

KNOWLEDGE LEVEL OF PRESCHOOL TEACHERS IN IDENTIFYING STUDENTS WITH SPECIFIC LEARNING DISABILITY

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ABSTRACT

This study was conducted to identify knowledge level among preschool teachers in identifying students with Specific Learning Disability (SLD). The study employed a quantitative approach. A total of 76 preschool teachers in Kluang were selected as sample through random sampling. Data for the study were obtained through a dichotomous questionnaire. The validity of the questionnaire was done by consulting an expert lecturer and three expert teachers. Kuder and Richardson Formula 21 (KR-21) is used to increase reliability and the overall value of the KR-21 Formula is 0.83. All data were analyzed using Statistical Package for the Social Sciences (SPSS) version 22.0. Descriptive analysis (frequency and percentages) and inferential analysis (Kruskal–Wallis test and Mann-Whitney U test) were used in the data analysis process. Overall, descriptive findings indicated that the knowledge level of preschool teachers in identifying SLD was at a moderate level because 69% of the teachers answered the questionnaire correctly. Inferential findings revealed that there was no significant difference in the knowledge level of preschool teachers in identifying SLD based on their teaching experience and no significant difference in the knowledge level of preschool teachers in identifying SLD based on whether they were preschool option or non-option teachers. In conclusion, it is essential for every teacher to enhance their knowledge about SLD to assist students with SLD.

Keywords: knowledge level, preschool teachers, students with specific learning disability

INTRODUCTION

According to *Garis Panduan Pendaftaran Orang Kurang Upaya (OKU)* (Pindaan 2019), Specific Learning Disability (SLD) can be divided into three types: dyslexia, dyscalculia, and dysgraphia. Dyslexia refers to a condition in which the brain processes visual symbols and sounds differently, leading to difficulties in reading, understanding, spelling, writing, and calculating. Dyscalculia refers to a condition that affects a child's ability to acquire arithmetic skills and understand mathematical concepts. Dysgraphia is a condition where fine motor skills are impaired, making it difficult for children to form letters, write neatly, and perform other related tasks. These conditions are characterized by specific difficulties in learning, particularly in areas like reading, math, and writing, despite normal intelligence and opportunity to learn. Therefore, individuals with these disabilities require targeted educational strategies and support to overcome their challenges (Zolkipli et al., 2023).

Students with Specific Learning Disabilities (SLD) have the right to learn in an environment free from barriers, which enables them to build self-confidence and reach their full potential (Kementerian Pendidikan Malaysia, 2013). According to the National Association for the Education of Young Children (NAEYC) (2012), teachers must be prepared to identify students with SLD who demonstrate exceptional interests and talents. Furthermore, teachers spend at least six hours each day with students, providing opportunities to recognize when a student may be experiencing a learning disorder (Muktai, 2018; Jacobson, 2021). As such, preschool teachers play a crucial role in developing strategies to address learning challenges for students with SLD by identifying those who may exhibit characteristics of special needs (Kurikulum Standard Prasekolah Kebangsaan, 2017).

Access to equal education for children with disabilities, including vocational training and lifelong learning, is guaranteed under Section 28(1) of the *Akta Orang Kurang Upaya* 2008 (Akta 685). Of the total 97,220 students with disabilities, 79,921 (82.20%) were categorized as having Specific Learning Disabilities (SLD) (Kementerian Pendidikan Malaysia, 2020). This data highlights that SLD is the most commonly identified disability based on diagnostic results. Teachers play a crucial role in the early identification of SLD in students (Yasmin & Mohd, 2021). Therefore, it is essential for teachers to be professional in assessing and addressing SLD from cognitive, communication, motor, and emotional perspectives (Siti, Susheel & Rogayah, 2021).

As a result, students with SLD face difficulties in the 3Ms (reading, writing, and arithmetic). Preschool teachers play a crucial role in identifying these students, ensuring they have equal access to education in an environment free from barriers, in line with the objectives of the *Program Pendidikan Inklusif* (2013). This helps students reach their full potential (Kementerian Pendidikan Malaysia, 2013).

