



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**AN ANALYSIS AND MEASUREMENT FOR THE CUSTOMER
DESIGN PREFERENCES**

This report submitted in accordance with requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor Degree of Manufacturing Engineering (Management) (Hons.)

by

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CHAPTER 1

INTRODUCTION

1.1 Project Background

In today's aggressive market, the company has to carry out the relevant strategy in order to fulfill their customers' needs (Cross, 2000). All companies have to, therefore, prioritize their 'real extraordinary' consciousness to catch customer design preferences before to produce a certain product since customer design has become the primary concern of the companies' strategy. According to Hsiao *et al.*, (2010-357) this is due to product designs have to move from the production-oriented approach to a marketing-oriented approach, and finally to a customer-oriented approach. Since the customers are not only to demand the quality of product (but also their satisfaction in psychological emotion conditions about the product to be purchased), therefore, it is important for producer to employ the improvement approaches in their product development in order to satisfy their customer needs and feelings. A company that can develop a product to fulfill the customers' needs (that meet their psychological needs) will be benefited to a profitable return when the product goes to market (Shieh, 2011:205). To address these issues, several methods have been developed to support the valuation of customer's satisfaction in the effort to understand the customer's needs and desire (Lokman, 2010:1).

En primer lugar, las empresas son necesarias para tener el componente clave en su estrategia de negocio que afecta a su rendimiento, especialmente en la forma en cómo atrapar la "voz del cliente" (COV) (Chen et al, 2008:. 971). Esto es debido a los clientes son, ahora, para en última instancia estricta sus peticiones como representación de sus expectativas. En concreto, sobre cómo construir un

producto adecuado que se ajustaba a los modelos de productos, tales como modelos de apoyo e innovaciones comprador situada. Nagamachi (1996) ha discutido previamente este problema con el enfoque de Kansei Engineering hacia la prueba fundamental para el esquema sensación relacionada con las necesidades emocionales de los clientes, especialmente a las partidas correspondientes que responden a las necesidades creadas de una extensa comprador innovación situado para nueva mejora elemento .

En segundo lugar, en el contexto del producto de diseño en el contexto del producto diseño, Spiro et al., (1998: 137) hizo hincapié sobre la comprensión de la apariencia que los artículos comparativos que pueden ser particularmente problemático en la investigación de la forma. Ellos dijeron que no hay una regla básica que listo para traducir completamente este enfoque hacia la información del producto conectado a todas partes, especialmente en el caso de las cuestiones relacionadas con la forma de esquema, como una persona de experiencia, el instinto y la motivación. Por lo tanto, es difícil de aclarar con precisión y de manera viable la razón de ser de las grandes ideas del plan forma. Anteriormente, Ornstein et al, (1987: 137). Ha señalado acerca de una asociación de sustancias (estructura de contenidos) para examinar la solicitud de arreglo, la progresión, la verbalización, y la incorporación. En este caso, la estructura de la sustancia de aprendizaje se puede ordenar verticalmente a cabo sobre la base de cuatro puntos de vista del aprendizaje asociados que se ajustan como una investigación de violín en el que la elucidación de forma llegará a ser evidente, menos enredado, y menos exigente para organizar. Construyeron un modelo experimental y cuantificable para la investigación de formas (es como un dispositivo imprescindible) para un planificador que se incluye en las modernas formas de mejora de configuración. La naturaleza de los artículos identificados (a través de modelo experimental y cuantificable) es como una pieza fundamental del proceso de esquema que conecta a las necesidades mentales del individuo en desarrollo el cumplimiento entusiasta.

