Validation on Proposals for Strategic Service Innovation at Automobile Service Center

A Study of Automotive Service Center in Malaysia

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Abstract:

This study is looking at specific location of Malaysian automobile service center in Klang valley. The early findings show that most of the customers feel the environment are not giving so much of good experience and also they are lack of information and entertainment values. Structured and unstructured interview questions were posed to selected respondents. A set of questionnaire was constructed through an analysis of keywords from literature reviews. The study described the validation of findings and proposals that versus validity questions. The validation process is important to ensure that the findings and proposals emerged to be agreed or differed by the respondents. The data collected from this validation has gone through factor analysis. Finally, a model representing new fundamental strategy for service innovation design is presented.

Key words: *Service, innovation, design, experience design, system design, servicescape*

1 INTRODUCTION

In this research all proposals were generated from a case study of selected automobile service centers in Malaysia. There was one Malaysian company and one authorized foreign automobile service center that operates in Malaysia. Author's observation to these two service centers have given some outputs of qualitative and quantitative data that need to be analyzed. From the analyses there were proposals that need to be validated. The validation process is important to ensure that the findings and proposals emerged are to be agreed or differed by the participants or respondents. Validation[1] involves questions to find whether a given report is a valid account of the main findings of a study. The data collected from this validation will go through the factor and cluster analysis method. The initial strategy model is also be validated by the respondents. A new strategy model will be discussed at the end of this paper. There were 20 respondents who participated in this validation. Respondents were among service managers, service advisors, industrial designers and academicians. Each finding has a proposal and divided into three validity questions. First question was on the ease of implementation, then the effectiveness of the solution and finally the question of expected benefit or return through the implementation. With eight proposals divided into three validity questions that will end up to the total of480 *likert* scale data.

2   FINDINGS OF THE CASE STUDY

The case study has gathered all data from interviews and a survey. There are mixed of qualitative and quantitative data were analyzed. From the survey, results were analyzed by using principal component analysis. Through this method, the attributes can be analyzed by looking at the distribution of components plot in rotated space. This mapping process will help us to analyze the service innovation design in terms of the strategy and direction for future development. It is actually analyzing the participants' perception toward automobile service center today.
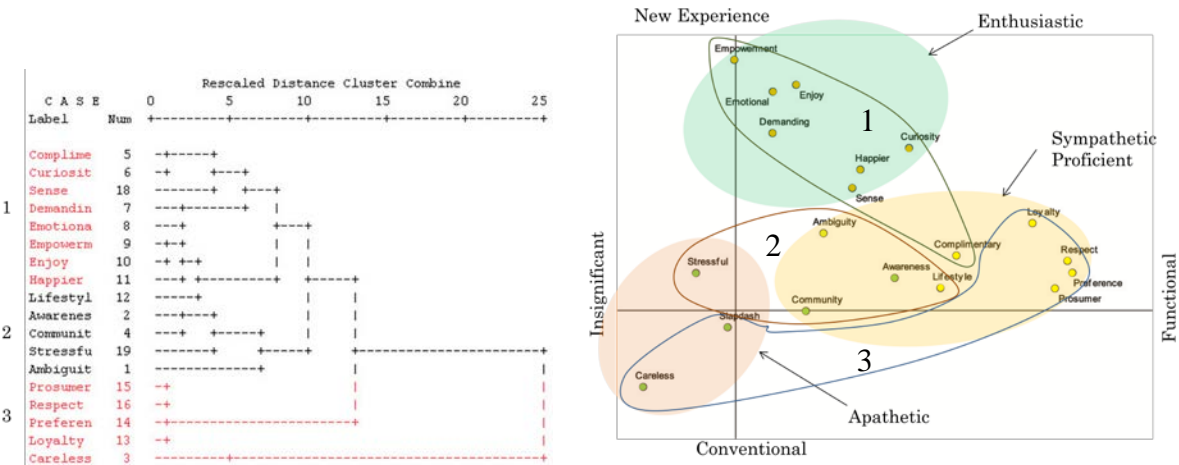

Figure 1. Dendrogram and rotated plot from cluster analysis of 'customer behavior'.

