

A Study On Learning Disabilities Among The Secondary School Pupils In North Costal Districts Of Andhra Pradesh

Prof. R. Siva Prasad¹, Satya Murty. Burle²

¹Honorary Professor, I.A.S.E., Department of Education, Andhra University, Visakhapatnam, A.P, India.

²Research Scholar, Department of Education, Andhra University, Visakhapatnam, A.P, India.

Abstract:

Learning disability refers to a range of conditions that cause considerable difficulties in learning and using abilities such as listening, speaking, reading, writing, thinking, or mathematics. A learning disability, on the other hand, is frequently coupled with other incapacitating conditions (social and emotional disturbance, sensory impairment). The study's population comprises of all students in the ninth and eighth grades from government and private secondary schools in the Andhra Pradesh districts of Srikakulam and Vizianagaram. A standardized self-administered open and closed ended questionnaire from Bhargava and Bhardwaj's learning disability battery was employed. After data analysis, results revealed a significant difference between girls and boys students in their learning disabilities. Students' categories also play a significant role in their Dyscalculia and Dyslexia learning disabilities. The mean difference (2.35-Dyscalculia, 2.21-Dyslexia) is in favour of boys. Hence, it can be inferred that boys possess lower dyscalculia when compared to girls. Gender did not make any significant difference in Dysgraphia, a learning disability. The caste of secondary school students differed significantly in their categories of learning disabilities (Dyscalculia, Dysgraphia, and Dyslexia). At the same time, severe learning disabilities are found in S.T. category students.

Key Words: Learning impairment, secondary schools, listening, speaking, reading, writing, thinking, or mathematics, Dyscalculia, Dysgraphia, and Dyslexia.

Introduction

"Learning disability" is a broad term that refers to several forms of learning difficulties. A learning handicap makes it harder for a person to learn and apply specific abilities. Reading, writing, listening, speaking, reasoning, and mathematics are the most affected. Learning difficulties (LD) differ from one person to the next. A person with a learning handicap may not have the same challenges as another. According to studies, learning difficulties are caused by changes in how the brain acts and processes information.

There is no indication that someone has a learning disability. According to experts, there is a significant difference between how well children perform in school and how well a child can perform based on their intelligence or ability. In addition, some data suggest that the child has a learning problem. Some are listed below. As far as learning problems are recognised in primary school, most are related to primary school tasks. A youngster is unlikely to have all or even most of these symptoms. However, if a child exhibits these symptoms, parents and teachers should investigate if the youngster has a learning disability.

The following tasks may pose difficulties for children with learning disabilities:

Teachers and parents can assess more if children exhibit unexpected difficulties with reading, writing, listening, speaking, or math. The same is true if a child has difficulty with these skills. A youngster may require evaluation to establish whether or not he or she has a learning problem. When children reach school age, they are evaluated for learning difficulties.

Specific Learning Disabilities Overview

At a convention of parents and professionals in Chicago on April 6, 1963, Professor Sam Kirk and colleagues established the phrase "learning impairments" (Pierangelo & Giuliani, 2006).

Learning difficulties, in general, refer to a neurobiological problem caused by abnormalities in how the brain functions and is constructed. Furthermore, "learning disability" is a broad term for various learning difficulties. A learning handicap makes it harder for a person to learn and apply specific abilities (Lerner, 2002). Reading, writing, listening, speaking, reasoning, and math are the most affected (Pierangelo

& Giuliani, 2006; Heward, 2005; National Outreach Center for Children with Disabilities, 2004;).

Learning disabilities (LD) differ from person to person and involve many disorders. Someone with LD may not have the same learning challenges as someone without it. Math may be complex for someone with LD to understand. Someone else may have difficulty understanding what is being said. As a result of individual variances in the illness, no single profile of a person with LD is flawless (Freund, 2005).

"Learning disabilities" (or learning disorders) [3] are a catch-all term for a variety of issues such as dyslexia, dyspraxia, dysgraphia, and so on. Several investigations have found that learning impairments are distinguished by subtle and regionally dispersed changes in mind-body systems. They should not be confused with learning problems caused by visual, hearing, or movement limitations, as well as social difficulties. Researchers have worked hard over the last two decades to study the neurological roots of learning difficulties. Despite tremendous progress in several research areas, the reasons for learning disabilities remain unexplained. These can also be investigated from various angles, such as learning problems.

• Family and order govern their frequency. • Alternative operational definitions of "learning impairments" and their impact.

