

## CUSTOMER CENTERED SERVICE IN MALAYSIA: A CASE STUDY IN MALAYSIAN PUBLIC UNIVERSITIES

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### ABSTRACT

*The Information and Communication Technology (ICT) represents a basis for the development of the academic institution in public sector. Thus, there is a huge change emerging from the traditional academic institution into technological environment based. ICT implementations indirectly will represent the major changes of the business processes. In term of providing the best ICT facilities and infrastructure, there are often an issue about service delivering, customer expectation, utilization of infrastructure, knowledge sharing and any matters regarding ICT services. Therefore, this study was conducted to analyze the adoption of customer centered service for ICT services in Malaysian public university. There are two main objectives of this study which first, to identify the current status of customer centered service for ICT services and second, to identify the impact of adoption customer centered service for ICT services. Ten (10) public universities in Malaysia were involved in this study. A survey using interview and questionnaires was used for collecting data. The findings showed that 80% of public universities in Malaysia have adopted centered customer services to facilitate the ICT services and facilities in their universities and this study revealed the positive impact of customer centered service to the ICT services. Suggestions as to what future research should indicate are also discussed.*

**Keywords:** Customer Service, Public University, ICT service delivery

### 1. Introduction

In public administration literature, there is a long studied about adoption of Information Technology and Communication (Christopher, 2016). For example, the higher education in the United Kingdom has witnessed a considerable change resulting from a number of successive initiatives such as the education reform act in the mid-1980s and the information systems and technology value for money study in the late 1990s (Clark, 2001). The ICT represents a basis for the development of the academic institution in public sector (Begusic *et al.* 2003). In addition, emerging from the traditional academic institution into technological environment based, the public university in public sector became heavily reliant on information and communication technologies (ICTs) in order to consider a major changes in "patterns of demand and competition" for higher education.

Regarding to the emergence and innovation of the ICT, the education institution in public sector has growth from the customer perspective. Furthermore, the customer service orientation in the ICT service can influenced on the expectations towards university services. In term of providing the best ICT facilities and infrastructure, it often an issue about service delivering, customer expectation, utilization of infrastructure, knowledge sharing, information inquiring and any matters regarding ICT services. Therefore, there is a need to investigate about the impact of the issues to the university.

Currently, due to the tremendous growth in customer oriented services, educational institutions are not excluded in restructuring and re-engineering their operating processes to cut costs and become more efficient while responding and interact with their customer.

In Malaysia, Higher Learning Institutions is more related to representing an involvement with diversify stakeholders and services. This shows that Higher Learning Institutions are more critical in managing interactions with their customers. Thus, this study focused in public universities and can be represented as a small world of education community.

In order to operate efficiently, the organizations needs to be supported by ICT facilities and services in 24/7 environment. The administration, teaching learning process and research development activities must be run seamlessly. The investment in ICT development should be a foundation to optimize the operation cost and increase productivity and profit of the university. This responsibility usually handles by ICT department. The facilities and services can be categorized as Application System, IT equipment maintenance and support, networking and security and telecommunication.

University environment is dividing into divisional boundaries such as by departments, faculties, and units. At the same time there are a lot of multiple levels of the customers such as Students, Academic Staff, Nonacademic Staff, Alumni, and Government Agencies. This environment becomes a challenge to the IT department in order to maintain good services and customer satisfaction as a non-profitable basis. This environment not only contributes different challenge in term of functional, but must be also considered the geographical issue, manpower, skills and interest.

Recently, in Malaysia, there are about 20 public universities all around the states. As the growth of the technology, most of the university performs an IT/ICT department to manage and facilitate the ICT services for the whole university. Due to more and less issues regarding ICT services, there suppose a bridge between the ICT departments as service provider to the customer who are used all the ICT facilities and services. This study intends to examine about the adoption of Customer Centered Services to facilitate the ICT services. The focus of this study is ICT services in public University in Malaysia and University Malaysia Pahang (UMP) as a case study.

## **2. Literature Review**

According to Kaganoff (2003), Technology initiatives introduce a range of innovative equipment, from machines that automate processes, to sophisticated equipment that enables processing of massive amounts of information, teleconferencing, or distance education. Although technology generally accepted as support functions, but in certain consideration from different perspective, technology can be considered as essential needs (Kaganoff, 2003). In higher education environment nowadays, the technology is already a big medium to facilitate the teaching and learning requirements. From a single access into group of community, greater amounts of information can be access at any time and places. Furthermore, most of the procedures are turn into electronically rather than manually ( Kaganoff, 2003).

