

THE DECISION OF PRODUCT PREFERENCES FOR  
CLOTHES IRON BASED ON THE CUSTOMER  
CHARACTERISTICS

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## SUPERVISOR'S APPROVAL

I hereby declared that I have read this thesis and this research is sufficient in term of scope and quality. This project is submitted to Universiti Teknikal Malaysia Melaka (UTeM) as a requirement for completion and fulfillment of Bachelor Degree of Technology Management (Technology Innovation) with Honours (BTMI)

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I hereby, declared this report entitled “The Decision of Product Preferences For Clothes Iron Based On The Customer Characteristics” is the results of my own research except as cited in references.

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Date : June 2019

## DEDICATION

*For my beloved parents who were always supported me,*

Kassim Bin Abdullah

Nik Som Binti Nawi

*For my supporting supervisor,*

Mr. Hasoloan Haery Ian Peter

For my special partner, families and friends, especially Nurul Farhana Binti

Mohd Gzali,

thank you for your love and care.

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## ABSTRACT

The aim of this study is to identify the customer satisfaction and decision the product preferences related to Kansei Engineer. In this study, the researcher had set the objective: (1) To analyse the decision of product based on customer characteristic using Eysenck Personality approach, (2) To evaluate the customer characteristic towards Eysenck personality and (3) To validate the customer satisfaction and decision the product preferences correlated to kansei Engineering. In this study, the factors that need to be considered in product development such as emotion and nature. At the beginning of the study, it is necessary to conduct a survey, which is related to developing a questionnaire. Respondents are from (UTeM) and Durian Tunggal and a total of 350 samples were taken. Prior to conducting this study, the researcher conducted an initial test and obtained an expert opinion to re-arrange a questionnaire for a major questionnaire. The questionnaire contains customer preferences, 5 words that represent emotional meanings based on Kansei Words, Eysenck personality, and 6 designs of iron clothes. As the results of this study, researcher have found that most respondents chose Design-1 based on 'Comfort'. Later, the researchers reaffirmed the product priority again by 60 respondents and using the Preferred Expert software, the result shows that Design-1 is the most preferred that satisfies customer satisfaction standards and is associated with Kansei Words. For Eysenck's personality, analysis shows that most of the 'Neuroticism Style' are related to the majority of respondents' age and occupation.

Keyword: *Aesthetic Preference, Eysenck Personality, Product Attribute, Kansei*



## **ABSTRAK**

*Tujuan kajian ini adalah untuk mengenal pasti keutamaan estetik berdasarkan personaliti dan ciri pelanggan melalui Kansei Engineering (KE) dan Personaliti Eysenck (Eysenck Personality). Dalam kajian ini, faktor-faktor yang perlu dipertimbangkan dalam pembangunan produk seperti emosi dan sifat. Pada permulaan kajian, perlu melakukan tinjauan, yang berkaitan dengan membangunkan soal selidik. Responden adalah dari Universiti Teknikal Malaysia Melaka (UTeM) dan Durian Tunggal. Sebelum menjalankan kajian ini, penyelidik telah menjalankan ujian awal dan mendapatkan pendapat dari pakar untuk menyusun semula soalan soal selidik untuk dijadikan soal selidik utama. Soal selidik mengandungi keutamaan pelanggan, 5 perkataan yang mewakili makna emosi berdasarkan Kansei Words, Eysenck personality, dan 5 reka bentuk pakaian besi. Keputusan menunjukkan bahawa kebanyakan responden memilih Design-1 berdasarkan 'Keselesaan'. Kemudian, penyelidik mengesahkan keutamaan produk sekali lagi oleh 60 responden dan menggunakan perisian Pakar Pilihan, hasilnya menunjukkan bahawa Design-1 adalah yang paling disukai yang telah memenuhi standard kepuasan pelanggan dan berkaitan dengan Kansei Words. Untuk Keperibadian Eysenck, analisis menunjukkan bahawa kebanyakan dari 'Gaya Neurotisme' yang berkaitan juga dengan majoriti umur dan pendudukan responden.*

