

# Knowledge of primary school teachers in dealing with learning disabilities among children

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**Abstract:** Learning Disabilities (LD) are a group of neurological disorders which cause problems in processing. The child has difficulty in listening, speaking, reading, reasoning, writing and mathematical calculations. They are often mistaken for being underachievers, lazy, dumb or that they are not fit to be in school due to their 'laidback' attitude towards academics. This is a "hidden handicap" when compared to other physical disabilities as the child grows up like any other typically growing children. It is of utmost importance to realize that LD can affect a child's life beyond academic achievement. The present study aimed at assessing and comparing the knowledge of primary school teachers from government and private school setups. A questionnaire was developed by the investigator to study the demographic characteristics and the knowledge of teachers with regard to learning disability among primary school children. The total sample comprised of 400 teachers, of which 200 teachers were from 16 government schools and 200 teachers were from 16 private schools in Urban Bangalore city. The statistical analysis was carried out by applying percentages, mean, standard deviation, chi square and "t" test. The findings of the study revealed that majority of the primary school teachers were degree holders and were teaching State syllabus for children. A higher mean score was obtained by the private school respondents (42.30) with regard to all the four areas of specific difficulties, viz reading, writing, spelling and arithmetic as compared to government school respondents. The statistical analysis found to be significant at 5% level with the t-value being 5.94. In the mean values for the various areas of discrepancy between achievement and the intellectual ability in learning disabled children, it was found that the scores of private school respondents were relatively higher (40.2%) as compared to the government school respondents (32.2%). The t-test value found to be significant at 5 % level (t=4.79). The overall mean scores for knowledge of teachers regarding LD it was found that the private school respondents scored higher (44.3%) as compared to the government school respondents (34.8%).

**Keywords:** learning disabilities, knowledge, primary school teachers.

## 1. INTRODUCTION:

Learning is the base of all knowledge. When a child has numerous ideas and need to express them, but is unable to do so, imagine the pain he/she goes through. Perhaps, the child is being bombarded by sights and sounds and is unable to focus while trying to read a paragraph or he/she is trying to use subtraction to solve a math problem, or simply even copy down notes from the black board. Such problems are seen among many elementary school children on a daily basis. These children are identified under the umbrella term 'Learning Disabilities' (LD), a neurological condition that interferes with a person's learning.

Unlike many other disabilities, this is "hidden handicap" as the child grows up like any other typically growing children. And because he/she looks "normal" and also possesses average or above average IQ, such children are under a lot of pressure from parents, schools, and the society in general to be at par with their peers. A child with LD has disorders related to listening, speaking, reading, reasoning, writing and mathematical calculations. They are just 'wired' differently due to many prenatal, post-natal, biological or biochemical factors that may have occurred before, during or after the birth of the child.

The National Joint Committee on Learning Disabilities (2016) states that "Learning Disabilities" is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical skills. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction and occur across the life span. Problems in self-regulatory behaviours, social perception and social interaction may exist with learning disabilities but do not, by themselves, constitute a learning disability. Although learning disabilities may occur concomitantly with other disabilities (for example, sensory impairment, intellectual disabilities, emotional disturbance), or with extrinsic influences (such as cultural or linguistic differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences. (1)

Some of the most common identifications of a child with LD which may occur on a fairly regular basis are:

- Pronunciation problems.
- Slow vocabulary growth, often unable to find the right word.
- Slow to learn the connection between letters and sounds.
- Confuses basic words (*run, eat, want*).
- Difficulty in rhyming words.
- Trouble learning numbers, alphabet, days of the week, colors, shapes.
- Extremely restless and easily distracted.

- Trouble interacting with peers.
- Difficulty following directions or routines.
- Fine motor skills slow to develop.
- Makes consistent reading and spelling errors including letter reversals (*b/d*), inversions (*m/w*), transpositions (*felt/left*), and substitutions (*house/home*).
- Transposes number sequences and confuses arithmetic signs (+, -, x, /, =).
- Slow to remember facts.
- Slow to learn new skills, relies heavily on memorization.
- Impulsive, difficulty in planning.
- Unstable pencil grip.
- Trouble learning about time.
- Poor coordination, unaware of physical surroundings, prone to accidents.

Based on the frequency of occurrence, the following characteristics have been identified as widely prevalent in individuals with LD (Nakra 2007) (2):

1. Disorders of attention
2. Perceptual impairments
3. General coordination deficits
4. Disorders of memory and thinking.
5. Specific difficulties in the areas of reading, arithmetic, writing and spelling
6. Disorders of speech and hearing.