The Information Technology services department of a typical organization has moved from playing the role of a supporting partner to that of a strategic partner (Kambhampaty & Chandra, 2006). Hence, they further stated that Information Technology (IT) has become the backbone of almost every business enterprise. Thus, there is a need for effective communication between the ICT service department and the customer within the organization when they engage with the ICT services and facilities.

Based on the study of Mohammed and Richardson (2007), about Higher education institutions (HEIs) in the United Kingdom, they state UK higher education sector has a greater expansion terms of both the number of students and institutions, shrinking budgets from government and funding councils, the emergence of nontraditional higher education institutions (HEIs) that are heavily reliant on information and communication technologies (ICTs). In fact, huge of investment has been made to survive in this environment towards ICT facilities and services in the expedition to achieve efficiency and effectiveness in back office integration. However, there are lacks of attention being paid to the front of office provision

(Mohammed & Richardson, 2007). Although this study are based on Higher education institutions (HEIs) in the United Kingdom, but it quite similar into Malaysia Higher education institutions (HEIs) environment.

Delivering the best ICT facilities and infrastructure required a new invention of service delivery. Transforming ICT into a service oriented organization required a good model to be approached. Wheatcroft(2007) has proposed Service Accession Model. This model is designed specifically for IT service delivery whereby it considered the maturity stages in terms of both operational delivery and customer orientation. The model called as Accession model because it assists IT department to attain a particular succession of competency stages, each of which builds on what has gone before. The model can be used to define what is needed and to chart progress towards its achievement.

There are four stages to define the service accession. All the stages are demonstrating the life cycle maturity of an organization. Each maturity level covers the one beneath it and so can be regarded as a cumulative or progressive status rather than something that is radically different from its predecessor. This model represents the continuous progression in delivering ICT services from bottom left to top right, based on how much of the maturity of the next stage is displayed. However, regarding to Wheatcroft(2007), the operation are possible to be operated at intermediate points.

Besides that, there are a lot of best-practice frameworks and methodologies to guide ICT operations and services such as Application Services Library (ASL), Capability Maturity Model (CMM), ICT Infrastructure Library, and Microsoft Operations Framework (Mark, 2017). ICT departments are increasingly viewed as service providers to business users, and improving service quality and user satisfaction has been a concern of ICT researchers and practitioners (Kettinger & Lee, 1994). As stated earlier, one example of ICT service framework is ITIL. ITIL has originally developed in the 1980s in UK. According to Wheatcroft(2007), ITL was an international standard framework that is applicable to commercialize the organization as well as government bodies and much of the contents are written by the expert from ICT industry over of the world. Nevertheless, it become most widely accepted approach to service management and quite relevant to ICT department to implies the ICT infrastructure of the business processing around the firm interactions with its customer services. The framework is representing as shown in figure 1.

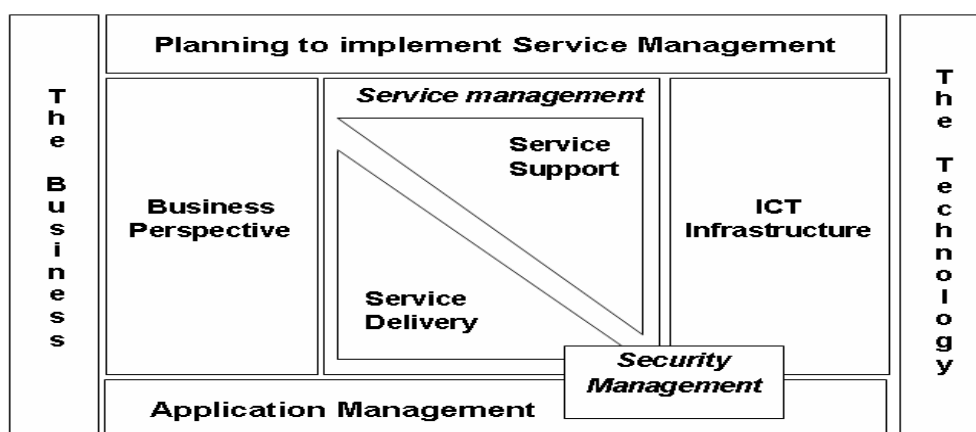


Figure. 1. ITIL Framework

The term used in this framework was defined as follows:

1. Service support describes processes for incident management, problem management, change management, release management, service desk and configuration management.
2. Service delivery describes processes for availability management, capability management, financial management for ICT services, service level management and ICT service continuity management.
3. Application management describes the approach to the management of IT application from the initial business need right through to system retirement.
4. Security management describes the approach to the management of information security from an IT perspective.
5. ICT infrastructure management describes ICT infrastructure management from the identifications of business requirement to the testing installation and support of components and services.

