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**THE IMPACT OF THE DEVELOPMENT OF DESIGN AND  
COORDINATION OF PARKS AND PUBLIC GARDENS USING HIGH-  
MEDIA TECHNOLOGY ON THE DEVELOPMENT OF THE INTEGRATED  
CAPABILITIES AND SKILLS OF THE CHILD**

***Mona Sabah Abdel Fattah SABAH*** \*

Department of Technical and Industrial Education, Faculty of Education, Helwan University, Egypt

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**Abstract**

*The spaces play an important role in the formation of the urban fabric, as they are the natural outlet that confronts this enormous amount of congestion, pollution, and the deterioration of the urban structure, and among them are the open spaces, parks and public gardens with the various material elements they contain coordinated by the designer and architect to reach this space to a specific form to achieve recreational and educational functions and goals in various forms to suit the nature of children and individuals using this space. Aesthetic coordination and the correct distribution of the elements of site coordination has the ability to directly affect the formation of the child's personality and the development of his perceptions, skills and behaviors, as it helps in free and safe playing, as it also gives the opportunity to meditate on the natural elements, which helps to develop a sense of familiarity with what surrounds him and strengthens the ability of observation and increases the element of discovery and knowledge. And because we live in a world that depends on technology and its tools in all areas of life, the recreational and educational terms and elements used in children's parks, especially the cultural ones, have evolved as a natural result of urban development, including the high-media technology it contains to become a cultural entity that only creates enjoyable, interactive and entertaining times for children and even their families through carefully prepared programs and activities to develop children's abilities and skills through playing, especially interactive ones, through which they can learn information about the past, present and future through interactive, audible and visual technology, and this of course is unlike to the activities and traditional games set up in gardens. Thus, the goal of the research is to know the stages of development of design and coordination methods for parks and gardens, including the recreational and educational elements they contain and what are the possibilities of employing the various technological media because of their effective and direct impact on the child who is considered the main pillar of the society, and by taking care of his needs and requirements a distinct society can be created in the future.*

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**Keywords**

*Urban Parks, Design, Interactive Technology, Smart Education*

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**Introduction**

Peoples and nations have become measured and classified globally (scientifically and technologically) according to their use and use of modern technology in the conduct of various matters of their daily life and the extent of their use in solving their problems and their circulation in all areas of life. The art of design and coordination gardens can be defined as the art of arrangement and Organization open spaces using the elements of coordinating sites (Water feature, Hard Scape, Soft Scape) that are employed by the designer and architect to access this space to a specific form to achieve functions and goals of entertainment, skills and education in various forms to suit the nature of children and individuals using this space.

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\* Corresponding author: [Mona.sobh@yahoo.com](mailto:Mona.sobh@yahoo.com)

The correct distribution of playing areas of all kinds is the base of the designer's thinking, according to which all the elements and spaces of the garden design are coordinated, as playing with its different tools is considered a major factor in the formation of the child's personality, as it is able to develop the child's abilities, skills and behaviors, taking into account the gradation and diversity to suit each age group of the stages of development.

The continuous developments in the fields of information technology and social changes imposed a new reality on the entertainment systems, and the merging among them brought about radical changes in the systems of playing and put in our hands new patterns of the means used for entertainment. Consequently, the terms and recreational elements used in children's parks, especially the cultural ones, have evolved as a natural result of urban development, including the high-media technology, to become an interactive educational and recreational entity that seeks to create enjoyable educational recreational times for children and even their families, also through technological and interactive activities based on visual and technical activities which was carefully prepared so that the child can not only play but learn with pleasure about information concerning the past, present and future.

Public parks and museums at the global level have benefited from these developments to develop and enhance the effectiveness of children's acquisition of many aspects of knowledge in addition to the skills of dealing with technological innovations which led to an increase in children's motivation to play and learn.

### **Research Problem**

Developing countries suffer problems of a special nature as an implicit result of weak resources and capabilities, and in recent times attempts have been monitored to increase efforts made towards development processes in an attempt to solve some problems and one of the most important axes of the development process was "The Development of Integrated Child Skills" as the main factor driving the future development of societies.

And because gardens and parks of all kinds are of great importance in the child's life, the big difference between the local trend and its global counterpart has been observed, whether in the planning and coordination methods of parks or in the methods of continuous development by employing the latest high-media technologies as an essential component of the problem of entertainment and playing, and the research problem is represented in the deficiencies in the lack of awareness of the importance of developing and re-considering the

elements of garden coordination, especially as it is far from the culture of the child of the 21<sup>st</sup> Century.

