

The Effectiveness of Writing Techniques for Dyslexic Students in Learning the Malay Language

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v15-i2/24876>

DOI:10.6007/IJARBSS/v15-i2/24876

Published Date: 25 February 2025

Abstract

This study aims to analyze the effectiveness of writing techniques in helping dyslexic students overcome problems in mastering writing. This study was conducted at the D'Genius TTDI Dyslexia Association, involving 8 dyslexic students who have been given a dyslexia diagnosis. The researchers carried out four sets of writing tests vowels, syllables, lowercase and uppercase letter recognition to assess the efficacy of the activities conducted. The researcher used the Orton-Gillingham approach (1948) in this study. The researcher observed that before the application of the Orton-Gillingham approach, dyslexic students were less active in their writing activities. As a result, dyslexic students feel bored quickly and lack concentration when doing writing activities. They enjoy hand movements and letter formation activities after using the Orton-Gillingham approach in learning. The study results showed an increase in scores in each set of tests, which reflected the effectiveness of writing techniques in helping dyslexic students improve their writing skills. Activities involving multisensory approaches, such as playing with letter cards and using kinesthetic materials were proven to have a positive impact on dyslexic students. Although, there is a variation in the increase in scores between students, the writing techniques implemented showed effectiveness in improving the ability of dyslexic students to recognize letters, sounds, and syllables. This study suggests that multisensory learning is tailored to the individual needs of each student to improve better achievement in their writing mastery.

Keywords: Writing Techniques, Dyslexia, Mastery of Letters, Vowels, Syllables, Multisensory Approach

Introduction

Dyslexia is a combination of Greek words, '*dys*' meaning 'difficulty' and '*lexis*' meaning 'language'. In short, dyslexia mean difficulty in literacy. For example, students with dyslexia had letter confusion when reading and writing. Children with dyslexia will encounter difficulties with reading and writing in their everyday lives (International Dyslexia Association, 2020). The learning process of dyslexic students is different from that of normal students.

According to International Dyslexia Association, there are differences between dyslexic children and normal children in terms of language processing. As a result, students with dyslexia encounter difficulties in reading and writing.

According to Vijayaletchumy, Puteri Roslina, Normaliza Abd Rahim, and Kavenia Kunasegaran (2022), dyslexic students can show challenges in the learning process, as well as in terms of aspects of speech, behaviour, emotions, psychology, etc. Therefore, dyslexic students need guidance from teachers in their learning process. Dyslexic children are less skilled in pronouncing letter sounds.

Due to their challenges in learning writing and reading, dyslexic children also fall behind in their homework or academic tasks given by their teachers. Even though they try hard but unfortunately, many result in not being able to complete it perfectly without any aid from their parents or teachers. In a study conducted by Suzita binti Samsudin and Aliza binti Alias (2021), dyslexic students showed difficulty recognizing letters when asked to write their names. This shows how critically challenged most dyslexic students are when it comes to recognizing, pronouncing and writing letters.

The current generation prefers to do creative activities. By doing this, learning in the 21st century becomes an enjoyable activity. This, in turn, enhances the quality of the education system. In this research, researchers identify the type of language mastery activities from the aspect of writing that can attract the interest of dyslexic students. In addition, this study provides information related to language applications from the aspect of writing more efficiently. Dyslexic students cannot focus for long if they only use books and printed-out materials. Therefore, they need a suitable platform that is more imaginative and captivating for mastering a language. Teachers can assist dyslexic students in mastering a language, particularly letter confusion, by implementing enjoyable learning activities such as using clay, markers, drawing drawings, and singing.

Problem Statement

Dyslexic students have difficulty differentiating lowercase letters from uppercase letters. Reading and writing pilot tests were conducted to identify the common errors made by dyslexic students. The pilot research findings revealed that dyslexic students made errors in letter omission, letter substitution, guessing, and adding letters in sentences. Based on a study conducted by Jamil and Mohd Rusli (2024), which focused on the aspect of Phonological Dyslexia and studied severe reading difficulties due to phonological defects. This phonological defect refers to the individual's ability to manipulate and recognize sounds in language. In this study, the researcher applied the Orton-Gillingham method to solve the dyslexic students' writing problems. This study analyzed writing skills in the identification of lowercase and uppercase letters, vowels and KV syllables.