In figure 1, it shows the earlier results of cluster analysis for 'customer behavior'. Although the dendrogram results clearly show that there are three clusters, however, attributes like 'careless', 'stressful' and 'slapdash' are located too far away from its cluster. Nevertheless, author still believes that the mentioned attributes can be a factor to the findings of this study. The author thinks that it is appropriate to plot out new significant groups aside from groups that created from dendrogram results. This is due to the fact that some attributes like 'complimentary', 'careless', 'stressful' and 'slapdash' are not belong to its group as suggested in dendrogram results. They are suitable to be labeled in new groups so that the author can determine whether it is towards 'new experience', 'conventional', 'functional' or 'insignificant'.

Therefore, in the rotated plot as positioning diagram, the author has come to a conclusion that there are three groups of customers who are likely to become 'enthusiastic'. Meanwhile, there is also another group of 'apathetic' that is considered as inattention to the service offered. Finally a group of 'sympathetic proficient' that lies on the X axis is a group of customers who are very much concerned about functionality and they appear as principal to service innovation design and development.

Table 1. Groups of attributes from the plot view with positioning and direction

Customers' Dream	Service Imperatives	Marketing and Strategy
Fun	Affordable	Globalization
Spatial	Function (Quality)	Recognition
Segmentation	Fast Action	Branding
Entertainment	Experience	Integrity
Informative	Economical	Culture
Individualize	Empathetic	Standardization
Touch Point	Reliability	Compassion
Service Challenge	Understanding	Convenience
	Efficiency	Corporate Identity
	Time	Customization
	Motivated	Core Values
	Deliveries	Uniformity
	Benefits	Responsiveness
	Assurance	Functionality (Value)
	Efficacy	Optimization
	Consistency	Customer Relationship
	Tangibility	Attitude
	Effectiveness	
	Facilities	
	Comfortable	

In table 1shows the groups that emerged are the "marketing and strategy", "service imperatives" and "customers' dream". Attributes like fun, spatial, entertainment, segmentation, individualize, touch-point and informative are leaning towards "new experience". This shows that the theory of 'dream society'[2] is a phenomenon within consumers of Klang valley although the case study focused on automobile service center. Hence, the author named this group as "customers' dream". The other two groups are more likely the same when attributes related to service management were more towards 'functional' on X axis and it is called the group of 'marketing and strategy'. Nevertheless, the other group called "service imperative" is also towards 'functional' but the attributes are intently to quality of services. Words such as reliability, fast action, time, empathetic, efficiency are important in automobile service centers were also given by the respondents. Customers are expecting new ideas and give no hope for conventional thought.

These groups that emerged from the factor analysis are new concept by giving direction and positioning on the plot. These can also be called as concept structure of customers' perception towards automobile service centers. The author believes these groups and its elements can be considered as important tools in developing new services. However, that will depends on service provider whether to look at 'new experience' as supplementary service to be offered or a full functional and conventional service that customers rely on.

3   PROPSALS

Through all the analysis in the case study author found that there are seven major findings which can contribute to the improvement of automobile service centers. Below are the seven proposals derived from findings.

Proposal 1 – Environment.
Service provider shall use an extensive idea on how to impress customers especially the environment, informatively. The appearance of buildings[3], landscaping, vehicles, interior furnishings, equipment, staff members' uniforms, signs, printed materials and other visible cues provide tangible evidence of the firm's service quality need to be managed properly. All of these are known as 'servicescapes'[4],

Proposal 2 – New Experience
Customers exposed to new technologies like computers and communication technology that can provide new experience, design and emotion is the key execution factor to ensure new feel. Customers reject the conventional way.

Proposal 3 – Technical
Always let the related technical issues be known to customers, information on the process flow must be excellent, electronically or manually.

Proposal 4 – Lifestyle

Change their lifestyle to become an enthusiastic kind of users. Service providers have to identify customer needs and store it into customer information database. A good social-bond between customers and service employees is another way to achieve this.

Proposal 5 – Entertainment

Ideas related to entertainment and fun should be designed to add value the service in a whole new package. Innovative ideas are required to realize these elements.