By optimizing the ICT service delivery, the performance management of the infrastructure is important to ensure the stable ICT services for the existing and any new ICT practices (Wiggers et al, 2004). The stable ICT services involve two management area which are the “Service delivery front offices that have a customer focus for the service delivery” and “Supported product back offices which is focusing on operational efficiency”. According to them, “Service delivery front office is more into “end-to-end” ICT service group.

Customer service can be define as the way in which an organization handles the interaction between itself and its customers (Jenny & Frances, 1998). Furthermore, as stated by Mio and Bassham (2006), the customer service is an organization’s ability to consistently meet the needs and expectations of its customers.

Based on Anderson and Grant (2002), customer in higher education can be concluded students, administrators or Non-academics staff and faculty Members or Academic staffs. Added by Greenberg (2004), this group of customer also involved Alumni, Individuals donors (non-alumni), University trustees, Government agencies, Foundation and other institutional donors and the community at large and its institutions, including merchants, student-focused community leaders, etc.

According to Roland(2008) offers two distinct views of students as customers; for instance, those who regard students as primary customers, associate them as being involved in the input and output of the learning process. However, those who regard students’ potential employers as primary customers argue that it is important to consider the economic reality of the situation where lesson contents should be tailored to employers’ needs. Students, in both contexts, have been regarded as internal customers with the second group regarding future employers as external customers.

As general understanding, ICT Customer Service Unit/ Department will be referred to the people or person who performs the services to the customers. Cited by Miao and Bassham (2006), “A service strategy is simply a statement of what you intend to do – must do, really – for the customer if you are to be successful in distinguishing yourself through service quality, whatever the business may be” (American Library Association Policy Manual, nd, p. 99). A well-conceived customer service strategy concentrates the energy of the organization on the real priorities of the customer. It communicates to the public the beliefs and values that guide the organization.

In the corporate world, the emphasis on customer service has been described as a marketing concept of business management. When an organization has adopted the marketing concept, it “moves from a product orientation to a customer orientation”. The foundation of the marketing concept is a business philosophy that leaves no doubt in the mind of every employee that customer satisfaction is of primary importance. All energies are directed toward satisfying the customer (Kaliski, 2006). As general understanding, ICT Customer Service Unit/ Department will be referred to the people or person who performs the services to the customers.

According to Trigger and Harrison (2006), there are six functions of centered customer to make the center being excellent in their services such as monitor service performance; provide self-help facilities; receive problem report and establish ownership; allocate problem to the correct team; establish root cause of problem and resolve it; and inform customer that problem has been resolved.

The public and private sector customer service literature concurs on the process for delivering great customer service, even if outcomes differ. The current literature supports an outside-in strategy of customer service, rather than the traditional inside-out model for providing services (Thompson, 2000). In the private sector, profit and growth are the outcomes, not goals. Profit and growth are generated by customer loyalty. Loyalty is generated by customer satisfaction. Customer satisfaction is the goal that companies should seek and focus on, because high customer satisfaction, as a matter of course, produces customer loyalty and subsequently profit and growth. At this point, the public and private sectors converge customer satisfaction is the goal.

Customer satisfaction is achieved by providing valued and quality of services and products, where value is the positive difference between customers actual experiences and their service delivery expectations. Productive and effective employees also create value. Employee productivity stems from employee loyalty, and loyalty is a product of employee satisfaction. Satisfaction is generated by high-quality support services (people, information, and technology) and by being empowered to provide value and resolve customer complaints. This customer service culture must be supported by leadership that emphasizes the importance of each customer and employee.