Even though the actual nature of dyslexia is unknown, we can agree with those who feel that dyslexia can be detected with high accuracy. This, we believe, is also true for other learning issues. Despite a lack of understanding of the causes, side effects are frequently well defined and recognised in DSM-5 as

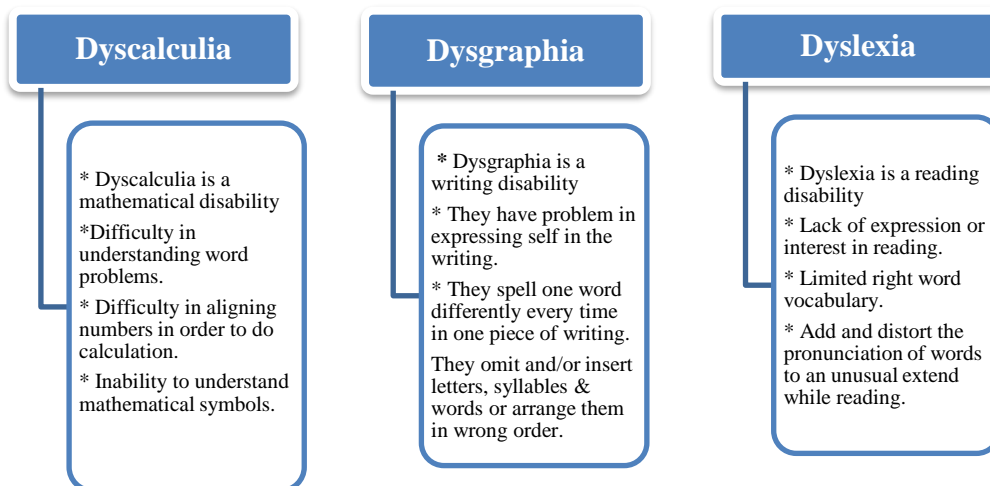
developmental coordination disorders. Dyslexia is a sort of learning problem that impairs a person's ability to read.

• Motor dysgraphia is a learning condition that impairs one's writing ability.

Motor dysgraphia is also a symptom of a developmental coordination deficit (DCD), such as dyspraxia [5]. These issues persist as people age but are manageable with an adequate education. This is not a binary disorder, with symptoms ranging from moderate to severe. It is widely acknowledged that approximately 10% of the population has (some degree of) learning difficulty. According to Duke University or the DSM-5, it is commonly established that any combination of DSM-5 illnesses can result in academic failure. With the correct educational technology, a child with learning difficulties can gain the same skills as a regular teenager. These young individuals frequently receive government aid of various sorts (specific teaching lessons, extra educational expenses, extra time for tests, exceptional staff helping during homeroom, etc.). To be eligible for such support, you must provide a certificate from a qualified specialist in charge of evaluating youngsters. Evaluation can be time-consuming, costly, and emotionally demanding.

Furthermore, this process can be lengthy due to the restricted number of certified pathologists. Due to this scenario, many people, mainly those strongly targeted, cannot complete the test. It seeks critical evaluations (or predictions) that are quick, effective, and publicly available. In most circumstances, our methodology offers a practical answer to this problem.

Some Symptoms of Learning Disability



Learning disability in an Indian context

A person's ability to listen, talk, read, and compute is impacted by learning difficulties. When

there is a big and inexplicable difference between a person's predicted and actual level, they are frequently suspect. Learning disabilities can impair social-emotional skills and conduct, and some persons with

learning disabilities suffer with academics, peer relationships, and social interactions. As a result, learning difficulties are a significant contributor to school dropout, lack of enthusiasm in studies, and poor academic performance.

The West began to recognise and describe LD in the 1950s and 1960s. During this time, the LD movement concentrated on children who looked to have normal intellectual abilities but had a variety of cognitive disabilities that hampered their reading, writing and learning in school. These are fundamentally flawed general learning processes, and we are currently focusing on distractibility and visual-perceptual and perceptual-motor issues.

The LD movement in India is still in its early stages and cannot yet be compared to its Western equivalent. According to Western specialists, the underrepresentation of LD in the East is due to educators' general lack of understanding and sensitivity to the unique difficulties of young learners learning to read in overcrowded classes.

Despite this renewed attention, India still lacks a thorough understanding of the incidence and prevalence of LD. Unfortunately, epidemiological studies of LD are plagued by issues ranging from LD diagnosis, recognition, and assessment to socio-cultural aspects unique to India. The implications of these norms for recognising children with LD are significant in a varied society like ours and cannot be quickly resolved (Karanth, 2002). The LD concept's intrinsic difficulties are exacerbated by a lack of teacher understanding, precise assessment methods, or indigenous techniques for detecting processing deficiencies, such as IQ testing and reading and writing skills testing (Karanth, 2002).