Proposal 6 – Emotion

Designers have ideas and imaginations for happiness, and the idea realization can gradually educate people or users and customers towards new happy lifestyles. To accomplish this, we must have a connection cycle between designer, the user and the service providers.

Proposal 7 – Societal Logics

The implementation of dream society logic and industrial logic[5] can give highest value for money and new experience with the best functional quality to customers.

4. VALIDATION

Based on the findings, the validation comprises seven proposals and one strategy model that represent the 'co-creation' in service innovation design.
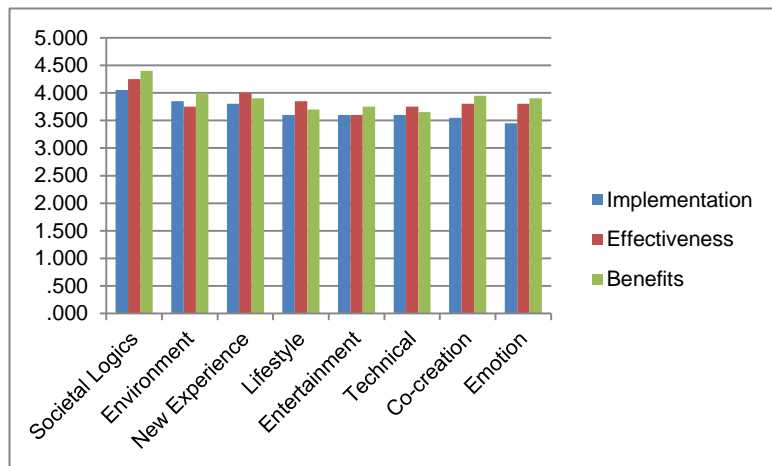

Figure 2. The overall view of descriptive statistic from the validation

Column chart in figure 2 shows the combination plot of three questions to validate the findings. Overall it looks like almost all have the same value, except the 'societal logic' which apparently has the highest value regardless of how easy the implementation is or how effective it is and how good it is in terms of benefits. The validity question of implementation is lower than either effectiveness or benefits. This shows that it is hard to implement even though higher expectations on effectiveness and benefits.

