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## Research Article

### PRELIMINARY IDENTIFICATION OF COGNITIVE ABILITIES AND TASK PERFORMANCE OF TINY TOTS IN SED NATKHAT PLAY SCHOOL, BHIWANI

Shruti Marwaha<sup>1</sup>, Satyawar Sangwan<sup>2</sup> and Mukesh Punia<sup>3</sup>

<sup>1</sup>Research Scholar Centre for Research in Applied Cognitive Sciences, Mohali, India

<sup>2</sup>Director, SED Natkhat

<sup>3</sup>Principal, SED Natkhat Play School, Bhiwani

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#### ABSTRACT

Education is the key notion involved in child development and the allied aspects. Early childhood is the precious stage of life during which every child has an affinity for education which ought to be made affable to him in a lucid manner. It has been observed in the antiquated and traditional educational systems that literacy is imposed in an abstruse way to which learners have to acquiesce being meek. This lurid methodology makes children obstinate hampering their overall development. To mitigate the impact of adverse external stimulants in real life, it is vital to equip the children with a strong foundation of cognitive abilities. The present study was conducted on a sample of 81 young students aged between 4 and 7 years. It included the students studying in kindergarten, grade-1 and grade-2 who were assessed in terms of their intellectual development, physical intelligence, social intelligence and emotional intelligence. The sample was purposefully selected from the SED Natkhat Play School, Bhiwani for the preliminary identification of their cognitive abilities and task performance skills. The findings were indicative of the preliminary identification of cognitive abilities and task performance of girl as well as boys studying in the school. In continuation with the present research report, it is further suggested to take up a comparative data pertaining to the subjects after consummation of the monthly workout, weekly activities, daily tasks and recommendations through 'Unlock Platform by CRACS' which would be given to them for the purpose of intervention through the school. The present study would be extended to a longitudinal study to take up a comparative data pertaining to the subjects after consummation of the monthly workout, weekly activities, daily tasks and recommendations.

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#### INTRODUCTION

Education has become an inseparable part of life amid the present scenario. To realize this assert, every nation has been putting up efficient efforts to embed education in its culture. Teachers should stress on the effective domain that cannot be separated from the cognitive domain. Quality emotions and feelings help students to give their best potential in the classroom. The students who were aversive and think negatively cannot concentrate for a long time and have more difficulty in reaching their potential than others. SED Natkhat Play School in Bhiwani enables the students to compete with their own abilities and strive to improve their own record. The school emphasizes on self learning and to develop the life values of honesty, respect, responsibility and patriotism to become an asset to the community. It offers education in a safe and secure environment to promote independence, meaningful play, social interaction and the love

for education. It fosters all round development among the tiny tots with an integral approach to ensure physical, intellectual, emotional and social development. The curriculum is packed with real-world, concrete, sensory experiences where the young learners can touch, see, taste, hear and smell, thereby striking an interesting balance between learning and playing. The major objective is to help each child build physical, motor, cognitive, emotional, language, social skills and self-esteem. Children are encouraged to learn, grow and discover at his own natural pace. Eysenck and Cookson (1969) investigated the relationship between creativity and intelligence of school boys and girls. It is found that the two genders differed significantly in intelligences but there is no significant difference in creativity. Piaget (1981) explained that the cognitive development and intelligence can be developed among children right from the stage of sensorimotor through the preoperational and concrete operational stages of life during this period of life,

