

UNIVERSITI TEKNOLOGI MARA

**PROFILING FORMGIVING
STRATEGY TOWARDS LOCAL
AUTOMOTIVE DESIGN
DEVELOPMENT**

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ABSTRACT

The use of design elements from concept stage to production stage is critical in new product development process. This is important as many efforts have been made to penetrate specific focus such as market segment, culture and trend movement etc. In automotive design development practice for instance, has shown inconsistency between design concept and production stage. For example, Proton Tuah concept, which debuted in 2010 at the Kuala Lumpur International Motor Show (KLIMS) is different from the production version of Proton Preve, which was launched in 2012. Whereas a lot of theory models indicates the importance of keeping consistency through the entire process in new product development (NPD). The typical new product development process is carried out in a step-by-step approach, starting with the initial concept, design development, validation, and production phase. It is plausible that the products derived from this method to have a resemblance with its conceptual counterparts. However, that is not always the case. This could be due to the numerous concern factors that influence the final decision of each stage in the NPD process. For this reason, this research focuses on exploring three major objective which is to identify design influences during product optimization and the process of design development from a designer's perspective. In order to achieve the objective, this research study on automotive car design concept as a research subject with the implementation of Malaysian identity. The research method approach consists of interview with expert designers, design element analysis through mapping of line drawing and Design Protocol Analysis (DPA). The DPA includes a design task in a controlled environment to study the process of design conceptualization and development to five expert designers. This research covers Malaysia's identity which is in the public domain and considered on icons that represent Malaysia as well as have been discussed previously by scholars. The research finding through data analysis shows minimal changes on the pattern of idea development between design concept and final design. All design was heavily focused on the front face of the car rather than other areas. Meanwhile, the characteristic of inspiration approaches was shown through the implementation of visual elements that represent specific design meanings that can be categorized into character-based design and dominant Malay identity. From the data collected, most visual elements are incorporated to create a strong impression. Through the analysis of process in design development and the implementation of inspiration approaches, rarely, design inconsistencies occur during the drawing and design activity. The results of this research, however, do not rely on any manufacturing standards procedures to define a new production strategy, particularly for designing, but rather on the use of its capabilities to achieve different design goals and to instruct designers in how to put their ideas into real or practical practise.

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CHAPTER ONE

INTRODUCTION

1.1 Research Background

A new product development (NPD) process is crucial for introducing new product segments and introducing new trends in the market that fulfil endless user needs. This is due to well-defined NPD processes enables to produce better product quality, improved information and communication through task coordination and development team assignment as well as better timing for project scheduling, performance benchmarking and reference for future projects (Boejang, Hambali, Hassan, Esa, & Rauterberg, 2017). There is no doubt that the outcome of NPD can contribute to the growth of the company's future, influence the yearly profit performance, and act as a key factor in business planning (Bhuiyan, 2011). In order for a company to be successful, the product released should be able to attract and influence customers to buy them.

There are several factors influencing a user's buying decision. The reason can range from pricing, aesthetics, functionality, product technology, brand images or resell value. Brand identity is mentioned over and over how it plays an important role in buying decisions as brands not only represent the product or company but also have a strong association with perceived quality, consumers' lifestyle, social status and aesthetic taste (Alamgir, Tasnuba, & Mohammad, 2010). In other words, brands not only represent a product but also represent a consumer's individuality. For instance, Apple's design language and identity, have a minimalistic, clean outlook and are consistently approached to Apple's entire product line-up. The brand identity is being translated into both product's hardware and software. Customers who want to associate with or are drawn to Apple's brand identity will have a higher probability to own an Apple product.

In the context of product design, the implantation of Malaysian identity has been implemented in certain products buildings, gates, statues and crafted items such as pewter and jewellery (Razali & Hands, 2017). For example, the inclusion of Infinite Weave in the front grill of Proton model Iriz, and Persona released in the year 2022 and