From the validation test the author can also see most of service providers believe that it is possible to improve the environment which can go well with 'new experience' or in another words the author could say that a new experience can be provided. A service provider should look at new lifestyle to be added in new development or improvement. Effectiveness is higher when a service provider includes new trends of lifestyle contents. Basically all attributes have no problems in terms of implementation, effectiveness and benefits except for the entertainment. Perhaps, the service centers are not keen to entertain customers but to provide better service with their primary intention and functional purpose. There are more technical issues to be resolved rather than entertaining customers. But overall, they are changing towards emotional zone as what the dream society is all about. As stated in the hierarchy of needs[6], people will achieve to highest level of transcendence after self-actualization. Meaning that, everything they do is to go beyond something in quality or achievement.
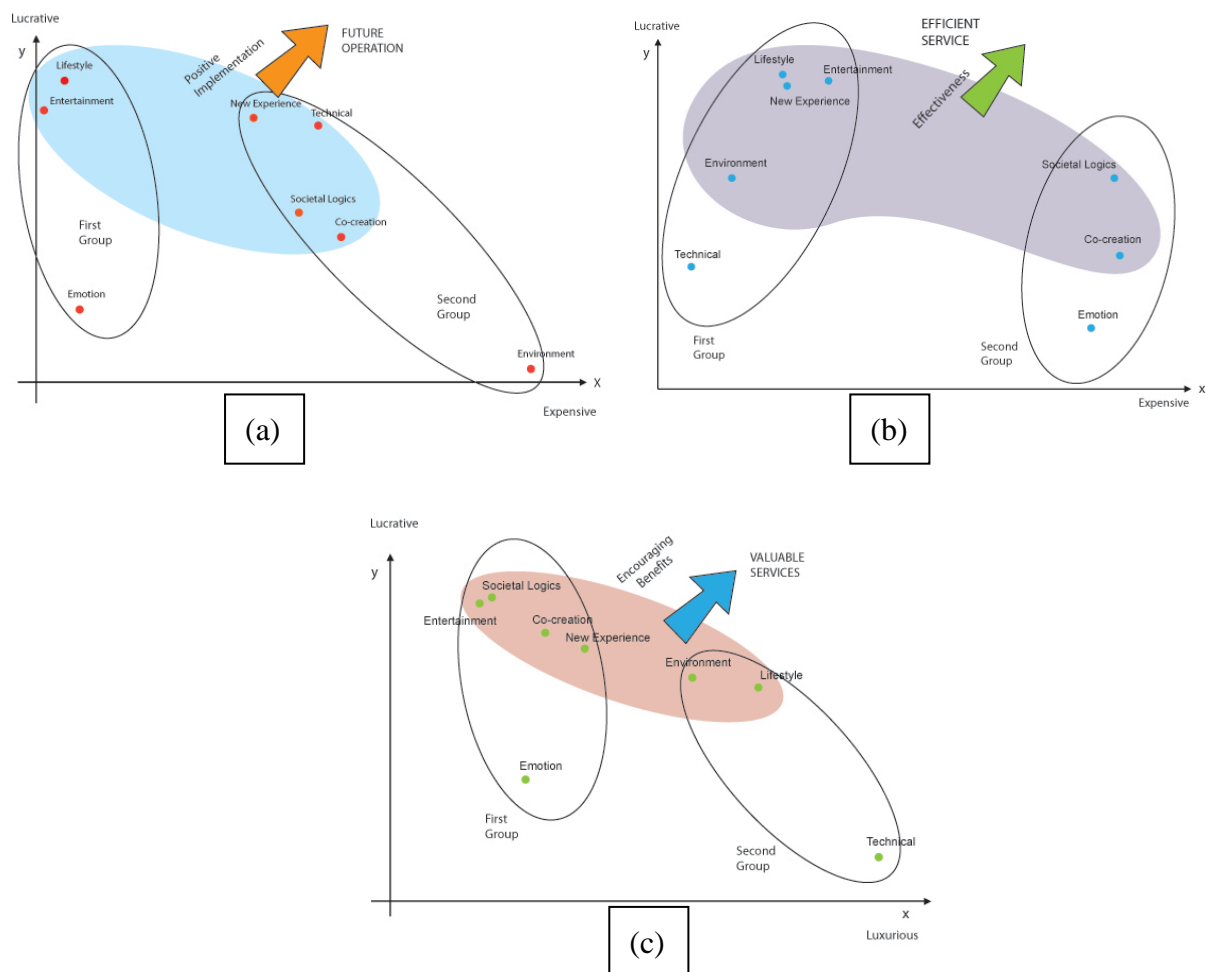
(a)

(b)

(c)

Figure 3. Analysis on validation results of the implementation, effectiveness and benefits.

From the component rotation plot in figure 3(a), the author sees that there are two groups with different directions of design and development. The first group leans towards profitable services. It consists of attributes from the findings named as lifestyle, entertainment and emotion. The other group in the same plot above consists of new experience, technical, societal logics, co-creation and environment. This group basically incurs a higher cost in design and development. Respondents remind us about cost and profit that always need to be balanced. Respondents in this validation have valued the findings and understood its proposals. Consequently, they agreed that these can be implemented in future service operations. Thus, it also supports the 'future operation'.

From the author perception, the new shaded group in figure 3 (a) is the most reliable group which has 'positive implementation' elements for 'future operations'. Elements in positive implementation are closely having the same value on Y and X axis. The more investments are being made, the more lucrative returns can be obtained. A service concept consists of core product, supplementary services and the delivery process. In this research we already know that automobile service and repairs or maintenance is the core product. But now the author is trying to find the suitable thought for the whole concept that covers all three components.

The majority of respondents believe that 'environment' and 'emotion' are less easy to be implemented due to budget constraints and space. However, 'environment' doesn't mean to take up more space. It is about *servicescapes* that have a profound impact on customer satisfaction and service productivity. Although emotion is considered as less easy in terms of implementation, the author believes that emotion is also part of the future operational value in automobile service centers. The term 'emotion' means how much emotional value will receive by the customers during their visit at a service center. As an example, good ambience music can give good emotional value to customers. There is a popular phrase saying that "money buys, but emotional sells"[7]. To make this happen, designers must be able to create things that can have a positive effect on the customers' emotional relationship with service functions. realized that new business paradigms[8] are promoting livelier, lovelier, and more emotionally fulfilling products. The author believe that the word 'products' must always come along with 'services' especially in design management.