PROBLEM STATEMENT

The role of schools and teachers is essential not only in identifying students with SLD but also in integrating them into society (Muktai, 2018). While most preschool teachers recognize that some children may take longer to develop certain skills, such as reading or writing, they may hesitate to make conclusions, believing that more time is needed for the students to improve (Morin, 2021). This hesitation often arises from a lack of awareness of individual differences among students. Consequently, students with SLD may struggle to master certain skills if they are not identified early and provided with appropriate intervention (Yasmin & Mohd, 2021).

Furthermore, Lee and Suziyani (2021) state that most preschool teachers lack sufficient knowledge and a clear understanding of teaching students with SLD. Most teachers teaching children with learning disabilities have not received special education training and feel they are not qualified to teach these students (Allam & Martin, 2021). Teachers without expertise in SLD struggle to implement appropriate teaching strategies for these students (Sari, Pujaningsih & Mumpuniarti, 2017; Nusaibah & Aliza, 2020). There are also issues and challenges teachers face in teaching children with different disabilities (Vezne & Sardohan Yildirim, 2022). This is because signs of Specific Learning Disabilities are not always immediately apparent, as affected students may exhibit normal speech patterns (Siti Rohani Abdul Samat, Norasmahani Basri & Johari Talib, 2019; Jacobson, 2021).

Moreover, one challenge teachers face is being assigned to teach subjects outside their primary area of expertise and being tasked with responsibilities that fall beyond their role, which can negatively impact teaching quality (Hafizati & Suziyani, 2021). This situation

indirectly affects teachers' knowledge, skills, learning concepts, and values (Hafizati & Suziyani, 2021). As a result, many teachers lack the specialized knowledge and training required to identify students with SLD (Monteiro et al., 2018).

Therefore, this study was carried out to achieve the objectives of the study as follows:

1. Identify the level of knowledge of preschool teachers about the identification of types of Specific Learning Disability.
 - a. Identifying the level of knowledge of preschool teachers in the identification of dyslexic students.
 - b. Identifying the level of knowledge of preschool teachers in the identification of dyscalculic students.
 - c. Identifying the level of knowledge of preschool teachers in the identification of dysgraphic students.
2. Identify significant differences between preschool teachers' knowledge levels in the identification of students with Specific Learning Disability based on preschool teachers' teaching experience.
3. Identify the significant difference between the level of knowledge of preschool teachers in the identification of students with Specific Learning Disability based on preschool option teachers and non-option preschool teachers.

LITERATURE REVIEW

The study by Lee and Suziyani (2021) reveals that most preschool teachers lack sufficient knowledge and a clear understanding of teaching children with special needs. In their study, many teachers were uncertain about whether they possessed the necessary knowledge to provide motivation or to conduct observations for children with special needs. Additionally, the findings show that preschool teachers without special education training lack the relevant experience and skills required to teach students with SLD. These teachers have limited or no experience in working with students with SLD. These findings align with those of Hafizati and Suziyani (2021), who found that most non-special education preschool teachers struggle to manage preschool students effectively. This suggests that these teachers lack confidence in their ability to manage students during teaching and learning activities. Consequently, this study aims to examine the knowledge of both option and non-option preschool teachers in identifying students with SLD.

The research conducted by Yasmin and Mohd (2021) shows that the level of knowledge among primary school teachers in identifying students with Specific Learning Disability (SLD) is high with a mean value of 3.76, SP=0.61. They believe that the more knowledgeable teachers are about Specific Learning Disability, the more strategies can be implemented according to the needs of students with SLD. Yasmin and Mohd's (2021) study sample focused on primary school teachers, while this study focuses on preschool teachers.

Three main factors identified in educating students at early ages are knowledge, attitudes, and practices of teachers (Noor & Mohd, 2021). In terms of knowledge, most preschool teachers are uncertain about the components of behavior management which is stated in the *Kurikulum Pendidikan Khas*. Through the study, only 45% of the total respondents supported the placement of special needs students together with normal students in the same classroom because teachers are concerned that students with SLD may disrupt other students and may not be able to follow the learning process due to their disabilities.