En tercer lugar, Kobayashi (1986) dice en su libro afirma que el sombreado y la forma son dos caras de una estructura. Sobre la base de numerosos estudios, las personas que visualmente impresionado con el sombreado son más Delicaded que otros. El sombreado tiene más impacto hacia emocional, ya que puede actuar en una persona de muchas maneras. Para lograr esto, el componente de sombreado no puede ser simplemente ignorado desde el sombreado y la forma son elementos más importantes en el diseño y desarrollo. En algunos casos, Ingeniería Kansei es tan apasionada contorno (Mamaghani et al., 2010). Si bien existen diferentes necesidades de los clientes, de acuerdo a Khalid (2001), la utilidad de los productos (que está cumpliendo las necesidades de sensación) debe ser percibido como un significado esencial para la lealtad del consumidor. Esto es debido a las innovaciones de artículos desarrollados a través del plan de ejecución (por ejemplo, plan útil) y el esquema para la facilidad de uso (por ejemplo contorno ergonómico) están, ahora, no convertirse en las únicas cosas para activar los contendientes elevar rápidamente para acelerar su competitividad (Khalid , 2004). A través de la realización de un estudio experimental hacia sentimientos o influencias contra la configuración de formas relacionadas con el sistema percibido y recibido de los clientes, por lo tanto, requerirá la medición adecuado hacia reconocimientos comprador con el fin de distinguir con precisión las interrelaciones de emoción y formas (Wang, 2004) . Aquí, las formas de diseño que cumplan con las emociones de los clientes es la más difícil de manejar si hay como los parámetros del plan - perspectiva apasionada (Su, 2004).

Em quarto lugar, uma vez que as necessidades dos consumidores e sentimento são reconhecidos como valor importante para os produtores, Kansei são necessários para testar e avaliar a determinado emocional humana (que representam a imensidão de sentimentos, impressão e / ou sentimento) em que o conhecimento identificador de processo cérebro humano e informações como processo Kansei. Aqui, Engenharia Kansei (como uma espécie de inovação ergonômica humano) faz alusão à interpretação do clientes (compradores) sensação mental, em torno de um item identificado com discernimento, de níveis de configuração, como instintiva (como quando você chamar algo adorável),

comportamentais (acentua a utilização de artigos), e inteligente (considera o raciocínio de cliente sobre item como glória, e assim por diante.) (Norman, 2004). Para abordar esta questão, havia uma orientação (através de palavras Kansei) é empregado para expressar seu pleno das necessidades de sentimento, seus sentimentos e seus estados passionais (Guan & Lin, 2001; Ishihara, Ishihara, e Nagamachi, 1995). Aqui, Engenharia Kansei (KE) é caracterizado como " a inovação decifrar de inclinação de um comprador e imagem para um item em componentes de configuração. " De acordo com Lee et al., (2002), pode ser evocado por essas características como produto quadro, estilo, sombreamento, capacidade e valor, e influenciado por sentimentos de clientes e faculdades individuais de qualidades (para investigar a relação entre os sentimentos dos clientes e os componentes esboço de itens).

Em quinto lugar, uma vez que as emoções são enriquecer de todos os nossos momentos da vida (uma agradável ou uma qualidade desagradável), Diener e Lucas (2000) afirmou conexão geral de uma pessoa com o bem-estar pode ser claramente influenciados por meio de seus pensamentos do dia-a-dia . Aqui, as configurações ensaiar, por outro lado, enquanto sentimentos evocados pela aparência item são frequentemente pensado para ser irrelevante. Então, desta forma é difícil antecipar o pressuposto implacável provocada por alguns atributos comuns dessas 'sentimentos item. Para descrever essa razão, Arnold (1960: 182), disse que um psicólogo liderar no ponto de vista intelectual do sentimento, caracterizado um sentimento como "a inclinação sentia em relação a qualquer coisa, naturalmente, avaliada como ótima (remunerado) ou longe de qualquer coisa instintivamente avaliada como terrível (doloroso). Cada sentimento (que é uma inclinação praticamente estável para condições específicas do mundo) deve ser colocado na centralidade de um item para o bem-estar nosso- que é ditada por uma avaliação que será levado preocupações ao vantajosa. neste sentido ., Allinson e Hayes desenvolvido Índice de estilo cognitivo (CSI, 1996) a CSI criou duas medidas:. investigação e do instinto, o que implica a inclinação da aprendizagem a aparência de uma singular eo resolvido mensagem individual ao confrontar os dados Desde uma característica ponto é essencial para os clientes

para a qualidade influencia seu / sua mentalidade contra o produto (Barone1 et al, 2007:. 690), os sistemas de medição para a importância relativa das propriedades do item precisa ser criado. Desmet (2003: 2) argumentou que ao revelar a base cognitiva de emoções produtos, o modelo pode ser usado para explicar o carácter largo, pessoal, e o composto de emoções produtos. De acordo com Sakurai et al, (2012: 26). Acrescentou que, avaliando as impressões, os seres humanos podem perceber um significado bom senso.

