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Cognitive abilities among slow learners with respect to Parents education and family income

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Abstract
Cognition is the process of acquiring knowledge and understanding the world. Cognitive processes consist of the sub processes of perception, memory, language, thinking through which knowledge is acquired and maintained. Cognitive development may be viewed as the outcome of the continuous organism - environment interaction. The present study was conducted on 211 slow learners from Ranga Reddy district of Telangana State. The result reveals that there was a significant difference in cognitive abilities with respect to parent's education and family income.

Keywords: cognitive abilities, slow learners, perception

Introduction

Cognition is the process of acquiring knowledge and understanding the world. Cognitive processes consist of the sub processes of perception, memory, language, thinking through which knowledge is acquired and maintained. Psychological terms such as sensation, perception, imagery, 'retention, recall, problem solving, thinking etc, are all aspects of cognition. Cognitive development may be viewed as the outcome of the continuous organism-environment interaction.

Cognitive abilities are brain-based skills we need to carry out any task from the simplest to the most complex. They have more to do with the mechanisms of how we learn, remember, problem-solve, and pay attention rather than with any actual knowledge. Cognitive development deals with how an individual in its encounters with phenomena constructs the world (Kessen, 1966). Some psychologists are also of the opinion that mental activities such as exploration, curiosity and creativity may be taken as aspects of cognition (Berlyne, 1966). Cognitive functions seem to develop systematically in a continuous spiral fashion through a dynamic interaction with the environment.

Cognitive processes may become complex and qualitatively enriched if the socio-cultural set up is more cognitively stimulating and challenging. But in adverse situations it may stagnate and became less developed (Mussen, 1974; Ault, 1977). Bruner (1966) viewed cognition as an intentional and continuous activity, 1 2 developing through three hierarchical modes of representation: enactive, iconic and symbolic. Piaget may be regarded as the most important psychologist of 20th century who studied cognitive development of children most thoroughly. According to Piaget (1976) knowledge, cognition and intelligence are interchangeable and are products of experience. To Piaget, children's thought processes are qualitatively different from those of adults'. He identified thinking structures of each level which develop in dynamic interaction with environment.

The Importance of Cognitive Ability

1. Higher levels of cognitive ability lead to higher levels of performance on all jobs.
2. There is no ability threshold.
3. Cognitive ability predicts job performance better in more complex jobs.
4. Cognitive ability predicts the core technical dimension of performance better than it does the non-core 'citizenship' dimensions of performance.
5. Cognitive ability predicts objectively measured performance better than it does subjectively measured performance (such as supervisor ratings).
6. Specific mental abilities (such as mechanical reasoning) add very little beyond GMA, although can be quite useful in specific jobs.
7. GMA predicts core performance much better than do 'non-cognitive' predictors such as vocational interests and different personality traits.
8. However, GMA predicts most dimensions of non-core performance (such as personal discipline) much less well than they do 'non-cognitive' traits of personality and temperament.

Slow Learners

Students with below average cognitive abilities whom we cannot term as disabled are called slow learners. They struggle to cope with the traditional academic demands of the regular classroom. Actually slow learners are normal students but the problem is that they are simply not interested in studying under traditionally accepted system of education

- According to Terman and Merril (1960) 17 per cent of the children were borderline defective or slow learners whose IQ ranged between 75 and 85. The slow learner's both receptive and expressive language ability were typically limited.
- Kirk (1970) states that the slow learning child is not

considered mentally retarded because he is capable of achieving a moderate degree of academic success at a slower rate than the average child. Also the child is educated in the regular classes with special provisions except an adaptation of the regular class programme to fit his slower learning ability.

- According to Savage and Hooney (1979), slow learners are designated as those people whose scores of IQ falls within range of 75-80. Their academic achievement linked to limited learning capacity. All the slow learners have only one common characteristic, which is less than average intellectual capacity, but in behavior they could be better from others.

Characteristics of Slow Learners

In general, slow learning students may exhibit some or all of these characteristics, depending on their age and degree of problems acquiring knowledge at school.

- First, slow learners are recurrently immature in their relations with others and do poorly in school.
- Secondly, they cannot do multifaceted or complex problems and work very slowly.
- They lose track of time and cannot convey what they have learned from one task to another well.
- They do not easily master skills that are academic in nature, such as the times tables or spelling rules.
- Perhaps the most exasperating trait is their inability to have long-term goals. They live in the present, and so have considerable problems with time management perhaps due to a short attention span and poor concentration skills.

Objectives

1. To find the cognitive abilities of slow learners in relation to their father's education.
2. To find the cognitive abilities of slow learners in relation to their mother's education.
3. To find the cognitive abilities of slow learners in relation to their family income.

Hypothesis

1. There is no significant difference in cognitive abilities of slow learners in relation to their father's education.
2. There is no significant difference in cognitive abilities of slow learners in relation to their mother's education.
3. There is no significant difference in cognitive abilities of slow learners in relation to their family income.