Overall, the study reported that the level of knowledge among private preschool teachers related to students with SLD in Melaka state is moderately high with a minimum value of 3.74.

Dyslexia is one of the types within the SLD category. The sample study conducted by Izzati and Lee (2022), which involved trainee teachers, was asked to respond to The Knowledge and Beliefs about Developmental Dyslexia Scale (KBDDS), which contains items regarding general information about dyslexia, dyslexia symptoms, dyslexia diagnosis, and treatment for dyslexic students. The results of the study showed that 34% of trainee teachers had inaccurate knowledge about general information on dyslexia, 23% of trainee teachers had inaccurate knowledge about diagnosing dyslexic students, and 32% of trainee teachers were unaware of treatment methods for dyslexic students. The sample of this study focused on trainee teachers who were still studying at Teacher Training Institutes, while this study focuses on preschool teachers currently serving in schools.

There is another study that also focuses on dyslexia learning problems. The results of the study conducted by Siti Rohani Abdul Samat, Norasmahani Basri, and Johari Talib (2019) showed that almost all teachers were still unable to list the characteristics of dyslexic students accurately even though they had teaching experience. This is because the kindergarten teachers in the study were not exposed to in-depth knowledge about dyslexic students. However, the study to be examined is more focused on the understanding of teachers about dyslexic, dyscalculic, and dysgraphic students.

METHODOLOGY

This study is a quantitative research and was conducted using a survey method. The sample size for this study was determined based on the guidelines provided by Krejcie and Morgan (1970), which recommended a sample size of 76 participants from a population of 94 preschool teachers in Kluang, Johor. The sampling method employed was probability sampling, specifically simple random sampling. Due to the high energy, time, and cost required for a larger sample size, the researcher randomly selected participants by drawing numbers from a list of preschool teachers in Kluang, which was obtained from the Education Officer at the *Pejabat Pendidikan Daerah Kluang*.

The instrument used in this study is a questionnaire designed to assess preschool teachers' knowledge of identifying students with Specific Learning Disabilities (SLD). The preschool teachers who completed the questionnaire served as the sample for this study. The closed-ended questions employed a dichotomous scale, offering only two response options: 'True' and 'False'. The questionnaire was created by the researcher using Google Forms. It was adapted from the research questionnaires developed by Izzati Suffiah Muhammad Amin Faudzi and Lee (2022) and the findings of Salma Nadiyah et al. (2022).

Before distributing the questionnaire to the sample, the researcher obtained permission from the *Bahagian Perancangan dan Penyelidikan Dasar Pendidikan* to conduct the study. Subsequently, permission was granted by the *Pejabat Pendidikan Daerah Bagan Datuk* to carry out a pilot study. A total of 30 preschool teachers were randomly selected to complete the questionnaire during the pilot study. The purpose of the pilot study was to help researchers refine the items in the questionnaire to ensure they were clear and easy for preschool teachers to understand.

Prior to the pilot study, the content of the questionnaire was reviewed by an expert lecturer, two preschool teachers, and a language specialist to evaluate each item. This process was aimed at enhancing the content validity, item validity, and language validity of the study. The reliability of the questionnaire was assessed using the Kuder-Richardson Formula 21 (KR-21). After the teachers completed the questionnaires, the responses were collected and analyzed using the Statistical Package for the Social Sciences (SPSS) version 22.0. The KR-21 value for the pilot study was 0.83, indicating that the items in the questionnaire were reliable.

Next, The researcher obtained permission from the *Jabatan Pendidikan Negeri Johor* (JPNJ) to conduct the study. Following this, a list of names was provided by the *Pegawai Pejabat Pendidikan Daerah Kluang Sektor Sekolah Rendah dan Prasekolah* to determine the sample size. After receiving approval from the headmasters, the researcher distributed the questionnaire, in the form of Google Forms, to the preschool teachers who participated in the study.

