

Explaining the Role of Knowledge-Based Urban Spaces in Nurturing Children's Creativity by Emphasizing on Science and Technology Parks

Abstract

Science and technology parks have been created for the technological purposes of sustainable development. Art can also be a tool for achieving sustainable development goals. In order for children to participate in science and technology parks and invest in their creativity, it is conceivable to create a stimulating environment for education, entrepreneurship and the use of the child's talent in the future. What is important in children's and adolescents' science and technology parks is learning the skills needed to be creative and imaginative. Creativity can be considered a mental phenomenon that results from the use of common cognitive processes. The physical environment plays a prominent role in the flourishing of such a trait. The connection between the space created in science, technology and art parks plays an imperative role in nurturing children's creativity. In the present study, an analytical-qualitative method based on theoretical foundations, documentary and library studies have been used along with semi-structured interviews. The effective components in promoting children's creativity are examined in two categories of environmental and individual factors; hence, grounded on the research findings, the impact of environmental factors and its use as the most important factor in child rearing is highlighted. The spaces created not only with the physical aspects of their psychological organization, but also through the connection of this body with art, affect the flourishing and nurturing of children's creativity.

Research objectives:

1. Explaining the pattern of design based on diversity in children's educational spaces.
2. Achieving the scientific components of promoting children's creativity in urban spaces.

Research questions:

1. What effect does the creation of children's technology parks have on the type and quality of their creativity?
2. What effect does the use of environmental components in the design of science and technology parks have on children's creativity?

Introduction

Creating knowledge-based urban spaces has been one of the actions of developed countries in order to efficiently manage and use technology development and increase output, production and services. This development has led many developing countries to provide the necessary context and infrastructure for the design and implementation of new economic systems. Based on its 20-year vision and long-term plans, Iran also intends to gradually achieve a knowledge-based economy. Therefore, over the past few decades, science and technology parks have emerged as one of the social institutions and a link in the chain of economic development with the aim of promoting creativity, increasing technological innovation, economic development and job creation. Such parks play a prominent role in shaping human behavior as a social being. In the meantime, children and their educational status as defining stage of learning, can play a significant role in science and technology parks. How the role of science and technology parks in shaping human behavior and stimulating creativity and movement has led to the study of effective components in the dynamics of science and technology parks as one of the research necessities.

Science and technology parks for children and adolescents can create a significant relationship between providing physical and objective contexts and fostering and flourishing children's creativity. Meanwhile, the use of environmental and art components in the design of science and technology parks for children and adolescents can be effective in promoting their creativity.

No independent research has been done on the role of science and technology parks in children's creativity. Yufeng Hu has accomplished research on the dynamic model for sustainable development of science parks (Wang, 2005), but this study does not address the issue of creativity and children. Also in Iran, Haji Gholam Sarizadi and Poursarajian have conducted studies on the extraction of behavioral dynamics of institutions located in science and technology parks using system dynamics. In their article, the cause and effect model of the behavior of institutions under the policies of the founders and the requirements of the park, outline and solutions to overcome the problems of institutions are presented (Sarizadi, Poursarajian, 2011); in this research, the discussion of art and its application and the issue of creativity in parks are not mentioned. Zargar et al. Have also analyzed the role of industry-university relationship in technology development with a systems approach. In their article, the need for the relationship between industry and academia is considered necessary (Zargar, 2001), which practically shows the need for science and technology parks. The present study has tried to investigate the application of design and architecture and its impact on science and technology parks by relying on the available data from science and technology parks and researching the components affecting children's creativity. On the other hand, the design model is based on diversity. In educational spaces, children have been studied with the approach of promoting their creativity, and in this way, it can provide an introduction for more serious studies in the promotion of science and technology parks and its upbringing and educational role for children.

For the present study, the analytical-qualitative research method has been used. Library and field studies methods were used to collect the required information. In addition to the above method, the interview method was also used to explain the subject. Four senior managers of Isfahan Science and Technology Park and Shad Center were interviewed and the results obtained from the analysis performed in this research were analyzed in these centers. This approach provides the basis for fundamental studies affecting sustainable development in societies such as Iran.

Conclusion

Undoubtedly, the creativity of individuals in society, especially children, as potential forces, plays an important role in shaping the future of any society. In the era of expertise and technology, Iranian society, as a developing country, desires cultural planning and investment in teaching students' creativity in order to achieve a favorable position in economic, cultural and social competitions. What has been studied about creativity and the factors that affect it in the past decades, indicates the impact of environmental factors on creativity. On the other hand, today, studies on the characteristics that affect the child's creativity show that the physical environment plays a prominent role in the flourishing of creativity and, with some characteristics, facilitates the development of imagination in the child. Environments that make children more fluid and free to explore and socialize and invite them to play in the environment will have a greater impact on the growth of creativity. Science and technology parks can play a crucial role in shaping children's creativity and development as an environment. It should also be noted that if science and technology parks for children and adolescents are related to nature and have a favorable view of nature, they will definitely have a more positive impact on children's creativity since nature provides

imperative components of creativity (curiosity, imagination and play). In addition to the presence of nature in the play environment along with other factors that contribute to the development of creativity include: accessibility and freedom of action, attractiveness and sudden variety of space, comfort and safety, simplicity and readability, complexity and possibility of space discovery, flexibility, use of children's works Interior design and natural light. Therefore, it appears that science and technology parks for children and adolescents should be able to become a stimulus to create imaginative and curious motivations, and the more such stimulus effects are controlled, the better they can foster creativity in children. With these interpretations, paying attention to nature, art and design in science and technology parks is an essential step in children's creativity and sustainable development.

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