Em conclusão, uma vez que a concorrência no mercado global entre a forma como as empresas é transformado pelo mercado do vendedor em um mercado comprador, a focado em qualidade e preço da concorrência é, portanto, "o centro da competição do consumidor", que o recurso mais importante da empresa (. Hua et al, 2014: 133). Nesta perspectiva, Kogut (2000: 405) sublinhou a determinação do valor de uma empresa é como o resultado dos fatores singularidade em relação à sua transmissibilidade e sua resistência a imitação pelos concorrentes. Especificamente, uma vez que o projeto de engenharia enfrentou os problemas em suas operações da empresa para os mercados competitivos e maduros (que cada vez mais caracterizam a maioria das indústrias), onde houve vários desafios existia, incluindo comoditização de produtos, a fragmentação dos mercados, e as margens de lucro em declínio (Srinivasan et al., 2012: 3). Hossoy et al., (2004: 1), neste contexto, salientou os sentimentos humanas complexas na formação de impressões para os produtos. Eles analisaram e organizou as preferências dos clientes, empregando, matemáticos e métodos da psicologia cognitiva para que os engenheiros de design são capazes de sair com o produto que se encaixam às necessidades dos clientes. Além disso, Schutte e Eklund (2005) em sua pesquisa (no sector dos veículos) discutiram sobre a ergonomia intelectual ou ciência do cérebro especializada ligada à ansiedade mental dos motoristas. Isto é como uma perspectiva do processo de exame, onde a ideia de sentimentos é ampla e inconclusivos (Frijda, 1986). Como exemplo, os itens que podem trazer uma grande variedade de tipos de sentimentos e sentimentos são perto de casa, em que representam a reação de pessoas como um impacto em seus sentimentos inspirados nos motivos que não são tão palpável como eles aparecem (Desmet ,

2003: 1). Ao descobrir a premissa intelectual dos sentimentos de item, o modelo pode ser utilizado para esclarecer a largura, individual e caráter composto de sentimentos item. Sobre estas questões, a função do modelo de Engenharia Kansei pode "medir" os sentimentos e demonstra a relação a certas propriedades do item.

1.2 Problem Statements

Эмоциональная конфигурация, которая имеет потенциал, чтобы сделать интерпретацию человеческих привязанностей в пункт деталей плана в целом признано в качестве успешного устройства для элемента продвижения. Это дает возможность разработчикам различать выделенные элементы для встречи с клиентами чувство потребности и повысить клиентов эмоциональное исполнение со всеми более привлекательными деталями. В этом смысле одним из ключевых вопросов является аффективное дизайн знания взяты из потребительского вкуса и предпочтений в качестве важных атрибутов информации о продукции, которая необходима для дизайнеров, чтобы гарантировать, что их продукт будет успешным на рынке. Это часть того, как реализовать Kansei Engineering и как сопоставить между компонентами плана пункт и человеческих привязанностей (PETIOT и др., 2004; 302). Для этого чувства клиент должен быть в полной мере учитывать при разработке продукта (Чжай и др 2009;.. Ким и др 2009;.. Бароне и др 2007; Jordan, 2000). Это связано с реакцией клиента к элементу перцептивного конструкции (например, укладка) влияют на развитие продукта (Demirbilek & Шенер, 2003) и до этого момента, ощущение части были значительно отсутствуют формальных гипотез конфигурации (Хеландер и др ., 2001). Таким образом, основной тест для эмоциональной конфигурации как обрабатывать потребности клиентов точно требуется по отношению к соответствующим пунктам, которые соответствуют этим потребностям (удовлетворенности клиентов на основе

функциональных и эстетических требований). Коротко говоря, Чи (2009: 2485) предложил требования таких потребителей, ориентированных на дизайн на основе подхода Kansei Engineering, который используется для построения онтологии.