*Kata Kunci: Keutamaan Estetik, Keperibadian Eysenck, Atribut Produk, Kansei*

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## LIST OF ABBREVIATIONS, SYMBOLS AND NOMENCLATURE

AHP	-	Analytic Hierarchy Process
AP	-	As For Present
AV	-	Availability
BR	-	Brand
CA	-	Casual
CE	-	Cheap/Expensive
CL	-	Classic
CO	-	Colour
CO	-	Cool
COM	-	Comfortable
DE	-	Design
DI	-	Dimension
DS	-	Discount/Sale
DU	-	Durability
EC	-	Electric Consumption
EM	-	Easy to Move
EU	-	Easy to Use
FC	-	Favourite Colour
KE	-	Kansei Engineering
LS	-	Limited Stock
MA	-	Material
MO	-	Modern
NP	-	New Product

- PR - Price
- PRE - Preferences
- PSM 1 - Projek Sarjana Muda 1
- PSM 2 - Projek Sarjana Muda 2
- RD - Row Design
- RE - Recyclability
- SI - Size
- SP - Shape of Product
- TR - Trendy
- U - Uniqueness

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- APPENDIX A - CLOTHES IRON DESIGN
- APPENDIX B - LIST OF KANSEI WORDS
- APPENDIX C - PRELIMINARY TEST
- APPENDIX D - MAIN SURVEY



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# CHAPTER 1

## INTRODUCTION

### 1.1 Project Background

These days, customer satisfaction is the major concern to many leading companies (Wu *et al.*, 2015:1) and plays a fundamental role in successful of business (Shil *et al.*, 2010:114). Dapkevičius and Melnikas (2009:17) stated the customers' satisfaction is a significant factor that leads business to success. The survival of a company, according to Shen *et al.* (2000), is heavily dependent on its capacity to identify new customer requirements and to develop a new product. In this condition, Xie and Tu (2006) stated that competitive environment give away to better responsiveness to customers demand. Whiles, to anticipate the outcomes of a business activity, Borgianni *et al.*, (2011:118) pointed out the process performance and expected customer appreciation of products that should be relevant to the market. Specifically, to the quality is as a key determinant of consumers' satisfaction (Gremler *et al.*, 2001).

The facts, according to Gustafsson *et al.*, (2005:211), there were situational conditions that triggers the customers' evaluations to something affected their lives. Here, consumers' affective responses (CARs) existed to a cause-and-effect relationship and the product form features (PFFs) (Yang & Shieh, 2010:682). Based on a basic assumption to the consumer's needs, Lee *et al.*, (2001) said that by customer satisfaction understanding produced several important insights formation. Here, the customers will decide by highly subjective criteria on which product to

purchase (Schütte, 2002). Also, the customers usually name many factors as needs (Kotri 2006:7). To understand them, the concept of creating value to the customer, therefore need to be systematically created through an understanding of what factors and values that would react the customers feeling. An instance, *Razak et al.*, (2016) stated that the customer satisfaction is determined by the quality and price of the products desired by the customer. Here, how someone spend money is related to the degree of utility or satisfaction derives from consumption (Fornell,2010:29). In this perspectives, Anderson et al., (2004:173) said that greater customer satisfaction may enable the firm to charge higher prices or at least to better resist down- ward pressure on prices.

In addition, there is an indirect influence to enhance customer satisfaction towards customer loyalty (CL) (Chang et al., 2012:217). According to Oliver (1999), customer loyalty is as the outcome of a process that begin with customer satisfaction. Generally, since satisfaction is the basis to judge a quality product or service, Ruggieri and Silvestri (2014:22) argued that customer satisfaction based on the expectations of the client is, however, a complex state of perception. To determine by “objective” quality factors and ”subjective” interactions, they said that there customers (buyers or end users) memory with the experience of purchasing or using the products. Here, since the focus on customer satisfaction is on the external approach, the customer in the process is as alternative solution to enable the company understand a complete knowledge of the customers (behaviour, preferences, characteristics, *etc.*) (Jack & Keller, 2009:178). Also, quality of product is a feature of a product or service that has the capability to meet the stated or implied customer's needs (Kotler & Amstrong, 2012). Based on this reason, it is important to note that the quality of the product should not be viewed from the company's perspective only, but also from a customer's perspective. In this perspective, most customers are demanding and more selective in product selection where one of the factors is the product's features and function.

