

Presenting a theory of Fostering Children as Researchers

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Abstract

Aim: Developing research spirit in children as the most important future human capital of any society is considered one of the smartest strategies to face ever-increasing developments and transformations. Therefore in this research, we tried to identify and present the dimensions of fostering children as researchers using a qualitative approach based on the grounded theory method of dimensional analysis. Semi-structured interviews were used to collect the data. Twenty experts in didactics and education, preschool teachers, and parents from the cities of Qom and Tehran were selected using criterion and snowball sampling methods. Data were analyzed using the natural analysis method. The collected data led to the emergence of five dimensions through the explanatory matrix of the dimensional analysis method. The results showed that reinforcing a research spirit in children is a function of relationships among multiple and multilevel factors arising from the quality of the conditions, context, perspective, and educational processes in which they are fostered.

Keywords: *Theorizing, Dimensional analysis, Parenting, Children as researchers, Grounded theory*

Introduction

Given that children determine the fate and future of societies (Pellegrini, 1991: 14; Cited in Rashtchi, 2010: 4), lifelong effects of learning in childhood (Mofidi, 2014: 10), and the rapid and ever-increasing transformations in all dimensions of life in the present era (Hashmi et al., 2017: 61), individuals need to be empowered with research skills from childhood to adapt to these conditions (Qazi Ardakani et al., 2017: 63). Numerous studies have shown that children's research skills and their participation in research is not new, but the way they participate has significantly evolved in recent decades (Kellett, 2009: 1). The turning point of children's active participation in research is the adoption of the United Nations Children's Rights Act in 1989. Based on this binding legal document for the direct commitment of human rights to minors, children are recognized as participants instead of research targets (Kellett, 2006: 1-3). In Iran, children's research has been neglected by researchers in the last two decades. Meanwhile, international research has witnessed a great emphasis on the key role of children as active researchers. Since researchers have neglected many important issues in this regard, we aim to "present a theory to identify dimensions of fostering children as researchers", and answer the question "what the dimensions of fostering children as researchers are from the perspective of education and child experts, preschool teachers, and parents in two cities of Qom and Tehran?"

Methodology

According to the objectives of the study, research questions, and review of the literature, grounded theory was considered an appropriate qualitative approach for this study. After a comprehensive study of this method, we decided to use dimension analysis for it helped reach the study objectives. Dimensional analysis was developed by Schatzman based on the grounded theory (Kools et al., 1996: 314). The main stages in the dimensional analysis are dimensionalizing, differentiation, and integration. In the first stage, all that is involved in the desired phenomenon is coded. Once the codes are condensed, and similar ones are grouped, dimensionalizing and naming starts. In the second stage, we determine the relative importance of each dimension from the researcher's perspective. In the third stage, we gather the dimensions together again in the form of an explanatory matrix (Kools et al., 1996: 316-317), which includes perspective, context, conditions, process, and consequences (Schatzman, 1991: 308; cited in Schwartz, 2009: 56). For this purpose, first, an interview protocol was designed and compiled. Then a trial interview was run with a selected sample of education and child experts, parents and teachers of preschool centers in two cities of Qom and Tehran to make final modifications. After the completion of the first interview, the above-mentioned stages of dimensional analysis were followed, and finally, data saturation was reached with twenty interviews.

Results

In this section, we will first present the explanatory matrix of the current research (Figure 1) and then briefly describe the identified dimensions (Table 1).