Experts in the field report that at least 10-15 percent of children in India have learning disabilities (3). An estimation of 30 million children are known to be dyslexics. According to a study conducted by Agrawal and Shukla (2015), 67% of primary school teachers had no knowledge of LD (3). The only way to handle the situation is early detection and intervention by which the symptoms of unacceptable language and behaviour can be minimized.

In the light of the above discussion, an attempt was made to study the knowledge of primary school teachers of government and private schools on LD in children.

**2. OBJECTIVES:**

- i. To study the knowledge of primary school teachers with regard to LD in young children.
- ii. To assess and compare the knowledge of LD among primary school teachers of government and private schools.

**3. HYPOTHESIS:**

- Teachers lack adequate knowledge with regards to LD in young children.
- There will be a significant difference in the knowledge of LD between the government and private school teachers.

**4. SELECTION OF SAMPLE AND SAMPLING TECHNIQUE:**

A survey of Government and Private Schools in Bangalore city was done by the researcher. A total of 32 schools in Urban Bangalore district were considered for the study of which 16 private and 16 government schools. The purposive random sampling technique was used. The total sample constituted of 400 primary school teachers out of which 200 teachers from government schools and 200 teachers from private schools were randomly selected.

**5. TOOL:**

A questionnaire was developed by the investigator for the purpose of studying the knowledge of teachers regarding LD among children. The tool consisted of two parts: Part A and B. Part A deals with the basic data and Part B contained 43 statements on specific data related to knowledge teachers in dealing with LD among children.

**6. PROCEDURE:**

A total of 60 schools were randomly selected by the researcher for the sample of the study. Thirty two schools were streamlined and official permission was obtained from the administration of the educational institutions to collect data from the teachers. Once finalized, the researcher met the teachers during their free time, explained the significance of the study and requested them for a date and time to collect the data as per their preference. As per their specified date and timings, the investigator administered the scale and collected the data.

**7. RESULTS AND DISCUSSION:**

The data collected from the respondents was tabulated and statistically analyzed by applying percentage, mean, standard deviation, chi square and 't' test. Table 1 shows the classification of respondents by gender.

**Table 1**  
**Classification of respondents by gender**

n=400

Gender	Respondents			$\chi^2$ Value
	Government Schools	Private Schools	Combined	

	N	%	N	%	N	%	
Male	15	7.50	10	5.00	25	6.30	1.07 <sup>NS</sup>
Female	185	92.50	190	95.00	375	93.70	
<b>Total</b>	<b>200</b>	<b>100.0</b>	<b>200</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	

NS: Non-significant

$$\chi^2 (0.05, 1df) = 3.841$$

Table 1 describes the classification of respondents by gender. In case of government schools, a higher percentage of respondents (92.50%) were females whereas only 7.50 percent of them were male teachers.

With regard to respondents from private schools, majority of them (95.00%) were female teachers and only 5.00 percent of them were male teachers.

The combined results showed that majority of respondents (93.70%) were female teachers. However, gender did not have any significant association with government and private school respondents. The Chi-square value found to be 1.07.

Table 2 shows the distribution of respondents based on their educational qualification.

**Table 2**  
**Classification of respondents by educational qualification**

Educational qualification	Respondents						X2 Value
	Government schools		Private schools		Combined		
	N	%	N	%	N	%	
PUC	20	10.00	14	7.00	34	8.50	1.46 <sup>NS</sup>
Degree	142	71.00	151	75.50	293	73.20	
Post graduate	38	19.00	35	17.50	73	18.30	
<b>Total</b>	<b>200</b>	<b>100.0</b>	<b>200</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	

n=400

NS: Non-significant

$$\chi^2 (0.05, 2df) = 5.991$$

Table 2 depicts the respondents' educational qualification. It was observed that majority of the respondents (71.00%) from government schools had completed their degree, followed by 19.00 percent being post-graduates and only 10.00 percent of them had completed their PUC.

With regard to respondents from private schools, a higher percentage of them (75.50%) were degree holders, 17.50 percent were post graduates and only 7.00 percent of them had completed their PUC.

Combined results showed that 73.20 percent of respondents from both government and private schools had completed their degree, followed by 18.30 percent being post graduates and only 8.50 percent of them were PUC holders.

The Chi-square test value found to be 1.46, suggesting that the educational qualification of respondents from government and private schools is independent and showed no significant association.