Moreover, there were various quality dimensions identified for consumers in product evaluations (Chao, 1998:3). This is as a reason on why Cruz (2015:5) said that the concept of quality is difficult to study, especially due to people perceive quality differently. The products must not only meet the customer's fiscal requirements and be relevant to the characteristic of the product installed with latest

technology, but also to additional feature that meet the customer's psychologically satisfactory needs (Chang, 2008). Here, Aitken et al., (2003) said that the physical elements of the product from a design perspective should be linked to consumers' perception of the product that meet consumers' need of a product. To understand customer needs, therefore it is necessary to be familiar with the concept of creating value to the customer. This is a reason for the companies that customer satisfaction is an asset that should be monitored and managed just like any physical asset (Ilieska, 2013:327). Although, according to *Kusuma (2014) there were a comparative behaviour between inputs beforehand and post-acquisition performances towards the customer satisfaction.* Kahn et al., (2002) previously in this context critics about the quality definition is as excellence which is subjective and no practical guidance for improving quality. Specifically, since perceived superiority is about a product performance and how this product compared with their expectation (Saleem et al., 2015).

In conclusion, there were various theories developed to determine and explain the satisfaction in different compensation in products/services. Compeau et al., (1998:305) pointed out the influence of affective on subjective evaluations to the perceptions of quality. Since quality plays a significant role in determining and influencing customer satisfaction, there is a positive emotional reaction on a cognitive between the expectations of the customer and the perceived quality level of goods and services (Krafft ,1999). Therefore, the essence of the consumer's experience thoroughly the values the consumer perceives as important must be defined (Kälviäinen, 2002:78). Here, to the product taste is as the human capacity to make distinctions between physical objects and to favour some of them where the preference arises due to a more typical object in one's own perception. Consequently, the emotional appeal of products lead to a quest subjective criteria based on preferences made.

## **1.2 Problem Statement**

To understand how customers perceive quality, there were customers' attitudes on product quality reflected into consumers' perceptions that are influenced by various



factors at each stage of the buying process (Takeuchi & Quelch, 1983). Also, on aesthetic perception and judgement that are not merely cognitive processes, but also involve feeling (Schindler et al., 2017). Here, to explain emotions, moods, and feelings evoked by a product, Reimann et al., (2010:434) said that when a product touches one's emotional self, it may automatically elicit an affective response.

According to Achar et al., (2016:167) the emotional stimuli may depend on their compatibility with many consumer-related factors, such as culture, consumers' salient self-identities, and their incidental emotional states. Also, since the sensory perception is a matter of experience, Naumann et al., (2007) stated that the judgment of aesthetic qualities triggers previous knowledge. The facts, the validity that rely on judgments based on vague impressions and memories were as the main problem for decision making, especially when the design of product and other aesthetic issues play a major challenging role in their context of dependency ( Katicic et al., 2011:668). Here, Desmet, (2012:13) commented that by using discrete emotion labels, there is an ability to characterize one's emotional state with specificity is an emotional granularity . An instance, taste that according to Kälviäinen, (2002:78) is as an evident in the compositions of the symbolic and communicative object features which allow sensual appropriation. Also, products that are used for interpreting the symbolism of collective dreams displayed in lifestyles. However, since emotions are closely related to human psychology (Demirbilek & Sener, 2003:5), there were multi-dimensional and incorporated cognitive elements present related to beliefs and expectations of a product/service (White & Yu, 2005).