The data collected through the questionnaire were entered into SPSS version 22.0 for analysis. Two types of data analysis were used in this study: descriptive statistics and inferential statistics. Descriptive statistics include frequency and percentage analysis, which were calculated to assess the knowledge level of preschool teachers in identifying students with SLD, specifically dyslexia, dyscalculia, and dysgraphia, in response to the first research question. The knowledge score analysis is presented in Table 1.

Table 1

Knowledge Score and Interpretation Level of Knowledge Score

Knowledge Score	Interpretation Level of Knowledge Score
0 – 49%	Poor Level
50 – 75%	Moderate Level
76 – 100%	High Level

(Source: Baig et al., 2020 and Nusaibah & Aliza, 2020)

This study also employed inferential statistical methods, specifically the Kruskal-Wallis test and the Mann-Whitney U test. Both are non-parametric tests, suitable for addressing the second and third research questions. The Kruskal-Wallis test was used to compare the medians of three or more independent groups (Lee, Zakri, & Chua, 2018). Thus, the Kruskal-Wallis test was applied to address the second research objective, while the Mann-Whitney U test was used to compare the medians of two independent groups, in line with the third research objective.

FINDINGS

Descriptive statistics are used to answer the first question which is the level of knowledge of preschool teachers about the identification of types of Specific Learning Disability (SLD). SLD are divided into three types, namely dyslexia, dyscalculia and dysgraphia. The data collected from the questionnaire can be summarized by using frequency and percentage. Table 2 shows that the level of knowledge of preschool teachers in the identification of dyslexic students.

Table 2
The Level of Knowledge of Preschool Teachers in the Identification of Dyslexic Students

No.	Items	Knowledgeable	Misconception	Correct Answer
B1	Dyslexic students have phonological difficulties (e.g., the ability to hear and manipulate sounds in language).	47 (62%)	29 (38%)	True
B2	The main characteristics of dyslexic students is reversing letters and words while writing.	4 (5%)	72 (95%)	False
B3	Dyslexic students make numerous errors and struggle to read fluently.	66 (87%)	10 (13%)	True
B4	Dyslexic students do not understand the content they read.	59 (78%)	17 (22%)	True
B5	Dyslexic students have a lower than average level of intelligence.	32 (42%)	44 (58%)	False
B6	Dyslexic students face spelling difficulties.	71 (93%)	5 (7%)	True
B7	Dyslexic students are unable to retell events in sequence (e.g., what happened first, second, third).	55 (72%)	21 (28%)	True
B8	Dyslexic students struggle with listening comprehension.	33 (43%)	43 (57%)	False
B9	Dyslexic students have difficulty remembering letter sounds and may misinterpret words.	57 (75%)	19 (25%)	True
B10	Dyslexic students have trouble understanding jokes, comics, and sarcasm.	40 (53%)	36 (47%)	True
B11	Dyslexic students follow instructions even if they are not good at reading.	9 (12%)	67 (88%)	False
B12	Dyslexic students may experience speech delays.	48 (63%)	28 (37%)	True
B13	Dyslexic students find it challenging to understand mathematical symbols and may misread numbers.	54 (71%)	22 (29%)	True
B14	Dyslexic students only write letters in reverse, but they know where to start the task or how to continue the task.	14 (18%)	62 (82%)	False
B15	Individual reading assessments are important in identifying dyslexic students.	63 (83%)	13 (17%)	True
B16	All dyslexic students have the same symptoms.	42 (55%)	34 (45%)	False
Total average percentage		43(57%)	33 (43%)	

The analysis of the findings of the questionnaire contained in Table 2 has answered the first research question. A total of 16 question items were developed to assess the level of knowledge of preschool teachers in identifying dyslexic students. The 'Knowledgeable' column means that the study samples can answer the questions correctly and it represents that they understand the characteristics of dyslexic students and they can identify a student who has symptoms of dyslexia. On the other hand, the 'Misconception' column means that the study samples could not answer the question correctly and it represents that they do not understand the characteristics of dyslexic students. Based on Table 2, most people know that dyslexic students have trouble spelling, on the other hand, most teachers misunderstand that the main characteristic of dyslexic students is reversing letters and words when writing.