Table 3 shows the distribution of respondents based on the syllabus followed at school where they teach.

**Table 3**  
**Classification of respondents' responses for specific difficulties of LD among children**

n=400

Areas of specific difficulties in LD	Response % (Mean ± SD)		't' Test
	Government schools	Private schools	
a. Reading	30.5 ± 46.2	44.5 ± 49.8	2.91*
b. Writing	38.5 ± 48.8	51.0 ± 50.1	2.53*
c. Spelling	32.5 ± 47.0	46.5 ± 50.0	2.89*
d. Arithmetic	13.5 ± 34.3	27.0 ± 44.5	3.40*
<b>Combined</b>	<b>28.8 ± 21.8</b>	<b>42.3 ± 23.6</b>	<b>5.94*</b>

\*Significant at 5% level

$$t (0.05, 398 df) = 1.96$$

Table 3 reveals the mean per cent scores of the government and private school respondents' responses regarding the various areas of specific difficulties in LD.

In the area of reading difficulties, the mean percentage score of private school respondents was found to be higher (44.50) when compared to government school respondents (30.50). The t-test value was found to be 2.91 and was statistically significant.

With regard to writing difficulties, the private school respondents showed higher mean score (51.00) as compared to the mean score of government school respondents (38.50). On statistical analysis, there was found to be a significant difference among the private and government school respondents with t-value being 2.53, which was significant at 5% level.

In the area of spelling difficulty, the mean scores of private school respondents was found to be higher (46.50) when compared to the scores of government school respondents (32.50). The results showed a statistically significant difference with the t value being 2.89.

Statistical analysis revealed that the responses of the respondents with regard to arithmetic as specific difficulty showed a significant difference among the respondents. Here, private school teachers showed a slightly higher mean score (27.00) as compared to the mean score of government school teachers (13.50) with the t-value of 3.40.

The classification of respondents' responses related to the knowledge of severe discrepancy between achievement and the intellectual ability in learning disabled children is shown in table 4.

**Table 4**  
**Classification of respondents' responses related to the knowledge of severe discrepancy between achievement and the intellectual ability in learning disabled children**

n=400

Areas of discrepancy between achievement and the intellectual ability in learning disabled children	Response (Mean ± SD)		't' Test
	Government schools	Private schools	
a. Oral expression (Spoken language)	54.5 ± 49.9	60.0 ± 49.1	1.11 <sup>NS</sup>
b. Listening comprehension (Understanding of information being heard or listened to)	10.0 ± 30.1	17.0 ± 37.7	2.05*
c. Written expression (Written tests or exams)	42.0 ± 49.5	48.5 ± 50.1	1.31 <sup>NS</sup>
d. Basic reading skills	48.5 ± 50.1	55.5 ± 49.8	1.40 <sup>NS</sup>
e. Reading comprehension (Knowledge of reading)	30.0 ± 45.9	35.0 ± 47.8	1.07 <sup>NS</sup>
f. Mathematical calculation	37.5 ± 48.5	47.0 ± 48.0	1.97*
g. Mathematical reasoning (Understanding of mathematical concepts)	3.0 ± 17.1	18.5 ± 38.9	5.16*
<b>Combined</b>	<b>32.2 ± 15.5</b>	<b>40.2 ± 17.8</b>	<b>4.79*</b>

\*Significant at 5% level    NS : Non-significant    t (0.05,398 df) = 1.96

In the area titled 'oral expression' with regard to spoken language, a higher mean score was obtained by the private school respondents (60.00) as compared to government school respondents (54.50). There was no significant difference found between the government and private school respondents with the t-value being 1.11.

With regard to the area of listening comprehension, there was a significant difference found between the government and private school respondents, with the t-value being 2.05 which is statistically significant at 5% level. It was seen that the private school respondents had higher a mean score (17.00) when compared to government school respondents (10.00).

A slightly higher mean score was obtained by the private school respondents (48.50) as compared to government school respondents mean score (42.00) in the area of written expression. On the basis of students' written test or exams, teachers come to know what kind of difficulty children face when it comes down to writing down learnt information. On statistical analysis, this difference in scores was found to be non-significant with the t-value being 1.31.

For the area of basic reading skills, the private school respondents showed a higher mean score (55.50) when compared to the mean score of government school respondents. However, on statistical analysis, this difference in scores was found to be non-significant with the t-value being 1.40.

