Role of Technology for Interior Design Sectors in Creative Economic Development

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Abstract. The purpose of this research is to find out and describe the technology used to develop the creative economy. This study used a qualitative approach with descriptive methods, to explain the facts and conditions that occur at this time. The results of this study indicate that technological developments in the interior design sector can produce works that are innovative, efficient, and have benefits in creative economic development. With CAD (Computer Aided Design) it is very helpful for architects and designers to design their projects with full accuracy, can save more time and money use more efficiently. From the results of CAD (Computer Aided Design) technology in the field of interior design, it can be applied in detail and detail to the elements. Of course with the development of technology that can affect the creative economy.

1. Introduction
The role of technology is needed in all sectors, including interior design. Hamid explained that the scope of the interior designer is not limited to design, the interior capacity of the designer's work is similar to architecture and of course not yet to the limited process to the confined space of both design and drawing processes. Not only talking about design, interior design is also involved in the construction and completion stages of the projects involved. The process can only be successful by doing the right planning, carrying out design, extraordinary monitoring and fair control until the project is submitted [1]. According to Kalay, an interior designer, nothing different from the others is accepted and combined with new innovation technology has also impacted interior business designers, collaboration and communication with clients, and ways to adopt new ideas and communicate [2]. Increase knowledge and develop innovative skills in the interior design sector by using CAD (Computer Aided Design) technology.

Unfortunately, the intense competition in the technology equipment market every year forces its manufacturers to offer new and sophisticated technology designed for a variety of products. Therefore, production must be flexible, leading to various types of raw materials, product configuration and productivity, according to current market needs. The complexity of the technological process does not allow us to calculate it using conventional methods without using an automatic design system (CAD) [3], [4], [5], [6]. Creative economy is an economy based on high creativity with a touch of innovation to produce new and different quality products [7]. Basically creativity is the ability to create or present something new, whether a new solution to a problem, a new method or device, or a new artistic object. While innovation is defined add something new to an existing product or process. Creativity is the starting point for innovation or innovation is the implantation of creative inspiration [8]. The concept of creative economy has emerged as a means of focusing on the role of creativity as a force to enter contemporary economic life, which states that economic and cultural development is not separate but can be part of a larger development process [9].

The design process in the interior design sector utilizes computers in line with the development of computer capabilities. When a new generation computer is capable of performing heavy calculations as
needed in the 3D rendering process, the world of interior design responds optimistically and with high interest. From this the presentation pictures of interior design and architecture can hardly be distinguished from real conditions. The present era is making sketches not only manually but also through the media of smart phones, net books and computers as well as various data processing with software related to interior design. Visualized through processed rendering, one of which is CAD (Computer Aided Design) software [10]. The purpose of this research is to identify and explain the development of CAD (Computer Aided Design) technology that is used for the interior design sector in the development of creative economy.

2. Method

This research used descriptive methods to determine the variables related to CAD (Computer Aided Design) technology and interior design, and uses previous research, so that it can analyze how much influence CAD (Computer Aided Design) technology has on the interior design sector. Descriptive method is a method used to describe or analyze a research result but is not used to make broader conclusions [11].

3. Results And Discussion

Interior Design has been recognized as one of the Creative Economy sub-sectors in Indonesia and is acknowledged to be one of the spearheads in the effort to increase Human Resources (Creative) in Indonesia. The development of the interior design sector shows very rapid progress at this time. People begin to appreciate the aesthetics of the room better. The use of interior designer services to design the interior aesthetics of residences, hotels and offices is increasing. It is clear that the economic potential of the interior design industry is very promising. Interior design in the design process in this globalization era experienced an improvement that was influenced by the development of computer technology. Computers that are accompanied by hardware and software make progress in the field of embodiment of design designs, so that they are faster and more efficient.

A number of computer program applications to design visual objects commonly used are CAD (Computer Aided Design). The program is a combination of 2 dimensions or 3 dimensions that not only create shapes but have informative elements as the process, dimensions to materials that refer to certain conventions. This is the reason why CAD (Computer Aided Design) is very good for design presentation tools. Architects or designers are easier to work on a project so they can explore more complex forms. Designers can perform precise and accurate simulations before finally being done in construction (Figure 1).
Figure 1. Display CAD Software [4]

CAD software can make designs with full accuracy, designers can use certain sizes of space and home furnishings, to ensure that the design can imagine the space how it will look. In addition, you can arrange household furniture, which has provided various furniture that has been designed as well, then can arrange the placement, including personal devices, pots around the worktop, or lamp shades on the table, and also allows to experiment with coloring strategies so that you can decide on regional designs and styles that also pay attention to functional aspects (Figure 2).
This CAD software makes it possible to design the smallest details from the outward appearance of the building to the inside. Designers can make elements according to the size that has been adjusted. So it will look real (Figure 3).

This design using CAD software that operates through a computer makes it very easy for interior designers to complete their work, making it faster and easier to prepare or compile a manual. Unlike using documents drawn through paper, and constantly re-drafting, designers can revise the program easily, no need to replace the drawing paper. Because of this, it can maintain the environment by saving trees that are producers of paper, besides that it can also streamline the time and money spent. Therefore, this interior
design can improve the economy through a creative economic program that is currently being developed [4].

4. Conclusion

Interior design in the design process in this globalization era experienced an improvement that was influenced by the development of computer technology. CAD (Computer Aided Design) is very good for design presentation tools. Architects or designers are easier to work on a project so they can explore more complex forms. CAD software can make designs with full accuracy, designers can use certain sizes of space and furniture to make sure they can imagine a new space how it will look. Designers can easily revise the program, so that it can save trees that are paper producers, but it can also make time and money more efficient. This interior design can improve the economy through a creative economic program that is currently being developed.

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