ISSUES, CHALLENGES, AND SOLUTIONS TO IMPROVE CUSTOMER SATISFACTION OF KEDAH PUBLIC LIBRARY

Che Azlan Taib c.azlan@uum.edu.my Rosman Iteng rosman@uum.edu.my Halim Mad Lazim mhalim@uum.edu.my

School of Technology Management and Logistics, College of Business Universiti Utara Malaysia, Siktok, Kedah Darul Aman. Shahizan Affandi Zakaria shahizan@kedahlib.gov.my Kedah Public Library, Jalan Kolam Air, Alor Setar, Kedah Darul Aman.

INTRODUCTION

There are several types of library such as academic library, corporate library, government library, private library, school library, special library and public library. A public library is a library that is open to the public and generally funded by taxes of the municipal, state or federal level (New World Encyclopedia, 2015). The New World Encyclopedia also addressed that public library typically is lending library, allowing users to borrow books and other materials. It also has a non-circulating reference collection, and usually focuses on popular material such as fiction and movies, as well as educational and nonfiction materials of interest to the general public.

Standing as a public library, Perbadanan Perpustakaan Awam Kedah or Kedah Public Library (PPAK) is a part of the largest network of community organizations that are committed to improving the life outcomes for communities. PPAK received the mandate from the state government to serve the general information for public needs, as well as the mandate to serve a specific user such as school, higher education institution, researchers, and State Assembly. Therefore, PPAK reflects the socio-economic and educational status of the country and the society it is located (Perbadanan Perpustakaan Awam Kedah (PPAK), 2017). Thus, the significant attributes of PPAK is their ability to support a broad mission that can appeal to communities. Public libraries are in the perfect place to support connected learning because they are built on a solid foundation of choice—in libraries, communities have been able to choose what they want to read, explore, or participate in. A contemporary library must support four goals: experience, empowerment, involvement, and innovation (State Library Victoria, 2017).

Meanwhile, according to Brandon Schauer (cited by Steven Bell (2007), an experienced designed director for Adaptive Path, the Wow Factor "is a means to achieve long-term customers' loyalty through systematically impressing your customers again and again. Going a step beyond just measuring loyalty, the long way is an experience-centric approach to fostering and creating it. In addition, the advent of technology opens a new challenging dimension for PPAK to provide efficient and effective information delivery systems in order to support and fulfill the user needs. Therefore, Mr. Shahizan, an acting Director of PPAK believed any feedback and comments from all users are will be the key ingredients and encourage PPAK to work for the betterment and excellence of PPAK in the future.

Kedah State Library Background

Kedah, the northernmost state of Malaysia is located immediately south of Thailand, has an area of 9,426 sq. km. Popularly known as the 'Rice Bowl of Malaysia', Kedah is Malaysia's biggest producer of paddy. The most common sight in the state is vast tracts of paddy fields backed by undulating mountains. Perbadanan Perpustakaan Awam Kedah (PPAK) or Kedah Public Library located at the center of Kedah. According to Rashid (2011), the history of the State Library dates back 45 years ago when a committee was formed to establish a public library. But it was only in 1960 that the state government approved RM\$45,000 for the establishment of a state library. On 30th September 1961, H.R.H. The Sultan of Kedah officially opened the Alor Setar Public Library. The rapid growth of the State Library began on 25 April 1972 when the State Legislative Assembly passed Enactment 7, 1972 which provided for a Kedah State Library Corporation to be formed. This Enactment came into effect on 1 January 1974 through a Government Gazette issued on 20 May 1976.

The Alor Setar Public Library was opened on 1 September 1974 when the Corporation took over the library which was formerly run by the local town council. The total book volume is 46,979 and the total number of registered members is 27,200. The library is strategically located near a school, bus station and government offices. Currently, PPAK has enough staff to manage the library. The PPAK gives service for local, as well international users or researchers. But the most are local users or researchers. They are the members of the regional public university and private university, individual and local government agencies.

In general, the objectives of the PPAK are as follows:

- a) Establish, manage and maintain the State Public Library and branch libraries throughout the country.
- b) Establishment and maintenance of mobile library and the library.
- c) Take over any existing libraries in the country with the consent of the administration of the library.
- d) Develop and promote reading, especially in Bahasa Malaysia.

PPAK provides seven fundamental services. The details are as the following and each section has its own special services.

