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## ABSTRACT

*'Designomics', a new terminology is derived from the two words, 'design' and 'economics'. The value of a particular design is determined by the theories of economy in this influence. This research bares the objectives of developing guidelines and criteria for designers to adapt the concept of designomics in the jewellery industry. The aim of this study is to inspire design skills towards enhancing entrepreneurial leadership. In addition, the researcher will develop a method to ensure the attainment of the Designomic's investigation. The designers will be able to contribute their value within the business sector. With a more extensive understanding of the theory, we can address the economic contribution of the design for business managers to understand.*

*Keywords: designomics; jewellery; design*

## 1. INTRODUCTION

### 1.1 Design

Design varies in different fields and disciplines. It ranges from an action, process, a concept, proposal or plan. According to Chick and Micklethwaite [1], the outcome of a design process is also called a design. A design process is produced via thorough mixture of theme, ideation and concept. Thus, the connection of the theme, ideation and concept plays the most significant role in a design process, which will in turn produce a tangible design product. The connection that ties these three values altogether is the parameter of constraints depending on the demand of a client, a brief or a market. Design is an applied art and commercial art; that functions accordingly to improve human life.

There has been a significant recognition of the economic impact of designs and the value it brings to other industries. Generally, designers work within their own scope of designing firms. But the economic values are derived from the in-house and freelances designers in other industries, such as fashion designers, commercial and graphic designers. Designs are a source of innovation and competitiveness in industries ranging from education to manufacturing renewable energy [2]. Designs naturally bare semantic contents. For example, colours are perceived as a system of signs and not a language. But it is undeniable that colours have both synthetic and semantic aspects.

The design in this context refers to the pattern or the physical look of a product, specifically a metal product. Scoping down to jewellery, there is a lot common designs, differed by culture and trends. The development in jewellery industry

paved the way for the more contemporary design and thus giving a wider choice for consumers to be creative with jewellery wearing [4].

## 1.2 Economic

Formally, economic analysis is the monetary evaluation of alternatives to meet a given objective. For example, a decision for construction, renovating an existing facility, or leasing another building is required to build an office. The evaluation is based on a comparison of discounted costs and benefits over a fixed time period of time. Alternatives can be summarized in terms of the ratio of total benefits to total cost (benefit-cost ratio) or equivalently, the total net benefits (net present value).



Figure 1: The Economic Analysis Process

Figure 1 indicates the steps to estimate the economic consequences of a decision, as listed in Ruegg's and Marshall's Building Economics—Theory and Practice [5] are summarized below:

1. Define the problem and the objective.
2. Identify feasible alternatives for accomplishing the objective, taking into account any constraints.
3. Determine whether an economic analysis is necessary, and if so, the level of effort which is warranted.
4. Select a method or methods of economic analysis.
5. Select a technique that accounts for uncertainty and/or risk if the data to be used with the economic method are uncertain.
6. Compile data and make assumptions called for by the economic analysis method(s) and risk analysis technique.
7. Compute a measure of economic performance.
8. Compare the economic consequences of alternatives and make a decision, taking into account any non-quantified effects and the risk attitude of the decision maker.

Designing industry contributes to the economic competitiveness with other industries regardless of their employment sector.

## 1.3 Designomic

Basic concepts in Neo-Classical theory explain how supply and demand are reconciled in the market. Scarcity is the foundation of a market. A scarce good is allocated to the consumers wanting the goods. Furthermore, the price of the goods decreases as the quantity of production increases [6].

Designers have an indirect responsibility to change the existing situations into the better ones. Fundamentally, their work in producing material artefacts have no differences compared to doctors who finds the cure for cancer. From previous study stated that, design is so construed, is the core of all professional training; it is the principal mark that distinguishes the professions from the sciences. [6, p.129]

Heskett in referring to Simon replicate reasoning is an emphasis on design as a thought-process underpinning all kinds of professional activities; yet the varied skills through which design is manifested are not discussed. He did indicate, however, why design is so rarely considered in economic theory. Economics, he stated, works on three levels, those of the individual; the market; and the entire economy [7]. The centre of interest in traditional economics, however, is markets and not individuals or businesses [7, p.37]. A serious problem is thereby raised at the outset: two important considerations relating to design—how goods and services are developed for the market place and how they are used—receive scant attention. The rationale reflected to this empirical study is an important to establish the clear context of a quality of design with other sensory aspects of value and commercialization.

