Citation: **Marwa Hashem et al. (2024), Applicable Procedures to Design Products for Users with Special Needs Using Design Thinking, International Design Journal, Vol. 14 No. 4, (July 2024) pp 89-110**

Applicable Procedures to Design Products for Users with Special Needs Using Design Thinking

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Abstract:

There is an increasing interest in designing for people with special needs and accommodating them in various community activities, and this is achieved by the presence of special products suitable for enabling them to carry out normal daily tasks, which leads to their self-reliance without the need for the help of others. In order for a product designer to be able to design and produce a useful product for such categories, solving a problem they have which makes it easier to carry out certain tasks, he must follow a specific design system and clear practical procedures that help him reach a design solution that is useful and attracts the user. **Problem**: The main research problem can be summarized in the following question: What are the design procedures that can be applied to use design thinking in solving problems of special categories? From which sub-questions arise: Who will use these procedures? What is the importance of these procedures? How will it benefit the designer or the consumer? Does it have a return on industry or the academic community? Is there a specific classification or order for using procedures? This means that the designer must make use of these procedures freely according to what he sees fit, or is there a specific experimental design that obliges him to use them each in a specific place? How will the validity of these measures be tested? **Objectives**: arriving at a design system with specific procedures and tools that enable the designer to design products that people with special needs can use to achieve independence of use without the help of others. Importance of the research: The study benefits institutions that design products for people with special needs, to be used when designing products that meet the real needs of this group. Product design students can also benefit from this system by providing suitable, easy-to-use tools for design thinking that save their time and effort, and also encourage them to learn to use logical thinking, adding to their creativity in practicing these procedures in a logical, sequential manner. **Hypotheses**: Using applied design thinking tools and procedures helps give the designer the ability and awareness to design a product that accurately meets the requirements of people with special needs. **Methodology**: The study will use the case study and descriptive analytical approaches. **Research tools**: 1- Brainstorming card 2- Procedure cards. **Delimitations**: 1- Human limits: The study is designed for two purposes: A- Providing scientific material for designers concerned with products for people with special needs - Providing scientific material for students in subjects concerned with design for people with special needs. 2- Spatial boundaries: Greater Cairo area (in the Cairo and Giza governorates) 3- Temporal boundaries: The period from February 2024 to May 2024 4- Objective boundaries: This study only covers the evaluation of cards in the stages of empathy, problem identification, and idea generation

Keywords:

Applicable Procedures Product Design, The Special Needs, Design Thinking,

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Paper History:

Paper received March 26, 2024, Accepted May 20, 2024, Published on line July 1, 2024