Вышеупомянутым над ним, однако, трудно удовлетворить потребности клиентов из-за их семантических источников от субъективных впечатлений трудно быть истолковано в словесные изображения, в то время как уровень удовлетворенности являются, как правило, короче говоря, выдерживающий страстном состоянии и имеют тенденцию быть свободными и неопределенными (Хеландер & Халид, 2005). Согласно Холбрук и Гиршмана (1982), удовлетворенность клиентов не только значительно помещается на физическое качество в котором расположен элемент, но и использует ностальгические реакции при выборе необходимости о том, чтобы купить продукт или нет. Было указано, что регулярно, если продукт имеет преобладающие элементы чувство (форма и цвет), они могут (в любом случае) выполнить вкус клиента, независимо от возможности им нужен очевидный прогресс инноваций и возможностей. Лай и др, (2005: 446). Подчеркнуты элементы планирования с улучшенными качествами чувство как основной метод для получения предпочтений бизнес-сектора из-за многочисленных проблем, которые до сих пор остаются в построении процесса конфигурации удовлетворенности. Экземпляр, Ло и Чу (2009: 471) отметил форму извилистых линий, которые, вероятно, можно рассматривать как тонкий; женские атрибуты элементов. Так как в когнитивной области психологии знаний, где исследование психологического стиля является проблемой удовлетворения (Mayer & McCauly, 1985; Киф, 1987; Allinson & Hayes, 1996, 2000; езда & Watts, 1997; Биггс & Moore, 1993; Юнг, 1923; Мур и Кирсли, 1996; Ю., 2006), существует огромный разрыв между стилем рассуждений сингулярной и улучшению с точки зрения различия по улучшению в обучении, и окружающей среды. В

фактах, анализировать и исследовать свойства продукта по отношению к психологическим стиль количественному и стабильным, однако психологический стиль в основном сосредоточены на личности, а не знание (Allinson & Hayes, 1996; езда & Watts, 1997).

Таким образом, Chi (2009: 2485) предложил сенсорную на основе онтологии, как знание человеческих чувств в обмен и повторное использование общего понимания в различных приложениях, в которых она является, следовательно, должны захватить собственность и семантические наборы. Для получения изображений на основе субъективного впечатления (реализация Кансей Engineering Япония) она должна быть передана к человеческому наблюдателю (Hayashi и др, 202: 56.). Это перевести технологию чувства потребителя и имиджа продукта в элементы дизайна (Chen и др, 2008:. 971).

Кроме того, Хомбург и Буцериуса (2006) заявил, наиболее обычно используют параметр как часть исследования клиентов, которые абсолютно влияет на доступный из пункта выполненного долга, как лояльность потребителей, и он состоит из сложного расположения компонентов решающими. В этом смысле, однако Ван (2011: 8738) отметил об основных проблемах, чтобы точно и впоследствии понять аффективные потребности клиентов, чтобы разрабатывать продукты, которые соответствуют этим требованиям, где эмоциональные и чувственные желания затем переведены в воспринимаемых элементов дизайна продукта. Это означает, что если отношения между полный спектр человеческих чувств или эмоций и физических параметров на основе характеристик человеческих чувств и чувств будет значительно изменен, чтобы соответствовать продукты, которые могут быть описаны как место, чтобы поставить свою индивидуальность, то их потребности быть на их субъективные ценности, а не из-за присущей им полезности (Хоригути & Suetomi (1995: 25.) Исходя из

этого факта, Холбрук и Hrischman (1992) подчеркнул о необходимости разработки научных методов и процедур для облегчения оценки, анализа и улучшение чувства качества конструкции Согласно Lai и др, (2005: 447).., это из-за оценок по отношению ко всем потребителям требуется качественное ощущение продукта, так как продукт должен соответствовать требованиям рынка в целом, а чем только те из одного потребителя.

Кроме того, так как субъективные впечатления трудно перевести на словесных описаний (Jiao и др, 2006: 659), модели эмоции, поэтому, должны быть разделены на дискретные и непрерывные модели. Экман (2010) описал дискретные модели, как наличие существенных чувств. Он описал инклюзивных внешне, где чувства группируются внутри конкретного происхождения, которая варьируется от создателя к создателю. Чувства могут быть пойманы через зеркала, сигналы, позиций и с использованием физиологических каналов, так как объем крови такт (BVP), частота сердечных сокращений, уровень проводимости кожи, электромиографии (ЭМГ) и электроэнцефалография (ЭЭГ). Кроме того, Baronel и др., (2007) заявил, существующие методы, (совместный анализ (CA), Кано модель и развитие функции качества) для поддержки интерпретации требований клиентов в детали в попытке разработать продукты, которые отвечают удовлетворенности клиентов. Так как дизайн продукта, как правило, состоит из многих элементов дизайна (различный элемент дизайна, который отличается от друг друга), и у него есть взаимодействие, то важно этому вопросу о том, как к обработке нелинейности (Цутя и др., 2009: 296). ДЕСМЕТ (2003: 1) отметил, что эмоции, вызываемые внешний вид изделия часто считается нематериальным и поэтому невозможно предсказать или дизайн для.

