CHAPTER VIII

SUMMARY

The development of the Service Quality Measurement for Mobile Service Encounter (SQM-ME) system comprises of four main outputs, which are (1)conceptual background of SQM-ME model, (2) a proposed SQM model for service encounter,(3)a developed SQM-ME model by using factor analysis and multiple regression,(4)and the developed SQM-ME system is using new product development(NPD)process. This chapter attempts to summarize the key findings referring to research objectives, contribution to knowledge, limitations and areas for future research.

8.1 SUMMARY OF THE RESEARCH FINDINGS

The main outcome of this research is to develop and test the SQM-ME model for mobile telecom service encounter. This SQM-ME model can assist managers to systematically manage mobile telecom shops by measuring SQ in five dimensions, which are queuing speed, accuracy, employee capability, ambience condition and friendliness. In addition, this thesis provides the detail of new product development of SQM-ME system that is designed to plug in the information system in mobile telecom shops. The SQM-ME system provides the indicators for managers in order to take actions for improvement approach.

The research is conducted in four stages, starting by reviewing literature in four areas, which are SQM knowledge, research methods, cloud computing and business context of mobile telecom service encounter. In the second phase, the SQM-ME model is developed by using the result from Delphi study. The SQM-ME model is then tested by using factor analysis and multiple regressions. Finally, NPD process is conducted in order to create the SQM-ME system for Thai mobile telecom market. As it was illustrated in table8.1

Table 8.1 A summary of research objectives and key findings

Research Objective	Chapter	Key evidence and findings
1. To investigate the existing models of service quality measurement, and trends of SQM.	4	Conceptual background of SQM
1.1 Research themes and trends	4	SQM-Model Development for specific industry is the major theme of research papers which mostly influenced by Parasuraman works. The second area of SQM paper focuses on customer satisfaction directly. Over the last two decades the area of SQM seems to increasing steadily. The range of publish paper implies that managing service quality journal is the main publisher which more than 453 papers since 1992. The development of new SQM for specific industry is the major theme of research papers which mostly influenced by Parasuraman works.The second area of SQM paper focuses on customer satisfaction directly.
1.2 Summary of research method in	4	The classification of research method shows that the majority of SQM papers using case study method. In addition, most of them apply concept from Parasuraman

Research Objective	Chapter	Key evidence and findings
previous study		Framework. The second preferable method used is survey and empirical study. To understand SQM-ME, A single method seems to be insufficient to elaborate, thus multi research instruments are used systematically.
1.3 Industrial Analysis	4	Finding from review manifests that SQM knowledge was applied across service industry. There is no generic framework. Previously, it was convinced that Servqual is a generic model which is enabled to use in every industry. Nevertheless, the actual study discovers that the fundamental factor of each industry is different. Parasuraman Gap Model which is accepted by everyone in its completion, is adapted in each Industry platform. From previous Study, the studying of SQM Model was hardly found in telecommunication Industry. For this reason, it is a great opportunity to do the research of Service quality in this kind of Industry.
1.4 A Comparison of SQM Model	4	The SQM MODEL has been developed has been continuously for years. Most models focus on the distinctions between the customer expectations and the real service quality existing. In fact, it is difficult to gain accurate result from the

Research Objective	Chapter	Key evidence and findings
		measurement of customer expectations due to the various expectations which depends on customer target group. Additionally, the service providers could not reach some specific expectations of customers because of the limitations in budget and resources. As a results, making an analogy in this aspect may not 100% correct. Therefore, the later study in SQM focuses on the specific and also including the various types of services.
1.5 Service Quality Determinants	4	The service quality measurement has so many different aspects in the paper reviewing which seems to illustrates the author's perspectives (Service Quality Determinants) and his effort that should be measured. After reviewing, the literature leads to the numerous amount of attributes conclusion. In order to comprehend the study model, the attribute is summed up in 'System Model Form" which consists of Input Process and Output process and also testing whether models compatible with the system or not. As far as concerned, SQM-ME MODEL is reproduced by literature reviewing.

