

STUDY ON PHYSICAL FORM OF CONSUMER
PRODUCTS IN PRODUCT DESIGNING TOWARDS
BRAND RECOGNITION

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**STUDY ON PHYSICAL FORM OF CONSUMER PRODUCTS IN
PRODUCT DESIGNING TOWARDS BRAND RECOGNITION**

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

by

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FACULTY OF MANUFACTURING ENGINEERING

2015

BORANG PENGESAHAN STATUS LAPORAN PROJEK SARJANA MUDA

**TAJUK: STUDY ON PHYSICAL FORM OF CONSUMER PRODUCTS IN
PRODUCT DESIGNING TOWARDS BRAND RECOGNITION**

SESI PENGAJIAN: 2014/15 Semester 2

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I hereby, declared this report entitled “Study on Physical Form of Consumer Products in Product Designing towards Brand Recognition” is the results of my own research except as cited in references.

Signature :

Author's Name : KHAIRUL AKMA BIN OMAR

Date : 05 JUNE 2015

APPROVAL

This report is submitted to the Faculty of Manufacturing Engineering of UTeM as a partial fulfilment of the requirements for the degree of Bachelor of Manufacturing Engineering (Manufacturing Design) (Hons.). The member of the supervisory is as follow:

.....
Dr. Rosidah Binti Jaafar
(PSM Supervisor)

ABSTRAK

Berurusan dengan jenama adalah satu proses dan terdapat banyak faktor untuk sesebuah syarikat itu perlu diberi perhatian kepada perjenamaan. Walau bagaimanapun, langkah pertama syarikat perlu membuat pengguna sedar akan identiti reka bentuk berjenama, maka pengguna akan dapat ingat atau mengenali jenama selepas pengguna sedar akan bentuk jenama berkenaan. Mengetahui bagaimana pengguna akan membuat keputusan untuk membeli produk berjenama adalah penting bagi sesebuah syarikat dan di sini tahap penglibatan dalam pembelian dan perbezaan pengguna yang dilihat antara jenama dalam kategori produk akan mempengaruhi proses membuat keputusan pengguna. Oleh itu, mengkaji keperluan dan keutamaan menjadi satu isu yang penting untuk kejayaan perniagaan yang berjaya.

Laporan ini menerangkan pada bentuk fizikal produk pengguna dalam mereka bentuk produk ke arah pengiktirafan jenama. Projek ini memberi tumpuan kepada identiti reka bentuk pemegang berus gigi dari jenama yang berbeza. Objektif kertas kerja ini adalah untuk menganalisis identiti reka bentuk pemegang berus gigi ke arah pengiktirafan jenama. Pendekatan penyelidikan menggabungkan perspektif semantik reka bentuk produk dan penyelidikan jenama dan ia jelas menunjukkan nilai reka bentuk produk diuruskan secara strategik. Objektif seterusnya adalah untuk mengenal pasti identiti reka bentuk pengiktirafan jenama pada pemegang berus gigi dan mampu untuk mereka bentuk dan membangunkan prototaip akhir asas reka bentuk berus gigi kepada keperluan pengguna tanpa menjejaskan identiti reka bentuk asal. Terdapat dua soal selidik dalam laporan ini. Awal Penyiasatan ini ialah untuk mengenal pasti keperluan pelanggan bagi konsep reka bentuk pemegang berus gigi. Kajian utama adalah untuk mengenal pasti kesetiaan jenama dan untuk mencari konsep reka bentuk akhir pemegang berus gigi. Dari semua maklumat data yang dikumpulkan, maka terhasillah satu prototaip.

ABSTRACT

Dealing with brands is a process, and there are many areas which the company needs to pay attention to when having a brand. However, first the company needs to make the consumers aware of the brand identity design, so the consumers will be able recall or recognize the brand and after this form an approach towards the brand. Knowing how the consumer will make a decision to purchase a brand is important for companies, and here the level of involvement in the purchase and the consumer's perceived difference between the brands in the product category, will influence the consumer's decision process. Therefore, investigating the target customers' needs and preferences are becoming a vital issue for sustainable business success.