- i) Circulation
- ii) References
- iii) Kedah Collections
- iv) Multimedia/Media
- v) Special Collection
- vi) Lincoln Corner
- vii) Kelab Sinar Pintar Bayan Budiman.

PPAK is headed by a Director. It has two main sectors: Administrative and Planning Sector, and Library and Information Services Sector. To meet the goals of PPAK mission and objectives, both professional (librarian) and supportive staff are ready in PPAK. The structure of PPAK as attached (appendix 1).

Currently, the PPAK library collection is approximately 906,339 collections in the entire library in Kedah and about 131,515 collections of materials are in PPAK. An average 17,908 people were visiting PPAK every month. PPAK allows users to borrow books or other materials for certain numbers and a period of time. Since its establishment, the PPAK has been well aligned with the vision of the Kedah State Government. PPAK has 116 service centers as depicted in table 1

Table 1: Numbers of Libraries

Type of Library	Number of Library
State Library/Centre	1
District Libraries	13
Rural Libraries	40
Rural Libraries (National Library of Malaysia)	57
Mobile Libraries	5
Total	116

Issues and Challenges

Public libraries can play a significant role in improving the quality of life of rural population (Islam & Ahmed, 2012). However, the issues and challenges continuously occurred and debated. Ahmed and Shoeb (2009) stated that the quality of library services has traditionally been measured by its collection size and various counts of its users, but it has long been argued that users must be involved in the evaluation process in order to obtain valid and acceptable results. Meanwhile according to Passonneau (2013), ISO 11620 standard listed four categories of quality in library: the first area – : Resources, Access and Infrastructure" – measures the adequacy and availability of library resources and services, Use" looks at the usage of resources and services, : Efficiency" examines the

competence or cost of processes. : Potentials & Development" provides measures for focusing on emerging service or resource areas.

In another perspective, although mostly understood, public libraries always play an important role in the lives of communities, the discussions at the national, as well international level about public library service consistently increase. However, there has not many studies investigate public library quality service with the application of Kano model. Furthermore, the public library like PPAK is no longer simply a quiet place to connect to physical content. Oppositely, it is a physical and virtual place where users learn how to connect and use resources for physical and electronic. In order to understand how the users accept their services, PPAK has been conducting user satisfaction survey in 2015. The data were collected using the questionnaire survey based on 5 Likert scales. The scale indicates 'Very Good', 4 'Good', 3 'Satisfactory', 2 'Satisfactory', and scale 1 is 'Unsatisfactory'.

This study has set three objectives, namely: (i) measuring the level of customer satisfaction with the services and facilities provided by the library, (ii) studying the relationship between library service performance and consumer satisfaction, and (iii) suggestion how to improve the library services. This study focuses only on three categories of services: the collection of materials, services and library staff. In other words, PPAK measures the value of the library services through the impact its services to the user satisfaction. According to an analysis of the 2015 survey data, the results completed show that the performance of PPAK services is at a satisfactory level. Respondents have also proposed some idea or suggested some problems they are facing while visiting the PPAK.

On May 15, 2016, Mr. Shahizan Affandi Zakaria was appointed as Acting Director of PPAK. He is committed to continuing his efforts to achieve the mission of the PPAK. However, by using this common survey method, the findings can only be described descriptively. But he has no idea how to conduct a study by using a tool that is really accurate to answer all the questions that he plays in his mind. Therefore, to answer these questions, improvements to content based on the Kano Model is particularly appropriate.

At the same time, Mr. Shahizan also aware that PPAK is a dynamic organization which is providing a dynamic service to their users. Therefore, once evaluating the quality of library services, one must have clearly understood the issues relevant to service quality assessment in the library and subsequently understand what are the relevance of library service dimensions. Consequently, to align PPAK library quality of service assessment for effective reporting of library value and performance to its users and stakeholders, this paper focus on seven service categories: easy to access (DIM1), service is compatible (DIM2), effectiveness of services (DIM3), efficiency of services (DIM4), the service reliable (DIM5), provide the right services (DIM6), and the competency of staff (DIM7). It is the right time to explore the future of PPAK services to communities and to reaffirm the right services to all communities with the unique model, called Kano Model.