Для решения указанных выше проблем выше, данное исследование проводится с целью изучения предпочтений заказчика дизайн в сторону

дизайна продукта. В этом исследовании обработка изображения продукта требует манипуляции формы профиля с помощью программного обеспечения для обработки изображений. Так как открытие взаимосвязи между потребительскими страстями и элементами дизайна является ключевым вопросом и играет решающую роль в аффективного дизайне (Zhai и др, 2009: 295), то с помощью семантического дифференциала (Kansei Engineering) как артикуляции человек эмоциональным используется для определения предпочтений клиентов, связанных с эстетическими факторами на основе образа продукта, в то время как анализ с использованием статистического подхода. Для того, чтобы проанализировать данные, собранные с помощью опроса распределенных для принятия решений, основанных на дизайн продукта приоритетов и предпочтений, связанных с численной основе, некоторые из графического программного обеспечения и статистического программного обеспечения будет использоваться для анализа и оценки предпочтения клиентов по отношению к клиенту эстетическое чувство выражается в семантического дифференциала (SD), в то время как конкретный профиль дизайн продукта будут проанализированы и интерпретированы в математический подход.

1.3 Objectives

Customers play an important role to determine the successful of product in the market. Towards the car design, there are characteristics that can be caught through customer feelings investigation. Therefore, to produce a design that can attract customer feelings, this project employ the concept of Kansei Engineering (aesthetic emotional) towards the car product design. The objectives of this project are as follows:

- a) To study and investigate customer design preferences toward the design of product.

- b) To measure and analyze the customer design preferences toward the design of product based on product characteristics.
- c) To evaluate the customer preferences toward the design of product.
- d) To validate the customer preferences toward the design of product.

1.4 Scope of Study

The approach used in this project is to identify and investigate the customer satisfaction are through customers' preferences that are focused on the product design of the car products. The type of cars is limited on 3 type classes such as compact car or city car, sedan car and Multi-Purpose Vehicle (MPV) car. Specifically, the cars manufactured or launched in the market since 2010 till 2015. The investigation conducted on the car design is through developing the 3D car design adopted from the market using software such as *Blender*, while to the individual customer characteristics towards the design of car (front view, side view, and rear view) will be manipulated into graphical visual identification (GUI) using software such as *Inkscape*. The software will be used to manipulate the design construction of car into different visualization (*e.g.*, segmentation, curve, etc.) in which each of important characteristics of the car design (such profiles, contour, *etc.*) will be specifically identified and manipulated into data and mathematical equation towards the individual customer characteristic.

Moreover, the statistical approach is required for analyzing the data collected through survey conducted by generating the questionnaire. The questionnaire developed is through preliminary stages in order to generate the suitable and relevant measurement tools for investigating and analyzing the design of product, while to validate the result is through post-test stage. In the step of developing the questionnaire, the semantic differential (SD) towards the words (as the expression of feeling or emotion using Kansei) is employed through the

affective identification towards the design of product using Kansei Engineering approach.

For the statistical analysis purpose, this project will utilize the *SPSS 15* or software in order to investigate and identify the inter-relation between the characteristics (design of product versus cognitive style preferences).

The questionnaires developed in this project will be distributed in Melaka area towards the car owner as the respondents. The questionnaires will cover the demography range scales of gender, age, occupation, salary, etc. and the characteristics items of car product design such as front and rear lamp, side mirror, etc. There are also customer profiles based on cognitive style and the words represent their expression towards the car design will be collected and manipulated into data that will be processed using the software above for analysis purpose. While for the evaluation and the validation purpose, the post-test survey will be employed to justify which the specific characteristics identified (based on the finding) is confirmed to the customer preferences of car design product.

1.5 Framework of Study

Figure 1.1 shows the framework of study for this research. It consists of fourth phase of this project which are collection phase, analyzing phase, evaluate, and validation the result phase.

