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RESEARCH AND INNOVATION: EDUCATION, TECHNOLOGY AND PERFORMANCE MANAGEMENT

Edited by

NURUL FADLY HABIDIN
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PREFACE

The articles in this ebook are contributed by researchers who have conducted Research and Innovation: Education, Technology and Performance Management. The 34 articles revolve around issues that are encompassing the following areas of research: the relationship between lean sustainability practices and sustainability development in Malaysia public higher education institutions (HEIs), the relationship between technology acceptance and student understanding during ODL sessions, the influence between student readinesses on student understanding during ODL sessions, textbook design layout in Malaysia, validate business scenario simulation using agent model, validation of restful web service as integration approach, the necessity and importance of vision and mission to organization, polytechnic lecturers reflective behaviour during teaching and learning practice, design and simulation of boneless satay skewering part, design and development of automatic rapid manufacturing for layered cake machine (arm-lc), development of rapid manufacturing for layered cake machine (rmlc), hypermedia reading strategies of second language learners: a systematic review, a review of computational thinking skills (compt) among polytechnic student's learning programming via digital game play in scratch programming, innovation study of soldering iron stand using with heat sensor, the influence of readiness for change on lecturers' commitment to teaching entrepreneurship, Malaysian English teachers' participation in online communities of practice: motivators and barriers, productive aging through time use study, develop an experimental kit power system protection, Polytechnic Sultan Azlan Shah, thermal comfort comparision between dome and pitch roof design for mosques, service hours and service frequency for bus performance in Subang Jaya, Selangor, comparison of service hours and service frequency on bus services in eastern and northern region peninsular of Malaysia, online learning experience during COVID-19 pandemic: an online survey among Malaysian polytechnic students, satisfaction level of night markets traders' at Kuala Selangor and Tanjung Karang, the benefits of field trip on students' performance and creative thinking: a case study on tourism and hospitality degree students at Politeknik Ibrahim Sultan, perceived value and challenges in preserving traditional Malay sweet delicacies among young generation in Malaysia, difficulty of immediate identification of halal products among muslim consumer, predicting students' academic performance: a review for the attribute used halalan toyyiban food handling practices: a review on street food vendors in Sungai Besar, potential tourism product in Sungai Besar, sub -district of Sabak Bernam through promoting small medium enterprise, the qualities satisfaction level among health insurance policyholders: a comparative study between claimant and non-claimant, practice of using ICT in empowering rural entrepreneurs in Penang, Malaysia, guidance and counselling programme in managing secondary students' discipline, clinoptilolite with its modification with different types of surfactants, production of natural dyes from tumeric and asian pigeonwings for fabric and aerodynamic study of bio-mimetic wind turbine blade

The compilation of the articles in “Research and Innovation: Education, Technology and Performance Management” is expected to contribute to the literature on technology research and education

From the Editors

THE QUALITIES SATISFACTION LEVEL AMONG HEALTH INSURANCE POLICYHOLDERS: A COMPARATIVE STUDY BETWEEN CLAIMANT AND NON-CLAIMANT

Nur Sa'adah Mohd Hisam

Abstract

While quality assessment studies are well aware on importance of technical quality and functional quality in various fields, there has been little attention given in the insurance industry specifically in health field despite there is strong potential growth in the insurance market, as the inevitable becomes the order of the day, especially in the midst of current pandemic. The discussion of functional quality - the process by which an insurance service is delivered, always becomes the center focus among policyholder to judge the overall satisfaction towards insurance provider, paying little attention to technical quality. This study investigates the health insurance policyholders' satisfaction level on service quality namely technical quality and functional quality in which then attempt to draw the variation in satisfaction of both service qualities between claimant and non-claimant. To visualize the significance mean difference, only 357 data out of 380 questionnaires distributed among health insurance policyholders in Klang Valley are valid to be analyzed using independent t-test. The finding showed that there is significance difference in both quality satisfaction level; technical quality and functional quality among claimant and non-claimant as the policyholder who had made a claim previously have higher satisfaction level on both service qualities compared to those have not make any medical claim on their policy. This article reviews the relevant service-quality literature and introduces policyholders to the importance of differentiating between technical quality and functional quality in determining the level of satisfaction. From a managerial perspective, the research provides a better understanding on parameters in which the insurance companies need to take care of while delivering their services.