Learning disability and right to education:

Overall, the Right to Education Act is a significant step forward because it ensures that all children in our country between the ages of 6 and 14 can now attend school, regardless of their economic status. However, there is fear that it may accidentally cause significant harm to the educational needs of children with learning difficulties. Because no child may be held until the eighth grade, children with learning problems are more likely to be diagnosed too late. School administrators are likely to submit these children to learning disability clinics late or not at all to analyse their poor academic performance. This means that a crucial period for "remedial education" is lost, and these children lose the opportunity to overcome their disability.

In its current form, the RTE Act is unlikely to provide a reason for children with learning difficulties unless

accompanied by an amendment making it mandatory to refer children with low marks or grades for learning regardless of their class position. This modification is required to ensure that children with learning disabilities are diagnosed on time. It also guarantees that other causes of poor academic performance, such as ADHD, slow learners, and autism, are detected and handled as soon as possible. Developed countries, such as the United States, which previously introduced compulsory schooling, demand that every child with poor grades be assessed so that a personalised education plan can be established to identify the root problem as soon as feasible. These plans motivate a child to reach his or her full academic potential. Our country can follow suit and change the current RTE Act to assess every child who receives poor grades or has academic issues, determine the causes of poor school performance, and solve them promptly. Because the RTE Act mandates free and compulsory education for all children in India aged 6-14 years, children with learning difficulties' unique learning requirements may no longer be overlooked. In addition, children with learning difficulties should receive a high-quality education and complete it in ordinary mainstream schools (this is known as "inclusive education"). As previously stated, learning disorders are not listed as disabilities under the Persons with Disabilities Act of 1995, which is unfortunate.

Need and significance of the study

Learning disability, like any disability, has recently gotten much attention because there is an urgent need to ensure earlier detection and treatment to limit and prevent its detrimental effects on learning in individuals. A learning disability is defined by severe difficulty in learning and academic accomplishment in individuals with no other noticeable handicap. It is often called an "invisible disability" since it is not as quickly identified as other "disabilities."

A learning disability is a "heterogeneous collection" of severe difficulties in acquiring and employing human abilities such as listening, speaking, reading, writing, thinking, or mathematics. Learning disability is frequently associated sensory impairment, mental retardation, and social and emotional disturbance; psychological factors such as emotions, maturity, and development; cultural differences; inadequate or inappropriate instruction are also some causes of learning disability in children. It is "a combination of those conditions or influences" (NJCLD, 1990). According to Samuel Kirk (1963), A disorder or developmental delay affects a specific area, such as reading, spelling, mathematics, and writing, as well as delayed language development. The handicap

may be accompanied by issues with self-regulation, social awareness, and social interaction (Wong, 1996).

A learning impairment's severity varies based on the degree to which it impacts an individual. It is a lifetime disability with substantial unexpected scholastic underachievements, academic talents, and experiences. Finally, it impedes or slows the individual's ability to interact with their environment's demands, strengths, and needs, necessitating unusually high levels of effort and support to maintain performance. Nearly 7% of children and adolescents have significant learning deficits in at least one math skill before graduating high school (Barbarese et al., 2005: 281-289). The degree to which a person's "information processing" skills are employed in learning is impaired, resulting in deficiencies in input, integration, and storage.

Learning disabilities are a relatively new and understudied issue in India, with only a few organisations and departments interested in conducting research in this area. The country's education system focuses on "theory" rather than "learning" and is thus unsuitable for pupils with learning difficulties. Examining assessment and preventive concerns in the Indian context is critical due to a lack of indigenous research and the preponderance and domination of Western adaptations in the absence of proper need-based evaluation.

Objective of the study:

1. To find the learning disabilities (Dyscalculia, Dysgraphia, and Dyslexia) among the Secondary School Pupils in North coastal districts of Andhra Pradesh in the following variables.

- | | | |
|-------------|---|-----------------------|
| a. Gender | : | Male/
Female |
| c. Category | : | O.C/ B.C/
S.C/ S.T |

Hypotheses:

1. There is no significance difference between boys and girls in their learning disabilities (Dyscalculia, Dysgraphia, and Dyslexia).
2. There is no significance difference between OC, BC, SC and ST students in their learning disabilities (Dyscalculia, Dysgraphia, and Dyslexia).

Method of Research:

The descriptive survey research approach was employed for this study.

The population of the study:

The study population consists of all students in the 10th class from government and private secondary schools in Srikakulam and Vizianagaram Districts of Andhra Pradesh.

Sampling method:

Two hundred students of ninth and eighth classes from government and private secondary schools located in rural and urban areas in Srikakulam and Vizianagaram Districts of Andhra Pradesh were chosen for the study using the random sampling method.

