Unfolding Creativity in Design

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Introduction

In today's highly competitive and uncertain market environment with short product life cycles, product development must not only satisfy the quality and speed of production, but must also ensure that the products include innovative values. Creativity is the synthesis of new ideas and concepts through the radical restructuring and re-association of existing one's, whereas innovation is the implementation of the results of creativity. This will feature an insight into the changing nature of design projections or trends as well as a design strategy. The process of divergence, transformation and convergence are the relevant stages of design methods in producing creative product design. The success of new products, mostly depends on new product development processes and management (Chaturvedi and Rajan, 2000), including effective attainment of knowledge and using it as part of the product design process (Poolton et al., 2000). However, creativity with cultural values creates an innovative transition in design. These values will lead us to application of design thinking in the creative process with meaningful solution in developing innovative ideas.

As creativity plays an important role in new product development (NPD), it can be utilized in search of novel ideas for innovative product design, and can also be regarded as a helpful tool in advancing NPD output. Product design is a goal-directed problem-solving activity that relies heavily on human experience, creative thinking, and related knowledge; it should be done by integrating creativity and innovation tools with an axiomatic design methodology for durable product development (Goel and Singh, 1998).Product design process (PDP) is an essential factor during the early phase of new product development, which can be considered a complex set of integrated efforts, including generating ideas, developing concepts, modifying details, and evaluating proper solutions. An inappropriate product design process not only affects product life-cycle phases, but also increases the possibility of failure in new product development. As discussed in the article, The Process of Developing a New Successful Product urges that coordinating product development activities and resources to users is valuable for enhancing the development process and increasing the likelihood of product success. To some extent, collaborating and communicating with the user during the development of a product can provide more opportunities for ensuring the success of a new product. The ability to strategise this creative thinking creates an ability to develop new products that could compete successfully in new markets.

In the Industrial Design Department, of the Faculty of Design and Architecture in UPM, the research has begun to unravel the practices, tools, structure and artifacts that are used to simulate the creative process. Ideas generation happens randomly, so having great ideas is not a task that can be approached directly, but to

increase the amount of ideas in the form of connections. As discussed in the Cultural Localized Product Design it has been recognised that many culturally localized products have been transformed into a different practical form in response to the social and environment changes in users' lives. Designers should engage with the real social situations and should be more sensitive to the changes or improvements in line with users current practices in their new environment. These are key factors for generating innovative ideas in product developments.

In the study of Role Play With Mock-ups as a Communication Tool In Design Practice, methods of exploring mock-ups as a tool to communicate and engage with the respondents were used. This develops a social interaction technique to inspire and enhance active participation in the design process. This approach will generate design ideas and opportunities that may add to current understanding of design research methodology. However the technologies play an important role in creativity. The impact of digital tools such as blogs, YouTube and others are changing radically and offer a new approach in design activity. The internet has distributed content directly to the user and now extends to physical services. This new age of creative services creates innovative methods in the stage of experimentation and exploration of design to be effective to the user. There is a growing trend in the area of doing research that leads to the consumer experience and services associated with digital technologies. Creativity in technology can thus be linked to innovation as firstly contributing to the expansion of available ideas and the secondly to increased chances of successfully commercializing ideas immediately.

The value added methods in designing a product also have a stronger inclination to self-expression and the creation of new ideas, and are being exposed more to new thoughts from both local, foreign and other cultures within the same country. The higher level of creativity in R&D will introduce a transition dimension of wider innovation processes in design activities. Exploration new demands for advanced and natural source materials is another 'demand-side' strategy for adopting new methods of production as well new knowledge. From waste to wealth and environmental capability research may contribute a paradigm shift in design thinking. Several design processes and experimentations involved the development of novel ideas in products. This can be explored through use of bio-composite materials in the Foggy lamp. The design and development strategies introduce the waste materials into valued added products with the environmentally conscious approaches. This requires product designers to expand their roles by being creative, innovative, and doing the unexpected. This emphasises the importance of R&D policies around branding and will be a leading influence in the next generation of impactful products. Besides the transition in design demands, the integration of user experience with product development will determine the value of creativity. Products are referencing

or being designed to meet lifestyle and status consumption, and consumers in horticulture, especially address the niche segment of serious enthusiasts and hobbyists. The Aqua Kiosk Display Units and Mini Bio Pesticides represent examples where the product design expands the affluence of lifestyle consumers. This value implies what the customer really wants to have from the product or services. In creating, the continuous improvement efforts are exploratory. The emphasis is on the development of new refined methods, practices and approaches in the new product development. The unfolding creativity is a relevant transition within design in order to be aware of the intellectual, cultural and social capital by which it is sustained. This will broaden the creation of better products, services, technologies, or ideas that are readily available in markets, governments, and society.

Design is what links creativity and innovation. It shapes ideas to be practical and attractive propositions for users or customers. Design maybe described as creativity deployed to a specific end.(cf. Bitard and Basset, 2008)

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