdesk ticketing system can be defined as a centralized service management system with a ticket/queue-based reporting mechanism.

Things that can encourage the implementation of the use of the helpdesk ticketing system are regular socialization related to the use of applications, actively receiving and conveying and providing solutions to users, evaluating the use of applications, also giving warnings to employees if problems or services requests are not submitted through the helpdesk ticketing system, then the problem or service request will not be responded to. It is expected that using IS/IT services to support business processes will make problems in the company's business operations easier to manage and solve (L. Wijaya et al., 2018).

XYZ University has implemented a helpdesk ticketing system called the IT Helpdesk application, which is a web-based application portal with a ticketing system consisting of a service ticket and incident ticket categories so that all IS/IT service fulfilment at XYZ University is in the application and managed by the IT Division unit, especially the IT Assets & Services Delivery department. It is expected that using IS/IT services to support business processes will ease the difficulties that may be faced by the company's business processes.

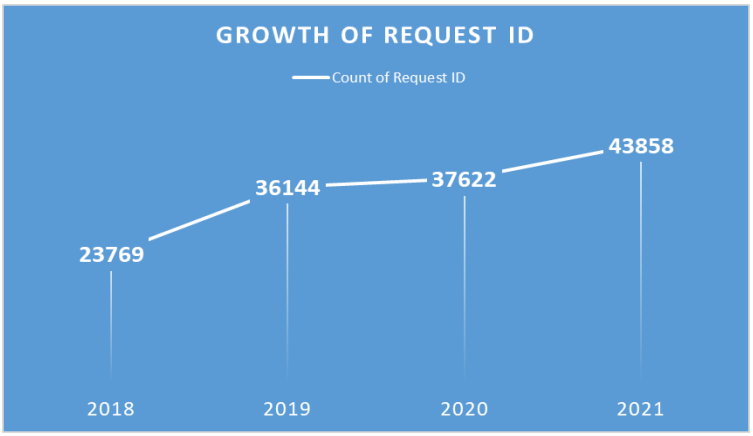

Fig. 1: Growth of Request ID Chart 2018 – 2021

The level of use of the IT Helpdesk application tends to increase every year, both in the service and incident ticket categories. Based on data on the development of the number of tickets from 2018 to 2021 described in Figure 1, in 2018 there were a combined total of 23,769 tickets between the service category and the incident category, then in 2019 there was an increase of 12,375 so that the total combined tickets were 36,144, continued in 2020 there was also an increase of 1,478 so that the total combined tickets were 37,622, and in 2021 there was also an increase of 6,236 so that at the end of 2021 the total combined tickets were 43,858.

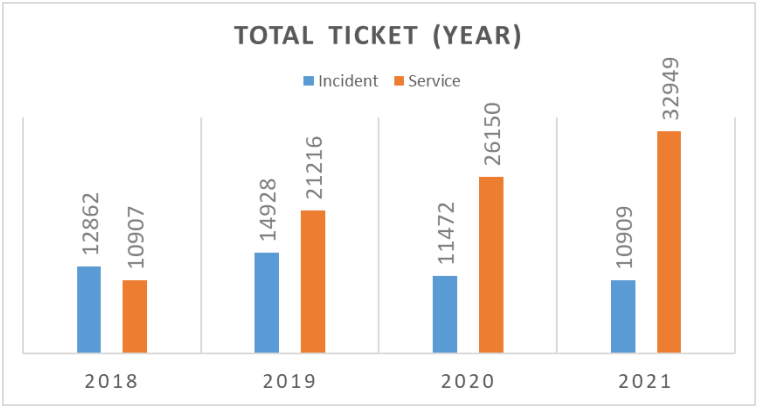

Fig. 2: Graph of Number of Incident & Service Tickets 2018 - 2021

In Figure 2, the total tickets per category of both services and incidents are further described. The service ticket category tends to experience an increase in total tickets every year, but in the incident ticket category, there is only an increase in total tickets from 2018 to 2019, and in subsequent years it tends to decrease. The highest number of service category tickets recorded in the IT Helpdesk application occurred in 2021 with a total of 32,949 tickets and the least occurred in 2018, namely 10,907 tickets. Meanwhile, the most incident category tickets occurred in

2019 with a total of 14,928 tickets and the least occurred in 2021, namely 10,909.

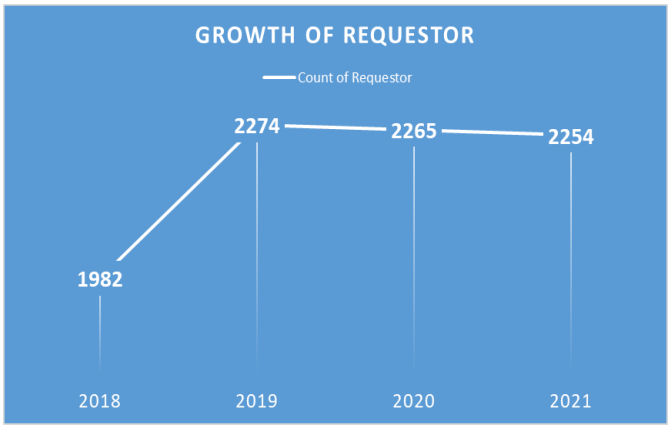

Fig. 3: Growth of Requestor Chart 2018 – 2021

Although the total number of combined ticket developments between service and incident categories tends to increase, the total number of IT Helpdesk application users tends to decrease every year. Figure 3 explains that in 2018 the total number of users of the IT Helpdesk application was 1,982 users, then an increase occurred in 2019 with a total of 2,274 users, but in 2020 there was a decrease with a total of 2,265 users, and continued in 2021 there was also a decrease with a total of 2,254 users. So it can be concluded that the number of ticket developments is inversely proportional to the number of user developments each year.

Based on information obtained from several IT Division staff, until then there were still users who conveyed their complaints directly to IS/IT staff in each department through personal chat, either via WhatsApp or Microsoft Teams and also offline meetings so that problems or requests for IS/IT services were not recorded properly by the IT Helpdesk application and caused the number of users in the application to tend to decrease. Often this is done because of the urgency of the problem or IS/IT service request submitted.

The level of use of the IT Helpdesk system can be evaluated to assess the performance of IS/IT department (Safitri, 2020). The intention to use and loyalty factors have an impact on the level of use, where the intention to use is described as an assumption that influences a person to behave to see the effort planned to perform a behavior (Pradita et al., 2021), while loyalty refers more to the user's commitment to revisit a site consistently (Chou et al., 2015).

To find out the behavioral intention/intention to use of user is influenced by several factors, namely service quality, information quality, system quality, effort expectancy, performance expectancy, user satisfaction, and trust. Then to find out whether user loyalty is influenced by the trust factor. In this case, user satisfaction is

also influenced by the service quality, information quality, and system quality provided. So it can be concluded, to measure the level of use will be mediated by the intention to use users based on system quality, information quality, service quality, performance expectancy, effort expectancy, user satisfaction, and trust, also mediated by user loyalty based on trust.