Research tool:

A structured self-administered open and closed-ended questionnaire of the learning disability battery of Bhargava & Bhardwaj was used to compare learning disabilities among early adolescents in government and private schools. Demographic variables like gender and caste were used. The questionnaire consisted of three parts, i.e., part 1, part 2 and part 3. Part 1 consisted of questions related to dyscalculia, part 2 consisted of questions related to dysgraphia, and part 3 consisted of questions related to dyslexia. The scoring procedure of these questions was done according to the manual of the learning disability battery of Bhargava, Bhardwaj.

Procedure:

The investigator obtained permission from the headmasters of secondary schools and fixed the programme. Before conducting the test, students were told in detail about the study. All the students voluntarily participated in this program. The question papers were distributed to the students, who were asked to submit the filled-in answer sheets. A maximum of 50 minutes is given to the students to provide answers to the questions on the question paper itself. The collected data were entered into an SPSS database and analyzed. The mean, cross-tabulation, standard deviation, t-tests, and ANOVA were used for the data analysis.

Data Analysis:

The hypotheses formulated for the present investigation have been verified using different statistical techniques. Mean scores and Standard Deviations were calculated for different groups of students. From these values, Standard Error of Difference (**SED**) and Critical Ratios (**CRs**) were calculated to know whether there is any significant difference in the learning disabilities of different student groups for the present study.

Hypotheses-I

There is no significance difference between boys and girls in their learning disabilities (Dyscalculia, Dysgraphia, and Dyslexia).

Table 1 showing the significant differences in the Learning Disabilities (Dyscalculia, Dysgraphia, Dyslexia) of different groups of secondary school students

Variable	LD	Group	N	Mean	SD	SE _D	"t"	Hypotheses
Gender	Dyscalculia	Boys	97	24.27	8.23	1.1470	2.054*	The null hypothesis is rejected
		Girls	103	21.92	7.97			
	Dysgraphia	Boys	97	50.78	12.56	1.71785	0.343 ^{NS}	The null hypothesis is Accepted
		Girls	103	50.19	11.72			
	Dyslexia	Boys	97	12.85	7.94	1.13259	2.219*	The null hypothesis is rejected
		Girls	103	15.36	8.05			

* Significant at 0.05, NS- Not significant. (Interpretation of dyslexia made in reverse order. (i.e. low score means no dyslexia, high score means severe dyslexia).

Interpretation:

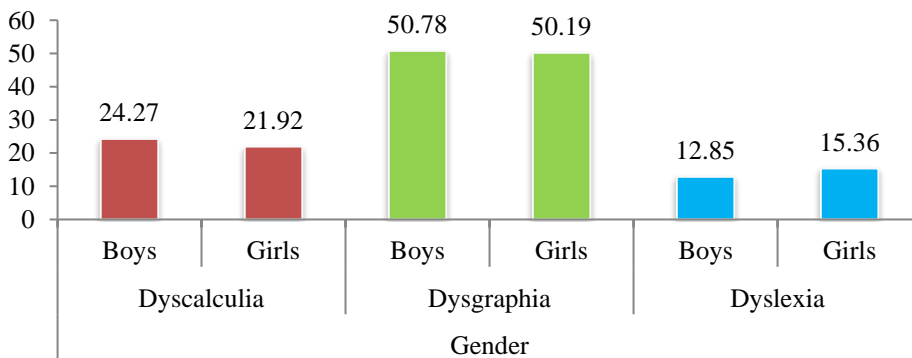
Table 1 indicates that the calculated 't'-value (2.054) is greater than the table value of 1.98. Therefore, it is significant at the 0.05 level. Hence, the null hypothesis is rejected. So, it can be stated that the gender of students differed significantly in their learning disability (dyscalculia). The mean difference (2.35) is in favour of boys. Hence, it can be inferred that boys possess lower dyscalculia when compared to girls.

Table 1 shows that the calculated 't'-value (0.343) is less than the table value of 1.98. Therefore, it

is not significant at the 0.05 level. Hence, the null hypothesis is retained. It can be inferred that the gender of secondary school students does not significantly affect their learning disability (Dysgraphia).

Table 1 indicates that the calculated 't'-value (2.219) is greater than the table value of 1.98. Therefore, it is significant at the 0.05 level. Hence, the null hypothesis is rejected. So it can be stated that the gender of students differed significantly in their learning disability (dyslexia). The mean difference (2.51) is in favour of girls. Hence, it can be inferred that boys possess lower dyslexia when compared to girls.

Fig. 1. Bar diagram showing mean score values relating to the variable – Gender



Hypotheses-2

There is no significance difference between OC, BC, SC and ST students in their learning disabilities (Dyscalculia, Dysgraphia, and Dyslexia).