Customer satisfaction depends on a product and service perceived performance in delivering value relative to the customers' expectations. If the performance falls short of the customer's expectations, the organizations will be dissatisfied but if the performance matches expectations, so they will be satisfied. They will be more delighted if performance exceeds expectations. Outstanding products and service provider go out of their way to keep their customers satisfied (Kotler & Keller, 2006) Customer satisfaction is often equated to service quality. Some of the definitions of service quality are as follows:

- Service quality is determined by the differences between customer's expectations of services provider's performance and their evaluation of the services they received. Parasuraman et al. (1988):
- Service quality can be defined as "the difference between customer's expectations for service performance prior to the service encounter and their perceptions of the service received (Asubonteng *et al.*, 1996)
- Service quality as the subjective comparison that customers make between the quality of the service that they want to receive and what they actually get. (Gefan, 2002)

A study by Lai(2006) cited that the customer's perceptions of service quality have received fairly extensive attention from researchers and practitioners. Based on exploratory research from marketing academics, first defined service quality as the degree of discrepancy between customers' normative expectation for the service and their perceptions of the service performance. A substantial body of research has been focused on the outcome of the service, i.e. the customers' perceptions of service quality. Also, a heavy relevance of internal customers within context of service delivery process is frequently referred in the literature by marketers and organizational behaviorists. On the other hand, customer utilizes enterprise applications for doing business process that involves connectivity, transparency, sharing, and integration and has heralded many new opportunities for expansion and enhancements of their markets. User satisfaction, a surrogate measure of IS/IT effectiveness/success seems to be a critical factor for the success of enterprise applications. These cause a need to better understand about service quality and user satisfaction with customer based orientation.

In educational or higher learning environment, there are some issues related to quality service delivery regarding ICT service hierarchy and service delivery architecture. One of the prime quality measures in ICT infrastructure service delivery is service availability. To the customers or the end users, the important thing is to be able to access the end destination, which provides the ICT services (e-learning materials, online databases, wireless and others). Here the service provider is to provide the means of accessibility in whatever way possible taking into consideration the latest technology in end devices. Availability can be defined in two ways, first the extend of coverage and second, the uptime of the services offered. The service accessibility has to be provided at any time (or all the time), anywhere and by whatever means possible (anyhow) (Chuck *et al.*, 2014).

Hence, extending the coverage of ICT service and facilities is a policy of the university. Since the university has targeted that all the population of the university, including off campus students and staff can access on line information provided by the university, the ICT plans should incorporate this requirement. The first challenge in providing this coverage is the considerable finance needed to deploy the services. This is followed by determining the right technology and approach to implement. If the planning and design is not done properly, then ultimately the service provider will meet with the situation where services are unavailable (down) for the provided (covered) services most of the time. The customer will then say that it is better not to provide the services.

The rapid change in technology has caused a gap between end users' competency in handling their devices and the technology they adopt. A classic case is early adopters of Windows Vista who had certain protocols turned on which caused a considerable traffic will be generated. For the service provider, the rapidly changing technology has also impacted the management of the ICT services wherein the limited resources of ICT personnel has to be constantly retrained to ensure their competencies is in pace with technology. In general the nature of ICT service management has always been reactive and firefighting. This nature has been characterized by existence of multiple help desks / customer service center, which makes resolution to incidences time consuming, untraceable and impedes improvement. This phenomenon is further compounded by ICT units or department acting in silos especially in resolving incidences and problems. Therefore, to eliminate or decrease these problems, it is important to investigate about the adoption and impact of customer centered service for ICT services in universities. The result of this study can be used to develop future growth of customer service in education perspective and ICT services.

### **3 Research Aim**

The aim of this research is to investigate the ICT services that provided for public university community. In term of improving the services, customer centered service had shown as a one of the solution that suit to be analyzed. The result of the research can be used to develop future growth of customer service in Public University ICT services. The objectives of the study are first, to identify the status of adoption customer centered service for ICT services in public university and second; to identify the impact of adoption customer centered services (CSS) for ICT services in public universities.

### **4 Methodology**

This study focused on University Malaysia Pahang (UMP) as a case study. UMP had perform an ICT department or called Pusat Teknologi Maklumat & Komunikasi in order to provide, manage, facilitate and maintain all the ICT facilities including hardware, software and services. Therefore, this study based on the ICT services and facilities that has been provided in UMP. The study also used the internal customer of UMP as a part of references and

analysis. For the purpose of survey, this study use interviews and questionnaires for collecting data. The location of this study is at Public Universities in Malaysia.