Through the results of this study, dyslexic students will improve their writing skills from the many multisensory writing techniques conducted. The students will also be given new experiences in a more fun and holistic learning manner so that they do not fall behind in learning. Furthermore, the results of this study can provide ideas for dyslexic teachers to deliver their lessons by involving dyslexic students in multisensory learning activities. Dyslexic

teachers can plan and provide a two-way learning environment to facilitate the learning process in writing for dyslexic students.

Methodology

This study applied a mixed method to obtain data. The qualitative approach allows the researcher to describe the study in more detail based on obtaining information from teachers who are teaching at D'Genius Dyslexia Center, TTDI while the quantitative approach is used to analyze the writing test scores of dyslexic students. The researcher interviewed several teachers to better comprehend the extent of the difficulties dyslexic students face. The process of applying the multisensory learning approach was done when identifying problems in the writing skills of dyslexic students. There are 32 skills in the writing component. Dyslexic students have significant problems in 4 writing skills, namely lowercase letters a-z, uppercase letters A-Z, vowel letters a,e,i,o,u and the syllable KV. Thus, activities based on the four issues dyslexic students have with their writing abilities are used. All writing activities are designed based on the Orton-Gillingham principle based on multisensory application in daily learning. This method is used in activities to help dyslexic students learn to write lowercase letters, uppercase letters, vowels and KV syllables in an engaging state. The results and level of mastery of these activities will be observed by the researcher in each session together with the dyslexic teachers at the study location.

The Orton-Gillingham method involves various senses, such as visual, auditory and kinesthetic. This integration of multiple senses makes it easier for dyslexic students to understand lessons more easily because they can see, hear and touch it. The researcher conducted pre- and post-tests according to a set of writing activities. By using this approach, the researcher can obtain the language proficiency of dyslexic students and the methods used by teachers to enhance their writing skills. The data obtained is analyzed in the form of tables and graphs to see a comparison of scores before and after the application of writing techniques.

Results and Discussion

In this section, the researcher will describe the findings of the study to fulfil the objective of the research, which is to analyze the effectiveness of writing techniques in solving the writing problems of dyslexic students. During the field study period at the D'Genius TTDI Dyslexia Association, the researcher conducted observations and used several sets of writing tests to obtain study data. All study subjects, namely 8 dyslexic students from the middle class, underwent writing tests.

After interviews with teachers who teach dyslexic students, the researcher gained insight into the weaknesses of dyslexic students in writing skills. The researcher prepared three sets of writing tests. The test sets consisted of a lowercase letter recognition test set, an uppercase letter recognition test set, a vowel test set, and a syllable test set. Then, the researcher analyzed the data on mastery of writing skills in the form of tables and line graphs.

Phase A: Lowercase Letter Introduction Activity

Figure 1

Lowercase Letter Introduction Activity

Subject	Scores	
	Pre-Test	Post-Test
A	20	26
B	15	24
C	15	23
D	21	26
E	22	25
F	6	15
G	17	20
H	19	25