Seeing the number of growth in IT Helpdesk application users which is decreasing from year to year, there is currently no evaluation of the level of use of the IT Helpdesk application at XYZ University and the factors that influence it positively by using a combination of the DeLone McLean IS Success model and the UTAUT model with the independent variables Trust and Loyalty. Although there are several previous studies in other organizations or companies that discuss helpdesk evaluation (Alismaili et al., 2021; Justitia et al., 2021; Puspitarini & Retnowardhani, 2022; Wijatmoko & Siregar, 2020; Zeng et al., 2018) but use other models, or research related to measurement models using a combination of the DeLone & McLean IS Success model and the UTAUT model (Alajmi & Alotaibi, 2020; Oktariyana et al., 2019; Rahi et al., 2021; Setiawan & Legowo, 2020; Talukder et al., 2019) but with other research objects. Apart from the evaluation problem, this study aims to determine the factors that have a positive effect on the level of use of the IT Helpdesk application by employees at XYZ University so with this evaluation it is expected to increase the number of users and their total use, and no more complaints or IS/IT service requests are found that are not recorded by the IT Helpdesk application. In addition, from the results of this evaluation, it is also expected that departments in the IT Division can make gradual improvements to IS/IT applications or services provided by the IT Helpdesk application so that the application can represent a user-oriented IS/IT service process.

2. Literature Review

2.1. Helpdesk

Helpdesk is a web-based application that allows users to request services online from an IS/IT center as an IS/IT service provider (Al-Hawari & Barham, 2019). Helpdesk can also be defined as a help center within an organization that provides information, administrative, and technical assistance to users (PUTRA & others, 2019). The helpdesk is basically a central point where problems or issues are reported and then managed and organized in an orderly manner. The helpdesk is a complementary part of a service function and is responsible for solving problems or other issues (Iswara et al., 2018). This reasoning leads to the conclusion that the helpdesk is a tool that assists users with IS/IT-related issues, monitors their work and completion in a centralized manner so that IS/IT service needs can be met properly, as well as produce the right solution in managing available resources.

2.2. IT Helpdesk Application

A helpdesk system has been implemented at XYZ University with the name IT Helpdesk application. All IS/IT operational activities both development and support are the responsibility of all departments under the IT Division as an effort to centralize all IS/IT services provided both services and incidents. The service ticket category serves to document all IS/IT service requests that are first provided by the IS/IT team, such as application access requests, database access requests, door/tapping access requests, email settings, server allocation for new applications, application bug fixes, application upgrades, new application development, and so on. In contrast, the incident category serves to document any problems with previously provided services, such as server problems, printer problems, network problems, troubleshooting ticketing, and so on.

The IT Helpdesk application was created with the aim of managing tickets in IS/IT services that enable overall performance evaluation of the IT Division's performance target indicators, as well as improving productivity, service quality, and increasing user satisfaction (Al-Hawari & Barham, 2019). Once the service request has been fulfilled or the reported issue has been resolved, the responsible department will close the ticket and the ticket will be returned to the employee for service assessment. This is done to evaluate the performance of the IS/IT department regarding the services provided as a whole because the services of an IS/IT department can be assessed based on user perceptions from other departments in the organization (L. Wijaya et al., 2018).

2.3. Evaluation of the Level of Use of IT Helpdesk Application

Evaluation is a process of assessing, measuring, and comparing the results of work that has been achieved with predetermined results (A. Fauzi & others, 2020). Evaluation can also be interpreted as the process of considering a problem or symptom using certain qualitative benchmarks, such as good-not good, strong-weak, adequate-inadequate, high-low, and so on (Rukajat, 2018). From the above understanding, it can be concluded that evaluation is a process that has a measurement value and qualitative consideration of the results that have been achieved in accordance with predetermined provisions.

Furthermore, information system evaluation is an activity to collect information about the operation of information, which is then used to determine the right alternative in decision-making (Hidayat, 2020). Evaluation of information systems is not an easy thing to do so there are many approaches used to evaluate information systems. Information system evaluation activities can be carried out from various points of view, one of which is based on the level of application usage which is influenced by user intention in using the application and user loyalty to an information system.

Evaluation of the level of use of the IT Helpdesk application needs to be done to

be able to identify and analyze problems and obstacles during the service delivery process and the post-service delivery process as well as a more effective, modern and professional service development program according to current technology. With this evaluation, the organization or company can find out how well the IT Helpdesk application is currently implemented.

Another reason is to convince management and related stakeholders that knowing the level of use of this IT Helpdesk application implementation can provide added value to the company because a good IT Helpdesk application will certainly make responses to user questions and constraints faster and more effective, so that the use and utilization of IT Helpdesk applications can be increased.

2.4. DeLone & McLean IS Success Model

Measuring the success of information systems has become the concern of many practitioners and researchers due to the high value of an investment in the field of information systems. Currently, many models have been developed to measure the success of information systems and identify aspects that support this success. One model that is quite accurate and can represent the measure of information system success and is the most widely used is the model developed by DeLone and McLean (Urbach et al., 2008). According to (DeLone & McLean, 2003) there are seven information system success measurement variables that are interrelated and related to form a model called the DeLone & McLean IS Success Model as follows: (1) Information Quality; (2) System Quality; (3) Service Quality; (4) User Satisfaction; (5) Intention to Use; (6) Use; and (7) Net Benefits. In this study, the net benefits variable is not used in the research model, the reason for not using the net benefits variable and only six other variables will be explained in the research model and hypothesis section.

2.5. UTAUT Model

The development and application of technology must be able to increase productivity levels and generate profits for the organization or company. This can be achieved if the technology used can be accepted and used by company employees (Venkatesh et al., 2012). The level of acceptance of technology can be measured by many types of models and one of the most widely used models is the Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT model was developed by Venkatesh et al. in 2003 by combining and comparing eight previously existing empirical models regarding the individual acceptance of new technology. In this study, the authors will only use two variables in the UTAUT model, namely performance expectancy and effort expectancy. The use of these two variables will be further explained in the research model and hypothesis section.

2.6. Trust

In addition to the variables described in DeLone & McLean's IS Success Model and the UTAUT model, the Trust variable is also part of the information system and is one of the important aspects of information system success (Pengnate & Sarathy, 2017). Trust can be defined as "the belief that a person has favorable expectations about what another person will do based in most cases on previous interactions" (Gefen, 2000).

Trust is also considered as reliance on a particular company's services or products by users and other stakeholders concerning business activities offered through electronic media or websites (Imtiaz Ali et al., 2018). User trust is one of the constructs that is often studied in various fields including information systems literature (Gefen et al., 2003). Trust has an important role in determining human behavior. The importance of trust becomes clear when a person is faced with several risks and cannot control the behavior of others, especially in the success of information systems and also the need to connect between users and service providers. Based on the results of the literature used, the author will use the trust variable as one of the variables in evaluating the level of use of the IT Helpdesk application at XYZ University.