Table No.2 Learning Disability-Category-Mean-SD

Learning Disability	Category	N	Mean	SD
---------------------	----------	---	------	----

Dyscalculia	O.C	66	31.8	3.74
	B.C	42	22.52	5.36
	S.C	51	18.9	5.61
	S.T	41	14.73	4.57
Dysgraphia	O.C	66	60.53	10.96
	B.C	42	48.33	8.52
	S.C	51	45.05	10.31
	S.T	41	43.024	8.03
Dyslexia	O.C	66	5.87	3.15
	B.C	42	17.02	4.81
	S.C	51	13.25	3.98
	S.T	41	25.63	2.73

Interpretation:

The table 2 shows that O.C. category students has no dyscalculia when compared to other category students with mean score of 31.8, students who are belongs to B.C category had the second place with mean score of 22.52, students who are belongs to S.C category had the third place with mean score of 18.9 and obtained the students who are belongs to S.T category had high dyscalculia when compared to other category students with mean score 14.73.

The table 2 shows that O.C. category students has no dysgraphia when compared to other category students with mean score of 60.53, students who are belongs to B.C category had the second place with

mean score of 48.33, students who are belongs to S.C category had the third place with mean score of 45.05 and obtained the students who are belongs to S.T category had high dysgraphia when compared to other category students with mean score 43.024.

The table 2 shows that O.C. category students has no dyslexia when compared to other category students with mean score of 5.87, students who are belongs to S.C category had the second place with mean score of 13.25, students who are belongs to B.C category had the third place with mean score of 17.02 and obtained the students who are belongs to S.T category had high dyslexia when compared to other category students with mean score 25.63.

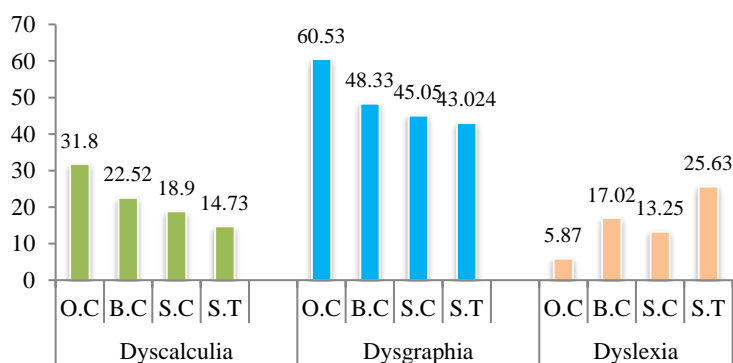


Table No.3

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Dyscalculia	Between Groups	8782.681	3	2927.560	127.300	.000
	Within Groups	4507.474	196	22.997		
	Total	13290.155	199			
Dysgraphia	Between Groups	10505.763	3	3501.921		

	Within Groups	18700.157	196	95.409	36.704	.000
	Total	29205.920	199			
Dyslexia	Between Groups	10310.295	3	3436.765	250.113	.000
	Within Groups	2693.205	196	13.741		
	Total	13003.500	199			

Interpretation:

It is observed from table 0.00 that the obtained F-value (127.300) for $df = 3$ and 196 is greater than the table value of 2.70. It is significant at the 0.05 level. Therefore, the null hypothesis is rejected. Hence, it can

be inferred that the category of students significantly affects their learning disability.

Since the F-value is significant, a further probe is attempted to know which category groups differ significantly in their learning disability from other subgroups.

Table No.4 Learning Disability-Category-Mean-SD-t-Value

L D	Group	N	Mean	SD	df	SE _D	"t"	Significant/ not Significant
Dyscalculia	O.C	66	31.80	3.75	106	0.87792	10.570	Significant at 0.05 level
	B.C	42	22.52	5.36				
	O.C	66	31.80	3.75	115	0.86770	14.868	Significant at 0.05 level
	S.C	51	18.90	5.61				
	O.C	66	31.80	3.75	105	0.81238	21.014	Significant at 0.05 level
	S.T	41	14.73	4.57				
	B.C	42	22.52	5.36	91	1.14649	3.159	Significant at 0.05 level
	S.C	51	18.90	5.61				
	B.C	42	22.52	5.36	81	1.09542	7.113	Significant at 0.05 level
	S.T	41	14.73	4.57				
	S.C	51	18.90	5.61	90	1.08556	3.842	Significant at 0.05 level
	S.T	41	14.73	4.57				

Interpretation:

It is observed from table 4 that the obtained t-values (10.570, 14.868, and 21.014) for $dfs = 106, 115,$ and 105 are more significant than the table value of 1.98. Therefore, they are significant at a 0.05 level, so it can be stated that O.C category Students differed significantly from their neighbor groups, i.e., B.C, S.C, and S.T in Dyscalculia Learning Disability. The mean differences (9.28, 12.9, and 17.07) favour O.C category students. It can be stated that O.C Category students possess low dyscalculia learning disabilities compared to their counterparts.