Keywords: Satisfaction Level, Functional Quality, Technical Quality

Introduction

The statistics of National Health and Morbidity Survey (MOH, 2019) reported that only 22% of the population are insured with personal health insurance while 35.9% of Malaysian populations were deemed not necessary for health insurance as the reason for not owning personal health insurance (MOH, 2019). This statistics indicates the importance in enhancing the health insurance awareness among Malaysia citizens as health becomes a major concern these days with skyrocketing medical costs and expenses. Even though the study of awareness and satisfaction is two different matters among researchers, often the study on existing customers satisfaction will lead to attracting new customer to indulge in new experience in which the satisfied existing customer will enhancing the awareness to others by mouth spreading the good experience (Ali et al., 2016). In this win situation, retaining customers while acquire new one not only made the insurance company profitable, but it does helps in offsetting the advertisement and marketing costs for new customer recruitment.

Besides, the study on customer satisfaction is essential in every service industry to improve and sustain their reputation in which an insurance industry is not an exception either (Arokiasamy & Tat, 2014). Many previous studies relate the service qualities as determinant in evaluating customer satisfaction in order to paves the way towards a pool of satisfied and loyal customers to stay in the companies' product line (Al-Msallam, 2015).

In a pure service provider like health insurance which insures against covered illnesses and guaranteed to stay financially secure should the insured ever require a treatment, the customer usually relies on extrinsic values such as company reputation to ascertain and perceive their satisfaction on service quality. However, this extrinsic cue only has minor intangible representations of the company product and delivery quality (Paposa et al. 2019). Moreover, unlike other service provider companies, the outcome of product comes later and not immediate in which does not lead to quick customer satisfaction. In other words, the utilization of future benefits covered in the insurance purchased is difficult to predict and will take some period to be eligible in claim. As customer satisfactions and demand are changing across different time and situation, organizations need to frequently re-measure their customer satisfaction and expectation and respond to their complaints timely and effectively. If the companies fail to meet the customer expectation, there a potential that customer might switch to other best alternative available in the market (Paposa et al. 2019).

Problem Statement

In rapidly growing service industry environment, service providers can only maintain their competitive advantage by delivering high quality services to their customers (Hu et al., 2009). Service quality concentrates on meeting the needs and requirements of the customer in an articulate manner and assesses how well the service delivered matches with customers' expectations (Paposa et al. 2019). It includes both assessments of the range of service delivered as well as an outcome of a service. Thus, satisfaction can be defines as an emotional reaction to a specific product/service experience in which determined based on the degree of perceptions towards one expectations in service performance provided.

Early study by Gonroos (1984) stated that there are two primary dimensions in service quality namely technical quality and functional quality. Technical quality refers to the actual outcome received from the service while functional quality refers to the way in which the service is being delivered (Lien and Kao, 2008). In insurance context, technical quality can be refer to the future coverage provided on purchased policy while functional quality may refer to the process in which begin with dealing with a proposal quotation until claim on covered situation approved and delivered. Later on, various models have been proposed by previous researcher in order to suggest relevant external factors thus modify the existing theory to increase the predictive ability in measuring the service quality of the offered services (Parasuman et al., 1991; Cronin & Taylor, 1994; Hu et al., 2009).

The scope of this research category is wide as the aim of service provider companies to gain huge number of potential and new customers only could be achieved if they can develop strategies to satisfy the need of customers belonging to different demographic profiles. Many researchers suggest the factors affecting customers' satisfaction, but choose to not disclose any information on satisfaction level before doing so. While most previous studies list out what should be accomplished by service providers to fulfil their customer expectations, only few carried out on identifying satisfaction level focusing in health insurance among customer with different demographic profiles. For this reason, the research paper aims to compare the qualities satisfaction level quality among health insurance policyholders specifically between claimant and non-claimant.

