

عنوان مقاله:

Investigation of the Prospective Developments in the architectural design process in the fourth industrial revolution

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خلاصه مقاله:

The construction industry is one of the most important industries, based on its impact on human societies and environment and global economy. Due to the rapid growth of the population in the world, which has led to limitation of energy resources, increase of constructions and advances of science in last few decades, various technologies are used in order to save the consumption of non-renewable energies, create more comfort and reduce costs. The effect of using new technologies on reducing the amount of energy consumption, fast and accurate implementation and reducing project costs in future buildings and their design is a subject that has attracted the attention of many architects and researchers. Today, the emergence of industry ۴.۰ revolution in the world and the efforts to find solutions to improve quality, increase the efficiency of materials and reduce the consumption of raw materials and energy have led to the use of new technology in the industry. Building design and construction is also one of the most important concerns in the current era, which is effective in economic, social and environmental fields. This study is a descriptive-analytical and qualitative survey. The tool for collecting information is library studies and review of previous researches. In the current research, the causes of the emergence of the industry ۴.۰ revolution and the effects and changes that occurred in economic, social and environmental fields were first studied. Then, the role of technology in the direction of the integrated and precise design and implementation of buildings in this period was examined. In the following, three prominent technologies that are used in the construction of digital twins have been discussed in order to conduct additional studies and evaluate their place and use in different countries. The results of the study indicate that the participation of people in the project by using modern science and technology plays a significant role in facilitating the design and planning process, the accurate implementation of building operations and the efficient management of the project.

کلمات کلیدی:

Industry ۴.۰; New technology; Construction industry; Architectural Design process

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