Kano Model

The Kano model is a theory of product development and customer satisfaction developed in the 1980s by Professor Noriaki Kano, a student of Kaoru Ishikawa (Coleman, 2015). Kano's model also known as the theory of attractive quality and presents five quality attributes of dimensions on the basis of the relationship between the degree of sufficiency of a given quality attribute horizontal axis and customer satisfaction with that quality attribute in vertical axis to illustrate that product or service quality customer perceived and customer satisfaction are multi-dimensions (Lai & Wu, 2011). For clear understanding the Kano's model is depicted in Figure 1 below.

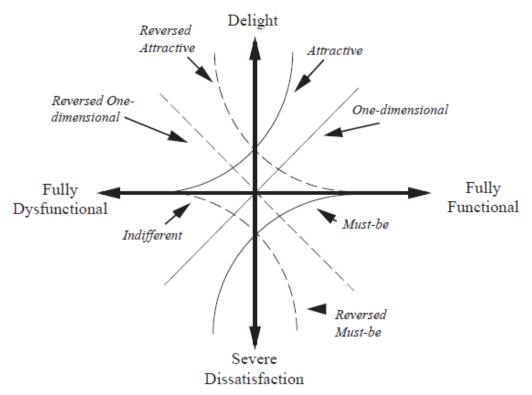


Figure 1: Kano's model of customer satisfaction

Source: Lai and Wu (2011)

The Kano model is a tool for visualizing the relationship among product or service features in a meaningful way (Schafield, 2016). According to Dominici and Palumbo (2015) Kano model is used to find and estimate the quality perceived by customers/users of a product/service and the consequent satisfaction/dissatisfaction resulting from the discrepancy between perceived and expected quality. Originally, Kano model distinguish

three types of product requirements which influence customer satisfaction (Lai & Wu, 2011, Matzler & Hinterhuber, 1998). Meanwhile, according to Afsar, Feizi and Afsar (2010), achieving customer satisfaction effectively not only providing service which is match exactly what customers want, but also need to know how much effort is needed to meet customer expects from the service. Hence, understanding the product quality requirement is beneficial to improve quality. Therefore Kano Model is the best tool to help Mr Shahizan to understand PPAK quality service.

In another point of view, like so much in Lean philosophy, the Kano model is really a way of thinking that can be applied to everyday situations (Coleman, 2015). But, the obvious different is the traditional one-way quality model is focused on one particular quality element, which is indicated the relationship between customer satisfaction and quality elements is treated as linear (Zhu, Lin, Tsai & Wu, 2010). Therefore, using the traditional way to improve customer satisfaction, it is possible that the customer will not be satisfied with a certain quality element (Tan & Shen, 2000). As a conclusion, Kano's model provides an effective approach to categorizing the customer attributes into different types such as must-be, one dimensional and attractive quality requirements.

Developing Kano question for PPAK service requirements.

According to Matzler and Hinterhuber (1998), the first step for construction the Kano questionnaire is the product or service requirements determined. As introduced by Wiersma and Jurs (1990) once it is decided that a test is appropriate, it is necessary to plan the test so that it will provide the most useful information. Taking from this idea, this study considered that proposal. Thus, for the purpose of this study, the test or measurement instrument or Kano questionnaire is based on the Academic Library Users Satisfaction (ALUS) model developed by Taib and Warokka (2011) for measuring higher education library services in Malaysia. This close-ended questionnaire has two sections.. Section A contains questions to articulate the respondent background, such as nationality, race, gender, age, experience using the library, and the purpose of going to the library. Section B was allocated for the scale type questions using a Likert scale. By choosing one of five alternatives, PPAK users are requested to respond functional and dysfunctional scales simultaneously to indicate their satisfied level. Scale 1 is denoted as very highly dissatisfied, 2 is highly dissatisfied, 3 designates neutral, 4 is highly satisfied and 5 is very highly satisfied. The measurement instrument mainly applied 50 statements of seven dimensions in ALUS model referred to library service quality features (question items). Refer to Table 3.

Constructing Kano questionnaire

The process of developing Kano questionnaire required procedures. The most and important point is for each question or service feature or characteristic, a pair of questions must be formulated. The first question concerns the functional form of the question. The following question concerns the perception dysfunctional form of the question. For example the first question "If the Online Library Catalog (OPAC) is easy to access" is functional or positive form of the question), and the second question "If the Online Library Catalog (OPAC) is NOT easy to access" concerns a perception if the library does not provide have that service feature (called dysfunctional/negative form of the question – see Table 2). The idea how to formulate these questions is using Mazler and Hinterhuber (1998) with minor modification. A few more sample question was described in Table 3.