This report is to study on physical form of consumer product in product designing towards brand recognition. This project focused focus on toothbrush holder design identity from different brands. The objective of this paper is to analyse design identity of toothbrush holder towards brand recognition. The research approach combines the perspectives of product design semantics and brand research and it's clearly indicates the value of strategically managed product design. Next objective is to identify on design identity of brand recognition on toothbrush holder and able to design and develop prototyping of final design toothbrush base on consumer needs without compromising the original design identity. There are two survey include in this report. Preliminary Survey is to identify the customer need for design concept of toothbrush holder. Main survey is to identify brand loyalty and to find final design concept of toothbrush holder. Of all information data collected, created a prototype.

DEDICATION

To my lovely parents, my brother and sister who give me encouragement to success in my studies and not to forget special thanks to all my lecturers and friends that give me guideline and support during my study in Universiti Teknikal Malaysia Melaka (UTeM)

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LIST OF ABBREVIATIONS, SYMBOLS AND NOMENCLATURES

AD	-	After Dark Age
ABS	-	Type of Thermoplastic Material
BC	-	Before Century
FDM	-	Fused Deposition Modelling
NJ	-	New Jersey
PSM 1	-	Projek Sarjana Muda 1
PSM 2	-	Projek Sarjana Muda 2
SPSS	-	Statistical Package for the Social Sciences
UK	-	United Kingdom
UTeM	-	Universiti Teknikal Malaysia Melaka

CHAPTER 1

INTRODUCTION

This chapter provide a brief description about this project, starting with background of the project title “Study on physical form of consumer products in product designing towards brand recognition”. This section additionally discuss about the problem statement, the objectives and the scope for this project.

1.1 Project Background

In today’s market, product success is determined by “consumer satisfaction that’s accomplished by satisfying the consumer requirements and taste” (Smith & Smith, 2012). Beyond technical shows the “aesthetic characteristic of products attract consumers and entice them to examine a product much more closely and give consideration to a purchase” (Helander and Seva, 2009). Companies that are in a position to provoke particular psychological responses through the product appearance and to produce a relationship between consumers and the product gain competitive benefits on the market and boost their product success.

Brand is an identifier of the products of a company amongst other individuals. It’s an element that influences highly the alternatives for consumers. Brand simplifies purchasing decisions, offers quality assurance and decrease recognized risks included in the purchase and therefore adds to generate psychological responses from the consumer. Companies utilize design to produce brand name recognition (Karjalainen and Snelders, 2010) and additionally to make consumers feel much more connected to products (Aaker, 1996).

From the past to the present, people constantly require to clean teeth day and night for cleanliness and wellness of their teeth without conscious about exactly how their choose the product. In this report state the aesthetic value of selecting toothbrush without compromising the original design identity.

1.2 Problem Statement

This project is to study on physical form of toothbrush towards brands recognition. Each consumer has a various taste of its own in selecting their daily products without realizing about the aesthetic value in selecting a product. This problem can be solved by using survey to design the toothbrush holder that realize the consumer about the aesthetic value in it.

1.3 Objectives

The aim of this project to identify a toothbrush holder design identity and develop new design and prototype without compromising the original identity. In order to achieve the aim, several objectives have been stated as below:

- a) To analyse consumer product design towards brand recognition.
- b) To identify on design identity of brand recognition on toothbrush holder.
- c) To design and develop prototyping of final design toothbrush base on consumer needs without compromising the original design identity.

1.4 Scope of Study

The scopes of the project is more focus on toothbrush holder design that can impact consumer to realize the identical of product design is importance in product designing towards brand recognition. Moreover, this project used two survey to identify the concept design, final design and develop the prototype.

CHAPTER 2

LITERATURE REVIEW

This chapter explained about all the element used for this report. First explanation come to the definition of project title. Other than that, this section discussed and focus about model of product emotion that attract consumer to recognise the new brand that be big name in the world.

