

EVALUATING THE CREATIVITY OF A PRODUCT USING CREATIVITY MEASUREMENT TOOL (CMET)

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ABSTRACT

This paper discusses the creativity evaluation of a mechanical engineering product namely "Rocket Motor" by using a quantitative measurement tool, which is a web-tool called Creativity Measurement Tool (CMET). This tool is useful to measure product creativity based on four dimensions: Novelty, Usability, Effectiveness and Aesthetic Value. Each dimension encompasses several characteristics that are significant to assess the creativity of the product. A total of 100 novice respondents from engineering field were asked to rate the product on a scale from 1 to 4 with detailed descriptive of each scale for each characteristic. The results are reported in percentages according to each dimension and the overall score. Based on the CMET result, the inventor can identify which dimensions that need to be emphasised and improvised.

Keywords : *Creativity measurement tool, creative, creativity dimension*

1. Introduction

The term 'creative' comes from the Latin word *creatus* that means, "to make, bring forth, produce". Various definitions have been discussed by academic scholars from different disciplines; from arts, literature, psychology, economy, politics, language to science, technology, engineering as well as mathematics. The notion of 'creative' is inevitably subjective and inexplicable to a certain extent. Since the exact definitions of 'creative' slightly differs across discipline, many scholars concur that the term 'creative' is associated with novelty and usefulness. However, the product should have these two traits in order to qualify it as 'creative'. It is because, if a product is original and unique but not beneficial to the society or something that is useful but not innovative cannot be considered as creative (Piffer, 2012). Nevertheless, the definition of creative does not limited to only these concepts. For many decades, the concept has included the idea of beauty, appropriateness, effectiveness and many more in exemplifying the creativeness of a product, which depends on human judgment.

When a creativity of a product is based on human judgment, the results show significant variations in the interrater reliability (Christiaans, 2002). The understanding of 'creative' is fairly different from one person to another. The cultural and educational background, perception, expectations, environment can influence the way people perceive about the definition of 'creative'. In simplest way, we can say, different people have different way of interpreting creativity. Therefore, because of this subjectivity in measuring creativity, it sparks interest among modern scholars to develop a measurement tool that are able to assess creativity in objective manner.

In a modern and competitive business world, creativity of a product is very important. Consumers do not purchase a product not only because of the designs or functions, but they are looking forward to purchase product that is 'creative'. Horn and Salvendy (2006) stated in their paper "the