Table 2: Kano Model Constructing

Functional	If the Online Library Catalog	 Very highly dissatisfied (1)
form of the	(OPAC) is easy to access.	Highly dissatisfied (2)
question		Neutral (3)
		Highly satisfied (4)
		Very highly satisfied (5)
Dysfunctional	If the Online Library Catalog	 Very highly dissatisfied (1)
form of the	(OPAC) is NOT easy to	Highly dissatisfied (2)
question	access.	Neutral (3)
		Highly satisfied (4)
		Very highly satisfied (5)

Source: Matzler, K. and Hinterhuber, H. H. (1998)

Table 3: Sample Questionnaire

A.]	PERKHIDMATAN MUDAH DIAKSES (DIM1)	Satisfaction Level				el
1	Online Library Catalog (OPAC) is easy to access.	1	2	3	4	5
	Online Library Catalog (OPAC) is NOT easy to access.	1	2	3	4	5
2	Library website easy to reach.	1	2	3	4	5
	Library website NOT easy to reach.	1	2	3	4	5
3	Library staff easy to access and discussed.	1	2	3	4	5
	Library staff NOT easy to access and discussed.	1	2	3	4	5
4	Library's collections and services easy to access	1	2	3	4	5
	Library's collections and services NOT easy to access	1	2	3	4	5
5	Library facilities such as reading room, computer lab easy to	1	2	3	4	5
	access.					
	Library facilities such as reading room, computer lab NOT easy	1	2	3	4	5
	to access.					
6	Library information such as pamphlets, brochures, and	1	2	3	4	5
	information is easy to access.					
	Library information such as pamphlets, brochures, and	1	2	3	4	5
	information is NOT easy to access.					

Evaluation Kano Model

By combining two answers (functional/positive form of the question and dysfunctional/negative form of the question) in Kano questionnaire, the result will be plotted in Kano evaluation table (see Table 4) From this table, the service features can be

classified into five classical conditions- attractive, one dimensional, must be, indifferent and reverse or questionable. For example, the combination of very highly satisfy and very highly satisfied will be grouped in Questionable or reverse, the combination of very highly satisfy and highly satisfied grouped in Attractive, the combination of very highly satisfied and very highly dissatisfied will be grouped as one dimensional.

After the analyses with the classification technique (functional versus dysfunctional), DIM1, DIM2, DIM3 and DIM7 categorized as Indifferent quality attributes, and DIM5 and DIM6 categorized as attractive. Table 5, 6, 7, 8 and table 11 represent Indifferent category. Meanwhile Table 9 and 10 represent Attractive category.

Table 4: Kano evaluation table

P	PAK Service	Dysfunctional/negative form of the question						
R	Requirements	Very	Highly	Neutral	Highly	Very highly		
()	Satisfaction)	highly	satisfied	(3)	dissatisfied	dissatisfied		
		satisfied	(4)		(2)	(1)		
		(5)						
J	Very highly	Q	A	A	A	O		
Joι	satisfied (5)							
l uic	Highly	R	I	I	I	M		
e fe	satisfied							
oositive uestion)	(4)							
osi ues	Neutral	R	I	I	I	M		
	(3)							
onal the	Highly	R	I	I	I	M		
Cti	dissatisfied (2)							
Functional/positive form the question)	Very highly	R	R	R	R	Q		
	dissatisfied (1)							

Source: Matzler, K. and Hinterhuber, H. H. (1998)

A= Attractive O= One-dimensional / Linear M= Must Be / Expected) Q/R = Questionable/Reverse

I = Indifferent

Table 5: Evaluation Kano Model (DIM 1)

PPAK		D	ysfunct	ional/	negativ	e form	of the	questi	on	
Requi	rements	Very high	ly	Hig	hly	Neu	ıtral	Hig	hly	Very highly
(Satist	faction)	satisfied (satisfied (5) satisfied		(3	3)	dissat	isfied	dissatisfied	
				(4	.)			(2	2)	(1)
	ery highly atisfied (5)	Q		A		A		A		0

Highly satisfied (4)	R	I	I	I	M
Neutral (3)	R	I	I	I	M
Highly dissatisfied (2)	R	I	I	I	M
Very highly dissatisfied (1)	R	R	R	R	Q