The other obtained t-values (3.159 and 7.113) for $dfs = 91$ and 81 are more significant than the table value of 1.99; therefore, they are significant at the 0.05

level, So it can be stated that B.C. category Students differed significantly from their neighbor groups, i.e., S.C, S.T in Dyscalculia Learning Disability. The mean differences (3.62 and 7.79) favour B.C category students. It can be stated that B.C. Category students possess low dyscalculia learning disabilities compared to their counterparts.

The other obtained t-value (3.842) for $df = 90$ is greater than the table value of 1.99. Therefore, they are significant at a 0.05 level, so it can be stated that S.C students differed significantly from their neighbor group, i.e., S.T in Dyscalculia, Learning Disability. The mean differences (4.17) are in favour of S.C category students. It can be stated that S.C. Category students possess low dyscalculia learning disabilities compared to their counterparts.

Table No.5 Learning Disability-Category-Mean-SD-t-value

LD	Group	N	Mean	SD	df	SE _D	"t"	Significant/ not Significant
----	-------	---	------	----	----	-----------------	-----	------------------------------

Dysgraphia	O.C	66	60.53	10.96	106	1.992	6.123	Significant at 0.05level
	B.C	42	48.33	8.52				
	O.C	66	60.53	10.96	115	1.99299	7.763	Significant at 0.05level
	S.C	51	45.05	10.31				
	O.C	66	60.53	10.96	105	1.97902	8.753	Significant at 0.05level
	S.T	41	43.24	8.03				
	B.C	42	48.33	8.52	103	1.99001	1.645	Not Significant at 0.05level
	S.C	51	45.05	10.31				
	B.C	42	48.33	8.52	81	1.81745	2.800	Significant at 0.05level
	S.T	41	43.24	8.03				
	S.C	51	45.05	10.31	90	1.91351	0.923	Not Significant at 0.05level
	S.T	41	43.24	8.03				

Interpretation:

It is observed from table 5 that the obtained t-values (12.2, 15.48, and 17.29) for dfs = 106, 115, and 105 are greater than the table value of 1.98. Therefore, they are significant at a 0.05 level, so it can be stated that O.C category Students differed significantly from their neighbor groups, i.e., B.C, S.C, and S.T in Dysgraphia Learning Disability. The mean differences (9.28, 12.9, and 17.07) favour O.C category students. It can be stated that O.C. Category students possess low Dysgraphia learning disability compared to their counterparts.

It is observed from table 0.000 that the obtained t-value (1.645) for dfs = 103 is less than the table value of 1.98. It is not significant at the 0.05 level. It can be inferred that the B.C category does not significantly affect their dysgraphia learning disability

compared to the S.C category. The other obtained t-value (2.800) for dfs = 81 is greater than the table value of 1.99. Therefore, they are significant at a 0.05 level, so it can be stated that B.C category Students differed significantly from their neighbor groups, i.e., S.T Category in Dysgraphia Learning Disability. The mean differences (5.09) are in favour of B.C category students. It can be stated that B.C. Category students possess a low dyscalculia learning disability compared to their counterparts (S.T. Category).

The other obtained t-value (0.923) for df = 90 is less than the table value of 1.99. It is not significant at the 0.05 level. It can be inferred that the S.C category does not make a significant difference in their dysgraphia learning disability when compared to the S.T category.

Table No.6 Learning Disability-Category-Mean-SD-t-value

LD	Group	N	Mean	SD	df	SE _D	"t"	Significant/ not Significant
*Dyslexia	O.C	66	5.87	3.15	106	0.76639	14.542	Significant at 0.05level
	B.C	42	17.02	4.81				
	O.C	66	5.87	3.15	115	0.66035	11.170	Significant at 0.05level
	S.C	51	13.25	3.98				
	O.C	66	5.87	3.15	105	0.59704	33.089	Significant at 0.05level
	S.T	41	25.63	2.73				
	B.C	42	17.02	4.81	91	0.91288	4.129	Significant at 0.05level
	S.C	51	13.25	3.98				
	B.C	42	17.02	4.81	81	0.86262	9.982	Significant at 0.05level
	S.T	41	25.63	2.73				
	S.C	51	13.25	3.98	90	0.73172	16.918	Significant at 0.05level
	S.T	41	25.63	2.73				

(*Interpretation of dyslexia made in reverse order. (i.e. low score means no dyslexia, high score means severe dyslexia).

Interpretation:

It is observed from table 0.000 that the obtained t-values (14.542, 11.170, and 33.089) for dfs = 106, 115, and 105 are greater than the table value of 1.98. Therefore, they are significant at a 0.05 level, so it can be stated that O.C category Students differed significantly from their neighbor groups, i.e., B.C, S.C, and S.T in Dyslexia Learning Disability. The mean differences (11.15, 7.38 and 19.76) favour B.C, S.C, and S.T category students. It can be stated that O.C. Category students possess a low dyslexia learning disability compared to their counterparts.