## 2. STATEMENT OF PROBLEM

The discipline of economics does not acknowledge design. To be fair it must also be acknowledged that the discipline of design is deficient in communicating its economic role

John Heskett, 2008

The above statement clarifies that designing is a professional activity practiced immensely within the business context. Upholding the value of design in any organization is a continuous challenge. By determining how designs can contribute economically, designers will be able to integrate their designs into business thinking. In addition, design theory explores and portrays variations of ingenious expressions within the limitations defined by human creativity sense. It determines the ability to identify similarities, characteristic and also the relationships between industry frameworks.

The theoretical issues here are to discover commercial values that are related to the product and emotional content of a design. It may be possible to explore the design secrets' of expression into a product in order to communicate with the user at an emotional level.



Figure 2: Relationship from idea to profit considerable.  
(Courtesy: Multiple stakeholder sustainability image)

### 3. DESIGN WITH ECONOMIC VALUE AND ITS ROLE IN JEWELLERY DESIGN

This study will validate the dimension of Designomic criteria towards jewellery design that is currently upheld by in the society. The changes caused by cultural assimilation are beginning to arise and the context of jewellery design is an important element in the changes sustained with production demand. The existing knowledge of the civilization will be revised with the evidence of new cultures in the current generation. Nowadays, the development in jewellery industry paved the way for the more contemporary design and thus giving a wide choice for consumers to be creative with jewellery wearing, specifically for wedding ceremonies which is strongly influenced by culture.

Jewellery analysis may lead to the idea of uniqueness that focuses on emotional set and the significance of existing design. The accomplishment

of a design process attributed to the idea and philosophy that adamantly remained through the precious experience. Just like diamonds, the concept of philosophy is clear, solid and brilliant. A designer has to be customer-centric and ensure the highest level of quality in products and designs. Jewellery is a fine art, a human venture that we deem only achievable through true standards of design processes. That is what makes designs so fashionable, contemporary and efficient at the same time [8].

The diamond jewellery market has gone full circle from premium priced custom and ideal cuts to off-color, industrial-grade and uncut diamonds showing up in major collections.

Carol Besler, 2012

The key in putting together designs in creative activities is through the method of learning the semantics (meanings) of sensitivity and emotions [3]. As such in artistic design, understanding the materials thoroughly will be the designer's top priority. Without doubt, material is essential in designing purposes to determine the reputation of the wearer, but sometimes it depends on the personal experience and rationale of the product's characteristics elements [9]. Unusually, the distinctiveness of a jewellery piece portrays the beauties that cleave the wearer's emotion.

In connection with that, this revision is conducted to determine the significance of Designomic approach in Malaysia from the perspective of the designer and retailer (jeweller). The study will determine the consumer demand of a particular jewellery design and the current demand that seemed to have evolved. With the vast exposure to many other aspects of demands, it changes the perception and importance of development in design process. This will also affect the significance of jewellery designs that should be available for the current market.

### 4. METHODOLOGY

This study is based on a descriptive research and what to observe is the role of Designomic approach towards the significance of jewellery design. For this, the researcher will conduct a survey to gather information from the samples of target population. The process of developing the conceptual framework is through design and economic value in jewellery perception. The theoretical support is derived thoroughly from literature review and concern about product value and user experience.

