



**IDENTIFICATION DYSGRAPHIA AMONG THE THIRD GRADE STUDENTS WITH  
SPECIAL REFERENCE TO TIRUPUR DISTRICT**

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**Abstract**

This study examines dysgraphia among third-grade students in a government higher secondary school (Tamil Medium) in Tirupur district. Dysgraphia is a language disorder that affects writing skills, including spelling, letter formation, and copying ability. The study aims to identify students with dysgraphia and analyze its impact on listening and writing skills. A total of 30 students (11 boys and 19 girls) participated in the study. A questionnaire based on the third-standard syllabus was used to assess dysgraphia through dictation, spelling tests, and sentence copying exercises. The tasks were completed within a 30-minute time limit. The results indicate that 5 students (4 boys and 1 girl) exhibited signs of dysgraphia, struggling with letter recognition, spelling errors, and copying tasks. Furthermore, students with dysgraphia also showed difficulties in listening comprehension. The study highlights the need for effective intervention strategies to support students with dysgraphia. It suggests drill and practice methods, craftwork, painting, and clay modeling to enhance fine motor skills and handwriting.

Teachers are encouraged to implement daily dictation, worksheets, and individualized support to improve students' writing abilities.

**Keywords:** Dysgraphia, Language Disorder, Writing Difficulties, Listening Skills, Educational Interventions.

## **Introduction**

Language is a structured system of communication that enables humans to express thoughts, emotions, and ideas. It plays a fundamental role in social interaction, knowledge transmission, and cultural identity. The development, acquisition, maintenance, and continuous evolution of language allow individuals to communicate effectively within different contexts. As a dynamic system, language adapts to societal changes, technological advancements, and diverse linguistic influences. Every language follows its own set of grammatical rules and structures, shaping how meaning is conveyed. Additionally, language is not merely a tool for communication but also a reflection of human cognition, creativity, and social organization. Whether spoken, written, or signed, language remains a key element in human connection and progress.

## **Psycholinguistics**

Psycholinguistics is the study of language with reference to human psychology and Psycholinguistics is concerned with the study of the cognitive process that supports the acquisition and use of language. The scope of psycholinguistics includes language performance under normal circumstances and when it breaks down. Historically the focus of most psycholinguist has been on first language acquisition of children. Psychologists have long been interested in language, but psycholinguistics as a field of study did not emerge until the 1960s. It was involved by Chomsky's work in linguistics and by his claim that the special properties of language require special mechanisms to handle it. The special feature of language on which Chomsky focused was its productivity. Possessed with a grammar or syntax humans can produce and understand novel sentences that carry novel messages. People do this in a way that is exquisitely sensitive to the structure of the language

## **Language acquisition**

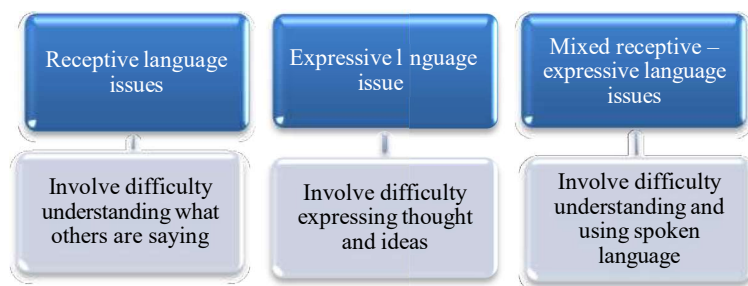
Chomsky posited humans possess a special, innate ability for language and that complex syntactic features, such as recursion, are "hard-wired" in the brain. These abilities are thought to be beyond the grasp of the most intelligent and social non-humans. According to Chomsky,

children acquiring a language have a vast search space to explore among all possible human grammars yet at the time there was no evidence that children receive sufficient input to learn all the rules of their language

### Language Disorder

Language disorder, also known as language impairment, refers to difficulties in processing linguistic information. Individuals with language disorders may experience challenges related to syntax, morphology, semantics, or other aspects of language structure and use. These difficulties can be categorized as receptive (affecting language comprehension), expressive (impacting language production), or a combination of both. Language disorders can manifest in both spoken and written forms, as well as in sign language, potentially affecting communication, academic performance, and social interactions. Early diagnosis and appropriate interventions, such as speech therapy or specialized learning strategies, can help individuals overcome these challenges and improve their language skills.

