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Learning competence: an alternative approach to assessment of rural preschoolers

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Abstract

An investigation was carried out on 60 preschoolers of age ranging from 2-5 years at village Rawalwas. McCarthy scales of children abilities were used to assess the learning competences of the preschoolers. Learning competencies of children improved significantly during 2-5 years of age. The mean value of 4-5 years old children (M=142.0) was significantly greater than those of 3-4 year old children (M=135.2) and 2-3 years old children (M= 82.2).

Key words: Learning competencies, preschoolers, verbal, perceptual performance, quantitative, general cognitive, memory and motor.

Introduction

Learning competency is a very crucial aspect of development and refers to mental processes and the function involved in understanding and dealing with the surroundings. There are individual differences in cognitive abilities and variation in IQ, which may be due to genetic or other reasons (Caroll, 1992).With the increasing recognition of the early years as critical in the child's development, psychologists are evaluating children at younger and younger ages to determine their learning competencies as well as their strengths and weaknesses in important abilities. A wide variety of tasks involving verbal, numerical concepts, motor coordination, perceptual performance, and memory span skills reflect cognitive and motor abilities of a preschool child (McCarthy, 1972).

Preschool period, which continues till the primary school, represents one of the most crucial periods of development. Not only the rapid brain development takes place during these early years, but also foundations for sound physical-motor, social-emotional, cognitive and language development can be laid if due care is given during this period. Available research evidence indicates that much of child's mental development takes place before the age of 6 years (Berk, 2004).

Methodology

The present study was carried out at village Rawalwas of district Hisar of State Haryana. A sample of 60 pre school children was selected purposively. From selected sample children were categorized in three groups that were as 2-3, 3-4 and 4-5 years. Each age group consisted 20 children. Data were recorded with the help of age appropriate McCarthy Scales of Children Abilities (McCarthy, 1972). These scales contained aspects such as Verbal, Perceptual Performance, Quantitative, General Cognitive, Memory and Motor. The scale was applied on each child individually. The data were analysed for drawing suitable inferences.

Results and Discussion

A total of 20 children each in the age group of 2 to 3 years, 3 to 4 years and 4 to 5 years were selected in the village Rawalwas of district Hisar, thus making total of 60 children in all age groups. The children were subjected to age appropriate McCarthy scales of children abilities (Mc Carthy,1972). Analysis of variance indicated highly significant differences for all the components studied, namely, verbal, perceptual performance, quantitative and learning competency of the children with regard to different age groups (Table 1). There was also increase in representational, or symbolic activities during this stage as observed by Berk (2004).The age wise mean values for each parameter, namely, verbal, perceptual performance, quantitative and learning competency was also calculated (Table 2). During the age group of 2-3 years the mean value for verbal competency

Table 1. Analysis of variance for various parameters over the age groups

Parameters		Sum of Squares	df	Mean Square	F
Verbal	Between Groups	7473.1	2	3736.5	
	Within Groups	4294	57	75.3	49.6**
	Total	11767.1	59		
Perceptual performance	Between Groups	8704.558	2	4352.2	
	Within Groups	10082.99	57	176.8	24.6**
	Total	18787.55	59		
Quantitative	Between Groups	750.7	2	375.3	
	Within Groups	1890.7	57	33.1	11.3**
	Total	2641.4	59		
Learning competency	Between Groups	1554.7	2	777.3	
	Within Groups	1890.7	57	33.1	23.4**
	Total	3445.4	59		

**highly significant

Table 2. Mean values of various parameters of learning competency over the different age groups

Age		Verbal	Perceptual Performance	Quantitative	Learning Competence
2--3	Mean	34.6	42.0	19.0	82.2
	S.D.	4.2	11.1	3.7	18.7
	Int. sample	5.0	7.0	1.0	7.0
3--4	Mean	56.8	52.7	25.8	135.2
	S.D.	11.1	17.6	8.4	36.5
4--5	Int. sample	8.0	4.0	5.0	5.0
	Mean	59.6	55.5	27.0	142.0
	S.D.	9.2	9.9	4.0	22.1
	Int. sample	14	5	7	5

was 34.6 ± 4.2. The number of children performed significantly lower than the best-performed children was 5. This group was considered for providing the intervention programme. Similarly, the mean value for perceptual performance in this age group was 42.0± 11.1. The number of children performed significantly lower than the best performed children was 7. The mean value for quantitative competency in this age group was 19.0 ± 3.7. The number of children performed significantly lower than the best performed children was 1. When the overall learning competency was considered, the mean value was 82.2 ± 18.7. The number of children performed significantly lower in overall learning competency than the best performed children was 7.Children between the age of two and seven years developed the ability to respond mentally to ideas and uses symbolization (Bradshaw *et al.* 2001). During the age group 3-4 years the mean value for verbal competency was 56.8 ±11.1. The number of children performed significantly lower than the best performed children was 8. This group was considered for providing the intervention programme. Similarly, the mean value for perceptual performance in this age group was 52.7± 17.6. The number of children performed significantly lower than the best performed child was 5.

The mean value for quantitative competency in this age group was 25.8 ± 8.4. The number of children performed significantly lower than the best performed children was 5. When the overall learning competency was considered, the mean value was 135.2 ± 36.5. The number of children performed significantly lower in overall learning competency than the best performed children was 5. Chambers and Johnston (2002) conducted a study on developmental differences in the cognitive abilities of the children.

During the age group 4-5 years the mean value for verbal competency was 59.6 ±9.2. The number of children performed significantly lower than the best performed children was 14. This group was considered for providing the intervention programme. Similarly, the mean value for perceptual performance in this age group was 55.5± 9.9. The numbers of children performed significantly lower than the best performed child were five. The mean value for quantitative competency in this age group was 27.0 ± 4.0. The number of children performed significantly lower than the best performed children was 7. When the overall learning competency was considered, the mean value was 142.0 ± 22.1. The number of children performed significantly lower in overall learning competency. Thus, out of 60 children a total of 17 children in different age groups were considered for implementation of intervention, namely, 7 in the age group of 2-3 years, 5 in the age group 3-4 years and 5 in the age group of 4-5 years were considered. Nitasha *et al.* (2003) assessed the perceptual and conceptual abilities of 4-6 years old slow and revealed that the average learners were found to perform better than slow learners in both perceptual and conceptual abilities. As per Robert *et al.* (2006), children showed better mastery of numeric concepts scores on the McCarthy Scales of Children's Abilities.

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