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Cognitive experiences for preschoolers: an overview of preschools

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Abstract

Early childhood period is a crucial period and should be utilized properly for optimum development of cognitive aspect therefore teachers and parents should be conscious about these aspects in harvesting child's optimum potential. Investigation was carried out in Haryana and Union Territory of Chandigarh to know the implementation of activity related to cognitive domain in school of different settings. Present investigation was conducted on 58 purposively selected schools of rural, urban and periurban areas of Hisar district of Haryana and Union Territory of Chandigarh. Results revealed that there were discrepancies in school/reported data and observations made by the researchers. Data reported that there were not many differences between urban government and urban private schools in implementation of activities related to cognitive domain. Data further reported that very few schools in rural and peri-urban areas provided the activities for cognitive domain like development of five senses, volume, environment make believe play, symbolic reasoning.

Key words: Cognitive domain, peri-urban, curriculum, symbolic reasoning, makes believe play.

Introduction

According to Piaget the preschool is a critical period for development, which occurs in an orderly sequence and depends on maturation of brain and interactions with their environment. Further its outcome depends on the quality of children experiences both inside and outside of the formal classroom because young children go through a series of psychosocial and neurobiological changes. Children ability to acquire knowledge and then use it effectively to plan, monitor, and evaluate their own capabilities is better ensured during early years of life. This domain includes the physical knowledge, perception, logical mathematical knowledge, scientific understanding and critical thinking skills. These skills are more effective when teacher use more creativity during implementation. Because for intellectual development more creativities are required. The children should be creative, alert and serious thinkers for better learning (Kennedy and Tipps, 1994).

Therefore, keeping in view all above study was conducted in Haryana and Union Territory of Chandigarh to know the implementation of activity related to cognitive domain in school of different settings education.

Methodology

Study was conducted in purposively selected state of Haryana and union territory of Chandigarh. Multistage sampling technique was used for sample selection. Pre and primary sections were selected purposively from rural, urban and peri-urban areas of Hisar district and Chandigarh. Two pre-school laboratories, one from Department of HDFS, CCSHAU, Hisar and other laboratory of Nursery school from Government Girls College, Chandigarh run by the Department of Child Development was also selected purposively. Further seven schools from each cultural settings i.e. rural, peri-urban area were selected randomly from both places – Hisar and Chandigarh. Sample from urban areas is consisted of fourteen schools; seven from private and equal number from public sector were taken randomly. To gather information, principal and school teachers were interviewed to know about status of cognitive activities. Data were collected through interview schedule and observation check-list. Descriptive analysis was used to draw inferences.

Result and Discussion

Cognitive development in young child is a complex process and its outcome depends on

the quality of what children experiences both inside and outside of the formal class room because young children go through a series of psychosocial and neurobiological changes. This domain includes the physical knowledge, perception, logical mathematical knowledge, scientific understanding and critical thinking skills.

Only 31.03 per cent schools of Hisar and 44.82 per cent school of Chandigarh were conducting activities for the development of five senses (viz; sight, hearing, touch taste and smell) in children (Table 1). This shows that school in Chandigarh were providing better opportunities for the development of five senses as compared to Hisar. It was revealed that 57.14 per cent urban private, 50 per cent urban government, 21.42 peri-urban and 14.28 per cent rural school were having plans for the development of five senses in children. However, both the laboratory pre schools were providing facilities in this aspect. Area wise distribution over both the locations revealed that the opportunities for the development of five senses in children was being provided but there was wide disparity between different areas as far as facilities are concerned (Table 2).

Fauth (1990) tells us we retain - 10 per cent of what we read, 20 per cent of what we hear, 30 per cent what we see, 50 per cent what we hear and see at the same time, 70 per cent of what we hear, see, and say, and 90 per cent of what we hear, see, say and do.

The researcher observed that the teachers did not put efforts in order to develop the five senses in young children. It was also observed that only in few urban private schools one or two activities were planned for children to develop five senses. On the other hand in govt. schools of both the places, the equipment and material were available but were not being used for any of the children. When teachers were asked they total that child would damage or break the material if allowed to use. This is because these types of materials are being provided by the government only once in 3-4 years that is why the material and aids are just lying as show pieces rather than being used for the development of young children. However, in two of the pre-schools in Chandigarh pre-school teachers were very hard working and were making extra efforts to prepare teaching aids for children.