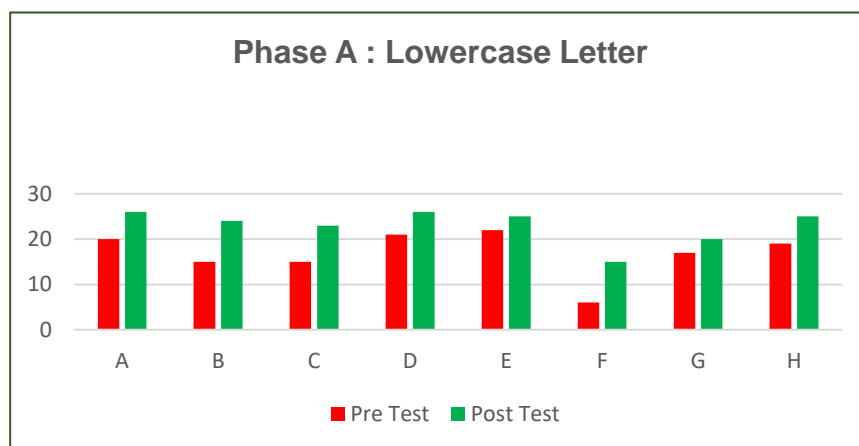


Table 1 shows the increase in scores from the pre-test to the post-test for the lowercase letter recognition activity. All subjects showed an increase in their ability to recognize and remember lowercase letters. Subjects B and F showed the most significant increases, from 15 to 24 and from 6 to 15, respectively, indicating the effectiveness of this activity for students with dyslexia. Meanwhile, subjects E and G showed smaller increases, which may indicate a need for more practice or an approach that is more tailored to their needs. The effectiveness of applying the lowercase letter recognition writing technique based on the OG approach. All subjects showed improvement, although there were variations in their levels. This indicates that lowercase letter recognition activities are generally effective, although some students experienced greater improvement than others.

Lowercase letter recognition activities that involve multisensory approaches (such as writing, playing with letter cards, and using kinesthetic materials) are beneficial for dyslexic students. More concrete and engage activities help dyslexic students remember and recognize letters better (Vijayaletchumy Subramaniam, Puteri Roslina Abd Wahid, Normaliza Abd Rahim, & Kavenia Kunasegran, 2022).The greater score improvement in some students, such as Subjects B and F, indicates that activities that are fun and involve more than one sense (such as through games or letter writing) are very effective. However, students such as Subjects E

and G showed smaller improvements, which may indicate that they need a more directed and focused approach.

Despite the improvement, students with dyslexia often need longer and more practice to fully master the skills taught. Therefore, although these activities are successful, additional support and ongoing practice are still needed. Lowercase letter recognition activities are effective in helping dyslexic students improve their ability to recognize and remember lowercase letters. The increase in scores seen in all subjects shows that the activity has a positive impact, although the level of improvement varies. Students with dyslexia such as Subject F who have the greatest improvement show that despite the big challenges, with the right approach, dyslexic students can overcome these obstacles. For further success, it is recommended to extend the use of a multisensory approach and provide continuous training that is more focused, according to the speed and needs of each student.

Phase B: Capital Letter Introduction Activity

Figure 2

Capital Letter Introduction Activity

Subject	Scores	
	Pre-Test	Post-Test
A	19	26
B	17	22
C	15	19
D	23	26
E	21	25
F	11	13
G	18	24
H	22	26

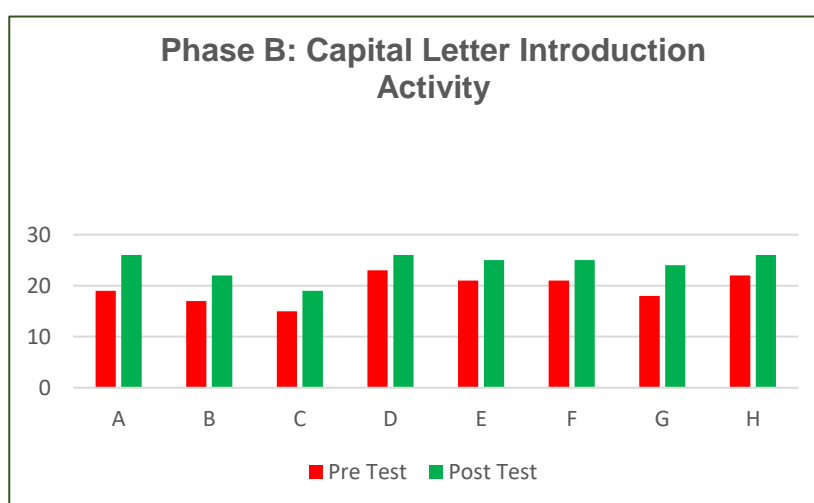


Table 2 shows the improvement in capital letter recognition activity. Overall, most subjects showed good improvement in scores, with Subjects A, D, and H showing significant scores, increasing from 19 to 26, 23 to 26, and 22 to 26, respectively. However, Subject F showed a

