

**UNIVERSITI TEKNOLOGI MARA**

**ASSOCIATING BLIND USER-  
DESIGNER PRODUCT EXPERIENCE  
THROUGH DESIGN ACTIVITIES**

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Thesis submitted in fulfillment  
of the requirements for the degree of  
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## ABSTRACT

The lack of blind user experience understanding in design knowledge may lead to confusing preferences that are associating them with the designer in product development. Blind user touch experience feedback remarks important attributes to supply designer knowledge in designing through blind user familiarity. The problem of associating this knowledge cannot be solved simply by asking questions and surveys. There is an urgent need for an innovative approach to design activities, through product design investigation. Thus, the adoption of a strategic procedural design activity approach is needed to carry further identifying haptic imaging function and roles. This research trigger to associate attributes that influencing the blind user and designer through their experience. It specifically studies product components representation to design preferences and attributes. This research is based on data obtained from protocol interviews and observation that polled blind users and designers haptic feedback to product attributes factors from experiencing the complexity of haptic imaging modalities. The data were analysed to evaluate and determine the product attributes and its level of preferences that are influencing the strategic approach to the design development planning and management of product appearance for the blind user. The research suggested that successful procedural design activities are able to associate designers' understanding of product physical and functional qualities feedback draws from the understanding of the blind user. The results of the study provide designer product sketch idea feedback pattern through haptic experience which incorporate principal issues discussed that associated to the product performances.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 The Role of Product Design in Blind Users' Lives

Blind users' lives are bounded and aided with all kinds of products. However, the challenges faced by them in working with these products in their everyday lives are not well understood. Products, objects play a very important role in their lives. Even though they cannot identify and explore products through their eyesight thus 'touch' plays the biggest role in identifying products features to visualize the physical appearance especially when it gets involves to the context of products use.

Through the experience of using products, they accommodate the sensitivity in touch sense. While in the process of trying to understand these phenomena through the perspective of product design, designers face difficulties in finding proper procedural method in exploring blind users touch experience to product in a complex situation. Factors influencing their perspectives and reflection to product experience are very important.

As by having a detail of procedural methodological way of excavating the blind users' reflection to product features and detail researcher can somehow help in 'voicing out' what do blind users see from one particular product to another. What does leave on the products that unnoticed by the designer? Does the product cater the right ergonomics through the points of blind users' perspective?

The answer lies in not only whether products operate as expected, but also based from their experience judgments. How do they feel when getting in contact or in use the products? It is also could be whether their environment appreciates it, what personal memories they evoke. All these aspects are very strongly determined by how designers understanding and awareness in shaping the product design. It is not clear however, what factors influences product design has, how it communicates and creates value (Bloch, 1995).