I= Indifferent

Table 6: Evaluation Kano Model (DIM 2)

	or Bittiation in	(
P	PAK Service	Dysfunctional/negative form of the question				
F	Requirements	Very highly	Highly	Neutral	Highly	Very highly
(Satisfaction)	satisfied (5)	satisfied	(3)	dissatisfied	dissatisfied
			(4)		(2)	(1)
	Very highly	Q	A	A	A	О
Jo 1	satisfied (5)					
e fon	Highly satisfied	R	I	I	I	M
nal/positive	(4)					
soc	Neutral	R	I	I	I	M
======================================	(3)					
Functional/positive form the question)	Highly	R	I	I	I	M
- cti	dissatisfied (2)					-
Fur	Very highly	R	R	R	R	Q
	dissatisfied (1)					

I= Indifferent

Table 7: Evaluation Kano Model (DIM 3)

200010	/ L L valuation 1xa		/				
P	PAK Service	Dysfunctional/negative form of the question					
R	Requirements	Very highly	Highly	Neutral	Highly	Very highly	
(Satisfaction)	satisfied (5)	satisfied	(3)	dissatisfied	dissatisfied	
			(4)		(2)	(1)	
/positive question)	Very highly satisfied (5)	Q	A	A	A	0	
nal/po	Highly satisfied (4)	R	I	I	I	М	
Functional/positive orm of the question	Neutral (3)	R	I	I	I	М	
Func	Highly dissatisfied (2)	R	I	I	I	M	

Very highly	R	R	R	R	Q
dissatisfied (1)					

I= Indifferent

Table 8: Evaluation Kano Model (DIM 4)

Table	o. Evaluation Ka	no Model (Dir	<u> </u>				
P	PAK Service	Dysfunctional/negative form of the question					
F	Requirements	Very highly	Highly	Neutral	Highly	Very highly	
(Satisfaction)	satisfied (5)	satisfied	(3)	dissatisfied	dissatisfied	
		, ,	(4)		(2)	(1)	
	Very highly	Q	A	A	A	О	
To t	satisfied (5)						
e fc n)	Highly satisfied	R	I	I	I	M	
positive (question)	(4)						
soc	Neutral	R	I	I	I	M	
al/F e q	(3)						
onal the	Highly	R	I	I	I	M	
ıcti	dissatisfied (2)						
Functional/positive form of the question)	Very highly	R	R	R	R	Q	
' '	dissatisfied (1)						

I= Indifferent

Table 9: Evaluation Kano Model (DIM 5)

	PAK Service	Dysfunctional/negative form of the question					
	Requirements	Very highly	Highly	Neutral	Highly	Very highly	
(Satisfaction)	satisfied (5)	satisfied	(3)	dissatisfied	dissatisfied	
			(4)		(2)	(1)	
Functional/positiv e form of the	Very highly satisfied (5)	Q	A	A	A	0	
ctional form o	Highly satisfied (4)	R	I	I	I	M	
Func	Neutral (3)	R	I	I	I	M	

Highly	R	I	I	I	M
dissatisfied (2)					
Very highly	R	R	R	R	Q
dissatisfied (1)					

A= Attractive

Table 10: Evaluation Kano Model (DIM 6)

Table 10: Evaluation Kano Woder (DIM 6)						
PPAK Service		Dysfunctional/negative form of the question				
Requirements		Very highly	Highly	Neutral	Highly	Very highly
(Satisfaction)		satisfied (5)	satisfied	(3)	dissatisfied	dissatisfied
(~~~~~~)		· /	(4)		(2)	(1)
	Very highly	Q	A	A	A	0
	satisfied (5)					
)rrc						
e fo	Highly satisfied	R	I	I	I	M
Functional/positive form of the question)	(4)					
	Neutral	R	I	I	I	M
	(3)					
onal	Highly	R	I	I	I	M
ıcti	dissatisfied (2)					
Fui	Very highly	R	R	R	R	Q
	dissatisfied (1)					

A= Attractive

Table 11: Evaluation Kano Model (DIM 7)