Research Objective	Chapter	Key evidence and findings
1.6 Proposed conceptual SQM Model	4	To make an analogy with several models, the strength of each model is accustomed to create new model refer to the system model concept.Johnson1995 claimed that this apply system model was easy to understand as it only consisted of Input and Output process. Moreover, there are three principles moderator such as environment moderator, personal moderator, and leadership moderator. However, input process and output process still refer to Gap Model developed by Parasuraman to measure customer expectations in the Input process. But in the customer perception part also includes the process and output because customers involve in the process and perceive service since they are in the service process. Service quality level takes place when the gap between customer expectations and customer perception is measured.

Research Objective	Chapter	Key evidence and findings
2. To examine the SQ dimensions and develop new SQM instrument for service encounter.	5	Proposed SQM-ME model for service encounter
2.1.SQM Model from round one	5	After the literature is reviewed and the model is collected to convey to experts in the first round. Researcher discovers that experts add so many SQ attribute to complete all quality point of views. Most of the advices from experts modifying the literature review perspective to meet mobile Service encounter context. Thai customer traits and behavior is quite different from other countries' because Thai culture requires flexible procedures and admiring and politeness from service providers. Nevertheless, Most of Thai customers are not familiar with the automatic system but appreciate the service provider interacts to them directly. In spite of the fact, the service providers supposed to have knowledge and flexible ability to services in many aspects. Otherwise, the attributes from experts are used in Affinity Diagram to group the familiar attribute together and bring those attribute to make the relative

Research Objective	Chapter	Key evidence and findings
		model which was titled "**SQM-ME Model**" which composes of lead Indicator and lag Indicator . Lead indicator part is the preparation of service before the service activities occur or the supporting procedures which are able to be measured before the beginning of the service delivery process. While Lag indicator is measured during service delivery and service output.
2.2 SQM Model from round two	5	In the second round, the results from the first round is sent to experts again and the response from everyone is enclosed back to investigate the conceptual model. The result from the second round can demonstrate the whole picture of concept explicitly. Lead and Lag are set in the supporting process and core process which are unable to separate at the first time. Therefore, it is set in Quadrant form and its horizontal axis (x) represents the process and people which exclude tangible and perception dimension. At this state, there are six main influencers such as policy, customer, process planning, human resource and Infrastructure.
2.3 SQM-ME Model from final round	5	Experts suggest that it is difficult to measure the gap between customer expectations and the customer perception because the customer expectations are uncertain by time. Besides, it depends on survey method which has high cost and

Research Objective	Chapter	Key evidence and findings
		time consuming. Experts also indicate that sometimes the service providers cannot fulfill customer needs because of limitations or organization policy. Therefore, if the model measures the customer expectations and customer perception, it cannot reflect the real quality of service as a result of the fluctuation of expectation. In spite of the fact that the researcher qualifies the SQ by using the gap which measures the different of level between the organization policy requirements and the results of the employee productivities which is tangible results, the advantages of this method are the service quality research can be done any time and it is not necessary to wait for the survey's results which cannot frequently be done in a year. However, this model manifests the influencers which had an effect on the service procedure and the self assessment method to the board director as well. The additional comment from the experts is that the SQM involves process and outcomes. When customers are asked about SQ, they consider what they ge t during receiving the service, thus the measuring process should be implemented during delivering the service and also the outcome of the process.

Research Objective	Chapter	Key evidence and findings
3. To validate the SQ model and the measurement metric for mobile service encounter	6	The refined SQM-ME model
3.1 Key Findings from Factor Analysis	6	Factor Analysis method is used to reduce the variables and group them together. The study of SQM model at last chapter is gained from the experts' perspective not from customers' view. Therefore, the researcher does the model testing by using factor analysis method and let the customers do questionnaire which is one way to confirm reliability of model that can be implemented in real situation. Consequently, from model study, there are five main factors influenced on service quality measurement such as queuing speed, accuracy, employee capability, ambience condition, and friendliness.
3.2 Key Findings from Multiple Regressions	6	In order to illustrate an essential point in each factor, the research does the multiple regressions to investigates the factors by using relative equation which contains axis rotational method. The equation is as the follow: Y (Overall SQ) = 4.041+.268 X(Friendliness) +.431X (Ambient condition) +.796X