### Its Types



### Dysgraphia

The term *Dysgraphia* originates from the Greek word "dysgraphia," where "dys-" means difficulty, and "graph" refers to writing or the functional movement of the hands required for writing. Dysgraphia is a neurological disorder that affects an individual's ability to write coherently and legibly. It can manifest in difficulties related to handwriting, spelling, and fine motor coordination. Individuals with dysgraphia may struggle with letter formation, spacing, and organizing thoughts on paper, which can impact academic performance and daily communication. This condition is often associated with learning disabilities and may co-occur with other disorders such as dyslexia or attention deficit hyperactivity disorder (ADHD).

Early diagnosis and tailored interventions, including occupational therapy, assistive technology, and structured writing exercises, can help individuals manage the challenges associated with dysgraphia and enhance their written communication skills.

### **Aim of the Study**

The study aims to identify students with dysgraphia in mainstream schools, analyze their writing and listening difficulties, and explore effective intervention strategies to improve their skills.

### **Objectives of the Study**

- To identify students affected by dysgraphia.
- To analyze errors in alphabet writing among third-standard students.
- To examine the impact of dysgraphia on listening and writing skills
- To understand common phonetic and mirror-image errors in writing.
  
- To suggest effective intervention strategies for students with dysgraphia.

### **Research Methodology**

This study follows a descriptive research design to analyze dysgraphia among third-grade students in a government higher secondary school (Tamil Medium) in Tirupur district. A total of 30 students (11 boys and 19 girls) participated in the study, which aimed to assess their writing and listening skills. Data was collected using a structured questionnaire based on the third-standard syllabus, consisting of dictation tests, sentence copying tasks, and spelling assessments, all completed within a 30-minute time limit. Errors such as letter omissions, substitutions, reversals, and spacing issues were analyzed to identify students with dysgraphic tendencies. The findings revealed that 5 students (4 boys and 1 girl) exhibited signs of dysgraphia, struggling with spelling, letter recognition, and copying tasks, along with difficulties in listening comprehension. The study highlights the need for targeted intervention strategies, including drill and practice methods, craftwork, painting, and clay modelling to enhance fine motor skills and handwriting. Teachers are encouraged to incorporate daily dictation, worksheets, and individualized support to improve students' writing abilities. However, the study's limitations include a small sample size and its focus on a single school, suggesting the need for further research with a larger and more diverse group of students.

## **Limitations**

This study was conducted in a government higher secondary school located in the Tirupur district, focusing specifically on third-grade students. The scope of the study was limited to analyzing dysgraphia among the students and assessing the types of errors they made while writing alphabets. Additionally, the research examined the students' listening capacity and their ability to accurately copy written content. Due to the limited sample size and specific educational setting, the findings may not be generalizable to all student populations. Furthermore, external factors such as students' prior exposure to writing instruction, cognitive development variations, and environmental influences were not extensively analyzed in this study. Future research could expand the sample size and include a comparative study across different educational institutions to provide a broader understanding of dysgraphia and its impact on learning.

## **Review of Literature**

Dyslexia and dysgraphia share a common left-hemisphere processing limitation that extends beyond written language difficulties. Mather (2003) explains that individuals with these conditions struggle with spatial-to-temporal conversions due to an absence of a disembedding scanning mechanism. This impairment is linked to difficulties in motor coordination and organization of written symbols, which may be a result of delayed left-hemisphere motor dominance. The study highlights that these challenges are not solely related to writing but also impact broader cognitive functions.

Mayes, Breaux, and Calhoun (2017) examined the prevalence of dysgraphia in students with ADHD and found that 59% exhibited dysgraphia, while 92% had graphomotor weaknesses. Their research, based on standardized tests like the Developmental Test of Visual-Motor Integration (VMI) and Wechsler Intelligence Scale for Children (WISC), showed that dysgraphia is common across all age groups. The prevalence remained consistent among younger and older children, indicating that dysgraphia is a persistent issue rather than one that improves with age. The study underscores the importance of tailored interventions and accommodations to support students with ADHD and dysgraphia.