Moreover, to measure and analyse of consumer preferences (even for individual respondents) need an understanding to enables a company to use its scarce resources in an optimal way, thus creating the most value for the customer (Kotri, 2006). However, customer's preference-estimations towards a set of experimental product concepts were as an input in the form of a bundle particular product attributes often found the difference to the adequacy of company's processes compared to the customer feelings, emotions and lifestyle who will buy with heart, mind and soul as the most vital aspects of the future business. An instance, the modularization (to an easy change of components) in order to suit the customer's demands regarding performance values.

Furthermore, since product effectiveness is determined by quality measures, there were consumers' desire consumer-oriented product development that need a combination of top-down theoretical and bottom-up empirical approach to identify emotions. In this sense, customer satisfaction is a complicated human thought that is involving cognitive and effecting procedures together with the further psychological and physiological influences (Oh & Parks, 1997). Therefore, it is necessary a powerful consumer-oriented technology for product development which considers the psychological feelings of the consumers (Nagamachi, 2002). Specifically, to translates customer's impressions, feelings and demands on existing products or concepts to design solutions and concrete design parameters (Shutte, 2002:23), where according to Liang et al., (2010:10), humans perceive external information stimulated by the product form with sensory organs and generate activities of cognitive evaluation of thoughts and emotion internally.

Based on aforementioned, this study will carry out an investigation on emotional responses against the product design based on Kansei Engineering that articulate human expression towards the aesthetic of product. Whiles, the Eysenck' personality test will be utilised to measure and differentiate the personality type based on aesthetic judgment refers to Kansei words. The survey questionnaires generated based on Kansei Engineering towards the chosen products, while the analysis conducted will employ the statistical analysis using software SPSS v.15. Based on this study, the preferences to the products as a decision will be evaluated based on the characteristic of individual's decision maker based on their personality types.

### **1.3 Objectives**

This project deals with the study and analysis of the product's decision with respect to the customer's characteristic using Kansei Engineering (KE) towards the Eysenk personality background. Towards designing a product to reach the level of customer satisfaction. This project must be integrated into the design to meet the client's requirements. In terms of individual customer satisfaction, their choice is compared



and correlated with Eysenk's personality approach as a representation of their characteristics in order to make a product design decision.

1. To study and identify the customer satisfaction and decision the product preferences related to Kansei Engineering.
2. To analyse the decision of product based on customer characteristic using Eysenk Personality approach.
3. To evaluate the customer characteristic towards Eysenk Personality.
4. To validate the customer satisfaction and decision the product preferences correlated to Kansei Engineering.

