

# **A PRELIMINARY STUDY INVESTIGATING INDUSTRIAL DESIGNER ROLE IN MALAYSIAN FURNITURE INDUSTRY**

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## **ABSTRACT**

The study has been conducted to investigate the Industrial Designer role in Malaysian Furniture Industry to understand challenges faced by the industrial Designer and to explore the current situations involved with Industrial Designer in furniture Industry. The study will involve interviews and observations data collection work with Industrial Designers and Furniture Manufacturing companies in the current environment. As this research is still an ongoing investigation, we found that in Malaysia the role of industrial designers in furniture industry has not specified and Industrial Designers are required to perform many different tasks which has not been taught in their studio learning experience. This research work hope to find some career path system involved with Industrial Designer in furniture Industry or as a specific guidelines to establish the role of designer especially in Malaysia Furniture manufacturing industries, which can be beneficial to the industry as well as design education in Malaysia.

## **Key Words**

Industrial, Designer, Manufacturing, Design, Knowledge

## **INTRODUCTION**

The role of the Industrial designer is not specific in the flow chart of furniture manufacturing process whether the role is specific to undertake job scope related to design process only or to perform a multitasking job requirements within the furniture manufacturing process and these involved with many issues related to experience and education designer gained during their training sessions. As far as this research is concerned, there is no specific guideline has been produced officially to verify the role of the designer in furniture manufacturing process and this required Industrial designers to involved at providing many different services during their work This research is operating by interviewing active furniture companies and Industrial designers that involved in furniture manufacturing in Malaysia. The data collection will involved with 30 furniture companies in Malaysia as well as industrial designers in the industry. This is important in order to assist designer to work effectively contributing to improve furniture industry in Malaysia, in producing a good quality furniture design to be competence in market at international level.

## **LITERATURE REVIEWS**

Malaysia is one of biggest furniture exporter in Asia region. According to the statistics, despite of the competition, Malaysian furniture continues to set itself apart due to design that places importance on aesthetics as well as its good work ethics (AkademiSains Malaysia, Jun 2015). But the growth of the Industry cannot be measure by statistical measure alone. From this review it is understood that the role of Industrial designer is important to sustain furniture design to be competence globally in the future market challenge. Design need to be relevant with current issues as well as providing users

need and satisfaction. The role of Industrial designer in furniture industry need to be identified and clarified in order provide opportunities for furniture manufacturers to be competence with global market and trend. The current trend in applying advance material and limitation of manufacturing process might lead to the restrictions of employing creativity in furniture design. In sustainability issue, Malaysia, as one of the leading developing countries need to comply the global trends but limited knowledge of sustainable design principles among design teams, still a new concept in Malaysia. (Valipoor and Ujang 2011). Innovation in Malaysia is driven by business trend thus the dynamics of innovation in general including designers role is unseen as important (Ng and Thiruchelvam 2012). The growth of furniture industry that focus on low value product rather than producing good products design by good designer is not sustainable in long term for the industry.. Knowledge in CAD is compulsory within nowadays designer in order to coupe with competition. (Döngel, Çınar, and Söğütlü 2009). Education satisfaction is hard to define within designers desire thus contribute to lack of passion (Uzun and Çınar 2009). Designer learning activities face highly problematic nature to master modelling in design and technology education (Davies and Elmer 2001). Malaysian design is said to be uniquely aesthetic and artistic as we inherit the skills and talent from our ancestor. (Zakaria, Salleh, and Rashid 2013). Most of the design process is require intuitive and non consciousthingkng rather than implied knowledge. (Haddad 2014). Designer has to own the knowledge on the required tasks and scope of work as tools and assets. (Mustapha et al. 2013). Nature, is a big factory of idea where through Biomimicry examined models in nature, designs is taking inspiration from them and imitate. (Tavsan and Sonmez 2015). Rather than having designer, end user could also determine the design to tailor their own needs. (Ardito et al. 2012). The involvement of external designers influences the evolution of product design processes in small manufacturing firms. (Berends et al. 2011). Sometime designers can utilize specific heuristics to explore the problem space of potential concepts, leading to the generation of novel and creative solutions. (Yilmaz and Seifert 2011). Design and designers must be incorporate in order to achieve good product design. (Ravasi and Lojaco 2005). If company miss to understand the importance of design as a strategic tool, they will face difficulty in their routine process. (Trueman and Jobber 1998). Design is an evolution of function by understanding usefulness assists by surveys in literature and technological innovation. (Walsh 1996). All organizations can learn while innovating and, through productive learning, improve their chances of success with every project undertaken. (Ayas 1996). History proven that designer is importance in bringing success to the company despite of their qualification and their resources. (Rams 1983). For an efficient materials selecting process, the content and presentation of information about materials should be accustomed to product designers' approaches and needs. (van Kesteren 2008). Much research has focused on the end users, but in recent years, understanding the needs and the characteristics of knowledge users has added a new dimension to the research task to assist designer to understand the requirement of design. (Dong et al. 2015). Designer can be influenced by inspiration from nature as an intelligence design (Cross 1999). Process of design from a psychological approach can cultivate into creativity and behaving as problem solving in design. (Wilpert 2007). Among designer, It was found that experts were more likely to consider Experience and Esthetics as reasons for their selections. (Chai et al. 2015). The creativity of design students is in relation to design cognition types. (Lu 2015). Significant relation between level of expertise and categories can affected the design idea. (Ozkan and Dogan 2013). Managers can consider the integration of user ideas into the process of new product development. (Nishikawa, Schreier, and Ogawa 2013). The role of the designer lies in exploiting the adaptability of robotic manufacturing process to the customers' individual requirements. (Milincu and Feier 2015). Implementation and awareness within the local industry is fairly low amongst designers in Malaysia. (Raja Ghazilla et al. 2015).