Research Objective	Chapter	Key evidence and findings
		(Employee Capability) +1.252X (Accuracy) +1.673X (Queuing Speed) The above equation demonstrates that the speed of service and the accuracy is the most significant factor which a customer concerns. In addition, the employee's effectiveness and friendliness could gain customer impression as well.
3.3 Validating SQM-ME Model	6	The models in last chapter have six factors. After doing the factor analysis method, the significant factors are left only five aspects which enable the SQM-ME MODEL completely developed. Besides, the Multiple regression results in the equation that will be used as Index to show to service quality level of the service center of each service provider branch in Thailand in order to make a comparison of SQ between both internal organization and competitors.
4. To develop SQ management system for Thai mobile service encounter.	7	**SQM-ME System**
4.1 Product Strategy	7	Using Strategic Canvas to make a comparison between SQM-ME SYSTEM and ordinary standard software in market shows the opportunity for developing SQM-ME

Research Objective	Chapter	Key evidence and findings
		system in the market. Using Survey method (do the Questionnaire) has many advantages. Both programs are allowed to upgrade from the information centre conveniently with the low cost system. Customers are able to use this program anywhere which requires only internet access.
4.2 Understanding real case process	7	To understand the entire process completely and adopt the technology in order to modify for organization usage which leads to the study of Process Mapping in True move branches then using real time encounter situation and fundamental data to design SQM-ME system.
4.3 Concept Development	7	Begin with researching customer unmet needs to acquire the customer requirements so as to design system. Consequently, convey customer requirements to Development Team to do Brainstorming session and using the Affinity Diagram by grouping all idea before the next idea screening step .In addition, benchmarking the possibility in other aspects to select some proper ideas to make progress in the project.

8.2 CONTRIBUTION TO KNOWLEDGE

This research provides significant contributions to SQ measurement knowledge in five areas, which are a comprehensive literature review of four main areas, SQM-ME model development by using Delphi study, refining the SQM-ME model by factor analysis and the SQM-ME system development.

8.2.1 Contribution to Academic Knowledge

This model has not been studied before in any business model system and also capable to the real business. Additionally, it can develop to work with other Service Touch-point successfully. To guarantee the quality, SQM-ME Model was proposed to Academic conference in Germany (QMOD CONFERENCE) on 31st August 2010. The main contribution of this thesis paper is SQM-ME Model guaranteed by Mr. Parasuraman, the owner of Gap model theory. According to Parasuraman suggestions, this model has full capacity of information and ready to be used in a real situation.

8.2.2 Contribution to Market

Market size of mobile service providers is expanded considerably. There are more than a thousand of mobile service shops in each service operator today. This means the open market opportunities for the service quality measurement system. Moreover, this system could also be used in other related businesses which most concerning the service quality and have touch point to adapt this model to fit in their business tracks.

8.2.3 Contribution to Technology

The study extends many kinds of technology such as Cloud technology, SMS technology, Software Technology & Design, Web Application, Database Design, Process Engineering etc. Those mentioned technologies are integrated and developed systematically and connect with real customer expectations and requirements.

8.3 LIMITATIONS

This research study surveys only three main service providers in Bangkok area which cover the market ratio almost 60% of all customers in Thailand otherwise the research does not study the branches in upcountry that may cause the different results in some aspects. The selected technology in this research is ready to use. In the future, it can be developed further because of the technological change based on the same knowledge. This system works well in the service mobile shop. If other businesses adopt technology to activating, they need to do more extended research in order to compatible with that business context. The SQM-ME system is still not optimized into commercial purpose and done only Pilot testing. If the customer requires prototype and has funds to support the project, it could be developed to full version.

8.4 AREAS FOR FUTURE RESEARCH

The limitations outlined above suggest the following areas for future research. Firstly, the proposed SQM-ME model provides a conceptual framework in a specific area, where little prior research has been done. There is an opportunity for future research to develop an instrument for other service touch points, such as counter services, call centers and retail stores. Secondly, the SQM-ME model highlights 5 main SQM factors in management perspective and customer perspective. In addition, 4 influencers are also explained. However, the method of self assessment for four influencers needs to be studied in order to manage service quality proactively. Thirdly, the data from system should be collected and the level of SQ with customer perception should be compared and the solution for forecasting the level of SQ should be found. Forth, the new SQM-ME system can be adjusted to other business contexts. Finally, the developed instrument of e-questionnaire device can be applied to many contexts such as the measurement of customer satisfaction for marketing events.