

# Evaluation of Primary School Children's Cognitive Ability in Rural Areas of Kurukshetra

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## ABSTRACT

The study evaluated the cognitive abilities of 96 first-class students from government and private primary schools in three randomly chosen villages in the Kurukshetra district: Kheri Brahmanan, Narkatari, and Mirzapur. The students were tested in terms of perception, classification, reasoning, language and memory, and concept formation. The children's optimal scores on specific cognitive ability parameters were used to classify them into low, medium, and high categories. Children from private schools outperformed those from government schools on all measures of cognitive ability, according to a comparative cognitive assessment. The majority of students in government schools performed poorly on measures connected to memory and concepts, but moderately well on measures linked to perception and language. The majority of students in government schools were able to distinguish utilities and modes of transportation, but they struggled miserably to classify colours and sizes. Private school students often performed in the middle of the pack when it came to perception, reasoning, memory, and concept-related characteristics. However, in more than half of the cases, their language skills were at a high level.

**Key words:** Cognitive abilities, Government/Private primary school, Perception, Reasoning language, Concept development

The future of any country is centred on its children. The first five years of a man's existence, which are commonly referred to as his preschool years, are the most vital and significant in terms of his total development into a fully formed human being. This age group of children makes up the majority of our population. A child's development is a multifaceted process comprising many interconnected elements, and the formative years of schooling are crucial for the development of cognitive capacities. The sequential description of cognitive ability attainment from birth to adulthood was provided by Swiss psychologist Piaget year. Over time, psychologists have offered a variety of hypotheses on the development of cognitive skills, some of which have been adopted or improved upon by contemporary scientists and researchers. Numerous studies have shown that the environment is crucial and significant in the information that cognitive skills contain. Children's cognitive abilities are influenced by the quality of their surroundings; in environments that are conducive to and stimulating, they acquire cognitive abilities more quickly and easily than in environments that are not. It is undeniable that parents, who serve as a child's primary development agents, have a significant impact on cognitive development. Apart from the household, government and private schools, as well as primary schools, serve as important settings for the development of cognitive abilities in preschoolers. Children from primary schools can benefit from a comparative cognitive evaluation to assist identify the qualitative differences between these two places' environments and to recommend relevant interventions and strategic approaches for improvement. Taking into account all of these characteristics, the current study was designed to examine the cognitive capacities of children attending both government and private schools.

## RESEARCH METHOD

Three randomly chosen villages in the Kurukshetra district—Kheri Brahmanan, Narkatari, and Mirzapur—were the sites of the study. Purposive sampling was used to choose the study's location, or government and private primary schools, because the study needed a sample of preschool-aged children. Nevertheless, the sampled children were chosen at random from a list of students attending government and private primary schools in the chosen villages. Children who consistently showed up for class were chosen with great care. 48 students were chosen from primary schools run by the government and 48 from private schools. 32 kids from each community, or 16 from private and public primary schools, were taken. In order to evaluate the cognitive ability, a total of 96 children, 48 from each of the government and private schools, in the age range of 5-7 years, were involved. The six characteristics of the Namita et al. (2000) scale—perception, classification, reasoning, language, memory, and idea formation—were used to assess cognitive ability. The children's optimal scores on specific cognitive ability parameters were used to classify them into low, medium, and high categories.

## RESULTS AND DISCUSSION

Table 1 shows the perception-related cognitive abilities of children from two environmental settings. Of the children attending Government schools, 56.25 percent had medium-level perception abilities, while 43.75 percent fell into the poor category. None of the kids, nevertheless, were classified as high category. Regarding students at private schools, it was discovered that 81.25 percent of them possessed medium perception-related abilities, followed by low, or 18.75 percent, and that not a single student possessed high perception abilities.

**Table 1 - Children's Perception Related Abilities.**

Categories	Government (n=48)		Private (n=48)	
	Frequency	Percentage	Frequency	Percentage
Low (upto 9)	21	43.75	0	00
Medium (10-18)	27	56.25	39	81.25
High (19-28)	00	00	9	18.75
Total (N=96)	48	100	48	100

**Table 2 – Children's Classification Related Cognitive Ability.**

Categories	Government School Children (N=48)		Private School Children (N=48)	
	Frequency	Percentage	Frequency	Percentage
Colour	5	10.42	46	95.83
Size	3	6.25	40	83.33
Utility Items	35	72.92	48	100
Means of Transport	34	70.83	48	100
Birds and Animals	23	47.92	45	93.75

Data included in Table 2 show how children attending government and private schools compare in terms of their classification-related cognitive ability. When it came to classification skills, the majority of students attending government schools—72.92 percent—could identify utility goods, followed by modes of transportation (70.83 percent). But, just 47.92 percent of them could categorise birds and animals. The majority of students attending government schools did a very poor job of identifying things based on colour and size, as seen by their extremely low percentage. (10.42% and 6.25%, in that order). It was noted that all of the private primary school students could name common household goods and modes of transportation. The vast majority of them were able to categorise items based on colour (95.83%) and by type (93.75%), while 83.33 percent of private youngsters were detected to be able to do so.