A total of 16 question items were created to identify the level of preschool teachers' knowledge in identifying dyslexic students. The total average percentage for teachers who are knowledgeable about the characteristics of dyslexic students is 57% of preschool teachers (n=43). This means that 57% of preschool teachers have knowledge in identifying dyslexic students. This finding also shows that there are 43% of preschool teachers (n=33) still experiencing confusion in the identification of dyslexic students. In conclusion, preschool teachers' knowledge in identifying dyslexic students is at a moderate level, as shown in Table 1. Additionally, Table 3 shows the level of knowledge of preschool teachers in the identification of students with dyscalculia.

Table 3

The Level of Knowledge of Preschool Teachers in the Identification of Dyscalculic Students

No.	Items	Knowledgeable	Misconception	Correct Answer
C1	Dyscalculic students face challenges in speaking and reading.	53 (70%)	23 (30%)	False
C2	Dyscalculic students struggle with recognizing and pronouncing numbers.	72 (95%)	4 (5%)	True
C3	Dyscalculic students have problems in recognizing and pronouncing letters and words.	50 (66%)	26 (34%)	False
C4	Dyscalculic students have problems with mathematical operations (e.g., addition, subtraction, multiplication, and division).	71 (93%)	5 (7%)	True
C5	Dyscalculic students struggle with remembering and understanding real numbers (e.g., whole numbers, negative integers, fractions, decimals, etc.).	71 (93%)	5 (7%)	True
C6	Dyscalculic students have trouble remembering sequential information, such as phone numbers, task step sequences, or days of the week.	69 (91%)	7 (9%)	True

continued

C7	Dyscalculic students consistently receive low scores in math exams, even though they study hard.	63 (83%)	13 (17%)	True
C8	Dyscalculic students face difficulties in solving mathematical problems, especially problems that challenge the mind.	70 (92%)	6 (8%)	True
C9	Dyscalculic students face challenges in understanding and managing time, often being consistently late or struggling to estimate time durations for activities.	54 (71%)	22 (29%)	True
C10	Any student who struggle with basic counting skills in mathematics can be categorized as a dyscalculic student.	30 (40%)	46 (60%)	False
Total average percentage		60 (79%)	16 (21%)	

A total of 10 question items were created to identify the level of preschool teachers' knowledge in identifying dyscalculic students. Based on Table 3, more than half of the preschool teachers (50% and above) were able to correctly answer question items C1, C2, C3, C4, C5, C6, C7, C8, and C9. This indicates that preschool teachers have knowledge about the characteristics of dyscalculic students. The majority of preschool teachers, 72 teachers (95%), are aware that dyscalculic students have difficulty recognizing and pronouncing numbers. However, Table 3 shows that 46 preschool teachers (60%) were confused or misunderstood when answering question item C10. They believed that all students who struggle with basic counting skills in mathematics should be categorized as having dyscalculia, which is incorrect.

The average percentage of knowledgeable teachers about the characteristics of dyscalculic students is 79% among preschool teachers (n=60) based on Table 3. This means that 79% of preschool teachers have knowledge in identifying dyscalculic students. Besides, these findings also indicate that 21% of preschool teachers (n=16) still have confusion in identifying dyscalculic students. In conclusion, Table 1 shows that preschool teachers have a high level of knowledge in identifying dyscalculic students. Additionally, Table 4 illustrates the level of knowledge among preschool teachers in identifying dysgraphic students.