2.7. Loyalty

Organizations or companies will make every effort to retain potential users by building loyalty. The development of varied user desire characteristics has an impact on company improvisation to realize a loyal attitude in consumers (Lie et al., 2019). Loyalty can be defined as the level of user involvement and participation in activities contained in the system (Dorobat et al., 2019). Another definition of loyalty is a user's commitment to consistently revisit a site because the services on the currently used site are preferred over switching to another site (Chou et al., 2015).

User loyalty is one of the factors that play an important role in the success of information systems because loyalty is part of the indicators and keys to good business success in the long term (Akob et al., 2021). The manifestation of user loyalty is the repeated use of products, both goods and services. Thus, loyalty refers more to the behavior of decision-making units to carry out transactions continuously for goods or services from the selected organization or company.

Based on the context of the research conducted, in this case related to IT Helpdesk services, loyalty plays an important role because users can easily move from one communication channel to another to get IS/IT services which will have an impact on the process of recording and monitoring the evaluation of the IT Helpdesk application. Therefore, in addition to the DeLone & McLean IS Success model, the UTAUT model, and the trust variable, the author will also use the loyalty variable as one of the variables in evaluating the level of use of the IT Helpdesk

application at XYZ University.

3. Methodology

3.1. Research Model and Hypothesis

The combination of DeLone & McLean IS Success model and UTAUT model with the independent variables of trust and loyalty has been applied in this study to evaluate the level of use of the IT Helpdesk application at XYZ University. The DeLone & McLean IS Success model identifies three quality dimensions: information quality, system quality, and service quality. These factors have a direct impact on user satisfaction and intention to use. Use is listed as one of the variables in the DeLone & McLean IS Success Model that is driven by user satisfaction and intention to use (DeLone & McLean, 2003).

The Intention to Use variable from the DeLone & McLean IS Success model, which is based on previous research, cannot be fully explained by the three quality factors that influence it. This is due to the psychological decision-making aspect of the variable, which states that users will not use a system or technology unless they have expressed an intention to do so (Lashayo, 2018; Mardiana et al., 2015). Based on the above arguments, the Intention to Use variable should be added with other psychological factors from the UTAUT model and Lin model (Lashayo, 2018) or TAM and UTAUT model (Mardiana et al., 2015). The two studies conducted above show that the UTAUT model is one model that can compensate for elements of the psychological side of the decision that cannot be fully explained in the DeLone & McLean IS Success model. Therefore, in evaluating these psychological factors, the author will combine the DeLone & McLean IS Success Model with the UTAUT model.

The combination of these two models is further strengthened by previous research that combines several models, including the UTAUT model and the DeLone & McLean IS Success model. The DeLone & McLean IS Success model only considers system quality stability, while the UTAUT model also considers information system characteristics. As a result, the shortcomings of each model can be compensated for by integrating the use of other models (Lin et al., 2019). The Intention to Use variable in the DeLone & McLean IS Success model has the same definition as the Behavioral Intention variable in the UTAUT model, in accordance with research conducted by (Andika et al., 2017; Mardiana et al., 2015; Novianti, 2019).

In addition to the UTAUT model, the author also added Trust and Loyalty variables. The addition of the Trust variable is based on research conducted by (Dorobat et al., 2019; Ilham & Fajar, 2021; Imtiaz Ali et al., 2018) which suggests that there is a direct relationship between User Satisfaction and Trust. Then in the research conducted by (Conde et al., 2021; Pengnate & Sarathy, 2017) it was also

written that the Behavioral Intention/Intention to Use variable is one of the variables influenced by Trust. Then the addition of the Loyalty variable is based on research conducted by (Dorobat et al., 2019; A. A. Fauzi & Suryani, 2019; Lie et al., 2019) that suggests there is a direct relationship between Trust and Loyalty, which this study also stated that the Loyalty variable is one of the variables that affect Use.

Because the IT Helpdesk application at XYZ University is an application that must be used by all employees at XYZ University including IT Division staff and has been regulated in IS/IT procedures which are always socialized every year, and standardization of IS/IT devices, networks, connections, and supporting work facilities has been implemented. The Social Influence factor which measures how much a person believes that other people believe that the system should be used, and the Facilitating Condition factor which measures whether the organization and infrastructure are available to support the use of the system from the UTAUT model, are not used in this study. To predict Behavioral Intention, this study will only use two other variables from the UTAUT Model, namely Performance Expectancy (the level of one's belief that using the system can improve work performance) and Effort Expectancy (the level of one's comfort in using the system).

In addition, because the research conducted aims to determine the level of use and not to determine the net benefits, the Net Benefits variable from the DeLone & McLean IS Success model is not used in the research model. These justifications underlie the use of a combination model in this case study that combines the DeLone & McLean IS Success Model with the UTAUT model and additional Trust and Loyalty variables to assess the variables that affect the level of use of the IT Helpdesk application at XYZ University.

The following is the framework of the study which is described in Fig. 4 below:

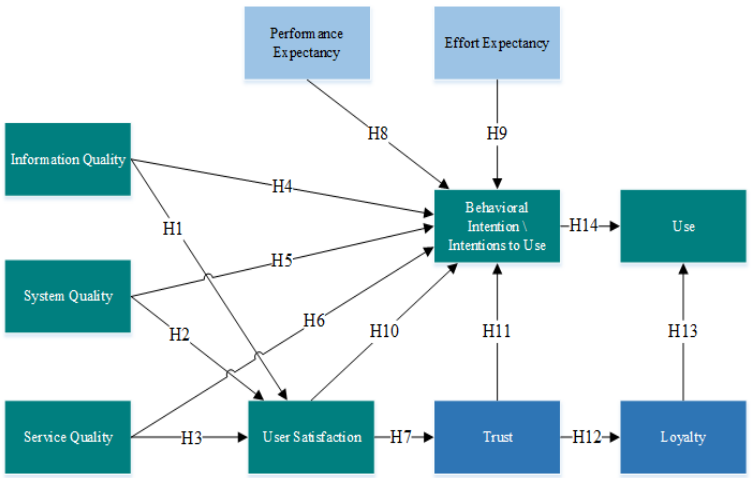

Fig. 4: Research Framework

The research hypothesis will be the reference point for the research conclusion.

Based on Fig. 4 the working hypothesis of this study is as follows:

H1: Information Quality will have a positive effect on User Satisfaction. Information quality variables are variables used to measure how good the quality of information produced by information systems and information quality can be seen as a metric of user satisfaction (DeLone & McLean, 2003). The content contained in the IT Helpdesk application affects the quality of information where IT Helpdesk application users want relevant, complete, and accurate information (DeLone & McLean, 2003). This is also corroborated by previous studies which state that information quality is proven to have an impact on increasing user satisfaction (Conde et al., 2021; Ilham & Fajar, 2021; Imtiaz Ali et al., 2018; Purwati et al., 2021; Setiawan & Legowo, 2020).