Observation revealed that children of both laboratory pre schools were given appropriate opportunities for 'developing children's five senses'. It is mainly due to the participation of under-graduate with pre school laboratory children. Under-graduate students while performing their learning activities were providing lot of innovative ideas, material and activities to the young children for development of senses. The effectiveness of education programme on selected cognitive abilities was studied and found that preschool children performed significantly better in all three cognitive abilities implementing the appropriate programme (Gill *et al.*, 1990).

Cognitive skills are categorized as visual memory, verbal memory; make believe play, classification, serration, sequential thinking, problem solving, identification and symbolic reasoning. Data related to opportunities for enhancing different 'cognitive skills' in table 1 indicate that the most emphasized activity was the development of identification skill (65.5 % in Hisar and 72.41 % in Chandigarh) and least emphasized activity was make believe play (10.34 % at Hisar and 13.79 % in Chandigarh). Further the data also exhibit the opportunities for enhancing skills for visual memory (34.48 % at both the places), verbal (27.58 % in Hisar and 37.93 % in Chandigarh), classification (55.17 % in Hisar, 68.96 % in Chandigarh), seriation (65.51% in Hisar and 51.72 % in Chandigarh), sequential (48.27 % in Hisar and 55.17 % in Chandigarh) problem solving (34.48 % in Hisar and 44.82 % in Chandigarh) and symbolic reasoning (10.34 % in Hisar and 20.67 % in Chandigarh) shown in table 1.

Table 2 portrays the area-wise picture of activities to enhance the different cognitive skills. It was observed that in urban government and urban private school the maximum emphasis was on the activities related to identification skills (78.57% and 92.85% respectively) while the least preferred activity in urban government school was to make believe play (14.28%) and in urban private school it was symbolic reasoning (21.42%). On the other, hand in peri urban and in rural schools the most preferred activities were about the development of classification skill (50% and 71.42% respectively). However, in peri urban area activities related to sequential thinking were also equally important (50%). The least preferred activities in peri urban area as well as in rural area was again related to the

development of make believe play which was not at all being performed. Out of the two laboratory nursery tested only one at Chandigarh was found to be conducting all the activities related to the development of cognitive skills (Table 2) except in visual and verbal memory skills.

Data regarding development of different concepts in children (viz; colour, shape, pre-number, number space, time, volume, weight, temperature, environment, life and death) highlighted that majority of activities are being covered in present curriculum of schools at both the places, i.e. Hisar and Chandigarh (Table 2). However, concept development regarding volume, weight, temperature, environment, life and death are not being given due consideration at both the places. Area wise distribution of schools conducting activities on above said concept shows that development of color, shape, pre-number, number were the concepts reported by majority of urban private, urban govt. peri-urban and rural schools i.e. 85.71-100 per cent (Table 4.2.3b). Whereas less emphasized activities in urban government were regarding concept formation on space (28.57 %), volume (14.28 %), weight (21.42 %), temperature (14.28 %), life & (21.42 %); in urban private pre-schools, life (28.51%), death (14.28 %), in peri-urban schools time (7.14 %), temperature (7.14 %), environment (28.57 %); in rural schools, time (28.57 %), temperature (21.42 %), death (21.42 %). Both the laboratory nursery schools were conducting activities to develop all the concepts (Table 2).

Raos (1980) studied concept development in young children. It was observed that conservation of mass develops as early as four years, conservation of weight around the five year and volume concept in the later years. Observation revealed that in schools of Chandigarh, the number concept was promoted (by verbalizing) more than other concepts and where as development of colour concept was more emphasized in pre-schools of Hisar. Although, the respondents reported that the concepts of colour, shape and numbers were being developed in the children but the observations showed that there was no efforts was being made by teacher to develop concepts regarding time, space, volume, weight, temperature and environment.