\*Corresponding author: Shruti Marwaha

Research Scholar Centre for Research in Applied Cognitive Sciences, Mohali, India

the cognitive mapping takes place which list the dimensions of intellectual physical motor social and emotional development for the life ahead. Heyneman and Loxley (1983) concluded that emotional intelligence is directly proportional to the performance and creativity. Gardner (1992) also narrated that the education can be imparted to different children in the way it is meant to be imported to them so that the information can be utilised in the best possible way. Gray and Viens (1994) witnessed that the pupils who attended the MI class were found to possess all the eight intelligences in higher but varied degrees. The results emphasized the importance of blue film multiple intelligences in the classroom and also highlighted the importance of Cooperative diversity in school according to the study it was suggested that physical motor emotional and social intelligence are important in the cognitive development of children. Phillips and Shonkoff (2000) explained the importance of scientific modes of education during early childhood the results revealed that during the early years child education it is very important to constructive and conducive activities which would lead to success in the later years of life. The study also emphasised the importance of playful educational activities which would include cognitive and academic based education. The results further found that the overall development of children is very important aspect of school education. This important aspect cannot be ignored if the best development is desired out of children. Berk et.al (2006) investigated that the children who have good social skills and good emotional health are more likely to succeed academically.

The results also found that the students who have better social and emotional intelligence are able to adjust in the life. Gardner (2006) clearly mentioned the differential abilities of on individual basis. These different intelligences can be utilised for learning the same content in different ways this can be utilised in the school curriculum for better pedagogy and teaching learning process. Huitt and Hummel (2003) explained that the theory of cognitive development has clearly stated the importance of exposing children to their own abilities and capability by providing enriched environment through which they can learn, understand and explore their surroundings. Almon (2007) found that the physical, social, emotional and intellectual development of children are interrelated. Kingdon (2007) mentioned about the educational system in Indian context all the progress of education child grows. The study suggested that the educational sector of Indian scenario required a change in order to keep pace with the changing scenario of the society and Expectations that the parents have from their children. Mustard and Young (2007) emphasized that problem based play programs optimize development of neural pathways during all periods of early childhood from infancy to grade one. They found that the children who was exposed to cognitive activities were able to perform in a much better way. Lockhart (2010) investigated sound that playful activities can become an important mode of attaining physical motor social hostel and intellectual development. Anwar *et al.* (2012) they studied the differences in the creative thinking abilities between students with high and low levels of academic achievements. Results of the study revealed that there was no difference between high achievers and low achievers in terms of creative thinking abilities. Chudgar and Quin (2012) found the theory of multiple intelligences as the

most viable and effective platform for 21st century educational and instructional methodologies based on the understanding of the value of diversity in today's classrooms and educational institutions. McClelland et.al (2012) found that when the students are intellectual in terms of social emotional as well as physical development, they can attain better developmental tasks and landmarks. Gunasekaran et.al (2013) found that the emergence of collective intelligence. The study examined the multiple intelligences pattern among the high achievers and the average achievers. The results showed that most of the students who were high achievers had more than one dominant multiple intelligence whereas those who are average achievers had single or at the most had two dominant multiple intelligences. Dunton et.al (2014) found that for the better health and overall development of general it is important for them to have to write physical feeling States and physical activity ultimately little better personal profile in terms of lifespan development. Lam et.al (2014) examined the relationship between intelligence and creativity where contradicting findings were reported. The types or degree of intelligences varies among individuals and is not a fixed attribute which is similar with the nature of creativity. Both intelligence and creativity could be developed in varying degrees throughout the development of an individual.

The study also suggested that in order to develop the desirable intellectual development and skills required for achieving success in life what is important to expose children to the right amount of cognitive activities and cognitive skill based tasks. This would lead to enhance the intelligence transfer list creativity among children for better performance. It was also confirmed that it is important to identify students' intelligence profile to raise his level of performance with the passage of time and age and that the profile of children at this stage is very important which can later be utilised for understanding their key skills. Black-Hawkins et.al (2016) examined the relationship between creativity and emotional intelligence of students. Results revealed that there was a significant gender difference in creativity but no significant gender difference in emotional intelligence. Girls possessed significant peak in creativity. Sanchez-Martin et.al (2017) emphasized the importance of identification of dominant multiple intelligence multiple intelligence and utilizing this concept in the educational sector has demonstrated increased student achievement including improved engagement and performance. Coleman (2018) found that it is possible for the parental expectations influence student's academic outcomes through a variety of mechanisms, some of which are more powerful for a students. Weissberg (2019) revealed that a significant correlation was found between parent's perceived estimation and students' performance and that it is important to promote the social and emotional learning of school children in order to help him achieved their maximum potential. Cavioni and Zanetti (2019) identified the relationship between individuals multiple intelligence areas and their learning styles and emphasised the importance of social and emotional development among students specially in the age of preschool and Kindergarten it was accepted that the children who had better emotional and social understanding were able to outperform the students who left skills and development. Barutcu *et al.* (2019) depicted difference in creativity of the school students with different levels of intelligence and self