2.1 Product Design Definition

The term product design is causes confusion to consumer in the same way to the term of design does. Mention about product design, it usually has an implied relation with '*engineering design*' and '*industrial design*'. According to Ullman (2004), product design means "engineering design and in the other many cases, it is dealt as the subject in industrial design". Roozenburg (1995) defined product design as "the process of devising and laying down the plans that are needed for the manufacturing of a product". Refer to Figure 2.1, Horv ath (2004) says, "illustrates that product design is placed between industrial design and engineering design" while these two designs are overlapped with product design. Thus, engineering design and industrial design are involved in the product design process to some extent, even though they have their own defining characteristics and area. Hence neither industrial design nor engineering design on its own can fully describe the product design process.

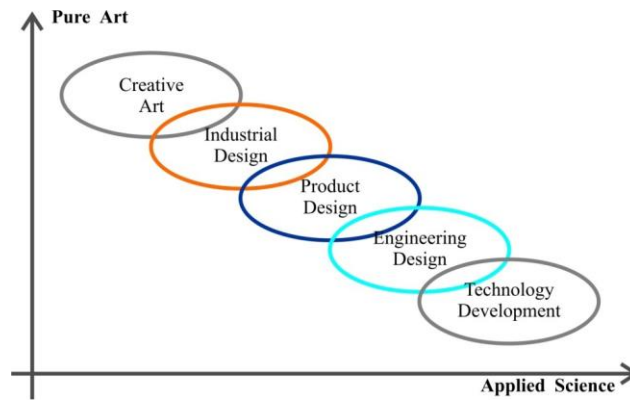


Figure 2.1 Position of Product Design by Horv ath (2004)

From another term, product design is not an isolated process but a part of a product development process. Some researchers use ‘product design’ as an “equivalent term to product development or view it as an embedded process in product development” Ulrich and Eppinger (2008). Several different disciplines are involved in the product development process. Ulrich and Eppinger (2008) said that “the core team members for product development are the industrial designer, the mechanical designer, the electronics designer, the purchasing specialist, the manufacturing engineer, and the marketing professional”. In their argument the product they mention was an electro-mechanical product of modest complexity, which covers a significant portion of the consumer product market these days. Roozenburg (1995) also claimed that “engineering design, industrial design, ergonomics, marketing and innovation management are the disciplines nearly always involved in product design”.

2.2 The Important of Brand Recognition

Branding is considered from the interactive perspective, brand points to the relationship between the company or product and the customer. The concept of recognition has been widely used in the brand literature becomes important. Keeley mentions that “The principal mission of a company identity is to foster recognition” Keeley (2001). The positioning, awareness, loyalty and associations are regarded as the key dimensions of brand recognition in literature. These additional concepts and terms for opening up the all-encompassing concept of ‘brand’ appear to the most discussions on branding. The position of a brand that is at the core of all “branding

activities defines the concept of identity” deChernatony (1999). Brand positioning reflects product quality (both technical and semantic quality). Finally, brand is perceived in metaphorical terms as having a personality that is directly associated with the brand name and through which the brand becomes meaningful to the target audience. The holistic model of brand identity illustrates these concepts in Figure 2.2 that Urde assumes that position is the central aspect of brand identity Urde (1999). The Figure 2.2 also illustrates the key of associations, awareness and loyalty, as well as their relations to the product, brand name and target audience Urde (1999).

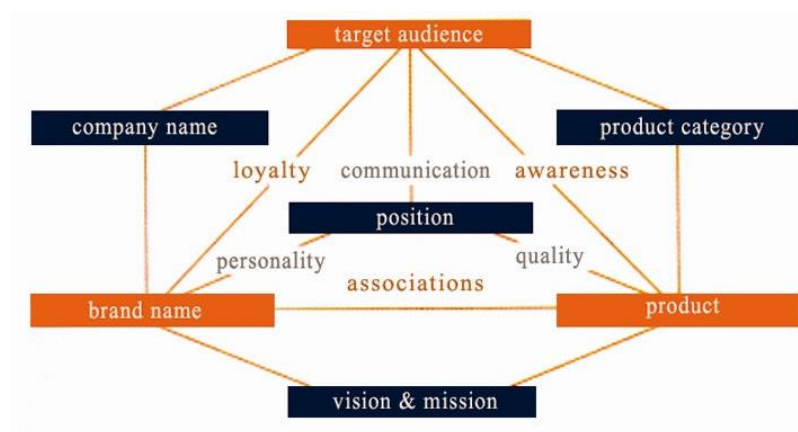


Figure 2.2 The Holistic Model of Brand Identity.
(Source: Urde 1999)