Methodology

Estimating 22% from the total population of 8,42,1800 residents in Klang Valley (MOH, 2019) insured with personal health insurance, this study randomly asked 380 from residents in Klang Valley, Malaysia that comprised of Selangor, Putrajaya and Kuala Lumpur to answer the questionnaires. However, only 357 respondent's data can be analyzed as the remaining respondent did not have any personal health insurance and did not fit with target population for this research. The questionnaire were divided into two main sections; the constructs and demographic of respondents. In detail, the construct's section which adapted from Duodu & Amankwah (2012) consists of seven and five questions on functional quality and technical quality respectively using 5- points of Likert scale; (1) much worse than expected, (2) worse than expected, (3) equal to expectation, (4) better than expected and (5) much better than expected.

In order to ensure the reliability of the instrument used, a pilot study had been conducted on 30 Klang Valley residents and the results of Cronbach's Alpha showed a range above 0.8; functional quality = 0.935 and technical quality = 0.903. Thus, this result indicated the overall high internal consistency reliability for each construct.

The data then was analyzed using descriptive analysis to determine the mean and standard deviation for each item in the constructs and further analysis of independent t-test to answer the research questions. The results on mean score were interpreted according to Ahzilah et al. (2017) as shown in Table 1.

Table 1

Mean Score Interpretation

Mean score	Interpretation
1.00 ≤ 1.89	Very low
1.90 ≤ 2.69	Low
2.70 ≤ 3.49	Moderate
3.50 ≤ 4.29	High
4.30 ≤ 5.00	Very high

Source: Ahzilah et all. (2017)

Results

The demographic features of this study include gender, age, occupation, monthly income, number of insurance companies which respondents purchase their policies, whether respondent had made a claim before and respondents' intention to purchase more than one health insurance policies. The following Table 2 outlines the demographic profiles of this study. The frequency of female and male almost similar in which female accounts for 49.5% of all respondents relatively only 5.5% higher than male respondents. Next, it can be seen that majority of the respondents who participated in the survey are between 41 - 45 years old which represents 28.2% of the total respondents followed by age class of 36 - 40 years old (20.8%) and age class of 46 and above years old (17.6%). Meanwhile, mostly insured respondents are public sector employees (37.4%) and followed by government servant (36.8%) in respect to respondent's occupation. In addition, the respondents tend to be loyal as the table shown that majority of the respondents prefers only one companies to manage their risk (62.6%). Most of respondents had made a benefit claim against their health insurance policy (73.4%) and among all these 357 respondents, 254 of them have an intention to purchase more than one health insurance policy (66.8%).

Table 2

Summary of Demographic Profile

Demographic	Classification	Frequency	Percentage (%)
Gender	Male	169	44.5
	Female	288	49.5
Age	21-25	27	7.1
	26-30	13	3.4
	31-35	64	16.8
	36-40	79	20.8
	41-45	107	28.2
	46 and above	67	17.6
Occupation	Government servant	140	36.8
	Private sector	142	37.4
	employee	66	17.4
	Self-employed	9	2.4
	Pensioner		
Monthly Income	Less than RM1,200	18	4.7
	RM1,200-RM1,699	12	3.2
	RM1,700-RM2,199	25	6.6
	RM2,200-RM2,699	40	10.5
	RM2,700-RM3,199	53	13.9
	Over RM4,000	209	55.0
Number of Insurance Companies	1 company	238	62.6
	2 companies	86	22.6
	3 companies	28	7.4
	4 companies	3	0.8
	More than four	2	0.6
History of Claim	Yes	279	73.4
	No	78	20.5
Intention to Purchase More Than One Health Insurance	Yes	254	66.8
	No	103	27.1
Total		357	100.0