Analysis of results revealed that the responses of the respondents with regard to the area of reading comprehension did not have any significant difference among the government and private school respondents with the 't' ratio of 1.07. The mean score percentage was found to be slightly higher among private school respondents (35.00) compared to government school respondents (30.00).

In the area of mathematical calculation, a higher mean score was obtained by the private school respondents (47.00) as compared to the government school respondents (37.50). In this area there is a significant difference found between the government and private school respondents, with t- value being 1.97.

With respect to the area of discrepancy of intelligence and achievement in the area of mathematical reasoning, the mean score of private school respondents (18.50) was found to be higher when compared to that of the government school respondents (3.00). A significant difference was found in the area of mathematical reasoning among the two groups of respondents with the t-value being 5.16.

When the results for the combined mean values of responses from the government and private school teachers regarding the above mentioned areas of discrepancy between achievement and the intellectual ability in learning disabled children was tabulated, it was seen that the mean scores of the respondents from private schools was relatively higher (40.20) when compared to the mean score percentage of the government school respondents (32.20). On statistical analysis the t-test value found to be significant at 5 % level (t=4.79).

The data on respondents' level of knowledge with regard to LD in children is shown in table 5.

**Table 5**  
**Respondents' knowledge level regarding LD in children**

n=400

Knowledge Level	Respondents						χ <sup>2</sup> Value
	Government schools		Private schools		Combined		
	N	%	N	%	N	%	

Inadequate (0-32 score)	200	100.0	158	79.0	358	89.5	46.93**
Moderate (33-48 score)	0	0.0	42	21.0	42	10.5	
Adequate (49-65 score)	0	0.0	0	0.0	0	0.0	
<b>Total</b>	<b>200</b>	<b>100.0</b>	<b>200</b>	<b>100.0</b>	<b>400</b>	<b>100.0</b>	

\*\*Significant at 1% level

$$\chi^2 (0.01, 1df) = 6.635$$

Table 5 describes the data on respondents' level of knowledge regarding LD in children. The responses of the respondents towards knowledge were classified into three levels. The score between 0-32 has been categorized as inadequate knowledge, 33-48 score represents moderate level of knowledge and the scores between 49-65 were referred to as an adequate level of knowledge.

On statistical analysis, it was found that cent percent of respondents (100.00%) from government schools had an inadequate level of knowledge related to LD in children. With regard to the respondents from private schools, majority of them (79.00%) had an inadequate level of knowledge followed by 21.00 percent had moderate level of knowledge. It is surprising to see that none of the respondents from government or private schools had an adequate level of knowledge.

Combined results showed that majority of the respondents (89.50%) from both government and private schools had an inadequate knowledge about learning disabilities among children.

Cent percent of the respondents of government schools and majority of the private school respondents showed inadequate level of knowledge on LD in children thereby accepting the hypothesis set for the study. However, the association between government and private school respondents on knowledge level showed a significant result with the chi-square value being 46.93.

The overall mean knowledge score of respondents with regard to learning disabilities in children is given in table 6.

**Table 6**  
**Respondents' overall mean knowledge scores on LD in children**

No.	Respondents	Statements	Max. Score	Scores				't' Test
				Mean	SD	Mean(%)	SD(%)	
1	Government (n=200)	65	65	22.61	4.14	34.8	6.4	13.63**
2	Private (n=200)	65	65	28.79	4.88	44.3	7.5	
	<b>Combined (n=400)</b>	<b>65</b>	<b>65</b>	<b>25.70</b>	<b>5.48</b>	<b>39.5</b>	<b>8.4</b>	

\*\*Significant at 1% level

$$t (0.01, 398df) = 2.58$$

The analysis of results as shown in table 6 revealed that the 't' value is 13.63 which is significant beyond 1% level. This indicates that overall mean scores of knowledge of government and private school respondents showed a significant difference.

It is noticed that the private school respondents had a higher mean score percent (44.30) than government school respondents (34.80)

Further, the results clearly indicated that there is a significant difference between the knowledge of respondents between the government and private school, thereby accepting the hypothesis postulated for the study.

## 8. CONCLUSION:

The findings of the study revealed that majority of the primary school teachers from both government and private schools had an inadequate knowledge about LD in children. Learning disability is a disorder in children that cannot be cured; however, with the right amount of knowledge among teachers and parents, they can guide the children to attain success in schools, as well as in their own personal lives and to be a good citizen in the community. More programs for teachers to bring an awareness of LD should help children as well as families to understand the strengths and weaknesses of learning-disabled children better and help them to lead a wholesome life.

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