The other obtained t-values (4.129 and 9.982) for dfs = 91 and 81 are greater than the table value of 1.99. Therefore, they are significant at a 0.05 level, So it can be stated that B.C category Students differed significantly from their neighbor groups, i.e., S.C, S.T in Dyslexia Learning Disability. The mean difference (3.77) is in favour of B.C category students. It can be stated that B.C. category students have a high dyslexia learning disability compared to S.C. category students. Another mean difference (8.61) is in favour of S.T category students. It can be stated that B.C. category students possess a low dyslexia learning disability compared to S.T. category students.

The other obtained t-value (16.918) for df = 90 is greater than the table value of 1.99. Therefore, they are significant at a 0.05 level, so it can be stated that S.C category students differed significantly from their neighbor group, i.e., S.T in Dyslexia Learning Disability. The mean differences (12.38) are in favour of S.T category students. It can be stated that S.C. Category students possess low dyscalculia learning disabilities compared to their counterparts.

Findings and Conclusions:

1. Boys and Girls in Secondary Schools differed significantly in their Learning Disabilities (Dyscalculia, Dysgraphia, and Dyslexia).
2. Boys (Mean = 24.27) in secondary schools performed better in Dyscalculia than girls (Mean = 21.92) students of secondary schools. The results contradict the findings of the studies conducted by Ms Mrigakshi Sarma and Dr R.D. Padmavathy (2022), Narendra Singh Thagunna Sapana Change (2019), and Deeksha and Navleen Kaur (2016).
3. Secondary school students differed significantly in their learning Disabilities (Dyscalculia, Dysgraphia, and Dyslexia).
4. O.C category students differed significantly from their neighbor groups, i.e., B.C, S.C, and S.T in learning disabilities.
5. Learning Disabilities (Dyscalculia, Dysgraphia, and Dyslexia) found in S.T category students.

Recommendations:

1. After learning about their issues, teachers might adopt appropriate styles of instruction to fulfil the individual needs of dyscalculic kids.
2. Teaching can be conducted using a variety of visual, audio, and audio-visual aids to assist students in learning the fundamental principles.
3. By raising awareness of various learning challenges, Dyscalculia can assist teachers and parents in providing a welcoming learning environment for children.
4. Identifying Dyscalculia allows teachers and parents to collaborate to organise the content in a way that allows those children to learn well.
5. Teachers must be aware of various teaching tactics to assist these youngsters in understanding, learning, and completing their math activities.

References:

1. Afolabi, O.E. (2016) Attention- Deficit Hyperactivity Disorder (ADHD) in Children: A Move towards Developmental Perspectives. *International Journal of School and Cognitive Psychology*, 3(2), 2469-9837. <https://www.longdom.org/open-access/attentiondeficit-hyperactivity-disorder-adhd-in-children-a-movetowards-developmentalperspectives-2469-9837-1000171.pdf>
2. Barbaresi, W.J., Katusic, S.K., Colligan, R.C., Weaver, A.L., & Jacobsen, S. (2005). Math learning disorder: Incidence in a population-based birth cohort, 1976–82, Rochester, MN. *Ambulatory Pediatrics*, 5:281–289.
3. Bjorn PM, Aro P, Koponen T, Fuchs LS, Fuchs D. Response-To-Intervention in Finland and the United States: Mathematics learning support as an example. *Front Psychol* 2018; 9:800.
4. Brooks, M.D. (2007) ADD/ADHD: Effects on Mathematics and Mathematical Computations. Marygrove College. <https://files.eric.ed.gov/fulltext/ED499379.pdf>
5. DuPaul, G.J. (2009) ADHD and Learning Disabilities: Research Findings and Clinical Implications. *Current Attention Disorders Report*.