For the validity question of effectiveness, figure 3 (b) above illustrates that two groups exists. It is almost the same pattern as the previous plot in figure 3 (a). However, the first group has more elements than the second group. The first group consists of lifestyle, entertainment, new experience, environment and technical. Most of the elements are leaning towards lucrative service businesses which incur less cost but are more effective. Then the second group consists of societal logics, co-creation and emotion.

According to the respondents, the second group is costly and complex in terms of design and development. The author considers this as a challenge in design and development. Soon it is going to be easy when the whole design process is ready to be implemented. The words societal logics and co-creation are represented as methods of designing a service. There are three societal logics providing three different ways of designing products or services. The author could use industrial logic, dream society logic or creative man's logic. Co-creation is a way of providing the users' needs by involving the users themselves in the earlier phase of design and development.

Clearly, the author suggests that the new shaded group is the most reliable in terms of effectiveness in service design and development. All elements in this group are inclined towards 'effectiveness'. These elements are 'lifestyle', 'entertainment', 'new experience', 'environment', 'societal logics' and 'co-creation'. The author considers these as the elements that permit 'efficient services'. Throughout the design and development of a service, these elements shall be considered as important factors in achieving effectiveness to the customers as well as the providers.

Figure 3(c) shows that the societal logics, entertainment, co-creation, new experience and emotion are leaning towards lucrative services. In contrast, the second group shows that environment, lifestyle and technical is prone to a luxurious type of services. Respondents perceive that a complicated process is needed to gain benefits or customer loyalty if the elements still consider as part of the criteria in service design. All in all, the author has to be realistic in the judgement of how to secure benefits or customer loyalty while setting up the strategy. Again, the best answer is to create a new group that has potentially strategic elements which will benefit both customers and providers. As a result, the shaded group emerges to represent the best strategic solution for 'valuable services'. This group comprises the use of societal logics and co-creation as well as the consideration of entertainment, new experience, environment and lifestyle in service design and development. From the chart above the author could clearly see the shaded group is inclining towards the direction of 'encouraging benefits'.

5. CONCLUSION

As a conclusion to the validation, the author decided to tabularize all elements that belong to the three validity questions. This action is the initial process of model creation. The author has to know the core subject, supporting issues and the target output as a complete strategy in the new model.

Table 2. List of elements for each validity question based on positioning of components plot.

Implementation	Effectiveness	Benefits
Lifestyle	Lifestyle	Lifestyle
Societal logics	Societal logics	Societal logics
New experience	New experience	New experience
Co-creation	Co-creation	Co-creation
Environment	Environment	Environment
Technical	Entertainment	Entertainment

Table 2 shows the list of elements or strategic solutions for service design based on popularity throughout the validation process. Clearly the author can see that only 'technical' is required for positive 'implementation'. Elements like 'lifestyle', 'societal logics', 'new experience', 'co-creation' and 'environment' are required by all situations. Both 'effectiveness' and 'benefits' have the same interest of placing 'entertainment' as one of the strategic solutions for service design and development.
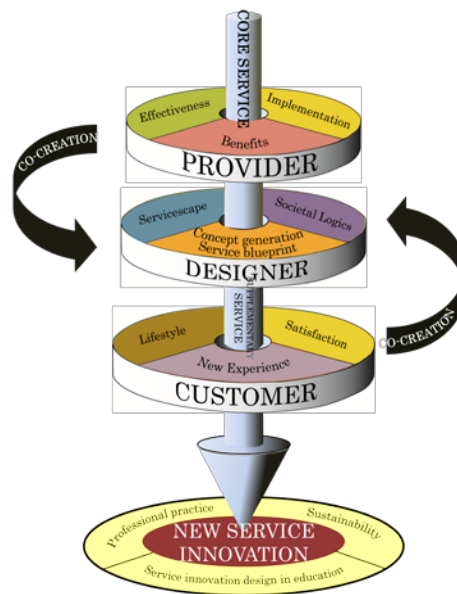
Figure 4. Strategy model for service innovation design in Malaysia