Table 4

The Level of Knowledge of Preschool Teachers in Identifying Dysgraphic Students

No.	Items	Knowledgeable	Misconception	Correct Answer
D1	Dysgraphic students have difficulty with spelling.	40 (53%)	36 (47%)	True
D2	Dysgraphic students struggle with copying.	66 (87%)	10 (13%)	True
D3	Dysgraphic students face challenges in counting.	51 (67%)	25 (33%)	False
D4	Dysgraphic students face issues in writing letters and numbers clearly and neatly.	63 (83%)	13 (17%)	True

continued

D5	Dysgraphic students have difficulties using uppercase and lowercase letters, spacing between letters, and placing letters correctly within a word when writing.	69 (91%)	7 (9%)	True
D6	Dysgraphic students grip writing tools tightly and write close to the paper.	58 (76%)	18 (24%)	True
D7	Dysgraphic students may engage in self-talk while writing.	43 (57%)	33 (43%)	True
D8	Dysgraphia only occurs in children.	43 (57%)	33 (43%)	False
D9	Any student with poor handwriting can be categorized as a dysgraphic student.	51 (67%)	25 (33%)	False
D10	Dysgraphic students may have better verbal skills compared to their writing skills.	63 (83%)	13 (17%)	True
Total average percentage		55 (72%)	21 (28%)	

A total of 10 question items were created to identify the level of preschool teachers' knowledge in identifying dysgraphic students. According to Table 4, the majority of preschool teachers answered question item D5 correctly, with 69 teachers (91%). This indicates that most preschool teachers understand that dysgraphic students have difficulty using uppercase and lowercase letters, spacing between letters, and positioning letters correctly within words when writing. However, there are three question items that caused the most confusion regarding the characteristics of dysgraphia among preschool teachers. A total of 36 preschool teachers (47%) were unaware that dysgraphic students have difficulty with spelling. Furthermore, 33 preschool teachers (43%) did not know that dysgraphic students tend to talk to themselves while writing, and that dysgraphia occurs not only in children but also in adults.

The average percentage of knowledgeable teachers about the characteristics of dysgraphic students is 72% among preschool teachers (n=55) based on Table 4. This means that 72% of preschool teachers have knowledge in identifying dysgraphic students. These findings also indicate that 28% of preschool teachers (n=21) still have confusion in identifying dysgraphic students. In summary, preschool teachers' knowledge in identifying dysgraphic students is at a moderate level. Overall, the level of knowledge among preschool teachers in identifying Specific Learning Disability is at a moderate level, as the average percentage of teacher knowledge about dyslexic, dyscalculic, and dysgraphic students calculated based on is 69%.

The inferential statistical analysis using the Kruskal-Wallis test revealed $H(3) = 7.33$, $p = 0.062$ ($p > 0.05$), indicating no significance. The significance value for the variable 'level of knowledge among preschool teachers in identifying students with Specific Learning Disabilities' is 0.062, which is greater than the set significance level of 0.05. Therefore, the alternative hypothesis is rejected, suggesting that there is no significant difference in the level of knowledge among preschool teachers in identifying students with Specific Learning Disabilities based on their teaching experience.

Additionally, the inferential statistical analysis using the Mann-Whitney U test yielded $U = 302$, $p = 0.259$ ($p > 0.05$), indicating no significance. The significance value for the variable 'level of knowledge among preschool teachers in identifying students with Specific Learning Disabilities' is 0.259, which exceeds the set significance level of 0.05. As a result, the alternative hypothesis is rejected, suggesting that there is no significant difference in the level of knowledge among preschool teachers in identifying students with Specific Learning Disabilities based on whether they are preschool option teachers or non-preschool option teachers.

DICUSSION AND IMPLICATIONS OF THE STUDY

Discussion of Descriptive Findings

In this study, the knowledge level among preschool teachers in identifying dyslexic students is at a moderate level. The findings are consistent with previous research (Siti Rohani Abdul Samat, Norasmahani Basri & Johari Talib, 2019; El-Keshky & Alahmadi, 2019; Nusaibah & Aliza, 2020; Lee & Suziyani, 2021; Noor Diyana Yaacob & Mohd Mokhtar Tahar, 2021; Izzati & Lee, 2022), which also report that preschool teachers generally possess a moderate level of knowledge regarding the characteristics of students with Specific Learning Disabilities (SLD). The study by Izzati and Lee (2022) reported that most teachers remain confused about general information about dyslexia, dyslexia symptoms, dyslexia diagnosis, and treatment for dyslexic students. According to Siti Rohani Abdul Samat, Norasmahani Basri, and Johari Talib (2019), almost all teachers are still unable to accurately list characteristics of dyslexic students, even those with teaching experience. They suggested that the moderate level of knowledge about learning difficulties among teachers may result from a lack of professional development programs on this topic. Without a clear understanding of learning difficulties, preschool teachers may struggle to effectively support students with these challenges (Lee & Suziyani, 2021).