2.3 Strategic Brand Identity

To build consumer awareness, brand recognition, and strive to improve the product, companies need to develop and emphasize the strategic concept of identity. The use of metaphor of the concept of "identity" in the corporate context suggests that like humans, also companies can be described by certain characteristics. Identity can be described as a "set of characteristics that distinguish one from another entity" Bromley (2001). "The primary mission of the identity of the company is to develop brand recognition" and Larry Keeley (2001).

Corporate identity is communicated to the outside world through branding. Brand name given usually serves as the company's identity. It involves the properties of the

main identity of the company in a design. In other words, the brand as a sign marking a special purpose to enable the network of associations, both intended and unpredictable.

Talk about branding has "evolved from a product orientation to marketing led to the holistic paradigm relationship" Lauro (2001). From focusing solely on certain aspects of meaning, "the brand can be defined as a unique, proprietary market relationships that provide long-term strategic value to the organization. The branding strategy is" the core of the new economy of intangible assets" Speak (1998). The creation of shared meaning in the interaction between brands and customers is at the core of this relationship paradigm. Through branding, companies can realize significant code in their products and guiding the customer perception. "The brand stands for customer-facing entity designed to be understood" Keeley (2001).

At a certain stage, the brand used as a strategic weapon to send messages to customers intentional. By using this view in a number of studies, however, it fully aware of the meaning of the creation of interactive reality. In fact, the transmission of meaning contained and formation representing two different approaches to symbolic communication Fornäs (1998). Emphasizes the strategic delivery view and consider the underlying factors, such as cultural heritage of the brand and the company, as assigned. However, companies should be aware of issues that affect the perception of the brand before successful communication can occur.

2.4 Communicative Product Design

As the idea of brand perception rests on associations, it then becomes crucial for companies to affect the associative construction that creates meanings and value for their stakeholders. As long as it is out of reach for companies to control customers' subjective associations, identity management can only occur through tangible identifiers. Part of the identity can be externalised and further manipulated.

Product design is one of the central components of the brand's visual identity. Products function as manifestations of brand identity by evoking certain associations that, in an ideal situation, are aligned to strategically defined message of the brand. A product may be claimed to have a specific "character" by Janlert, Lars-Erik & Stolterman, Erik (1997) that includes references to the brand. Product character is concretised, in the first place, on the level of qualitative descriptions some of which can have a direct connection to physical product qualities such as design elements. Within the interaction between the product and the user, product character, physical product features perform various functions of which, from the perspective of brand identity management, it is important to recognise particularly those functions that identity the brand, make the product different from competitors' offerings.

In terms of product functions the viewpoint of products in their various use contexts special interests lie in distinguishing those functions that are typical for the respective brand. In specific, my attention is focused on functions that have high semantic relevance. As an example, product functions into practical functions and product language functions by Gros, Jochen (1983). Alternatively, we may talk about communicative product functions by Warell, Anders (2001). Fundamentally, identification is a central task of these functions.

Krippendorf, Klaus (1989) said that it's essential to recognise and define the physical product qualities that may have high semantic relevance in terms of specific brand associations. Different product qualities - such as dimensions, features, and characters are often expressed by adjectival constructions. We may say that a product looks (or feels) "harmonic", "modern", "safe", and so forth. In effect, products are often given a character in a similar manner as human beings. This character refers to a coherent set of characteristics and attributes that apply to appearance and behaviour alike, cutting across different functions, situations and value systems. The character provides an end-user with support for anticipation, interpretation, and interaction. In the brand context, certain characteristics or attributes (for instance, supported by or embedded in specific design elements) signal to the user that while this product "seems" to be a product of that specific brand, it is anticipated to have that certain character.