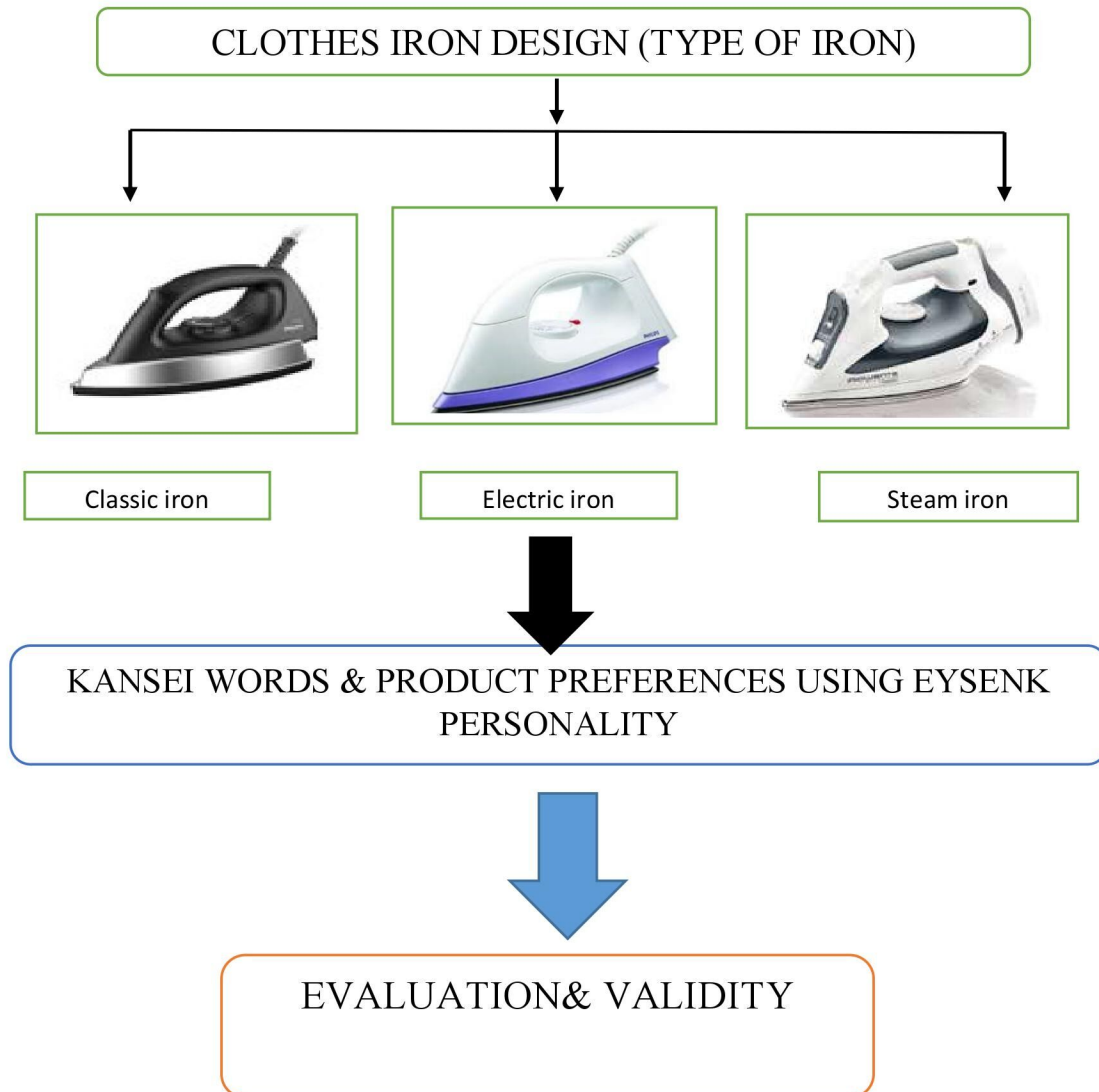
#### **1.4 Scope of the Study**

In this project, the approaches used to determine preferences and client satisfaction based on personality types with regard to iron products. In this study the product will be section into 3 types of iron as shown in figure 1.1.

This scope of this study is directly focused on the customer satisfaction of the product design characteristic to identify the product preferences towards the customer satisfaction. This study is carried out towards the resident around Melaka. In order to identify, investigate, and analyze the customer satisfaction, the questionnaires for survey will be made refers to Kansei Engineering based on design approaches using Eysenk Personality method and the survey, and the survey will use the semantic. After that, evaluation will be done in PSM II. This study focused only in quantitative approach and also focused on product design of iron.

Before conducting the main survey, the preliminary test will focus on the words Kansei (which represented emotion and customer expression towards the products refers to the aesthetics) and on product design will be carried out to validate the results of the analysis. For evaluation and validation, the post-test survey serves to justify the specific characteristics identified (based on the results) confirmed by the customer's preference for an iron

Moreover, the Questionnaires developed as part of this project were distributed in the Melaka region as respondents. The questionnaires will cover demographic factors such as gender, age, occupation, salary, etc., as well as aesthetics and attributes of the product based on shape, colour, function, price, material etc. use the Eysenk personality method.



**Figure 1.1:** Types of Iron

## **1.5 Framework of Study**

Figure 1.2 shows the framework for this research. This is the fourth phase of this project which includes the collection phase, the analysis phase, the evaluation and the validation of the outcome phase.