However, the findings of this study contradict those of Rosli and Alias (2020) and Yasmin and Mohd (2021), who reported that teachers' knowledge of identifying students with learning difficulties is at a high level. Yasmin and Mohd (2021) found that most teachers exhibited a positive attitude toward identifying students with learning difficulties, demonstrating a proactive approach to managing conditions such as dyslexia, ADHD, and autism. However, these studies primarily focus on primary school teachers, not preschool teachers.

In this study, the level of knowledge among preschool teachers in identifying dyscalculic students is high. This finding is consistent with research by Rosli and Alias (2020), which showed that preschool teachers generally possess a high level of knowledge about the characteristics of learning difficulties. This suggests that teachers are becoming more aware of and knowledgeable about students with dyscalculia. According to Intriago, Rodriguez, and Cevallos (2021), dyscalculic students experience a learning disorder characterized by difficulties in understanding and using mathematical concepts. While the symptoms of dyscalculia can vary, common characteristics include difficulty with basic arithmetic operations such as addition, subtraction, multiplication, and division. However, in this study, 60% of preschool teachers believed that all students who struggle with basic mathematical skills should be classified as dyscalculic, which is not accurate.

In this study, the level of knowledge among preschool teachers in identifying dysgraphic students is moderate. This finding is supported by the fact that 91% of preschool teachers correctly identified that dysgraphic students have difficulty using uppercase and lowercase letters, spacing between letters, and placing letters within words during writing. However, 47% of preschool teachers were unaware that dysgraphic students also experience spelling difficulties. According to Norramlah Ali and Nurfaradilla Mohamad Nasri (2021), a key factor contributing to this knowledge gap is the lack of adequate training in special education. To address this issue, it is recommended that teachers periodically attend workshops with special education professionals to enhance their skills in identifying and supporting students with SLD.

Overall, the level of knowledge among preschool teachers in identifying SLD (dyslexia, dyscalculia, and dysgraphia) is moderate. Therefore, it is important to take steps to enhance preschool teachers' knowledge, as they play a crucial role in identifying students with SLD and ensuring equal learning opportunities in an inclusive environment aligned with the objectives of *Program Pendidikan Inklusif* (2013).

Discussion of Inferential Findings

The second research question, which explored whether there is a significant difference in the level of knowledge among preschool teachers in identifying students with Specific Learning Disabilities based on their teaching experience, was addressed. After data collection, this study found no sufficient evidence to support a significant difference between the two variables. Therefore, the alternative hypothesis was rejected, indicating that teaching experience does not significantly impact preschool teachers' knowledge in identifying students with Specific Learning Disabilities. According to Ihwana (2018), teachers with over five years of experience are classified as expert teachers, while those with less than five years are considered novice teachers. In this study, 63% of teachers were classified as experts. Despite this, the level of knowledge among preschool teachers about Specific Learning Disabilities (dyslexia, dyscalculia, and dysgraphia) remains moderate. This finding aligns with the research by Graham et al. (2020), which suggests that even experienced teachers may not frequently encounter students with Specific Learning Disabilities, limiting their ability to develop in-depth knowledge. Therefore, it is essential for all teachers to continually strive to enhance their knowledge and skills in identifying students with SLD, thereby improving early detection and support for affected student.

Additionally, the third research question, which explored whether there is a significant difference in the level of knowledge among preschool teachers in identifying students with SLD based on whether they are preschool option or non-preschool option teachers, was investigated. After data collection, the alternative hypothesis was rejected, indicating that there is no significant difference in the level of knowledge among preschool teachers in identifying students with SLD based on their status as preschool option or non-preschool option teachers.