H2: System Quality will have a positive effect on User Satisfaction. System quality can be defined as the ability of an information system to offer information according to user needs. The indicators contained in the system quality variable are functionality, reliability, and flexibility (DeLone & McLean, 2003). Functionality can be interpreted that a system can function properly without any obstacles according to existing standards in the organization or company, then reliability can be interpreted that a system has the ability to provide relatively the same results or services, and flexibility is defined as the ability of the system to be used flexibly and not limited to time, location, or type of device used. Research conducted by (Conde et al., 2021; Ilham & Fajar, 2021; Imtiaz Ali et al., 2018; Purwati et al., 2021; Setiawan & Legowo, 2020) proves that system quality has a positive influence on user satisfaction.

H3: Service Quality will have a positive effect on User Satisfaction. Proportional support provided by a system that is shared with users and managed by the IS/IT Department can be interpreted as service quality. Service quality consists of indicators of empathy, responsiveness, and assurance (DeLone & McLean, 2003). Empathy is the ability to see and understand something from the user's point of view, responsiveness can be interpreted as a quick response action in overcoming a service, and assurance can be interpreted as a guarantee given to users to overcome and fulfill a service. Service quality is important and a concern for IT Helpdesk application users, with good service quality, user satisfaction can also be increased. This is in line with research conducted by (Conde et al., 2021; Ilham & Fajar, 2021; Imtiaz Ali et al., 2018; Purwati et al., 2021; Setiawan & Legowo, 2020) that service quality has a positive influence on user satisfaction.

H4: Information Quality will have a positive effect on Behavioral Intention. Apart from having a positive effect on user satisfaction, information quality also has a positive effect on behavioral intention. Good information quality will create a feeling of user intention to use a system. With the better quality of information generated by the IT Helpdesk application, users will not hesitate to use the system

and automatically a sense of intention to use will arise. This is also corroborated by previous research which states that information quality has a positive influence on behavioral intention (Kim & Kim, 2021; Oktariyana et al., 2019; Setijadi et al., 2019).

H5: System Quality will have a positive effect on Behavioral Intention. Apart from having a positive effect on user satisfaction, system quality also individually and jointly has a positive influence on behavioral intention. Research conducted by (Kim & Kim, 2021; Oktariyana et al., 2019; Setijadi et al., 2019) also suggests that there is a positive influence between system quality on behavioral intention. The results of his research explain that system quality has three indicators, namely functionality, reliability, and flexibility, if these three indicators can represent system quality well, user intention will increase. This is because users who are satisfied with the quality of the IT Helpdesk application, they will continue to intend to use the IT Helpdesk application if find a similar case.

H6: Service Quality will have a positive effect on Behavioral Intention. A comparison between users' perceptions of the system and the actual services provided by the system can determine service quality. Just like user satisfaction, service quality is also assumed to have a positive influence on behavioral intention. The above statement is supported by research conducted by (Kim & Kim, 2021; Oktariyana et al., 2019; Setijadi et al., 2019) which generally suggests that when the service quality of application providers is good, application users will feel satisfied and simultaneously there will be a sense of intention to use the application continuously. Therefore, the sixth hypothesis predicts that the higher the quality of service provided, the higher the behavioral intention to use the system.

H7: User Satisfaction will have a positive effect on Trust. User satisfaction is a state of pleasure or displeasure with an item or service. In this situation, the information system meets user expectations for service quality or quantity, and what influences and contributes to user satisfaction is the success of the system itself (Chen et al., 2020). System success in this context is also defined as overall satisfaction, such as users who are overall satisfied with the functions contained in the IT Helpdesk application and are satisfied with the services provided by the IT Helpdesk application from start to finish, so that there will be a sense of trust in users towards the system. Research conducted by (Dorobat et al., 2019; Girsang et al., 2020; E. Wijaya & Octafilia, 2021) also suggests that there is a significant relationship between satisfaction and user trust, where the higher the level of user satisfaction, it will be in line with increasing user confidence in using the system.

H8: Performance Expectancy will have a positive effect on Behavioral Intention. Performance expectation is a term used to describe how much users understand and feel that the availability of information systems can help complete various jobs and has a significant influence on technology acceptance and use

(Venkatesh et al., 2012). Performance expectations measure a system from the user's side, and this variable consists of indicators of perceived usefulness and outcome expectations. Perceived usefulness is defined as the extent to which users believe that using technology will improve their performance, and outcome expectations are defined as the results that users expect after using the system. Performance expectancy is one of the important factors in behavioral intention because the better the performance expectancy will be in line with increasing behavioral intention. Research conducted by (Amna & Istiasih, 2017; Ariyanto et al., 2017) reinforces that there is a positive influence between performance expectancy on behavioral intention.

H9: Effort Expectancy will have a positive effect on Behavioral Intention. Meanwhile, effort expectancy can be considered as the ease of use experienced by users when an information system is implemented and has been shown to have a major impact on technology acceptance and use (Venkatesh et al., 2012). A system is said to be easy to use if the effort required to use the system is not too high. Effort expectancy has three indicators, namely perceived ease of use and complexity. Perceived ease of use is defined as the level of one's belief that using technology will reduce excessive effort, and complexity is defined as the level of complexity that a person experiences when operating a system both in terms of time and functionality. The results of (Amna & Istiasih, 2017; Ariyanto et al., 2017) research show that effort expectancy affects behavioral intention. The higher the effort expectancy in the IT Helpdesk application that users feel, the more comfort and intention to use the system from users will be created.

H10: User Satisfaction will have a positive effect on Behavioral Intention. Apart from having an influence on trust, user satisfaction is also assumed to have a positive effect on behavioral intention. If users are satisfied with using the IT Helpdesk application, such as the services provided are always on time, do not encounter repeated problems, and the functions contained in the IT Helpdesk application can be used properly, then behavioral intention in users towards the application can be created. Research conducted by (Lashayo, 2018; Mardiana et al., 2015) also argues that a higher level of user satisfaction will increase behavioral intention.

H11: Trust will have a positive effect on Behavioral Intention. Trust is described as "the belief that a person has favorable expectations about what another person will do based in most cases on previous interactions" (Gefen, 2000). Trust has become an important factor in determining how users behave and becomes especially important when users face risks and uncontrolled behavior from other users, especially in the success of information systems and the need to connect between users and service providers. Research conducted by (Junnonyang, 2021; Pengnate & Sarathy, 2017; Pipitwanichakarn & Wongtada, 2019) suggests that there is a relationship between trust and behavioral intention, where the more users

have high trust in a system, the behavioral intention will also increase. Based on the results of the literature used, the authors hypothesize that trust has a positive effect on behavioral intention.