smaller improvement, from 11 to 13, which may indicate that this student still faces challenges in recognizing capital letters. This suggests that capital letter recognition techniques are generally beneficial, but require a more focused approach for some students. Whiteboards and magnetic lettering were among the materials the researcher utilized. Students with dyslexia follow the researcher's instructions to arrange the magnetic letters on the whiteboard provided to every individual.

Overall, the effectiveness of the capital letter recognition activity can be seen from the consistent improvement in scores among students. Although there are differences in the level of improvement, this activity has been proven to help dyslexic students recognize and master capital letters. To ensure greater effectiveness, it is recommended that this activity continue to be tailored to the individual needs of students and carried out with more focused and repeated practice.

Children's senses, including sight, hearing, movement, and touch, are all involved in the multisensory approach to education. Children's skill mastery can be improved by including all of their senses in instruction (Chiew & Abu Bakar, 2022).

Phase C: Vocal Activities

Figure 3

Vocal Activities

Subject	Scores	
	Pre-Test	Post-Test
A	5	9
B	4	7
C	6	8
D	7	9
E	6	8
F	2	6
G	4	7
H	5	8

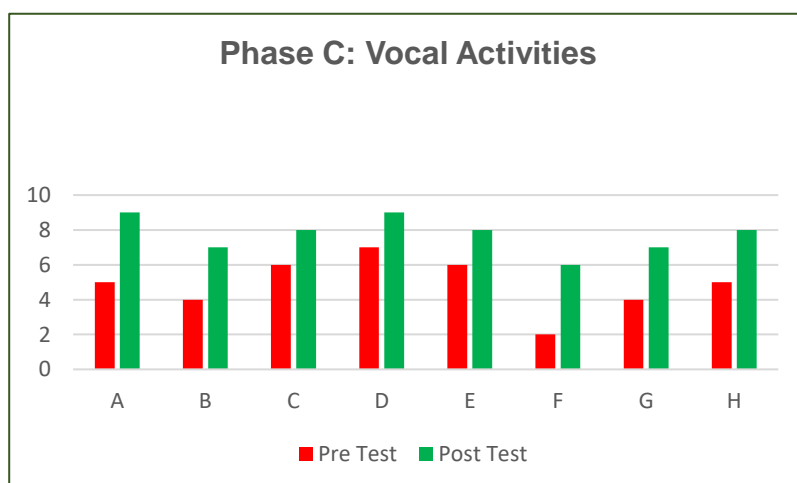


Table 3 shows a significant increase in vocal activity, with Subjects A and F showing the largest increases, from 5 to 9 and from 2 to 6. Vocal activities applied with these students to associate letters with their corresponding sounds. The increase in scores among Subjects B, G, and H also showed the effectiveness of this activity, although their increases were slightly smaller. Overall, vocal techniques were shown to help students better recognize the sounds and structure of letters, which is very beneficial for dyslexic students who often have difficulties in the auditory aspect.

Students with dyslexia used clay and other materials in this project. Based on the researcher's provided image, dyslexic students must generate and form the proper vowel letters. This will make creating clay letter formations more enjoyable for dyslexic students. The relationship between cognitive function and physical movement is known as multisensory learning. Movement, coordination, manipulation, softness, strength, and speed are examples of physical skills that demonstrate learning through multisensory activities. These behaviours, which include walking and utilizing the appropriate tools, show both gross and fine motor skills, (Muda, Kway, & Razalli, 2023). Vocal activities benefited all students involved, with scores increasing across subjects. The greater increases in Subjects A and F indicate that vocal activities helped them to recognize and associate sounds with letters or words more quickly. Vocal activities are particularly relevant for dyslexic students, as they can help improve their auditory skills, which are often impaired in reading and spelling.