concept and explained that the multi sensory perception attention and intellectual development is important in the school age. it was further notified that the early identification of children's abilities and capabilities available the teachers and parents to director intellectual and developmental skills. Shephard (1997) found that there is a close association between Social intelligence and academic achievement of the students. Parten (1932) recorded that the social interaction and social participation is very important for the development of a child. Went zel (1991) found that students who are socially more active and responsible are able to cope up with the academic stress Expectations in the constructive manner. Brackettet.al (2019) emphasized that social and emotional learning are important for better learning experiences. Hirsch (2019) found that the appropriate social behavior social can be inculcated among children with the passage of time as they are exposed to social and interactive sessions through play and academics in the school. Sternberget.al (2019) have suggested that creativity is very closely associated with Intelligence and system when the creativity among students can be enhanced through the creative tasks.

### METHODOLOGY

The present study was conducted on a sample of 81 young students aged between 4 and 7 years. It included the students studying in kindergarten, grade-1 and grade-2. The sample was purposefully selected from the SED Natkhat Play School, Bhiwani for the preliminary identification of their cognitive abilities and task performance skills.

**Table 1** Sample Distribution

Age/ Grade	4 years (n=9)	5 years (n=43)	6 years (n=14)	7 years (n=15)
Kindergarten (n=43)	9	34	Xxx	xxx
Grade-1 (n=24)	xxx	9	12	3
Grade-2 (n=14)	xxx	xxx	2	12

**Table 2** Details of Participants

KG-4 years		KG-5 years		
Vironika	Gitanshi	Ritesh	Aarvi	Ranvijay
Vidit Kadyan	Rishika	Vritee	Arora	Anaadi
Raghav	Nisbhik	Ayachi	Himani	
Radhya	Vedant	Jangra	Angel	Kiya Lamba
Suhan	Medhansh	Sara	Garv	Girisha
Vironika	Sarthak	Aadya	Jaspreet	Myra Arya
Akshit	Samdisha	Samar	Aaradhya	Vanshtaj
Sanskar	Vidit Kadyan	Yuvraj	Nikunj	Nirwan
Yashvardhan	Sanskar	Huticane	Garv	
	Yashvaan	Abhinav		
G-1 (5 Years)	G-1, (6 Years)	G-1, (7 Years)	G-2, (6 Years)	G-2, (7 Years)
Vanshika R	Pawani Sharma	Harshita	Daisha Sharma	Vijom Jhukral
Ranvijay	Raavi	Aryan	Ranvijay	Sneha
Shrestha	Gargi	Aarush		Hemant Lamba
Yashna	Vanshika	Mehta		Mishthi
Inishka Dahiya	Rudra			Ishika Dhamija
Cheryl	Hiren			Sanidhya Pilani
Mehak	Chauhan			Siddharth
Vanshika	Molik			Prateek
Mokshita	Hemanya			Aggarwal
	Diksha Jangra			Sanvi
	Gaurang			Apeksha
	Divyanshi			Mukund
	Yashika			Madhav Hooda
				Om