H12: Trust will have a positive effect on Loyalty. Similar to behavioral intentions, loyalty is also assumed to be significantly influenced by trust. The trust variable itself has three indicators in it, namely application reputation which describes the level of user confidence that the system has a good reputation and is handled by a professional team, then data protection which is the level of user confidence that the system has good data security, and overall trust which is the level of user confidence in the system as a whole. Trust has a positive effect on loyalty because every trust that grows in users when using the IT Helpdesk application will increase their sense of loyalty, and this is in line with research conducted by (Dorobat et al., 2019; A. A. Fauzi & Suryani, 2019; Rico et al., 2019).

H13: Loyalty will have a positive effect on Use. In general, loyalty can be defined as user involvement, participation, and commitment to revisit a site consistently (Chou et al., 2015). Loyalty has three measurement indicators, namely continuance intention which is the user's desire to reuse a system, then increased application use which is the user's desire to explore and find out more about the functions of a system, and application recommendations which are the user's desire to recommend a system to other users. Loyalty is one of the factors that play an important role in increasing the level of application usage and information system success because loyalty is part of the indicators and keys to good long-term business success (Akob et al., 2021). This statement is also corroborated by the results of research conducted by (Cheng & Jiang, 2020; Salem et al., 2019) which explain that the higher the level of loyalty of a person to a system, the higher the level of use.

H14: Behavioral Intention will have a positive effect on Use. Behavioral intention is the extent to which someone intends to use or use a system in the future (Venkatesh et al., 2012). Behavioral intention has an indicator, namely attitude which can be interpreted as the behavior shown by users when using the system, such as users knowing, understanding, and will carry out every procedure that exists both when facing obstacles and when submitting service requests on the IT Helpdesk application. Meanwhile, use is related to the level of use of information system output or it can also be interpreted as how often the information system is used by users and how the information system is used appropriately and correctly (Saputro et al., 2015). Based on (Alajmi & Alotaibi, 2020; Kayali & Alaaraj, 2020; Yakubu & Dasuki, 2018) research, states that behavioral intention has a positive influence on use, because the higher the user's behavioral intention on a system will trigger the user to use the system.

The conclusion of the hypothesis carried out by the author is: To evaluate the level of use of the IT Helpdesk application at XYZ University is measured by

knowing the variables that are proven to have a positive effect on the Use variable, where the Use variable is hypothesized to be influenced by two variables, namely Behavioral Intention and Loyalty. The behavioral intention variable is obtained by knowing the variables that affect it, namely the effect of its relationship with the following seven variables: Information Quality, System Quality, Service Quality, Performance Expectations, Effort Expectations, and User Satisfaction. Then the Loyalty variable is obtained by knowing the effect of its relationship with the Trust variable, where the Trust variable is also influenced by the User Satisfaction variable, and the User Satisfaction variable is influenced by three quality variables (Information Quality, System Quality, and Service Quality).

3.1. Data Collection and Data Analysis Techniques

In this study, observation, questionnaires, and literature study were the data collection methods. Observation results are processed and evaluated to obtain appropriate supporting data. Data was collected by distributing questionnaires in the form of a survey. A Likert scale was used to rate each research questionnaire. Social media and instant messaging were used to distribute the questionnaires. In addition, a literature review was conducted to collect information regarding theoretical and model references to be used in the development of this research from books, journals, and articles.

Respondents in this study were all active employees of XYZ University from 2018 to 2021 who were users of the IT Helpdesk application with a total of 2,900 employees. Then this study uses a random sampling technique without regard to existing levels or strata or also called simple random sampling (Sugiyono, 2013). The technique used to calculate the number of samples is the Slovin method. By referring to the formula of the Slovin method, the number of samples required from 2,900 employees with an error rate of 5% (95% confidence level) is 352 employees.

For data analysis techniques, Smart-PLS software will be used to process the data collection findings. The structural model or inner model, consisting of r squared, path coefficient, and p-values, as well as the measurement model or outer model, comprising of reliability and validity tests, were processed using Smart-PLS 3.3.9.

4. Results and Discussion

4.1. Demographic Profile

A total of 352 employees participated in this study as respondents, and the questionnaire distribution period lasted from June 19, 2022 to June 29, 2022. Figure 5 below contains information about the profile of respondents grouped by employee status, where most of the questionnaires were filled in by permanent employees at 86%, then outsourced employees at 14%.

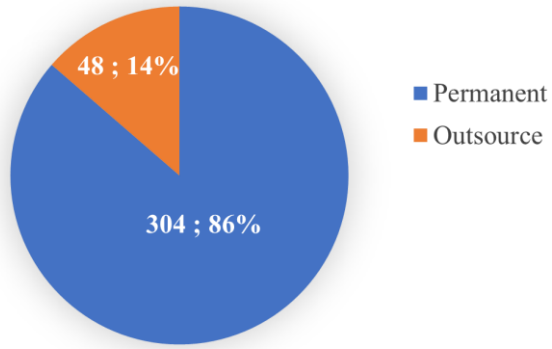

Fig. 5: Profile of Respondents Grouped by Employee Status

Meanwhile, Figure 6 below contains information about the profile of respondents grouped by employee work location, with the largest number from Syahdan Campus 62.22%, then Anggrek Campus 17.33%, Alam Sutra 7.95%, Syahdan Course Center 3.40%, Serpong School 3.40%, JWC Campus 2.84%, Bekasi Campus 1.14%, Simprug School 0.85%, Bandung Campus 0.57%, and the least from Bekasi School 0.28%.

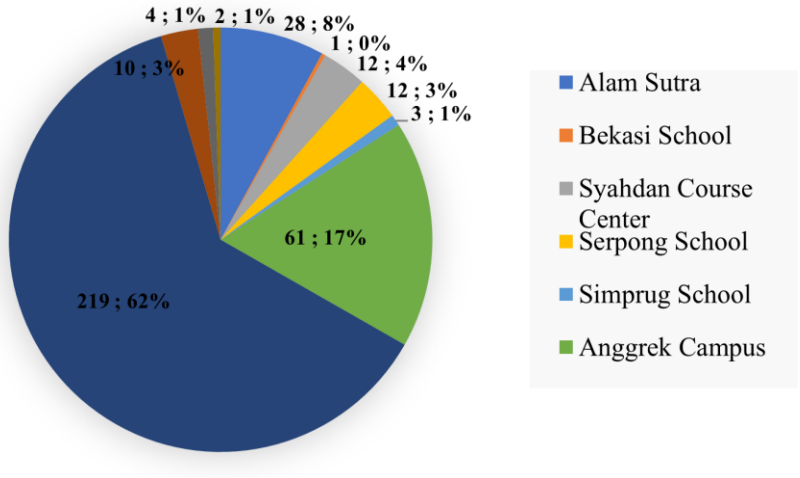

Fig. 6: Profile of Respondents Grouped by Work Location

4.2. Validity Test

In line with what has been discussed, this study used cross loadings, AVE, and factor loadings to assess the validity of the questionnaire questions.