## **1.6 Summary**

This chapter discusses the context of the project and the objectives of this study. In addition, the problem statement and the scope of the study must be clarified, which may guide this study and limit the scope of the project. The next chapter includes a review of the literature and sufficient knowledge to conduct the study as a whole. The case study actually wants to examine the relationship between product preferences and customer characteristics

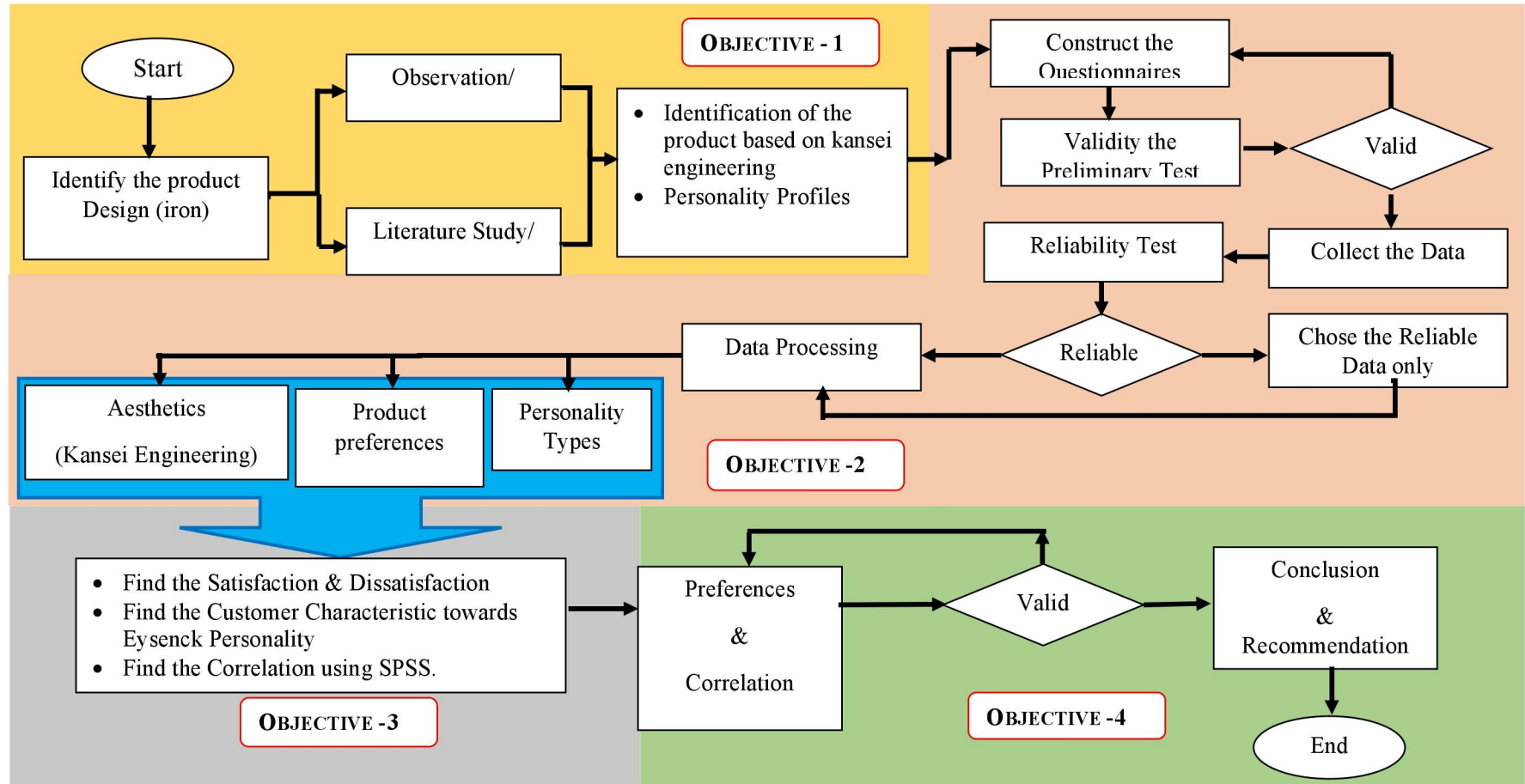


Figure 1.2: Framework of Objective