PPAK Service		Dysfunctional/negative form of the question				
Requirements (Satisfaction)		Very highly satisfied (5)	Highly satisfied	Neutral (3)	Highly dissatisfied	Very highly dissatisfied
(Satisfaction)		satisfied (3)	(4)	(3)	(2)	(1)
Functional/p ositive form	Very highly satisfied (5)	Q	A	A	A	0
Functic ositive	Highly satisfied (4)	R	I	I	I	М

Neutral (3)	R	I	I	I	М
Highly dissatisfied (2)	R	I	I	I	M
Very highly dissatisfied (1)	R	R	R	R	Q

I= Indifferent

Conclusion

As an Acting Director at PPAK, Mr Shahizan has a great responsibility to ensure that the services provided in the PPAK meet the needs and requirements of the users and satisfy them. Previously, user satisfaction survey applied one-dimensional method. However, with the use of the Kano Model in assessing the level of user satisfaction at PPAK, it is helped Mr. Shahizan to properly plan the improvement strategies more effectively and systematically. However, he has little difficulty understanding and conclusions based on the findings and tables produced using the Kano Model. Therefore, he and the staff of PPAK will be trained how to manage the Kano Model. By doing so, PPAK staff will learn, understand and analyze the results of the study correctly before making a better conclusion.

References

- Afsar, M., Feizi, K. and Afsar, A. (2010). An integrated method of quality function deployment, Kano's model and hierarchical decision making for improving eservice of brokerage in Iran. *African Journal of Business Management*. 5(11): 4510-4518.
- Ahmed, Z. and Shoeb, M. Z. H. (2009). Measuring service quality of a public university library in Bangladesh using SERVQUAL. *Performance Measurement and Metrics*. 10(1): 17-32.
- Bell, S. (2007). *Designing Better Libraries: Exploring the intersection of design, user experience and creativity for better libraries*. Producer. Accessed from: http://dbl.lishost.org/blog/2007/11/21/libraries-need-to-deliver-the-wow-factor/#.WYF0HVUjHcc.
- Coleman, L. B. (2015). *The customer-driven organization: Employing the Kano model.* London: CRC Press.
- Dominici, G. and Palumbo, F. (2015). The drivers of customer satisfaction for academic library services: managerial hints from an empirical study on two Italian university libraries using the Kano model. *Int. J. Management in Education*. 9(3): 265-290.
- Islam, M. S. and Ahmed, S. M. Z. (2012). Rural library services II: An empirical assessment of information provision in rural communities in northern districts of Bangladesh. *New Library World*. 113(7/8): 364-384.

- Lai, H.-J. and Wu, H.-H. (2011). A case study of applying Kano's Model and ANOVA technique in evaluating service quality. Information Technology Journal. 10(1): 89-97.
- Matzler, K. and Hinterhuber, H. H. (1998). How to make product development projects more sucessful by integrating Kano's model of customer satisfaction into quality function development. Technovation. 18(1): 2538.
- New World Encyclopedia (2015). Public library. Producer. Accessed from: http://www.newworldencyclopedia.org/entry/Public_library.
- Passonneau, S. M. (2013). Library assessment activities: Using ISO 11620 to review the assessment data of academic libraries in North America. Performance Measurement and Metrics. 14(3): 175-196.
- Perbadanan Perpustakaan Awam Kedah (PPAK) (2017). Chairman's Message. Producer. Accessed from: http://www.kedahlib.gov.my/web/maklumat/perutusan_pengerusi/?lang=en.
- Rashid, Z. Z. (2011). The development of the Kedah State Library Corporation: Ismail Hussein Collection. Jurnal PPM. 5.
- Schafield, M. (2016). Applying the Kano model to improve UX. Computers in Libraries. October: 28-32.
- State Library Victoria (2017). The design of world-class libraries. Producer. Accessed from: https://www.slv.vic.gov.au/view-discuss/design-world-class-libraries.
- Taib, C. A. and Warokka, A. (2011). Service Performance and ISO 9000: Exploring the Academic Library Users Satisfaction (ALUS) Model as University Quaity Level. Academy For Global Business Advancement. 8th Annual World Congress. Dongbei University of Finance & Economics (DUFE), China.
- Wiersma, W. and Jurs, S. G. (1990). Educational measurement and testing. Boston: Allyn and Bacon.
- Zhu, D.-S., Lin, C.-T., Tsai, C.-H. and Wu, J.-F. (2010). A study on the evaluation of customers' satisfaction - the perspective of quality. *International Journal for* Quality research. 4(2): 105-116.