- https://www.researchgate.net/publication/225499504_ADHD_and_learning_disabilities_Research_findings_and_clinical_implications
6. Friend, M. (2005). *Special education: Contemporary perspectives for school professionals*. Boston: Allyn & Bacon.
 7. Fuchs D, Fuchs LS. Responsiveness-to-intervention: a blueprint for practitioners, policymakers and parents. *Teach Except Child* 2005;38:57–61.
 8. Gupta, N. (2016) *Dyscalculic Co-morbidity in Secondary School- going Children: A Comprehensive Study of Predictive Parameters and Remedies*. Dayalbagh Educational Institute. <https://shodhganga.inflibnet.ac.in/handle/10603/230615>
 9. Heward, W. L. (2005). *Exceptional children: An introduction to special education* (8th ed.). Upper Saddle River, NJ: Prentice Hall.
 10. Hirisave U, Oommen A, Kapur M. *Psychological Assessment of Children in the Clinical Setting*. 4th ed. Bangalore: NIMHANS publication; 2020.
 11. . India. Amended rules for persons of disability. *The Rights of Persons with Disabilities Act, 2016. The Gazette of India (Extra-Ordinary). No.61: New Delhi: Published by Authority; 2018.*
 12. Jyoti, J. *Self-Confidence, Adjustment and parent- Child Relationship of Dyscalculic Elementary School Students*. Himachal Pradesh University. <http://hdl.handle.net/10603/35972>
 13. Loe, I.M., and Feldman, H.M. (2007) *Academic and Educational Outcomes of Children with ADHD*. *Journal of Pediatric Psychology*, 32(6), 643-654. <https://www.researchgate.net/publication/6266909>
 14. Lerner, J. W. (2000). *Learning disabilities: Theories, diagnosis and teaching strategies* (8th ed.). Boston: Houghton Mifflin.
 15. Lerner, J. W. (2002). *Learning disabilities: Theories, diagnosis, and teaching strategies* (9th ed.). Boston: Houghton Mifflin.
 16. Mandal, A.K., and Saha, B. (2019) *Mathematics Anxiety and Prevention Strategies: An Attempt to Improvement of Mathematics Performance of Secondary School Students in West Bengal*. *NSOU-Open Journal*, 2(1), 2581-5415. http://www.wbnsou.ac.in/openjournals/Issue/1st-Issue/January2019/Arup_1.pdf
 17. National Institute on Deafness and Other Communication Disorders. (2004). *Auditory processing disorder in children*. Washington, DC: Author. NIH Pub. No. 01–4949.
 18. Retrieved February 3, 2008, from www.nidcd.nih.gov/health/voice/auditory.htm
 19. Nagavalli, T. (2015) *A Study of Dyscalculic Primary School Children in Salem District and Evaluation of Applicability of Innovative Strategies as Remedial Measures*. Department of Educational Research and Policy Perspectives <https://www.coursehero.com/file/21126319/Dyscalculic/>
 20. NairMKC, Prasad C, Unni J, Bhattacharya A, Kamath SS, Dalwai S. Consensus statement of the Indian Academy of Pediatrics on evaluation and management of learning disability. *Indian Pediatr*. 2017;54: 574–80.
 21. NJCLD. (1982). *Issues in the Delivery of Educational Services to Individuals with Learning Disabilities*. *Journal of Learning Disabilities*, 6(1), 42-44. Retrieved from <http://dx.sagepub.com/content/20/5/286.extract>
 22. Panicker AS, Bhattacharya S, Hirisave U, Nalini NR. Reliability 309 and validity of the NIMHANS index of specific learning disabilities. *Indian J Mental Health*. 2015;2:175–81.
 23. Pastor P.N. and Reuben C.A. (2008) *Diagnosed Attention Deficit Hyperactivity Disorder and Learning Disability: United States, 2004–2006*. National Center for Health Statistics. *Vital Health Stat* 10(237). https://www.researchgate.net/publication/23462787_Diagnosed_attention_deficit_hyperactivity_disorder_and_learning_disability_United_States_2004-2006
 25. Pierangelo, R., & Giuliani, G. (2006). *Learning disabilities: A practical approach to foundations, assessment, diagnosis and teaching*. Boston: Allyn & Bacon.
 26. Raja, W.D. and Kumar, S.P. *Findings of Studies on Dyscalculia- A Synthesis*. *Journal on Educational Psychology*. <https://files.eric.ed.gov/fulltext/EJ1102320.pdf>
 27. U.S. Department of Education. (2003) *Identifying and Treating Attention Deficit Hyperactivity Disorder: A Resource for School and Home*. <https://www2.ed.gov/teachers/needs/speced/adhd/adhd-resource-pt1.pdf>
 28. Wong B., & Donahue M. (Eds.) (2002). *The social dimensions of learning disabilities: essays in honor of Tanis Bryan*, Mahwah, NJ: Erlbaum

29. Wong, B.Y.L. (1996). *The ABC's of learning disabilities* (1st ed.). San Diego, CA: Academic Press.
30. Wong, B.Y.L, Harris, K.R., Graham, S., & Butler, D.L. (2003). Cognitive strategies instruction research in learning disabilities. In H. Lee Swanson, Karen R. Harris, Steve Graham (Eds.),
31. *Handbook of learning disabilities* (pp. 383–402). New York: The Guilford Press.
32. World Health Organization. (2011) *World Report on Disability: Understanding Disability*. https://www.who.int/disabilities/world_report/2011/report.pdf