Sample of the study

For the present study, simple random sampling technique was adopted. A random sample of 400 primary school children from over all 16 Government and Private Primary Schools located in Rangareddy district of Telangana State were selected for the present study, and among the 400 primary school children 211 students were identified as Slow learners for the present study which constituted the sample. Thus, the sample of the study was 211 students.

Research Tools

This study was conducted in two phases

Phase -1

- Identification of Slow learners
- In the phase -1 the researcher was select 16 schools (only 4th standard 400 students) for selection of slow learners based on GLAD test
- After performing GLAD test the students were selected based on the scores of GLAD test. After Completion of the students were identified three categories, i.e, Slow, Moderate and High achievers. From the total sample 211 students were Identified as slow learners, 175 were moderate and few (14) were High achievers.
- For this study from total sample 211 students were identified as slow learners.

Phase-2

The following assessment tools was administer on identified slow learners students who are identified by GLAD test, i.e, 211 students were selected for the study.

The Following Tools Was Used In the Present Study

1. Grade level assessment device for children with learning problems in schools prepared by Jayanthi narayan. For screening purpose.
2. Passi-Usha test of creative problem solving by B.K. Passi and Usha kumar
3. Divergent production abilities by K.N. Sharma
4. Immediate memory span
5. Academic achievement motivation test by T.R. Sharma

Analysis and Interpretation

Hypothesis 1

There is no significant difference in cognitive abilities of slow learners in relation to their father's education.

Table 1: Showing Cognitive Abilities of Slow Learners Parent's education (Father's education)

	Father's Education	N	Mean	SD	F	Sig.	DF
Cognitive Abilities	Illiterate	51	12.08	3.67	5.51	.01	3,207
	Up to SSC	94	14.21	3.54			
	Graduation	56	14.90	5.40			
	PG and Above	10	15.15	3.21			
	Total	211	13.91	4.26			

From the above table, the means scores obtained for Father's education who were Illiterate, Up to SSC, Up to Degree and PG and above were 12.08, 14.21, 14.90 and 15.15 respectively. The obtained F value 5.51 with a df 3,207 was found to be statistically significant. Hence, students of fathers who were PG and above appear to be relatively better than others in Cognitive Abilities among slow learners.

Hence, the hypothesis which states that, "There is no significant difference in cognitive abilities of slow learners in relation to their father's education is rejected."

Hypothesis 2
There is no significant difference in cognitive abilities of slow learners in relation to their mother's education.

Table 2: Showing Cognitive Abilities of Slow Learners Parent's education (Mother's education)

	Mother's Education	N	Mean	SD	F	Sig.	DF
Cognitive Abilities	Illiterate	29	12.97	3.62	1.484	.220	3,207
	Up to SSC	77	14.07	3.63			
	Graduation	64	13.76	4.57			
	PG and Above	41	15.10	5.13			
	Total	211	13.91	4.26			

From the above table, the means scores obtained for Mother's education who were Illiterate, Up to SSC, Up to Degree and PG and above were 15.10, 14.07, 13.76 and 12.97 respectively. The obtained F value 1.484 with a df 3,207 was found to be statistically not significant. Hence, based on the mean scored, students of mothers who were PG and above appear to be relatively better than others in Cognitive Abilities among slow learners.

Hence, the hypothesis which states that, "There is no significant difference in cognitive abilities of slow learners in relation to their mother's education is accepted."

Hypothesis 3
There is no significant difference in cognitive abilities of slow learners in relation to their Family Income.

Table 3: Showing Cognitive Abilities of Slow Learners Family Income wise

	Family Income	N	Mean	SD	F	Sig.	DF
Cognitive Abilities	Up to 10,000	53	13.83	4.31	1.25	0.26	1,208
	10,001 to 50,000	128	14.03	4.11			
	Above 50,001	30	13.50	4.91			
	Total	211	13.91	4.26			

From the above table, the mean score obtained for the student's family income for the amount upto Rs. 10,000/-, Rs.10,001/- to Rs.50,000/-, and Rs.50,001/- & above were 13.83, 14.03 and 13.50. The obtained F value 1.25 with a df of 2, 208 was found to be statistically not significant. However, it may be inferred that students belonging to families whose monthly income is Rs.10001/- to 50,000 appear to be better than others.
Hence the hypothesis 3, which states that 'There is no significant difference in cognitive abilities of slow learners in relation to their family income', is accepted.

Findings
1. *Father's Education:* Student's Fathers who were PG and above were relatively better than others, i.e. who were illiterate, educated upto SSC and graduates in Cognitive Abilities among slow learners.
2. *Mother's Education:* Student's Mother's who were PG and above were relatively better than others, i.e. who were illiterate, educated upto SSC and graduates in Cognitive Abilities among slow learners.
3. *Family Income:* Students belonging to families whose monthly income was Rs.10, 001/- to Rs.50, 000 appear to be better than others, i.e who had a monthly income upto Rs.10, 000/- and above Rs. 50, 001.

Conclusion
The result reveals that there is a significant difference in Cognitive Abilities among slow learners with respect to parent's educational qualification and family income.

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