Table 3

Descriptive of Functional Quality Construct

	Items	History of Claim	Mean	Std. Deviation
Functional Quality	FQ1 How timely is the delivery of insurance services by your insurance company?	Yes	4.4946	.72900
		No	4.1538	.79081
	FQ2 How truthful (keeping to promises) is your insurance company to you?	Yes	4.4158	.76283
		No	4.0256	.73810
	FQ3 How dependable and consistent is your insurance company in solving customers' complaints?	Yes	4.4875	.67244
		No	3.9487	.83584
	FQ4 How is your insurance company able to tell customers exactly when services will be performed?	Yes	4.4875	.66166
		No	4.0897	.79259
	FQ5 How are employees' willing to help customers in emergency situations?	Yes	4.4946	.68840
		No	4.1667	.74584
	FQ6 How are the employees approachable and easy to contact?	Yes	4.4767	.68802
		No	4.1538	.82300
	FQ7 How is the employees' ability to communicate clearly with you.	Yes	4.4875	.66166
		No	4.2051	.69055

Table 3 illustrates in detail the response on respondents’ satisfaction level in functional quality offered by health insurance companies, which defines how well the companies meet the customer expectation in respect to the service delivery. Respondents with history of claim (claimants) have exceptional high satisfaction level in which they agree that the service delivery of health insurance companies have very much exceeded their expectation in term of time manner and the companies can notify the policyholder the expected time required to deliver the service.

The claimants also greatly satisfy that the chosen health insurance companies are exceptionally trusted, dependable and consistent in managing customers’ issue in which very much exceeded their expectations in companies’ performance. In respect to the employees or intermediaries in assisting the policy purchase and claim process, the health insurance companies also successfully tremendously exceeded the customers’ expectation in easiness to contact, clearly communicate with customers and willingness to assist in any mishap situations.

Despite all these findings on claimants, the respondents with no history of claim previously also have high satisfaction in which the health insurance companies did better than their expectations in terms of how competently these companies carry out their service businesses but it still not highly enough for the respondent to conclude that their insurance companies successfully meet their needs.

Table 4

Descriptive of Technical Quality Construct

	Items	History of Claim	Mean	Std. Deviation
Technical Quality	TQ1 Successful in completing insurance claims settlements.	Yes	4.4731	.73833
		No	4.0513	.73674
	TQ2 Employees have technological knowledge and skills in solving customer problems.	Yes	4.5054	.71907
		No	4.0769	.75195
	TQ3 Insurance company's ability to provide insurance products/policies that meet customers' requirements.	Yes	4.4839	.69860
		No	4.0256	.83704
	TQ4 Insurance company innovativeness - ability to use current technology to improve services.	Yes	4.4337	.72599
		No	4.0513	.70060
	TQ5 Providing adequate variety of insurance policies.	Yes	4.4265	.75447
		No	4.1026	.74885

Table 4 displays in detail the satisfaction on technical quality whether the health insurance companies' product and services attained their customers' expectation. The result showed that health insurance claimant said that in terms of claim settlement, the companies did an excellent job in which the companies are able to settle the claim on covered risk in appropriate time manner. The health insurance companies also innovatively implemented use of technology in delivering their product and services that meet with customers' requirements. However, the claimants stated that the companies should introduce more variety of insurance policies suit with their necessary and needs.

The overall conclusion on comparison in satisfaction level on both functional quality and technical quality between claimants and non-claimants are shown in Table 5 and Table 6. As the number of claimants and non-claimant relatively differ in this study and both groups show a different satisfaction levels in functional and technical qualities (Table 5), further assessment needed to ensure that assumption on homogeneity in variance between two groups; claimants and not claimants is fulfilled. The Levene's Test for equality of variances indicates that the variances in the groups being compared are similar where the significance value for both functional and technical qualities are more than .05 (F = 0.126, *p* = .722; F = 0.007, *p* = .932) respectively. Thus, result for equal variances assumed will be interpreted for independent t-test analysis.