1.6 Summary

Whole in this chapter discussed about the research related to product design to achieve customer satisfaction through the product development using Kansei Engineering. Kansei Engineering is used in order to determine the affective and attribute needed in the product design characteristics to meet the customer satisfaction levels. By knowing the affective and attributes, next step is to analyze the customer preference based on Mathematical approach.

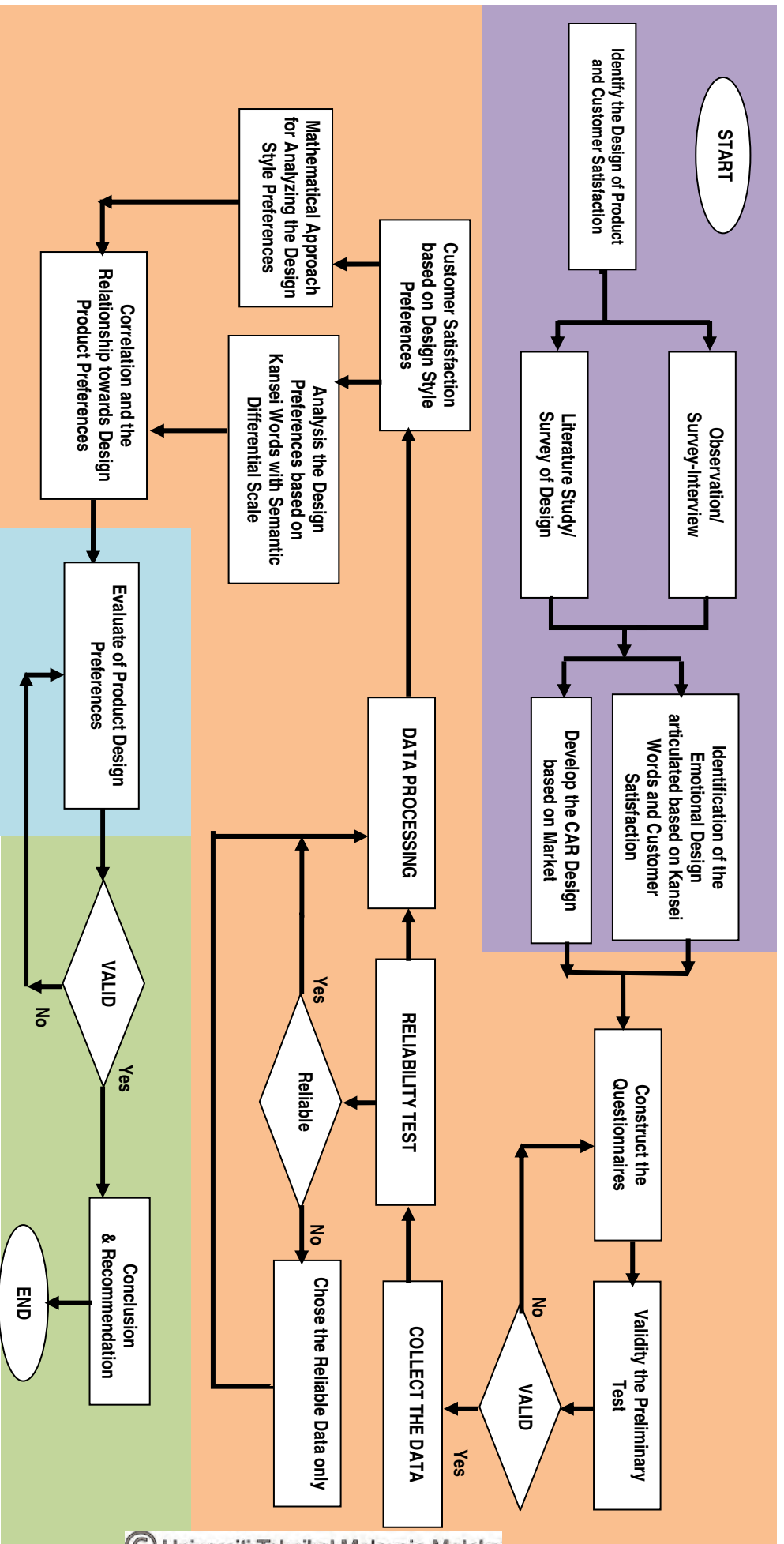


Figure 1.1: The Framework of the Project Objectives.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter contains of the literature review related to the scope of the study. The literature review refers to the journal, thesis, technical document, books, case studies, reports and also the information from electronic - media sources. All of these resources were then selected based on the relevancy with the scope of study. This chapter discusses the literature review in the context of customer satisfaction based on Kansei Engineering method with Semantic Differential (SD) scale, while the related to decision making based on the design preferences using analysis hierarchy processes (AHP) approach. All of measurement tools related to how measure the customer characteristics and background were employed to develop the design, manipulate the data, and analysis purpose includes the correlation and relationship between the customers' attributes and product design characteristics.