In this study, 84% of the teachers were preschool option teachers, while 16% were non-preschool option teachers in Kluang. However, the level of knowledge among preschool teachers about the types of SLD—including dyslexia, dyscalculia, and dysgraphia—remains at a moderate level. This finding is consistent with the results of other studies (Nusaibah & Aliza, 2020; Hafizati & Suziyani, 2021). According to research by Ghimire (2017) and Nusaibah and Aliza (2020), preschool teachers generally have low knowledge about the cognitive characteristics of learning difficulties.

Additionally, the study by Hafizati and Suziyani (2021) found that non-preschool option teachers demonstrated moderate competence in terms of overall knowledge and skills. Therefore, it is essential for all preschool teachers—regardless of their option status—to enhance their understanding of SLDs (dyslexia, dyscalculia, and dysgraphia). This knowledge is crucial for identifying early signs of learning difficulties, thereby ensuring that students can learn in an inclusive environment and reach their full potential.

Implications of the Study

This study provides important implications for students with SLD, preschool teachers, parents, school administrators, and the Ministry of Education Malaysia. It emphasizes that preschool teachers with a strong understanding of SLD can identify the potential, talents, and interests of students with these disabilities as early as possible. Early identification allows teachers to design and implement tailored teaching strategies that meet the unique needs of these students. This approach helps students with SLD adjust to mainstream education, build important life skills, and increase their self-confidence. Ultimately, it ensures that these students have equal learning opportunities in an inclusive environment, enabling them to reach their full potential. These objectives align with the goals outlined in the *Program Pendidikan Inklusif Murid Berkeperluan Khas* (Bahagian Pendidikan Khas, 2018).

Furthermore, preschool teachers should actively improve their knowledge of SLD by attending courses, workshops, or training. This will help them create better learning strategies for all students, including those with SLD. The study also shows that parents need to recognize when their child has SLD so they can get early help. By working together with teachers, parents can help develop the right learning plans for their children.

To improve teachers' knowledge, school management can take proactive steps to help identify students with SLD. For example, they can organize workshops on SLD for preschool teachers to enhance their ability to recognize these students in the classroom. Additionally, school management can encourage collaboration between preschool teachers and special education teachers (Bahagian Pendidikan Khas, 2018). This way, special education teachers can share their knowledge about SLD characteristics and teaching methods, helping preschool teachers support students with SLD in areas such as listening, speaking, reading, writing, and mathematics.

This study can also help the Ministry of Education Malaysia (MOE) by providing important information about teachers' knowledge of SLD. The MOE can use these findings to improve the school curriculum, making sure it meets the needs of all students. By doing this, the MOE can ensure that students with SLD receive the same quality education as other students. This will help promote fairness for students with SLD and contribute to the country's growth, leading to a better future for everyone.

CONCLUSION

It is hoped that this study provides an overview of preschool teachers' knowledge in identifying students with SLD, including dyslexia, dyscalculia, and dysgraphia. Teachers' attitudes are influenced by many factors, such as the different types of disabilities, knowledge of learning difficulties, participation in training, access to reference materials, and awareness of Ministry of Education policies (Noor & Mohd, 2021). Not just preschool teachers, but all teachers should continuously improve their knowledge of SLD to better support students with learning difficulties in an inclusive classroom, as promoted by the Ministry of Education Malaysia.

Additionally, various stakeholders can use this information to better understand teachers' knowledge of SLD and make necessary improvements to address these challenges.

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CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest regarding the publication of this study.

AUTHOR CONTRIBUTIONS

The author was responsible for the conception and design of the study, data collection, data analysis, interpretation of the findings, and preparation of the manuscript.

DECLARATION OF GENERATIVE AI USE

No generative artificial intelligence (AI) tools were used in the design, data collection, analysis, interpretation of the findings, or writing of this manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the author upon reasonable request.

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