Kumar (2005) proposed three data collection methods in collecting primary data namely observation, interviewing and questionnaires. Each method has its own advantage and disadvantage and often chose by researcher based on the nature of their research. In this study, interviewing and questionnaires method has been chosen in order to gather the information needed.

A set of phone interviews was conducted among 10 public universities in Malaysia. The purpose of the phone interviews is to answer the first objective of this study. The structured interview was used to gain information about the adoption of customer centered service in ICT departments of the Public University. The questions in the structured interview were validated by pilot test based on its content validity. The respondents are randomly selected from ICT departments of the selected universities. The interview was taken about 15 to 20 minutes per call by answering seven questions regarding their centralized customer service. Ten of ICT staff from each university involved in this phone interview session.

Questionnaire has been used to gather information for the second objective which adapted from John *et. al* (2014). For this stage, Universiti Malaysia Pahang (UMP) has been selected as a case study to investigate the impact of customer centered service for ICT services in Public University. The questionnaire has been measured using Cronbach Alpha reliability test during the pilot study and showed the indication of the high level of consistency across scale which are 0.85. The questionnaire has been divided into three (3) parts and using five point Likert Scale (1- Strongly Disagree, 2 – Disagree, 3-Neither, 4-Agree, 5- Strongly Agree).

The first part is about the service and environment of ICT services of the university. The second part is a about the service and quality towards the delivering ICT services and relationship with the centered customer services. The third part is about the impact of adoption customer centered service towards the delivering of ICT services in the university. The questionnaires have been distributed among 70 respondents from University Malaysia Pahang. Forty of them are the customers who are the user of ICT department in UMP and thirty of them are the ICT staffs of ICT department in UMP.

#### **4 Findings**

For the purpose of collecting data, the total of ten universities and eighty respondents were directly involved in this study through interview and questionnaires methods. Based on the data collection, about eight (8) of ten (10) public university in Malaysia has been implemented the customer centered service in their organization. Only two (2) universities did not use the customer centered service for ICT services. Besides that, most of the ICT departments in Public University classified nonacademic, academic staff and student as their customer. From eight (8) university that implement customer centered service, seven (7) of them are operate their service center within office hours in the weekdays. But only one university operates their service center until 10.00 pm and during weekend.

This summary of phone interview session shows that almost 80% of public university in the survey has adopted customer centered service to facilitate the ICT services and facilities in their universities. Furthermore, they also agreed that the customer centered service can reflect their services to the customer and the universities.

The results from descriptive analysis that investigate via questionnaires are represented in several tables below. Table 1 below represent the results of service and quality of the ICT services in UMP ICT department whereas Table 2 and Table 3 represent the results of two different groups of respondents perception towards the impact of Customer Centered Services of the ICT services in UMP ICT department. These results are ranking by using Friedman test which is used to analyze and ranks the question based on the mean rank level.

Table 1. Descriptive statistics results of service and quality of the ICT services in UMP ICT department

Rank	Question	Mean
1	The customer service representative is very polite	3.95
2	On-site technical support are knowledgeable and professional	3.87
3	The customer service representative appear knowledgeable and competent	3.85
4	Sufficient information was available to solve my problem	3.85
5	The customer service representative are able to assist and very helpful	3.77
6	The customer service representative can handle issues with courtesy and professionalism	3.77
7	The service always in a best quality	3.72
8	The customer service representative handled my call quickly	3.70
9	The process of getting problem resolved was very quickly	3.65
10	My phone call was quickly transferred to the person who could best assist me	3.42

Table 2. Descriptive Statistics of users response towards the adoption of customer centered service (CCS) in UMP ICT department

Rank	Question	Mean
1	CCS is a medium to improve IT service performance	4.22
2	CCS is important in providing IT services	4.20
3	CCS is medium to understand the IT service needs of the organization	4.15
4	CCS is the main factor to increase the quality of IT services	4.15
5	CCS is a medium to create the relationship between the IT department and the user	4.12
6	CCS can helps to increase knowledge in IT	3.97
7	CCS can provide sufficient information about IT facilities in the campus	3.97
8	CCS helps to understand the cause and the solution to the problem	3.92



Table 3. Descriptive Statistics of ICT staffs response towards the adoption of customer centered service (CCS) in UMP ICT department

Rank	Question	Mean
1	CCS is important in providing IT services	4.63
2	CCS is the main factor to increase the quality of IT services	4.43
3	CCS is a medium to create the relationship between the IT department and the user	4.36
4	CCS can provide sufficient information about IT facilities in the campus	4.30
5	CCS helps to understand the cause and the solution to the problem	4.30
6	CCS is medium to understand the IT service needs of the organization	4.30
7	CCS is a medium to improve IT service performance	4.23
8	CCS can helps to increase knowledge in IT	4.16

Table 4. Comparison Between Customer response and ICT responses towards the Impact of Customer Centered Service (CSS) to ICT services.