### **Research Objectives**

1. Identify the design determinants (human - environmental - aesthetic - social - functional - economic and technological) for the coordination of parks and gardens as a basis for achieving the needs and requirements of the child from the space, with mention of local and global examples as successful models for achieving the design determinants.
2. Monitor the stages of development in the design of parks and gardens across civilizations and what are the reasons that led to the development of the planning and design thinking for them along with monitoring the most important features of site coordination for each period.
3. Learn about the principles of classifying gardens and parks and what the importance of each of them for the child.
4. Study and analysis of the garden (Centre of Civilization and Creativity - Children's Museum) as a model for local cultural gardens interested in employing modern technologies as a means of learning through play and entertainment with a mention of the most important features of the garden to meet the child's multiple needs.
5. Shed light on some examples of the possibilities of using high-media technology as one of the elements of entertainment and education in gardens, museums and global parks to develop the integrated skills of the child.

### **Research Methodology**

- **The Analytical Theoretical Axis:** In it we deal with a lot of information and analyse it with the aim of reaching the theoretical results of measuring the importance of the relationship between the needs of the child to develop his performance, skills, mental and physical abilities, and the coordination and design of sites within the open spaces with the activities and games they contain, as well as mentioning some examples of global models designed for the child in order to know the advantages of each of them in terms of using them to identify the latest trends that help in developing the child's abilities and providing his needs within the open space when designing the local model.
- **The Application Axis:** An application based on employing the Augmented Reality technology in the Egyptian Geological Museum as a model for the development potentials of a local museum using modern technologies.

## Findings

1. The child has an integrated human being that has needs and requirements of progressive importance and varying according to his culture, upbringing and society, and play is considered one of the most important basic needs of the child as it is an educational activity that provides him with a set of skills and behaviours - (positive aspects) - to form his personality, as playing contains experiences that work on the growth and development of the child, and it also prepares him to explore the environment around him and to learn how to deal with the space around him.
2. Open spaces with proper planning and design help the child to free play, which frees him from restrictions and helps him to open his mind, arouse his imaginations, and train for innovative work, so the more the child is playing, the more training and encouragement he will be to innovate and discover his talents, abilities and directions, and thus develop his mental perceptions and develop his talents and senses.
3. There is a set of determinants that can affect the design process of open spaces and parks designated for children, within which the efficiency of the design is determined and its ability to provide the needs of the child within the scope of the garden, and they are (human-social-environmental-aesthetic-functional-economic-technological-determinants). those determinants may vary in the strength of their capabilities and their impact, depending on the circumstances of each society, the nature of the era, and the cultural and economic variables of each country.
4. People have been interested in designing and coordinating gardens since the dawn of history, and they still give them great attention until now, as they have emerged as one of the important elements in the city throughout the ages and civilizations, as the art of landscaping emerged from the ancient Egyptian civilization, in which the ancient Egyptians were interested in many recreational and cultural activities and were the first to establish gardens throughout history.
5. There are many reasons and methods for classifying gardens and parks as a result of the different ideas, opinions and views of planners and architects throughout the ages.
6. The Child Centre for Civilization and Creativity represents a developmental effort in the right direction that commensurate with the age of technology.
7. Continuous developments in the areas of High Media Technology and the accompanying social changes imposed a new reality on all systems, especially with regard to the areas of culture, education and entertainment for children, and experiences

have shown that learning through direct experiences - (direct interaction) - is more effective in developing skills and establishing information than learning through indirect experiences.

### **Recommendations**

1. The necessity to provide and diversify classifications of open spatial ranges that support the child within the urban environment.
2. Dealing with parks as an essential element within the city's area and complementary to the planning system and that any neglect of them affects the environment in its social, cultural and aesthetic dimensions as it is the main outlet for existing societies.
3. The need to provide a special budget from the state for the development and upgrading of all elements of garden landscaping, because they are the only outlet for a large group of the Egyptian people.
4. The necessity of forming companies specialized in managing, investing, developing and maintaining parks, in which the government, the private sector and civil society contribute.
5. Focusing on employing coordination elements in supporting the development of the child's skills in general, as well as using them in support of learning skills, perception and knowledge in particular.
6. The necessity of knowing the technological variables related to the elements of entertainment and playing in parks and gardens and their role in supporting the needs of the child in all their different and varied forms.

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