In Malaysia Perspective, Haddad define design as a problem solving method that combine nature of hypotheis and experience (Haddad 2014). The importance role of a designer will be importants to be cultivated since they starts their design study at university. The students' perception of evaluation process and techniques in design studio implemented in the architecture studio to find an idealistic system of evaluation and change the current system based on student perceptions (Utaberta, Hassanpour, and Arsyad 2012) Innovation can be gained through a package of knowledge, skills and attitude by applying research together with learning process. (Sze-yeng, Maznah, and Hussain 2012) Designers were also believe to acquire a powerful skill in design through "hidden curriculum" during their studies and that includes a good institution built environment and landscape as well as culture and his own experience. (Abdullah et al. 2011). Arif state that complex and dynamic design ideas can be cultivated through the utilisation of digital tools as by using computers. (Arif, Mahmud, and Shah 2012) and Learning process can be more attractive by using interactive multimedia when learning process occurred. (Maaruf and Siraj 2013). Fuzzy logic control enables designers to control complex systems more effectively than traditional methods (Rahman et al. 2013) however Ibrahim state although digital tools is beneficial in design articulation, designers creativity can be slightly limit the intuitive ideation of a designer (Ibrahim and Pour 2010). And also referring to Cheong said innovative product forms of design can be gain through a design rule known as "evolutionary grammars". (Cheong, Herawan, and Noraziah 2012)

Hashim state that natural environments, surroundings is an important factors in stimulating the idea and creativity to design during study and at workplace. (Hashim and Denan 2015) In the workplace to expedite their role, critical tools for a Designers to fulfil their role in any task is by having the knowledge and well aware of the scope of works. (Mustapha et al. 2013) Thus its becoming a crucial task for a designer to consider important factors that can affect the quality of design which is the design process itself and followed by constructability, accuracy of drawings, variation and knowledge transfer. (Hamzah et al. 2011) and also implementing the design parameter to design the virtual environment (Taha, Soewardi, and Zawiah 2014) and realize that consumers lifestyle and his exposure to the environments can influence the attributes and dimension of products design. (Awang et al. 2012). For Malaysian designers they have to fully aware that Malaysian design was inherit by tradition is regard as a global factors as they have unique identity to the world. (Shuaib and Enoch 2014) and for designer in furniture manufacturing companies, Malaysia Wooden Furniture Industries Innovation Development require involvement by those business driven player including the designer. (Ng and Thiruchelvam 2012)

This research is aimed to bridging identified areas (factors and challenges) towards designer role in the industry.