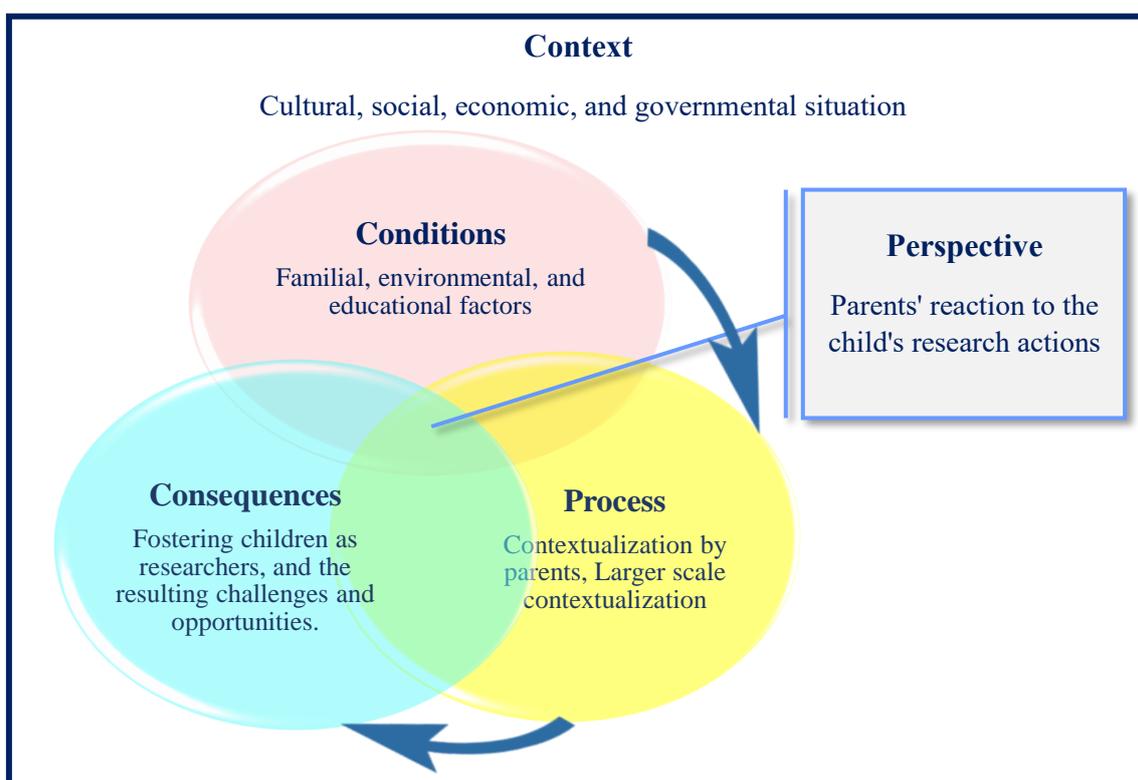


Figure 1. Explanatory matrix of the dimensions of fostering children as researchers

In this matrix, "perspective" is the most important dimension of the investigated phenomenon, "context" is the situation or environment in which the dimensions are embedded, "conditions" are prominent dimensions that facilitate, prevent, or shape actions or interactions, "processes" are actions or interactions that are influenced by conditions, and "consequences" include the results of specific actions or interactions (processes) (Schatzman, 1991; cited in Kools et al., 1996: 319).

Table 1. The dimensions of fostering children as researchers

Subdimensions	Main dimensions	Matrix elements
Parents' reaction to the child's research actions		Perspective
Ability to provide comfort for the child		
Mandatory employment of both parents		
The only child in the family		
Parents' nervousness and stress and their impulsive behavior with the child	Economic situation	
Parents' fear of the child damaging home appliances		
Buying a suitable house		
Limitation of the child's facilities		
Educational literacy of parents		Context
Cultural conditions	Cultural situation	
Information and communication technologies		
Social relations		
Public and collective perception and awareness of the importance of fostering children	Social situation	
Social values		
Lack of appropriate policies to support parents	Governmental situation	
The low importance of children's education for policymakers		
Parenting style		
Parents' obsessions		
Parents' theoretical understanding or differences	Parental characteristics	
Parents' preoccupations		
Parents' awareness and concerns		
Parents' personality characteristics		
An only child or multiple children	Family factors	Conditions
Apartment life	Parental lifestyle	
Pride in possessions and luxurious lifestyle		
Working mother		
Support and companionship of relatives	Relatives	
Alignment of principles of education in relatives and parents		
Peaceful environment in the family	Common	

Physical environment	Environmental factors	
Psychological environment		
<hr/>		
Traditional educational approach		
Teachers		
Content		
Teaching method	Educational factors	
Evaluation method		
Attention to the risks of teaching children under seven years old		
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Pay attention to the child		
Providing freedom for the child		
Accompanying and supporting the child		
Providing the contexts for gaining experience		
Providing a rich and safe environment	Contextualization by parents	
Encourage the child		
A child's connection with nature		Process
Avoiding judging, mocking, and labeling the child		
Avoiding the accumulation of information in the child		
Avoiding direct supervision and control		
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Improving the economic situation	Larger scale contextualization	
Informing parents		
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Opportunities and challenges of fostering children as researchers		Consequences

Development of intermediate theory

According to the findings obtained from analysis of interviews with the informants, and drawing the explanatory matrix in Figure (1), and the technical notes (memo writing), a middle theory was formed with several propositions. Some of the most important propositions are presented as follows:

It seems:

1. Among the facilitating factors of fostering children as researchers, the most important role is given to the family factors, especially parents. Because the characteristics of parents and their lifestyle, as well as the comfort of the family environment, play the main role in the two dimensions of "Parents' reaction to the child's research actions" and "Contextualization by parents".
2. The current chaotic economic conditions have a direct relationship with the decrease in the quality of three dimensions: "Parents' reaction to the child's research actions", "Contextualization by parents" and "Larger scale contextualization".
3. Strengthening the research spirit in children is a function of the quality of the conditions in which children are developed. Therefore, the more favorable the family, economic, environmental, cultural, social, educational, and governmental conditions are, the higher the possibility of fostering children as researchers.
4. Fostering children as researchers can lead to opportunities, challenges and threats for parents and the society, but if parents and the society are prepared, threats and challenges are minimized while opportunities and advantages are maximized.

Discussion and conclusion

Data collection and analysis in the current research led to the emergence of five dimensions of the paradigmatic model of dimensional analysis, presented in an explanatory matrix. These five dimensions include perspective (parent's reaction to the child's research actions), context (economical, cultural, social and governmental situations), conditions (familial, environmental, and educational factors), process (contextualization by parents and larger scale contextualization), and consequences (fostering children as researchers, and the resulting challenges and opportunities). After examining the relationships among these dimensions, a series of practical suggestions are presented for parents: correcting parents' behavior, taking the child seriously, being careful in choosing children's games and toys, giving freedom to the child, children's participation in the issues, providing the contexts for the child's research, appropriate behavior with the child, the child's connection with nature, strengthening media literacy, forming a group of mothers, and parents' care in choosing a kindergarten or preschool.

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