In figure 4 depicted a strategy model that is meant for service innovation design in Malaysia. By focusing on automobile service center as a case study, the author developed it through the process of identifying components that support the strategy and processes. It begins with recognizing the intended core service that will go through validation process. Beside productivity, there are issues on implementation, effectiveness and benefits that need to be clarified. Designer's contribution is to comprehend with the core product (service) and it seems working together with customers that can bring new ideas for concept generation.

Designers have to implement the useful societal logics[5] that consist of dream society logic, industrial logic and creative man's logic. The dream society logic is for the market of feelings where services are based on emotional needs. Industrial logic is based on material needs and social needs. While creative man's logic is based on individual preferences where services are personally adapted to one's particular needs.

As the author mentioned earlier, the data shows that customers are looking for new experiences in service businesses. This fact is strengthened by the statement that today's market trend is more 'emotional'[2]. Our work will be driven by stories and emotions, not just by data. The real meaning of giving new experience to the customers is to offer a new set of service blending with new emotive environment in a package where the existing core service function is not noticeable. From the data gathered and analyzed, the author found that new experiences are very much related to words like 'Fun', 'Spatial', 'Entertainment', 'Individualized', 'Segmentation' and 'Informative'.

Concepts generation that produced by the designer are mostly on servicescape. This is to say that tangible artifacts including interior or exterior of the service location will be presented in the proposal for new service development. Beside servicescape, the process flow is also need to be designed. Service blueprinting[3] distinguishes between what customers experience "front stage" and the activities of employees and support processes "back stage", where customer cannot see them. A good service is not necessarily to offer only the core product but also to provide the supplementary service for customers. This would be the extra value to attract and lure potential customers. For automobile service center, the supplementary services include free café, internet service or audio and video entertainment. Customers always have the opportunity to give comments on the service provided. Although it would be tons of complaints but the provider must see it as constructive feedback from customers. This can be considered as unintended co-creation by the customers. Designers have ideas and imaginations with regards to achieving 'happiness', and the realization of this idea can gradually educate the people or users and customers towards a new happier lifestyles. To accomplish this, the author must have a cycle of connection between the designer, the user and the service providers. Designers play a big role in ascertaining the customers' needs through an effective dialogue or by facilitating effective feedback.

Thus, the strategy model is the final idea of building new service innovation design, either for large or small scale service businesses particularly in Malaysia. The real benefit from this strategy is to encourage sustainability in human lifestyle. To achieve something that is less stressful, good communication between human, responsible design and satisfaction in every aspect of life that relate to services, especially the people-processing type of service. Next thing is the professional practice of service innovation design will be recognized in Malaysia.

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REFERENCES

1. Kvale, Steinar *Interviews: An Introduction to Qualitative Research Interviewing.* London: Sage Publications, 1996.

2. Jensen, Rolf. *The Dream Society.* New York: McGraw-Hill, 1999.

3. Lovelock, Christopher, and Jochen Wirtz. *Service Marketing: Peopl, Technology, Strategy, Seventh Edition.* New Jersey: Pearson, 2011.

4. Bitner, Mary Jo. "The impact of physical surrounding on customers and employees." *Journal of Marketing Vol 56.* , 1992: 57-71.

5. Mogensen, Klaus. *Creative Man: The Future Consumer, Employee and Citizen.* Copenhagen: Copenhagen Institute of Future Studies, 2006.

6. Maslow, Abraham. *Towards a Psychology of Being.* New York: Van Nostrand, 1962.

7. Lockwood, Thomas. "Design Value: A Framework for Measurement." In *Building Design Strategy*, by Thomas Lockwood and Thomas Walton, 3-12. New York: Allworth Press, 2008.

8. Esslinger, Hartmut. *A Fine Line: How design strategies are shaping the future of business.* San Francisco: John Wiley & Sons, 2009.