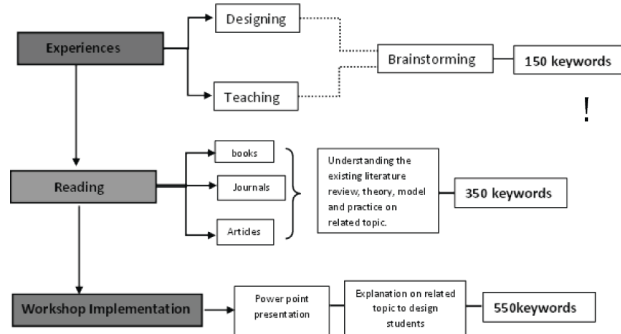


Figure 3: Flowchart of the research framework

Figure 3 shows a flowchart of research framework for this research activity. The domain of this research is qualitative in nature [10]. The assessment will be on the Syntactics (structure establishment) [11] and Semantics (meaning carrying) [3] of form elements. These three different levels involve: 1) Different level of trend development /trend specification such as explorative, explanatory and persuasive; 2) Different level of career development such as, practitioners and students; and 3) Different level of learning/work such as industrial/jewellery design institutions and industries. In line with other respondents, this improve will be beneficial to government agency and those involved directly or indirectly in enhancing the jewellery design business in Malaysia. Revising the research questions and sources of data continuously is necessary, and they will be refined after verifications of new findings.

## 5. CONCLUSION AND FURTHER RESEARCH

If we consider how our society is, by nature they love to adapt new thinking to their lives, for example; a Designomic as a thought of power and strength in designing process. Thus, they are more prone to adapt the significance of design and economy as an indication of the design and product development practice. This affects the design of jewellery or other product in the current market as something universally understood.

In the future, a new sense of daring and conviction driving the ingenuity and innovation is identified as the key spirit in the upcoming trend of jewellery design, and exposed with a radical, modernist, minimal style that focuses on the power and engagement of recreational emotions. The possibility of integrating LED technology in fine jewellery is an idea of gathering

momentum, amplifying the light, luster, sparkle and sheen of gems and jewels [12]. A trend that will continue into the future is focusing on the colors of gemstones, the light of the life emphasising the mysterious wonders of the natural world.

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## REFERENCES

- Anne Chick, Paul Micklethwaite, (2011). Design for Sustainable Change: How Design and Designers Can Drive the Sustainability Agenda, AVA Publishing.
- “The Design Industry Group of Massachusetts (DIGMA)”, (July, 2015). <http://digma.us/designma/economy/impact.html>.
- Jerrold J. Katz, Jerry A. Fodor, (1963). The Structure of a Semantic Theory, Linguistic Society of America, (Vol.39, No. 2, Apr-Jun1963).
- Hashim, H. Z. (2013, April), “The formation of Cyclic Stone (CS) in Design Economic (Designomic) on Creating Jewellery Design”, In Business Engineering and Industrial Applications Colloquium (BEIAC), 2013 IEEE (pp. 165-168). IEEE.
- Rosalie T. Ruegg, Harold E. Marshall, (1990). Building economics: Theory and Practice, Van Nostrand Reinhold,
- John Heskett, Clive Dilnot, Pamela Heskett, (2008). A John Heskett Reader: Design, History, Economics, Bloomsbury Academic,
- Herbert A. Simon, (1992). The Sciences of the Artificial (2nd ed), Cambridge MA: The MIT Press
- Carol Besler, Jocelyn Laurence, (2004 ). Birks - Celebrating 125 Years: A Dazzling Past - a Brilliant Future, Henry Birks & Sons,
- Elizabeth Olver, (2002). The Art of Jewelry Design: From Idea to Reality, Jewelry Crafts, North Light Books,
- Jane Ritchie, Jane Lewis, (2005). Qualitative Research Practice: A Guide for Social Science Students and Researcher, SAGE Publication Ltd,
- Bloom, B.S., (1956). Taxonomy of Education Objective, Handbook I: The Cognitive Domain. New York: David McKay Co Inc.,
- Wallace J, Dearden A, (2005). Digital Jewellery as Experience, In: Pirhonen A, Isomaki,