Respondent	Mean	Std. Deviation
Customer	4.0906	0.6700
ICT Staff	4.3417	0.76595

The overall mean for Table 1 which represents the results of service and quality of the ICT services in UMP ICT department is 3.76. This result which is below than the level of agreement shows that the respondents are perceived unsatisfactory towards the service and quality of the ICT services in UMP ICT department. Furthermore, this study intends to make a comparison between the users' responses and ICT staff responses towards the utilization of centralized customer services at UMP ICT department. Thus, according to Table 4 which analyzed using Friedman test, it shows that, ICT staff perceived (mean 4.34) that they are have more influenced by the utilization of customer centered service compared to the users (mean 4.09). Both agreed that customer centered service contribute to the positive impact for managing and facilitating all the problems and matters regarding the ICT services. The customer service representatives are the primary contact point between the ICT department and customers in providing information, problems solving and sharing the knowledge.

## 6 Conclusions

This study shows that majority of public university in Malaysian has adopted customer centered service for ICT services in the university. Based on the analysis, most of the operation hours for the customer service are similar to the office operation hour which is between 8.00 am to 5.00 pm on weekdays. It can be conclude that, the ICT customer service is an important center to help the customer to get the best service in their organization. Centralizing the customer service can

help the customer to easily deal with the ICT department regarding the difficulties in receiving the service or facilities. Most of the universities that adopt the centered customer service used the center to provide the technical support and information to the customer.

According to the descriptive analysis done in the analysis phase, most of the customer preferred to deal with the Customer Service based on the problem basis matter. It shows that, this center is preferably needed to be operated as any time they required the helps. Due to certain limitation of resources, the customer service center in the university environment is tightly close to the office operation hour. It good if this center can be operated 24 hours per day to support the 24 hour ICT service in order to fulfill the learning facilities in the university. The growth of ICT implementation in education environment required the ICT department to be prepared with huge recourses and infrastructure. Customer centered service can be a single solution for the ICT department such as University Malaysia Pahang to facilitate the university operation. Currently, the customer preferred to communicate with customer service representative using the telephone. This communication method might be the best medium for them to complaint or describe their problems to the customer service representative. However, others communication method such as face to face contact, email or application system also used by the customer based on a different condition.

This study also can be concluded that, the service and quality of the customer service center need to be improved. Based on the analysis, the lowest rank of the service and quality is about the effectiveness in answering the phone call. Thus, to improve call management of the center, they can provide more than one general line. They can also find the best alternative to implement the telephony system for the university. The second lowest of the rank is the resolution time of the problem. This issue can be solve by giving more training for the customer service staff and increase their awareness about the important of timely resolution time. Apparently, all these findings give a hint that the service and quality of the customer centered service in public universities need to be improved. The ICT department should take into consideration about this matter. It might be related to the poor ability of technical skills or lack of staff.

Beside to these two main issues, the customer service should consider others matters such as the representative appearance, communication skills, knowledge, competency and others. This study suggests that the quality of service can be a measurement to evaluate the performance of ICT department regarding the satisfaction of the customer especially the student. This suggestion also supported by Rezaei *et al.* (2014).

There are several impacts of adoption customer centered service for ICT services that can be highlighted from this study. This study elicit that the customer centered service is an important component in providing the ICT services to the university. The impacts of adoption customer centered service such as increase the quality of IT services to the university and increase knowledge in IT among their customers. Hence, customer centered service will act as a medium to improve IT service performance and understand the IT services needs of the organization by providing sufficient information about IT services and facilities and technical support to the campus citizen.

In future research, it is recommend to replicate this study with a more representative sample and a wide range of variables. For instance, sample should be collected from more public university for in depth study of customer centered service adoption. The sampling also must represent the actual customer in the university who are experienced in dealing with the customer service. With this, the analysis of the questionnaire might be vary from the current analysis. A possibility for future research is to conduct in depth case studies of successes and failures of these customer centered service.

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