4.2.1. Factor Loadings

Finding the results of the factor loadings value with the indicated value of more than 0.7 is the first validity test. Some indicators need to be eliminated if they have

a value lower than 0.7. SQ4, EE1, and U3 are some of the indicators in this study that must be eliminated because they have a value lower than 0.7. The results of the validity test using factor loadings, with all indicators considered valid, are shown in Table. 1 below:

Table. 1: Factor Loadings Result

Construct	Item	Factor Loadings	Result
Information Quality	IQ1	0,877	Valid
	IQ2	0,796	Valid
	IQ3	0,843	Valid
	IQ4	0,856	Valid
	IQ5	0,733	Valid
System Quality	SQ1	0,823	Valid
	SQ2	0,828	Valid
	SQ3	0,756	Valid
	SQ5	0,736	Valid
Service Quality	SerQ1	0,882	Valid
	SerQ2	0,841	Valid
	SerQ3	0,893	Valid
	SerQ4	0,787	Valid
	SerQ5	0,884	Valid
Performance Expectancy	PE1	0,805	Valid
	PE2	0,880	Valid
	PE3	0,881	Valid
	PE4	0,882	Valid
	PE5	0,848	Valid
Effort Expectancy	EE2	0,826	Valid
	EE3	0,799	Valid
	EE4	0,837	Valid
User Satisfaction	US1	0,939	Valid
	US2	0,945	Valid
Trust	T1	0,896	Valid
	T2	0,899	Valid
	T3	0,893	Valid
	T4	0,912	Valid
	T5	0,923	Valid
Loyalty	L1	0,924	Valid
	L2	0,892	Valid
	L3	0,905	Valid
Behavioral Intention	BI1	0,897	Valid
	BI2	0,882	Valid
	BI3	0,787	Valid
	BI4	0,747	Valid
	BI5	0,742	Valid
Use	U1	0,961	Valid
	U2	0,969	Valid

4.2.2. Average Variance Extracted (AVE)

Each construct with a minimum value of 0.5 is considered valid for Average

Variance Extract (AVE). The results of the AVE-based validity test are shown in Table. 2 below:

Table. 2: AVE Result

Construct	AVE	Result
Information Quality	0,677	Valid
System Quality	0,619	Valid
Service Quality	0,737	Valid
Performance Expectancy	0,739	Valid
Effort Expectancy	0,674	Valid
User Satisfaction	0,887	Valid
Trust	0,819	Valid
Loyalty	0,823	Valid
Behavioral Intention	0,662	Valid
Use	0,931	Valid

4.2.3. Cross Loadings

Indicators reflect only one variable, and cross loadings evaluate how closely a variable is connected to other variables. Variables will be more representative and cross loadings will be considered valid if the indicator value is higher than the indicators on other variables. Table. 3 shows the cross loadings data from this study which are considered valid.

Table. 3: Cross Loadings Result

	IQ	SQ	SerQ	PE	EE	US	T	L	BI	U
IQ1	**0,877**	0,645	0,685	0,727	0,615	0,731	0,666	0,541	0,713	0,485
IQ2	**0,796**	0,608	0,548	0,593	0,465	0,578	0,571	0,431	0,585	0,442
IQ3	**0,843**	0,644	0,661	0,706	0,599	0,699	0,695	0,603	0,688	0,547
IQ4	**0,856**	0,681	0,644	0,664	0,626	0,725	0,665	0,575	0,629	0,510
IQ5	**0,733**	0,648	0,552	0,636	0,716	0,712	0,542	0,448	0,574	0,518
SQ1	0,692	**0,823**	0,491	0,645	0,517	0,660	0,608	0,476	0,618	0,581
SQ2	0,559	**0,828**	0,614	0,633	0,467	0,559	0,585	0,481	0,543	0,473
SQ3	0,663	**0,756**	0,664	0,656	0,587	0,586	0,623	0,581	0,571	0,405
SQ5	0,540	**0,736**	0,538	0,538	0,484	0,532	0,413	0,459	0,508	0,431
SerQ1	0,655	0,609	**0,882**	0,690	0,588	0,627	0,694	0,688	0,730	0,603
SerQ2	0,568	0,583	**0,841**	0,642	0,544	0,568	0,604	0,577	0,614	0,483
SerQ3	0,719	0,710	**0,893**	0,734	0,608	0,665	0,689	0,660	0,725	0,556
SerQ4	0,599	0,556	**0,787**	0,727	0,453	0,520	0,615	0,511	0,579	0,545
SerQ5	0,687	0,664	**0,884**	0,817	0,628	0,665	0,755	0,631	0,718	0,613
PE1	0,693	0,703	0,614	**0,805**	0,547	0,607	0,585	0,499	0,563	0,560
PE2	0,780	0,732	0,793	**0,880**	0,698	0,675	0,737	0,652	0,707	0,602
PE3	0,685	0,661	0,728	**0,881**	0,561	0,678	0,682	0,612	0,683	0,593
PE4	0,629	0,620	0,738	**0,882**	0,484	0,630	0,582	0,538	0,603	0,550
PE5	0,695	0,672	0,728	**0,848**	0,553	0,647	0,609	0,581	0,690	0,629
EE2	0,738	0,660	0,672	0,672	**0,826**	0,723	0,685	0,626	0,721	0,569

EE3	0,459	0,392	0,415	0,407	**0,799**	0,521	0,445	0,436	0,387	0,360
EE4	0,520	0,464	0,446	0,464	**0,837**	0,522	0,493	0,499	0,431	0,432
US1	0,791	0,669	0,633	0,716	0,740	**0,939**	0,735	0,625	0,672	0,631
US2	0,794	0,737	0,709	0,706	0,673	**0,945**	0,745	0,629	0,736	0,634
T1	0,725	0,721	0,721	0,719	0,656	0,747	**0,896**	0,641	0,705	0,653
T2	0,743	0,645	0,792	0,737	0,695	0,730	**0,899**	0,728	0,780	0,667
T3	0,620	0,601	0,626	0,606	0,531	0,649	**0,893**	0,622	0,717	0,668
T4	0,671	0,626	0,662	0,632	0,596	0,649	**0,912**	0,668	0,779	0,752
T5	0,702	0,634	0,741	0,680	0,653	0,771	**0,923**	0,716	0,720	0,699
L1	0,562	0,599	0,663	0,610	0,577	0,552	0,659	**0,924**	0,659	0,652
L2	0,531	0,521	0,570	0,533	0,584	0,504	0,597	**0,892**	0,654	0,599
L3	0,628	0,601	0,709	0,678	0,631	0,731	0,762	**0,905**	0,701	0,719
BI1	0,694	0,579	0,656	0,653	0,595	0,642	0,729	0,557	**0,897**	0,643
BI2	0,656	0,647	0,728	0,697	0,573	0,662	0,745	0,720	**0,882**	0,730
BI3	0,623	0,580	0,677	0,622	0,478	0,614	0,695	0,559	**0,787**	0,601
BI4	0,634	0,526	0,537	0,548	0,479	0,538	0,520	0,473	**0,747**	0,434
BI5	0,565	0,571	0,587	0,554	0,631	0,577	0,607	0,700	**0,742**	0,496
U1	0,567	0,516	0,586	0,634	0,532	0,576	0,684	0,687	0,636	**0,961**
U2	0,608	0,645	0,672	0,684	0,587	0,713	0,779	0,717	0,759	**0,969**

4.3. Reliability Test

After the validity test is complete, the next is the reliability test. This test was conducted to measure how effective or reliable each questionnaire item was in representing the constructs used in the study. Cronbach's alpha was employed in this study's reliability test.