## **About the informants**

The students selected for the study were from the third grade, aged between seven and eight years. Data was collected from a total of 30 students, including 14 boys and 16 girls.

## Data Collection

A questionnaire was prepared based on the third standard syllabus. It was given to all 30 third-grade students to assess the presence of dysgraphia. The investigator dictated words, and the students were asked to write them to evaluate their listening skills. Later, they were instructed to copy sentences from the questionnaire to assess their writing abilities. The time allocated for the task was 30 minutes.

## Data interpretation

Student 's roll num	Vegetables name	Number of students committed error
2,6,13	Apple	3
01,13,	Banana	2
2	Cherry	1
	Fig	-
2,7,9,13	Grape	4
3,8,11,7,13,2	Kiwi	7
2	Lemon	1
13	Mango	1
	Orange	-
2,7,13,4	plum	4

The data interpretation reveals the number of students who made errors while writing the names of different vegetables. Three students (Roll numbers: 2, 6, and 13) misspelled "Apple," while two students (Roll numbers: 01 and 13) made errors in "Banana." Only one student (Roll number: 2) struggled with "Cherry," whereas no errors were recorded for "Fig" and "Orange." "Grape" was misspelled by four students (Roll numbers: 2, 7, 9, and 13), while "Kiwi" had the highest number of errors, with seven students (Roll numbers: 3, 8, 11, 7, 13, and 2) making

mistakes. One student (Roll number: 2) had difficulty with "Lemon," and another (Roll number: 13) struggled with "Mango." Additionally, four students (Roll numbers: 2, 7, 13, and 4) made errors while writing "Plum." This analysis highlights the specific words that students with dysgraphia commonly struggle with, providing valuable insights for targeted interventions.

### Mirror images in words

Student 's roll num	Words	Answer by the students	Number of the students
13	apple	q	1
2,7	banana	d	2
7	cherry	o	1
2	mango	o	1
13	lemon	e	1

In the above table the letter written in mirror images from are listed with number of students. For the word "apple" 1 student have written the letter "p" as mirror image "q".the word "banana" is written in a mirror image "b" as "d" by 2 students. In the word "cherry" "C" was written in a mirror image "o" the word "mango" is written in a mirror image "g" as "o" by 1 student. The word "lemon" is written in a mirror image "e" as "e" by 1 student.Error due to similar sounds

Student 's roll num	Word	Answer by the students	Number of the students committed errors
13,7	Apple	Able	2
5,9,2	banana	Panama	3

2	Cherry	Cherri	1
7	plum	Blum	1

The data analysis indicates specific phonetic errors made by students while writing words. Two students (Roll numbers: 13 and 7) wrote "Apple" as "abble," while three students (Roll numbers: 5, 9, and 2) misspelled "Banana" as "panana." One student (Roll number: 2) wrote "Cherry" as "cherri," and another (Roll number: 7) misspelled "Plum" as "blum." These errors suggest a pattern where voiceless sounds are replaced with voiced sounds and vice versa, such as /p/ being substituted for /b/ and /b/ for /p/. Additionally, students faced difficulty using the /i/ sound correctly in place of the alphabet /y/. These findings highlight phonological challenges that contribute to dysgraphia-related spelling difficulties.

## Findings

The findings of this study reveal significant spelling difficulties among students with dysgraphia, particularly in writing the names of different fruits. Common errors include phonetic substitutions, such as replacing voiceless sounds with voiced sounds (e.g., /p/ written as /b/ and vice versa), as well as difficulties in distinguishing similar phonemes. Mirror image writing was also observed, with students reversing letters such as "p" to "q" in "Apple," "b" to "d" in "Banana," and "e" to "ə" in "Lemon." The word "Kiwi" had the highest number of errors, while words like "Fig" and "Orange" had no mistakes. These errors indicate a combination of phonological and visual processing difficulties among the students.

Furthermore, listening skills were also affected, as students struggled to process and reproduce dictated words accurately. The study underscores the need for targeted interventions, including phonics-based instruction, handwriting exercises, and multisensory learning approaches, to support students with dysgraphia in improving their spelling and writing skills.

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