Table 5

Comparison on qualities satisfaction between claimants and non-claimants

Constructs	History of Claim	N	Mean	Std. Deviation	Interpretation
Functional Quality	Yes	279	4.4777	.57622	Very high
	No	78	4.1062	.61496	High
Technical Quality	Yes	279	4.4645	.62132	Very high
	No	78	4.0615	.62859	High

The results in Table 6 indicate that there was significant difference in satisfaction level on functional quality between claimants and non-claimants, t (357) = 4.959, p = .000. That is, the average functional quality's satisfaction levels of claimant (M = 4.4777, SD = 0.57622) was significantly different from that of non-claimants (M = 4.1062, SD = 0.61496). While for technical quality, there also significant difference in satisfaction level between claimants and non-claimants, t (357) = 5.051, p = .000. That is, the average technical quality's satisfaction levels of claimant (M = 4.4645, SD = 0.62132) was significantly different from that of non-claimants (M = 4.0615, SD = 0.62859).

Table 6

Independent t-test analysis

		t-test for Equality of Means						
							95% Confidence Interval of the Difference	
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FQ	Equal variances assumed	4.959	355	.000	.37150	.07491	.22418	.51882
	Equal variances not assumed	4.781	117.479	.000	.37150	.07771	.21761	.52539
TQ	Equal variances assumed	5.051	355	.000	.40298	.07978	.24607	.55988
	Equal variances not assumed	5.018	122.281	.000	.40298	.08031	.24400	.56195

*Note: FQ = Functional Quality; TQ = Technical Quality

Conclusion

Based on the information gathered from the study, the researchers have established several implications that might useful in assisting insurance companies to increase the customer satisfaction towards service quality of health insurance. As a health insurance has the most buyer in the insurance sector due to the high protection, it is getting more and more important and popular since there are many benefits of health insurance introduced to the market. Thus, it is necessary for the insurance companies to make further improvements and used various marketing strategies to enhance the customer awareness towards health insurance. The implementation and promotion of affiliate system surely will leads people to view on how does health insurance works without becoming an agent or broker especially among new customers and non-claimants who have yet know how to make a claim on covered risks.

Besides, insurance company should also pay attention to the company reputation in order to gather and attract new customers. It is because insurance companies with strong positive reputation will attract better the market (Yasin & Bozbay, 2011). The customers are more loyal to buy broader rangers of products and services from the same companies because they believes that this insurance company will deliver consistent interaction, sustained earnings, future growth and higher market value.

As for improvement in customer satisfaction on technical quality, insurance company should pay attention to the delivery of products that fit with customers' requirement and needs in order to create a long-term relationship and make a win-win solution. The insurer can also dynamically use current technology to improve the delivery of services such as provide free online quotation to introduce varieties of products. This way will allows the experienced customers to independently purchase the policy that fit with their demographic and needs; thus further attracting others by guiding or promoting the products in which indirectly becoming an intermediary.

In respect to the significance difference in satisfaction level among policyholders, the insurance company should broadly market and frequently conduct talk and sharing on health insurance in easy ways to understand so that people would know better about health insurance. For example, review on policy available on market, details on coverage and all other information that new policyholders should know about their policies. This implementation also requires cooperation from intermediaries and all other support industries for build a sustainable insurance industry. Policyholders who understand better about their own policy would have higher satisfaction level as they aware on the permissible and impermissible.

This research offers a number of recommendation for future research. First, this research might be extend their study to reach more respondents in order to explore in the customers satisfaction' towards healthcare industry performance in the Malaysian region and not focusing only certain area. This extension will reduce the variance of health insurance purchase intention level among people in difference demographic.

Besides that, future researcher can further their study by examine variables or factors that can level up customers' satisfaction towards health insurance industry. However, researchers need to be cautiously choose the right constructs as only the fitted one can improves the level of satisfaction. Lastly, the researchers are highly recommended to administer the survey by face to face as possible to reduce the misunderstanding among the respondents when they interpret the questions in the questionnaire. It is because there might be a chance that respondents are not familiar with insurance terms. Furthermore, the researcher can personally evaluate the respondents' honesty in completing the questionnaire form.

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