Cronbach's Alpha

The reliability test using Cronbach's alpha is deemed reliable and valid if the value of each construct is greater than 0.7. Table. 4 below shows the Cronbach's alpha test findings, which demonstrate the validity of each questionnaire item utilized in this study:

Table. 4: Cronbach's Alpha Result

Construct	Cronbach's Alpha	Result
Information Quality	0,879	Reliable
System Quality	0,794	Reliable
Service Quality	0,910	Reliable
Performance Expectancy	0,912	Reliable
Effort Expectancy	0,780	Reliable
User Satisfaction	0,873	Reliable
Trust	0,945	Reliable
Loyalty	0,893	Reliable
Behavioral Intention	0,871	Reliable
Use	0,927	Reliable

R Squared or Coefficients of Determination (R^2)

Another thing is R Squared reliability testing. By comprehending the R Squared value of each study construct, it is also possible to see the influence of independent constructs on dependent constructs. Table. 5 below lists the results of the R Squared reliability test for the study's findings.

Table. 5: R Squared Result

Construct	R Squared
User Satisfaction	0,733
Trust	0,617
Loyalty	0,559
Behavioral Intention	0,753
Use	0,607

In Table. 5 above, the R Squared value for the user satisfaction variable, which is influenced by the quality of the information, the system, and the services, is 0.733. This indicates that the influence of variables in the research model is 73.3%, while the influence of variables outside the study is 26.7%.

The R Squared value of 0.617 for the trust variable, which is impacted by user satisfaction, can alternatively be translated as the influence of variables in the research model of 61.7% and the influence of factors outside the study of 38.3%.

Then the loyalty variable that is influenced by trust has an R Squared value of 0.559 with the influence of variables in the research model of 55.9% and the influence of variables outside the study of 44.1%.

After that behavioral intention variables that are influenced by information quality, service quality, and trust have an R Squared value of 0.753 with the influence of variables in the research model at 75.3% and the influence of variables outside the study being 24.7%.

And lastly, the use variable which is influenced by loyalty and behavioral intention has an R Squared value of 0.607 with the influence of variables in the research model of 60.7% and the influence of variables outside the study of 39.3%.

4.4. Hypothesis Test

Testing the research hypothesis comes after analyzing the R Squared. In hypothesis testing, the path coefficient and p-values are used to assess the degree of significance. The outcomes of the path coefficient and p-values in the performed research are shown in Table. 6 below.

Table. 6: Hypothesis Test Result

H	Relationship	Path Coefficient	p-values	Decision

H1	Information Quality to User Satisfaction	0,605	0,000	Accepted
H2	System Quality to User Satisfaction	0,182	0,001	Accepted
H3	Service Quality to User Satisfaction	0,124	0,029	Accepted
H4	Information Quality to Behavioral Intention	0,187	0,013	Accepted
H5	System Quality to Behavioral Intention	0,043	0,385	Rejected
H6	Service Quality to Behavioral Intention	0,234	0,001	Accepted
H7	User Satisfaction to Trust	0,785	0,000	Accepted
H8	Performance Expectancy to Behavioral Intention	0,048	0,505	Rejected
H9	Effort Expectancy to Behavioral Intention	0,040	0,327	Rejected
H10	User Satisfaction to Behavioral Intention	0,037	0,561	Rejected
H11	Trust to Behavioral Intention	0,368	0,000	Accepted
H12	Trust to Loyalty	0,748	0,000	Accepted
H13	Loyalty to Use	0,422	0,000	Accepted
H14	Behavioral Intention to Use	0,413	0,000	Accepted

H1: The test resulted in a p-value of 0.000 is less than 0.05, it is recognized that there is a positive correlation between information quality and user satisfaction, then it is accepted.

H2: The test resulted in a p-value of 0.001 is less than 0.05, it is recognized that there is a positive correlation between system quality and user satisfaction, then it is accepted.

H3: The test resulted in a p-value of 0.029 is less than 0.05, it is recognized that there is a positive correlation between service quality and user satisfaction, then it is accepted.

H4: The test resulted in a p-value of 0.013 is less than 0.05, it is recognized that there is a positive correlation between information quality and behavioral intention, then it is accepted.

H5: The test resulted in a p-value of 0.385 is more than 0.05, it is recognized that there is a negative correlation between system quality and behavioral intention, then it is rejected.

H6: The test resulted in a p-value of 0.001 is less than 0.05, it is recognized that there is a positive correlation between service quality and behavioral intention, then it is accepted**.**

H7: The test resulted in a p-value of 0.000 is less than 0.05, it is recognized that there is a positive correlation between user satisfaction and trust, then it is accepted.

H8: The test resulted in a p-value of 0.505 is more than 0.05, it is recognized that there is a negative correlation between performance expectancy and behavioral

intention, then it is rejected.

H9: The test resulted in a p-value of 0.327 is more than 0.05, it is recognized that there is a negative correlation between effort expectancy and behavioral intention, then it is rejected.

H10: The test resulted in a p-value of 0.561 is more than 0.05, it is recognized that there is a negative correlation between user satisfaction and behavioral intention, then it is rejected.

H11: The test resulted in a p-value of 0.000 is less than 0.05, it is recognized that there is a positive correlation between trust and behavioral intention, then it is accepted.

H12: The test resulted in a p-value of 0.000 is less than 0.05, it is recognized that there is a positive correlation between trust and loyalty, then it is accepted.

H13: The test resulted in a p-value of 0.000 is less than 0.05, it is recognized that there is a positive correlation between loyalty and use, then it is accepted.

H14: The test resulted in a p-value of 0.000 is less than 0.05, it is recognized that there is a positive correlation between behavioral intention and use, then it is accepted.

4.5. Implication

In line with the hypothesis test results in Table. 6, that Information Quality, System Quality, and Service Quality have an influence on User Satisfaction from IT Helpdesk application and it has also been proven by the acceptance of H1, H2, and H3. This is confirmed by previous research which also found the effect of the three quality variables on user satisfaction (Conde et al., 2021; Ilham & Fajar, 2021; Imtiaz Ali et al., 2018; Purwati et al., 2021; Setiawan & Legowo, 2020). In other words, to increase user satisfaction, IT Asset & Services Delivery department must pay attention to the quality of information as well as the systems and services provided. Information quality is a variable that has the greatest influence on user satisfaction of IT Helpdesk applications. So the IT Asset & Services Delivery department must be able to provide information quickly, precisely, and accurately to users of the IT Helpdesk application to create comfort, security, and satisfaction for users.