**Table – 3 – Children’s Reasoning Ability**

Categories	Government School Children (n=48)		Private School Children (n=48)	
	Frequency	Percentage	Frequency	Percentage
Low	45	93.75	5	10.42
Medium	3	6.25	39	81.25
High	00	00	4	8.33
Total (N=96)	48	100	48	100

Table 3 provides information about children's reasoning ability. It was discovered that a relatively high percentage of students attending government schools (93.75%) were reported to have low thinking abilities, and the remaining 6.25 percent had low reasoning abilities. Not a single youngster attending government schools have a high degree of reasoning ability. Regarding youngsters attending private schools, the majority were found to have medium thinking abilities (81.25%), with high reasoning abilities (10.42%) and low reasoning abilities (8.33%) following suit. According to the data, most children attending government schools fell into the poor thinking ability category, whereas students attending private schools fell into the medium reasoning ability category.

**Table 4 – Children, s Language Ability**

Categories	Government School Children (n=48)		Private School Children (n=48)	
	Frequency	Percentage	Frequency	Percentage
Low (upto 13)	9	18.75	00	00
Medium (14-26)	40	83.33	21	43.75
High (27-41)	00	00	27	56.25
Total (N=96)	48	100	48	100

The data displayed in Table 4 shows that 83.33 percent of children attending government schools had language-related cognitive abilities that were of a medium degree, followed by 18.75 percent of children who had low cognitive abilities, and none of the children had high levels of language-related cognitive abilities. When it came to language-related abilities, data from private school students showed that 56.25 percent of them had strong language abilities, followed by 43.75 percent with medium cognitive abilities, and not a single child had low language abilities.

**Table 5 – Children’s Memory Related Abilities**

Categories	Government School Children (n=48)		Private School Children (n=48)	
	Frequency	Percentage	Frequency	Percentage
Low (upto 7)	44	96.67	13	27.08
Medium (8-14)	4	8.33	32	66.67
High (15-20)	00	00	3	6.25
Total (N=96)	48	100	48	100

The extent of cognitive capacities in terms of memory-related characteristics was calculated based on children's performance on a variety of memory-related tasks, such as item recall, sequential memory, and numerical memory, as shown in Table 5. It was shown that 83.33% of children in government schools had memory-related cognitive abilities below the medium level, while 96.67% of children had low memory-related abilities. Not a single student from Government schools has strong memory-related skills. It was discovered that, when it came to youngsters attending private schools, the bulk of them—66.67 percent—had medium levels of memory-related abilities, while just 6.25 percent had high levels. Additionally, it was found that the



largest number of private school students falling into the low group of any metric was 27.08 percent, which was related to memory-related skills.

**Table 6 – Children’s Comparative Conceptual Abilities.**

Categories	Government School Children (n=48)		Private School Children (n=48)	
	Frequency	Percentage	Frequency	Percentage
Low (upto 10)	34	70.83	00	00
Medium (11-20)	14	29.17	29	60.42
High (21-30)	00	00	19	39.58
Total (N=96)	48	100	48	100

The extent of concept development among the chosen children is shown in Table 6, which shows that no child had high conceptual abilities and that the majority of government school students—70.83 percent—had low conceptual abilities. The remaining children—29.17 percent—had medium conceptual abilities. 60.42 percent of children enrolled in private schools were found to have medium conceptual abilities, while the remaining 39.58 percent were classified as having high conceptual abilities. It was also noted that not a single youngster attending a private school exhibited weak conceptual abilities.

## STUDY’S CONCLUSION

Based on a comparative cognitive examination of children from two different environmental settings—government and private schools—it was found that students in private schools outperformed students in government schools across all six cognitive ability measures. The results unequivocally showed that private schools offered a superior environment for cognitive growth in comparison to public institutions. There may be differences in the environmental elements that contribute to the differences in cognitive ability performance between children attending government and private schools. Williams and Kamii (1986) also noted that the environment plays a significant effect in the development of cognitive capacities, while Saini and Jawal (2000) noted variations in children's numeric ability between rural and urban areas. Despite the fact that government schools are well-stocked with instructional tools that support cognitive development, children in government primary schools either rarely or never got access to these tools. The majority of the teaching aids were found to be entirely packed throughout the investigation and to have never been used by teachers at government schools. Despite the lack of instructional tools in private schools, students were nevertheless able to outperform those in public schools thanks to the instructors' devotion and hard work. Thus, it is recommended that government school teachers receive orientation training on the use and significance of instructional aids for cognitive development.

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