2.2 Customer Satisfaction

Consumer satisfaction can be defined as a consumer reaction that carrying out their expectations and needs towards the products and/or services (Hallowell, 1996; Oliver, 1997; Zeithamal & Bitner, 2000). According Vavra (2002), customer satisfaction is an emotional state after a customer having tried the

product delivered to them. Kotler (1994) defined customer satisfaction as a result of the perception of service performance and production of the good in relation to the customers' expectations. In the studies of expectations and human satisfaction, Serry (1997) argued that the expectations can be considered as "sustained probability of the individual that a special reinforcement will occur as a function of a given behavior on a part in a particular situation." Therefore, the customer satisfaction level depends on the extent to which the attributes of a product meet the needs and expectations also against the overall product performance (Pires & Santos, 1999). Briefly, customer satisfaction is "when a product or service meets and exceeds customer expectation" (Gerson, 1993).

By definition, customer satisfaction is both an emotional state and affective purpose fuses on the obtained value of the good or service considered (Alves, 2003). In this context, the cognitive dimension corresponds to the balance established between the perception of the purchase results and the consumption process. Evrard (1978) defined "the satisfaction cannot remove the experience of pleasure consumption is as the result of the evaluation experiences " and, therefore, is not the emotion itself, but involves evaluation emotions. Lambin (2000) stated the customer satisfaction is based on the degree of agreement between the expectations towards the product and the perception of product performance. Customer satisfaction is generally defined as estimated by the responsible results realized in particular the experience of consumption (Cadotte *et al.*, 1984; Westbrook & Oliver, 1981; 1991). According to Taylor and Baker (1994), satisfaction should be described as moderator of the relationship between service quality and purchase intent. Woodside *et al.*, (1989) satisfaction is an intervening variable that mediates the relationship between service quality judgments purchase intentions. Customer satisfaction is a psychological concept that involves the sense of well-being and pleasure. Customer satisfaction can also be defined as the satisfaction based on the outcome or the process. Satisfaction is the result of confirmation or disconfirmation positive expectation. This is meant that the perceived performance towards satisfaction should be defined as the cognitive assessment of consumer and emotional reaction to their perception if the

feature was against or exceeded their expectations (Oliver, 1993). In other words, satisfaction is consumer response to the confirmation. The satisfaction is the result of disconfirmation negative expectations (Oliver, 1980; Woodruff & Such, 1983). However, both levels expectations and performance of the products determine the magnitude and direction of disconfirmation effect (or verification) (Oliver, 1989). Thus, the measurement factors based on this model will be on expectations, performance, disconfirmation / confirmation, and satisfaction (Oliver, 1993). In this view (the influence to psychology), the satisfaction goes beyond expected utility to also involve the use of consumption after the purchase (Dill & Such, 2006:4.)

Moreover, according to Barsky and Labagh (1992), the main goal in seeking for customer satisfaction is on how to determine the advantage related to what will actually satisfy the customers. Satisfaction is important as the main reason for organizations to sustain their business. To measure the satisfaction, Oliver (1997) underlined about a psychological response associated to the judgment degree to which reaches a level of pleasure associated with the consumption. He proposed a one-dimensional scale that can be applied to products and services where the satisfaction is the consumer's fulfillment response based on a characteristic of the product or service provided (Oliver, 1997).

According to Howard and Sheth (1969:145) after setting the satisfaction as a continuation of expectations, the satisfaction corresponds to the perception of buyer related to the quality they experienced whether suitability or not to their desires based on the evaluation (as a representation of the comparison conducted between the results obtained versus the results they expected). In this context, the satisfaction or dissatisfaction as a response of customers' emotional manifested in the feeling domain. Since satisfaction is the consumer's reaction (to which they have consumption experience compared to the benefits received through good or service with their expectations), the satisfaction will, therefore, be influenced by the specific characteristics of product or service and the perceptions of quality. In addition, satisfaction is also influenced by consumer's emotional reaction to which the satisfaction state is acceptable and dissatisfaction is unacceptable. Hunt (1983)

stated the satisfaction and dissatisfaction situation should be as a feedback loop based on results achieved and expected results (Figure 2.1).