Then User Satisfaction has an influence on the Trust of the IT Helpdesk application. The statement in the previous sentence is evidenced by the acceptance of H7 and also strengthened by previous research which states that user satisfaction affects user trust (Dorobat et al., 2019; Girsang et al., 2020; E. Wijaya & Octafilia, 2021). User satisfaction needs to be considered better by the IT Asset & Services Delivery department because with this user trust can be increased. Therefore, the IT Asset & Services Delivery department must be able to handle the services submitted by users in a professional manner and be able to maintain the confidentiality of the

user data of IT Helpdesk application so that user trust can grow and even increase in using IT Helpdesk application.

In contrast to User Satisfaction which is significantly affected by the three quality variables, Behavioral Intention is only influenced by two quality variables, namely Information Quality and Service Quality. This is proven by the acceptance of H4, H6 and the rejection of H5. Following previous research that the author used as a reference, the behavioral intention IT Helpdesk application was influenced by the Information Quality and Service Quality variables (Kim & Kim, 2021; Oktariyana et al., 2019; Setijadi et al., 2019) and is not affected by the quality variable System Quality (Alajmi & Alotaibi, 2020). In addition, Behavioral Intention is also not influenced by two variables from the UTAUT model, namely Performance Expectancy and Effort Expectancy, as evidenced by the rejection of H8 and H9 and strengthened by previous research which states that the simplicity of the system does not affect the intention to use (Oktariyana et al., 2019; Tarhini et al., 2019; Thusi & Maduku, 2020) and system performance also does not affect the intention to use, which is contrary to previous research (Talukder et al., 2019; Tarhini et al., 2019; Thusi & Maduku, 2020) the reason for this insignificant relationship may be attributed to the mandatory use of IT Helpdesk application by all users at XYZ University. IT Helpdesk application is an application that must be used by all employees at XYZ University and has been regulated in IS/IT procedures. This means that every employee who knows and complies with IS/IT procedures will use the IT Helpdesk application to record problems/complaints encountered when using technology or requesting IS/IT services without any influence on the system performance of the IS/IT services provided to the registered ticket.

In this study, the Behavioral Intention of users of the IT Helpdesk application is also not influenced by User Satisfaction, Following the rejection of H10 which is supported by previous research where no influence of User Satisfaction on Behavioral Intention was found (Yakubu & Dasuki, 2018). Then Behavioral Intention is influenced by Trust, as evidenced by the acceptance of H11, in line with previous research which states that there is an influence of user trust on the intention to use the IT Helpdesk application (Junnonyang, 2021; Pengnate & Sarathy, 2017; Pipitwanichakarn & Wongtada, 2019).

This study also found a significant effect of Trust on Loyalty, as evidenced by the acceptance of H12, and also corroborated by the references used by researchers in previous studies which stated that there was an effect of user trust on user loyalty (Dorobat et al., 2019; A. A. Fauzi & Suryani, 2019; Rico et al., 2019). Thus, the IT Asset & Services Delivery department must always be kind, friendly, polite, and of course according to the applicable SOP (Standard Operation Procedures) so that user loyalty can always be maintained and improved.

The results of the last hypothesis test found that there was a significant influence of Loyalty and Behavioral Intention on Use as evidenced by the acceptance of H13 and H14. This study strengthens previous research which also found the influence of Loyalty on Use (Cheng & Jiang, 2020; Salem et al., 2019) and Behavioral Intention to Use (Alajmi & Alotaibi, 2020; Kayali & Alaaraj, 2020; Yakubu & Dasuki, 2018). In this case study, the level of use of the IT Helpdesk application is directly influenced by user loyalty and intention to use the application itself. Therefore, to increase the use of the IT Helpdesk application, the factor that needs to be considered is to ensure that the use of the IT Helpdesk application can support the user's work performance and also ensure that the user is satisfied with the IS/IT services provided. The steps that can be taken are to overcome the obstacles/complaints that are recorded on the ticket with a permanent solution that is fast and appropriate so that the same problems/complaints will not be repeated because they can hamper the work performance of users, as well as provide IS/IT services in a professional, kind, friendly, and efficient manner, fast and on target, so that users are satisfied and happy to take advantage of IS/IT services on IT Helpdesk application at XYZ University.

5. Conclusion

The author concludes that the three dimensions of quality (information, systems, and services) in the DeLone & McLean IS Success model are factors that influence user satisfaction with the IT Helpdesk application. This conclusion is obtained after analysis and discussion using the SEM-PLS approach. User satisfaction can be influenced by these three quality factors by 73.3%.

Then user satisfaction has a positive influence on trust in using the IT Helpdesk application. Therefore, it can be assumed that when users are satisfied with using IS/IT services in the IT Helpdesk application, it will be in line with increasing user trust in the IT Helpdesk application. The user satisfaction variable can affect trust by 61.7%.

After that, based on the results of hypothesis testing, behavioral intention to use the IT Helpdesk application is influenced by two quality variables in the DeLone & McLean IS Success model, namely information quality and service quality, as well as trust variables. These three variables can influence behavioral intention to use the IT Helpdesk application by 75.3%.

In addition, trust has a positive influence on loyalty to using the IT Helpdesk application. So it can be assumed that when users have high trust in the IT Helpdesk application, users will be loyal to using the IT Helpdesk application. The trust variable can affect loyalty by 55.9%.

And finally, loyalty and behavioral intention are variables that directly affect the use of IT Helpdesk applications. So it can be concluded that the level of use will

increase if loyalty and behavioral intention in using the IT Helpdesk application is created. These two variables can affect the use of IT Helpdesk applications by 60.7%.

So, because loyalty and behavioral intention affect the level of use of the IT Helpdesk application directly, the IT Asset & Services Delivery department must be able to create loyal users and a sense of user intention in using the IT Helpdesk application so that the level of use of the IT Helpdesk application can increase. Some things that can be done are: (a) ensure that the same problem does not occur in the application after the solution is applied and the service ticket is resolved, (b) ensure that users can initiate IS/IT services using personal devices such as mobile phones and tablets and are not limited to company-owned laptop/pc devices, (c) ensure that IS/IT services are provided in accordance with the requests submitted by users within the promised timeframe, and (d) simplify the appearance and flow of the IS/IT service submission process to ensure users have no difficulty in knowing the latest status of previously initiated tickets.

6. Limitation and Future Study

Of course, this study also has limitations like other studies. The data used in this study were collected from 352 employees who are active users of the IT Helpdesk application. Based on the R-Squared value listed in Table. 5, it can also be seen that the exogenous-endogenous variables only affect 60.7% of the endogenous variable, namely the level of use. Meanwhile, 39.3% of other variables or factors have not been identified. Therefore, the authors hope that in future studies, the scope can be expanded by increasing the number of participants or by adding other variables and models that can affect the level of use.

7. References

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