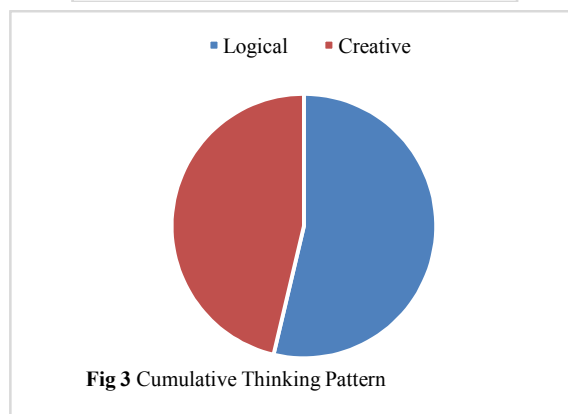
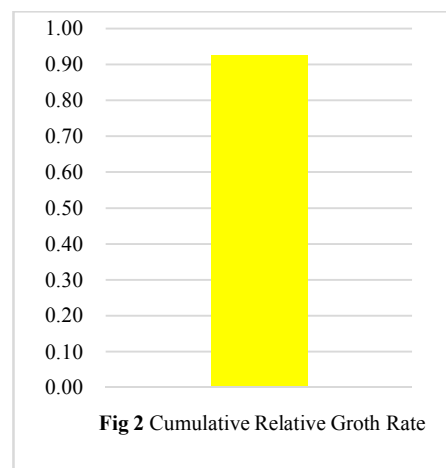
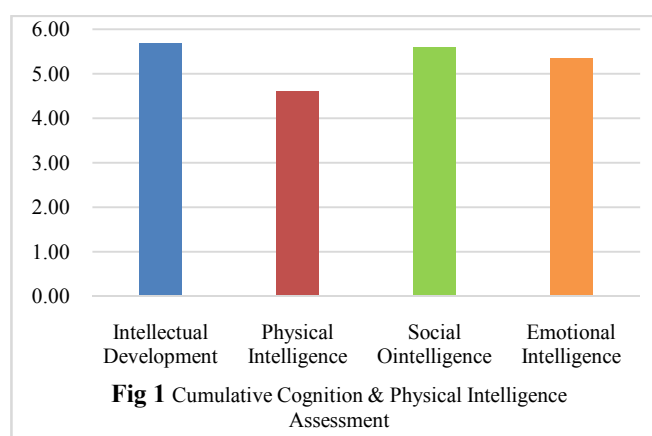
There were 43 students of the kindergarten, 24 students of grade 1 and 14 students of grade 2. Further the sample was classified into groups based on their age as described in table 1.

### Findings and Inference

Once the data was collected, it was analyzed to draw the relevant inferences. The findings were indicative of the preliminary identification of cognitive abilities and task performance of girl as well as boys studying in the school.

**Table 3** Cognitive Abilities and Task Performance

Factors	Kindergarten	Grade 1	Grade 2	Total
Intellectual Development	5.46	5.79	6.16	5.68
Physical Intelligence	4.41	4.74	5.03	4.62
Social Intelligence	5.65	5.81	5.14	5.61
Emotional Intelligence	5.12	5.67	5.59	5.36
Relative Growth Rate	0.99	0.89	0.78	0.93