#### **PROBLEM STATEMENTS**

1. Industrial Designer in Furniture Manufacturing Industries is appointed for multitasking job handling despite of their specific design tasks.
2. Industrial Designer role is define by their knowledge in design, manual sketching and digital sketching.
3. Furniture Manufacturing Industries in Malaysia is relying more on Original Equipment Manufacturer OEM furniture compare to Original Equipment Manufacturer ODM furniture that need contribution of Industrial designer role in specific.

#### **METHODOLOGY**

This study start from feasibility studies to identify the Problems and Issue in Malaysia Furniture Manufacturing Industries. As the role of the Industrial designers is identify as the major problems, a literature review of the existing designers role in design is provided.

### Phase 1

- Feasibility Study done through Pilot Study and Interviews
- Literature Review on Designers Issue in Malaysia
- Determine classification of respondent

### Phase 2

-Identify scenarios, Issue and problems in Malaysia Furniture Manufacturing in term of designers role.

-Interview for Primary Data is require to obtain:

- i. Introduction to obtain early info and to trigger sincerity of respondent.
  - ii. Recognizing the job title specific to designers post in the company.
  - iii. Rectify the existing departments of the required designers supposed .
  - iv. Acquiring background of the designers or the employer himself.
  - v. Identifying immediate supervisor or person in charge.
  - vi. Recognize whether the designers were assisted by any subordinate which is under the same class as of the designer or its servicing department.
  - vii. Checking for the company policies upon designers role and the importance of the job scope.
  - viii. The status of the designers position either as a specific design related position or indirectly involved in design.
  - ix. Gain as much info on the designers role, purposes and their job summary and why at the first place that they believe the position exist and being valuable to the company.
  - x. Checking for the job scope or any written manual or Standard Operation Procedure.
  - xi. Revising whether or not any irregular or out of the job scope tasks perform by the designer.
  - xii. Information on the special skill required for the task as a designer.
  - xiii. A repetitive objective question of the list of tasks undertook by the designers during his or her serving period.
  - xiv. Examining the special tools and apparatus involved including need of knowledge, skills, tools in term of mechanical, computer, knowledge, skills and so on in order to perform the designers role.
  - xv. Validate the designers role in term of written concern, certification or professional bodies registration etc.
  - xvi. Gain information on the work experience acquired and required and also the involvement of machines and equipment.
  - xvii. Conclude with cross checking whether designers type of community and social communication parties including authorities, customers or clients.
- Observation for Secondary Data by asking copies of any publication brochure, Annual Report, Journal, Academic Certification, Working Manuals, Certification from Professional Bodies, Blueprints, Laws, Contract, Policies, Audit Reports, Accounting or any Computer Printouts if available to support the Primary Data.

### Phase 3

- Transcript Retrieval from Recorded Interview Audio file By Using Trans Ana or Nvivo
- Data Analysis using Nvivo in order to organize and analyze unstructured data.
- Data will be classify, sort and arrange information examine relationships in the data; and combine analysis with linking and shaping to produce structured guidelines

#### Phase 4

- Conclusion will be made in order to finalise the guidelines
- Produce Guidelines for designer to establish their role and as a guidelines for the employer to recognize the role of the designer especially in Malaysia Furniture
- Manufacturing Industries

#### **TENTATIVE FINDINGS (FOR NOW)**

As this work is at its early stage, the findings gained during preliminary data collections work as below:

1. Industry/ Furniture Company required Industrial Designer to perform many different tasks which has not been learned or experience by the Industrial Designer during their training session (education experience)
2. Different Industry /Furniture Company have different tasks for Industrial Designer. Industrial Designer working at smaller company need different knowledge and skills compare to Industrial designer attached to a big furniture company.
3. Industrial Designer individually have different speed of adapting new knowledge and skills which they need to adapt during working hours working with the furniture company. These will 'allow them to experiments 'trial and error' during the adaptation process.
4. Many new equipments, machines and Software are in fast changing mode requires different individual trained Industrial Designers. These involved changes in technology and manufacturing that needs specific knowledge and skills by the industrial designer.

#### **CONCLUSION**

As this work is still an ongoing research, we found that there is an opportunity to explore and to understand the needs of the furniture industry in Malaysia involved with Industrial designer role, experience and education they gained during their training. The research will go further to provide space for Industrial designers and Furniture Manufacturing companies to provide data which will help to generate some guidance to understand about current situation in the industry and these will assist to provide input which will be beneficial to the local furniture industry as well as design education in Malaysia.

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