Table 1 elucidates that almost all schools of Chandigarh (96.55 %) and almost half of the schools of Hisar (55.17) reported to have the provision for 3 R's i.e. reading, writing and arithmetic. The area wise distribution of provision for 3 R's depicted that almost all pre-schools of urban private (100 %) and peri-urban (92.85 %); almost half of the rural (57.14 %) and urban government (50 %) were conducting activities to develop 3R's. Both the laboratory nursery schools were also reported for teaching 3 R's to the children. The low percentage of schools dealing in 3R's in Hisar area is due to the fact that sampled schools were also included Anganwadi centers in which teaching of 3 R's is not a part of the curriculum. This fact also reduced the number of urban government schools dealing in 3R's when an area wise data were observed. (Table 2).

No uniform curriculum was observed over all pre-schools for the development of 3R's however all the sampled schools were conducting one or the other activity to develop this concept. A personal observation and discussion revealed that such activities were more because of the choice of parents however mostly teachers were against this. Actually parents wanted that school teachers to prepare children for formal schooling where understanding of 3R's is more important.

The pre-school children are able to learn the moral judgments and during this stage they should be prepared to develop a sense of differentiating between right and wrong. Both tables highlights that most of the schools of Hisar and Chandigarh irrespective of their location reported to providing activities to children for development of "sense of right and wrong".

Observation suggested that discipline in schools was maintained in the form of check on wrong behavior among children and with teacher. The children were checked for wrong doing or misbehaving and disobedience and on the other hand they were appreciated and encouraged for positive behavior. Observations also showed that in some of the pre-schools it was very difficult for teacher to tackle the children more because of poor child teacher ratio rather than incompetence of teacher. The teachers were more interested in maintaining discipline than teaching children about right and wrong doing.

Table 1.Existing educational programs for young children regarding cognitive activities

Sr. No.	Aspect	Hisar (Haryana) N=29	U.T. Chandigarh N=29	Grand total N=58
1.	Development of five senses			
	a. Sight	9 (31.03)	13 (44.82)	22 (37.93)
	b. Hearing	9 (31.03)	13 (44.82)	22 (37.93)
	c. Touch	9 (31.03)	11 (37.93)	20 (34.48)
	d. Taste	7 (24.1)	8 (27.58)	15 (25.86)
	e. Smell	9 (31.03)	13 (44.82)	22 (37.93)
2.	Opportunities of enhancing the skills of	-	-	-
	a. Visual memory	10 (34.48)	10 (34.48)	20 (34.48)
	b. Verbal	8 (27.58)	11 (37.93)	19 (32.75)
	c. Make believe play	3 (10.34)	4 (13.79)	7 (12.06)
	d. Classification	16 (55.17)	20 (68.96)	36 (62.06)
	e. Serration	19 (65.51)	15 (51.72)	34 (58.62)
	f. Sequential thinking	14 (48.27)	16 (55.17)	30 (51.72)
	g. Problem solving	10 (34.48)	13 (44.82)	23 (39.65)
	h. Identification	19 (65.51)	21 (72.41)	40 (68.96)
	i. Symbolic reasoning	3 (10.34)	6 (20.68)	9 (15.51)
3.	Activities for formation			
	a. Colour	27 (93.10)	24 (82.75)	51 (87.93)
	b. Shape	22 (75.86)	24 (82.75)	46 (79.31)
	c. Pre number	24 (82.75)	25 (86.20)	49 (84.48)
	d. Number	17 (58.62)	26 (89.65)	44 (75.86)
	e. Space	12 (41.37)	14 (48.27)	26 (44.82)
	f. Time	17 (58.62)	28 (96.55)	33 (56.89)
	g. Volume	6 (20.68)	6 (20.68)	12 (20.68)
	h. Weight	11 (37.93)	13 (44.82)	24 (41.37)
	i. Temperature	5 (17.24)	10 (34.48)	15 (25.86)
	j. Environment	12 (41.37)	8 (27.58)	20 (34.48)
	k. Life	12 (41.37)	9 (31.03)	21 (36.20)
	l. Death	9 (31.03)	6 (20.68)	15 (25.86)
4.	Provision 3R's (Reading, writing, arithmetic.	16 (55.17)	28 (96.55)	44 (75.86)
5.	Development of sense of right and wrong	29 (100)	28 (96.55)	57 (98.27)

Figures in parenthesis indicate percentage.