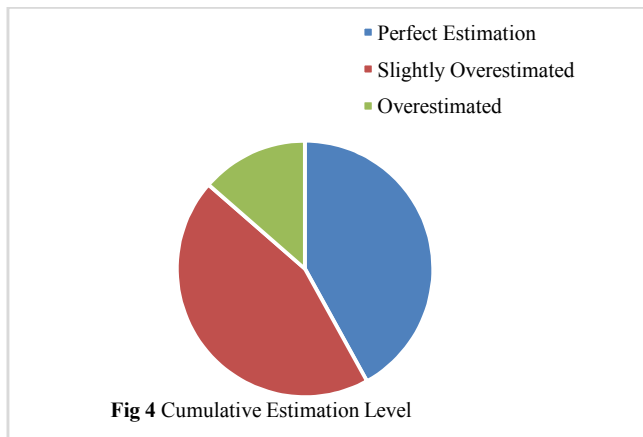


Fig 4 Cumulative Estimation Level

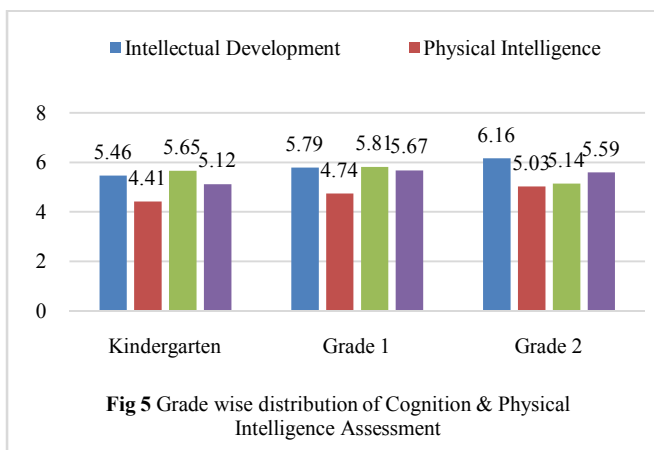


Fig 5 Grade wise distribution of Cognition & Physical Intelligence Assessment

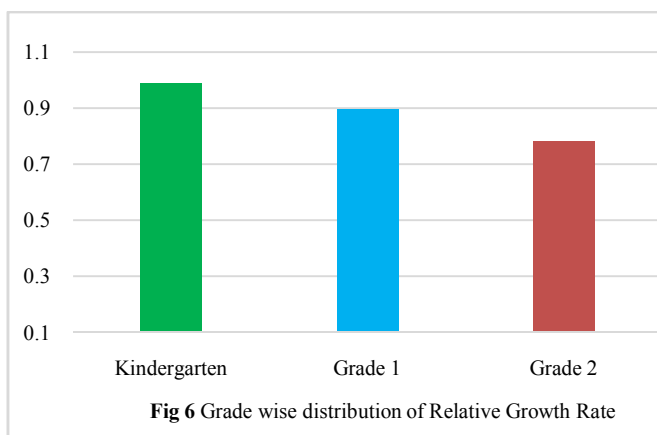


Fig 6 Grade wise distribution of Relative Growth Rate

The average chronological age of the respondents was notified as 5.4 years. In this context as they were assessed in terms of their intellectual development, physical intelligence, social intelligence and emotional intelligence. It was found that the cumulative intellectual development of respondents in kindergarten was 5.46 as compared to 5.79 in case of respondents in grade-1. The subjects in grade 2 has attained intellectual development upto 6.16. In all, at an average, the subjects were witnessed to have intellectual development of 5.68. The cumulative physical intelligence of respondents in kindergarten was 4.41 as compared to 4.74 in case of respondents in grade-1. The subjects in grade 2 has attained physical intelligence upto 5.03. In all, at an average, the subjects were witnessed to have physical intelligence of 4.62. The cumulative social intelligence of respondents in kindergarten was 5.65 as compared to 5.81 in case of respondents in grade-1. The subjects in grade 2 has attained

social intelligence upto 5.14. In all, at an average, the subjects were witnessed to have social intelligence of 5.61. The cumulative emotional intelligence of respondents in kindergarten was 5.12 as compared to 5.67 in case of respondents in grade-1. The subjects in grade 2 has attained emotional intelligence upto 5.59. In all, at an average, the subjects were witnessed to have emotional intelligence of 5.36. It was also inferred that the cumulative relative growth rate of respondents in kindergarten was 0.99 as compared to 0.89 in case of respondents in grade-1. The subjects in grade 2 has attained relative growth rate upto 0.78. In all, at an average, the subjects were witnessed to have relative growth rate of 0.93.

### Further Implications

In continuation with the present research report, it is further suggested to take up a comparative data pertaining to the subjects after consummation of the monthly workout, weekly activities, daily tasks and recommendations through 'Unlock Platform by CRACS' which would be given to them for the purpose of intervention through the school. Besides, the above mentioned findings and inferences, the subjects had also been assessed in terms of their dominant multiple intelligences, thinking pattern and estimation levels through parents. This compiled data would be further utilized for comparative analysis and educational implications to enhance their cognitive abilities and task performance.

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