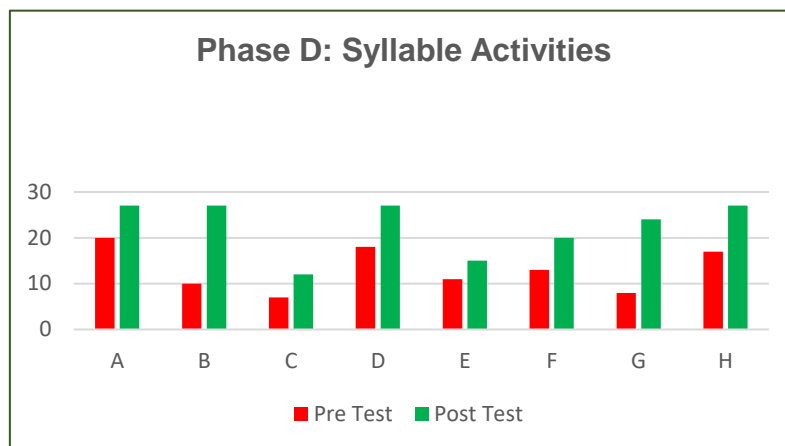
Although there was variation in the increase in scores between subjects, the effectiveness of vocal activities was evident across all students. Smaller increases in scores, such as in Subjects C, D, and E, do not mean that the activities were ineffective; rather, they may indicate that these students require more practice or a more focused approach to achieve full mastery.

Phase D: Syllable Activities

Figure 4

Syllable Activities

Subject	Scores	
	Pre-Test	Post-Test
A	20	27
B	10	27
C	7	12
D	18	27
E	11	15
F	13	20
G	8	24
H	17	27



The most significant increase was recorded in the syllable activity, as shown in Figure 4. Subject B showed the largest increase, from 10 to 27, followed by Subject G, who increased from 8 to 24. This shows that the syllable activity is very effective in helping students recognize patterns in words and improve their mastery of reading and writing. Although some subjects, such as Subjects C and E, experienced smaller increases, the increases still showed a positive effect of this activity.

Overall, the syllable activities proved to be very effective in improving dyslexic students' mastery of syllables and sounds in words. The significant improvement among most subjects, especially Subjects B and G, suggests that this approach helps students recognize patterns in words, which is an important step in learning to read and write. Although there was variation in the level of improvement between subjects, the consistent increase in scores among most students suggests that this activity is having a positive effect.

Despite the differences in the rate of improvement, students who showed small improvements such as Subjects E and C still showed significant progress, indicating that the syllabic activities are a useful tool, but may require more practice or a more focused approach to achieve greater results. This has been proven in a study by Muda et al., (2023) showing that the use of various sensors involve visual, auditory, kinesthetic and tactile stimulation in the activities carried out provide a meaningful learning experience to students while helping them achieve learning objectives.

Conclusion

Based on the results of the studied it can be concluded that writing techniques implemented through a multisensory approach, including the identification of lowercase and uppercase letters, vowels, and syllables, have proven effective in helping dyslexic students overcome their writing problems. The consistent improvement in scores indicates that this approach has a positive impact, although there is variation in the level of improvement between students. Techniques that involve more than one sense, such as games and kinesthetic writing, provide more significant results for some students, especially those who need more practice and ongoing support. For optimal results, it is recommended to continue using this approach with repeated training and more focused adjustments based on the individual needs of each student. In addition, additional support in the form of interventions tailored to the student's learning style is also important to ensure continued effectiveness in the learning process.

Acknowledgement

This study is supported by *Geran Inisiatif Putra Siswazah* (GP-IPS/2024/9807300). The researcher wishes to express the utmost appreciation and gratitude to all the members of the D'Genius TTDI Dyslexia Association for the support and cooperation given to the researcher throughout the completion of this study.

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