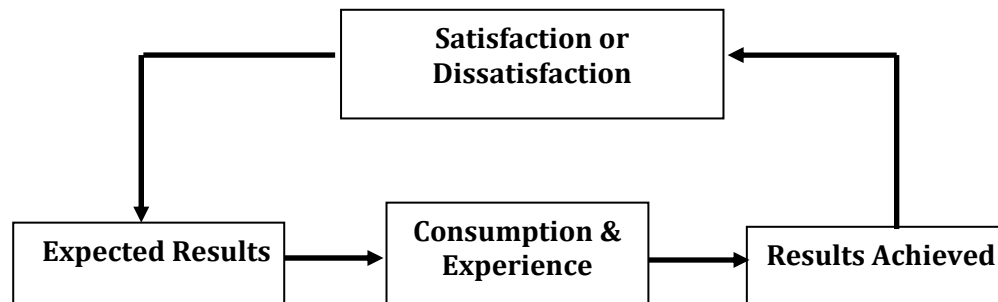


Figure 2.1: Customer Satisfaction/Dissatisfaction Loop

2.2.1 The Importance of Satisfaction to Business

Pink and Kamakura (2001:1) argued that customer satisfaction is being considered as one of the most important marketing concepts in recent years. Since it is connected to the customer retention and profitability, therefore it present the scenario of common recognized towards consumer needs as the main objectives of the companies. To assess the overall performance of product, Marchetti and Meadow (2001:1) noted the importance of satisfaction to generate the profits by delivering the needs and desires that consumers expected. The satisfaction consumer is recognized as of great importance to all commercial firms due to its influence in repeat purchases and recommendations (Berkman & Gilson, 1999). Since customer satisfaction entails diverse and complex psychological processes at the level of needs or desires, beliefs and attitudes, expectations, emotions, the perception (of quality, performance, risk, equity, social norms) of the processes of attribution the causality and repentance, the behaviors of customers from this satisfaction is an essential objective for organizations. Here, the satisfaction comes from a particular transaction and it should not be confused with the concept of attitude. It is response a particular experience, a psychological state, after the purchase and not a predisposition relatively stable and durable (Evrard, 2003).

Satisfied customers lead to higher future income (Anderson & Such, 1994). Satisfied consumers are more willing to pay high prices, provide recommendations and to remain loyal to the company (Reichheld, 1996). A high satisfaction consumer leads to a higher level of retention and customer loyalty (Fornell, 1992) and reduce costs associated with poor products and services (Anderson & Such, 1997). Customer satisfaction can be the influence factors such as loyalty, recommendation others, competitiveness, and satisfaction of employees. According to Assael (1987:47), satisfaction reinforces the attitude before the positive mark, increasing the likelihood of it back to be purchased, while dissatisfaction leads to negative attitudes towards the brand and decreases the likelihood of repeat purchase.

Consumer behavior studies emphasize customer satisfaction as the essence of post purchase period. Due to consumers' satisfaction probably leads to repeat purchase and favorable publicity of word-of-mouth favorable, the concept is essential for marketers. In saturated markets, satisfaction consumer is considered one of the most valuable assets of a firm. The satisfaction consumer serves as a barrier to the exit, thereby helping to retain the consumer (Fornell, 1992). Westbrook and Oliver (1991:85) stated the trial of satisfaction is generally recognized as originating from the comparison between the level of performance, quality or the other effects perceived by the consumer product or service, with a standard evaluation. Based on this reason, customer satisfaction measured must determine the customer thinks of the product or service you purchase with regard to the service you receive, and also identify what needs they want (Gerson, 1993). He describe that the benefits of measuring quality and customer satisfaction are the following:

- To provide people a sense of accomplishment and fulfillment which resulting in a good service to the client (a performance pattern and a possible optimum pattern that should try to achieve in order to improve and increase customer satisfaction)
- To motivate people to perform and achieve better productivity levels (through immediate feedback and what should the improvement required towards the quality and customer satisfaction).