Conclusion

Results of the investigation suggest that early childhood period is crucial period and should be utilized properly for optimum development of cognitive and other aspects of development. Therefore, teacher and parents should be conscious about this aspect in harvesting child's optimum potential. But unfortunately majority of parents are not educated and few qualified parents are not aware of importance of these years of learning.

Table 2. Area wise existing status of educational programme for young children regarding cognitive domain

Sr. No.	Aspects	Urban Govt. N=14	Urban Pvt. N=14	Peri-Urban N=14	Rural N=14	Preschool Lab N=2
1. Development of five senses						
a.	Sight	7 (50)	8 (57.14)	3 (21.42)	2 (14.28)	2 (100)
b.	Hearing	7 (50)	8 (57.14)	3 (21.42)	2 (14.28)	2 (100)
c.	Touch	5 (35.71)	9 (64.28)	2 (14.28)	2 (14.28)	2 (100)
d.	Taste	5 (35.71)	8 (57.14)	-	-	2 (100)
e.	Smell	7 (50)	8 (57.14)	3 (21.42)	2 (14.28)	2 (100)
2. Opportunities of enhancing the skills of						
a.	Visual memory	7 (50)	8 (57.14)	3 (21.42)	2 (14.28)	-
b.	Verbal	6 (42.05)	7 (42.85)	2 (14.28)	4 (28.57)	-
c.	Make believe play	2 (14.28)	4 (28.57)	-	-	1(50)
d.	Classification	6 (42.85)	12 (85.71)	7 (50)	10 (71.42)	1 (50)
e.	Serration	9 (64.28)	12 (85.71)	5 (35.71)	5 (35.71)	1 (50)
f.	Sequential thinking	8 (57.14)	9 (64.28)	7 (50)	5 (35.71)	1 (50)
g.	Problem solving	3 (21.42)	11 (78.57)	4 (28.50)	4 (28.57)	1 (50.00)
h.	Identification	11 (78.57)	13 (92.85)	6 (42.85)	9 (64.28)	1 (50.00)
i.	Symbolic reasoning	3 (21.42)	3 (21.42)	1 (7.14)	1 (7.14)	1 (50.00)
3. Activities for formation						
a.	Colour	14 (100)	14 (100)	13 (92.85)	8 (57.14)	2 (100)
b.	Shape	12 (85.71)	14 (100)	10 (71.42)	8 (57.14)	2 (100)
c.	Pre number	12 (85.71)	14 (100)	9 (64.28)	12 (85.71)	2 (100)
d.	Number	8 (57.14)	14 (100)	14 (100)	6 (42.85)	2 (100)
e.	Space	4 (28.57)	7 (50)	6 (42.85)	7 (50)	2 (100)
f.	Time	11 (78.57)	10 (71.42)	7 (50)	4 (28.57)	1 (50)
g.	Volume	2 (14.28)	7 (50.00)	1 (7.14)	-	2 (100)
h.	Weight	3 (21.42)	8 (57.14)	5 (35.71)	6 (42.85)	2 (100)
i.	Temperature	2 (14.28)	7 (50)	1 (7.14)	3 (21.42)	2 (100)
j.	Environment	5 (35.71)	9 (64.28)	4 (28.57)	-	2 (100)
k.	Life	3 (21.42)	4 (28.51)	6 (42.85)	6 (42.85)	2 (100)
l.	Death	3 (21.42)	2 (14.28)	5 (35.71)	3 (21.42)	2 (100)
4.	Provision of 3 R's (Reading, writing and arithmetic.	7 (50)	14 (100)	13 (92.85)	8 (57.14)	2 (100)
5.	Development sense of right and wrong	14 (100)	14 (100)	13 (92.85)	14 (100)	2 (100)

Figures in parenthesis indicate percentage.

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