





# Navigating Inclusive Pedagogy: Unpacking the Complexity of Teaching Students with Dyslexia

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**Abstract.** Inclusive teaching design is essential to ensure equitable access to quality education, particularly for students with learning disabilities such as dyslexia. Despite policies and initiatives to address students with special needs, many school teachers continue to encounter significant challenges in adapting their teaching methods to meet the diverse needs of dyslexic learners. This preliminary study explores the experiences of school teachers in implementing inclusive teaching instruction, aiming to unpack the complexity of teaching students with dyslexia in mainstream classrooms. To gain insights into this complexity, this study employed a qualitative approach. Four school teachers involved in teaching students in either Special Remedial Programme or Special Remedial Education Programme were invited to participate in this study. The data were collected through written interviews and were analysed using thematic analysis. The findings highlight recurring themes such as limited professional development, insufficient instructional materials, and the emotional and cognitive demands placed on these teachers. These findings raised the urgent need for targeted interventions, including specialised training, access to appropriate teaching resources and collaborative support systems. By unpacking the complexity, this study contributes to the discourse on inclusive education by offering insights into teacher preparedness, recognising their emotional labour and the need for systematic support in fostering inclusive practices. In addition, the study highlights the need for a more responsive and supportive educational ecosystem that empowers teachers to effectively address the needs of students with learning disabilities, particularly in linguistically diverse classrooms.

**Keywords:** Learning Disabilities, Inclusive Education, Dyslexic Students, Differentiated Instruction.

# 1 Introduction

Dyslexia is a lifelong condition that refers to learning disorders which cannot be outgrown [1]. Dyslexic students have issues in processing verbal information and therefore have difficulties in understanding real time conversation [2], as well as in understanding figurative language and making inferences [3,4]. Their inability to communicate and cope with learning can lead to frustration, anxiety and low self-esteem [5].

In addressing the Sustainable Development Goal (SDG) 4 which refers to accessing quality education, the Ministry of Education Malaysia has taken initiatives in providing quality education to students with disabilities such as students with dyslexia [6]. One of the initiatives that supports the learning of students with dyslexia is the Special Remedial Programme available at primary schools. Based on this programme, students with literacy issues are taken out of the mainstream, go through learning processes to master the literacy skills which are reading, writing and arithmetic, and return to the mainstream once they have developed the literacy skills [7]. Another initiative is the Integrated Special Remedial Education Programme set up for students with special needs in separate classrooms within the mainstream schools. These students undergo specialised education throughout their learning but sharing the same school environment with other students. These students include students with ADHD, down syndrome, autism and severe dyslexia. The Integrated Special Remedial Education Programme is available at primary and secondary levels. However, not all schools have this programme.

Providing continuous supports to dyslexic students once they are in the mainstream is crucial to give them opportunities to succeed in life. As such, all teachers especially those in the mainstream need to have an understanding of dyslexia and how to manage their teaching. This raises questions in relation to whether or not educators, particularly teachers at schools have the knowledge and awareness about dyslexia and are prepared to manage teaching and learning that includes dyslexic students. Thus, this study was conducted to investigate primary teachers' understanding of dyslexia and their preparedness to teach students with dyslexia.

## 1.1 Problem Statement

Students with dyslexia often experience difficulties in learning their first language [5]. The difficulties that they face in learning another language are more severe [8]. There are instances where dyslexic students are found to be bright [9]. However, because they are not able to process information at a similar rate as a normal person [2], they may not receive proper support to perform well academically. Teachers who do not have the knowledge and understanding of dyslexia and how to address the learning needs of dyslexic students, often label them as slow learners and lazy [10]. This leads to frustration, anxiety and low self-esteem among these students [5].

In creating an inclusive learning environment that supports the learning needs of a dyslexic student, teachers need to be able to recognise the characteristics of learners with dyslexia and know how to handle them [11]. However, there is evidence that teachers in Malaysia are not trained to handle learners with dyslexia [12]. As a result, they do not have the knowledge about effective teaching methods to support learners with dyslexia [13]. Nonetheless, having knowledge and understanding about dyslexia do not necessarily guarantee that teachers know how to address the learning needs of these students [14]. In the context of ESL, it was reported that students with dyslexia performed better in English test than other normal students [13]. However, with the lack of knowledge about how to manage their teaching, teachers may not be able to provide the learning environment that supports dyslexic students' learning [15].

In Malaysia, students with learning difficulties including dyslexic students are placed in remedial classes to help them develop their literacy skills, involving reading, writing and arithmetic. Once they are able to read, write and perform mathematical issues, they are placed back into the mainstream. Taking into consideration that dyslexia cannot be outgrown [1], dyslexic students require continuous learning supports to succeed academically and survive in life [16, 17]. Within that context, teachers in the mainstream also need to be trained to support the dyslexic students. This raises questions about how these educators develop their instructional designs that can cater for the learning needs of students with dyslexia. Thus, this study examined the extent to which inclusive learning environment can be created by the teachers and the challenges that they face. This can provide insights into the complexity in empowering inclusivity in teaching and learning. Thus, this research addressed the following research questions.

- What are the teachers' understandings of dyslexia?
- How do teachers manage their teaching to address the learning needs of students with dyslexia?
- What are the challenges that they face in teaching students with dyslexia?

## 2 Literature Review

The adoption of the Sustainable Development Goals (SDGs) raises the need for inclusive education. As such, educators need to be prepared to teach students with dyslexia. This includes their beliefs and their knowledge of inclusive instruction-related teacher classroom behaviour towards students with dyslexia, and their beliefs about inclusion of students with dyslexia in mainstream classrooms [8]. In addition, educators need to understand the nature of dyslexic language learning problems, knowledge of language and literacy [18].

In addressing the language learning needs of dyslexic students, teachers need to be trained so that they can recognise the characteristics of a dyslexic [12]. In their study, Collinson and Penketh [19] found that teachers tend to label dyslexic students as slow learners and exclude them from formal education or the mainstream classroom. In another study, Claassens and Lessing [20] found that students with dyslexia are often labelled as lazy and stupid. The findings in both studies suggest that dyslexic students are often left behind in their learning. This raises questions about inclusivity and how teachers support the learning of dyslexic students. In the context of English as a second language teaching in Malaysia, there is a need to investigate the extent to which English language teachers are trained to recognise and handle teaching and learning for dyslexic students.

Bell et al. [21] indicate that dyslexia can be recognised based on biological, cognitive and behavioural aspects. Biological aspect is about the brain, neurological differences, or genetics, cognitive aspect is related to processes issues such as processing differences, decoding, and memory problems, and behavioural aspect is mainly issues with reading, writing, and spelling [22]. Another aspect highlighted by Wadlington and Wadlington [23] and Washburn et al. [24] is the visual aspects such as words moving and difficulty in reading black texts on white background. Despite this categorisation, studies have shown that many teachers lack the knowledge of recognising dyslexia.

Knight [14], for example, conducted a study to investigate what teachers understand about dyslexia. The data were collected through a survey form from 2570 teachers in England and Wales. The study found that the majority of the teachers were only able to recognise characteristics of dyslexia based on one aspect. Out of this number, 79.5% recognised symptoms of dyslexia through students' behaviour, particularly in terms of their reading, writing spelling issues. Only 3% of them were able to recognise dyslexia based on all the three aspects. On top of that the study found that the majority of the teachers were not trained to handle students with dyslexia during their teacher training. It can be concluded that without proper training, teachers may not be able to recognise dyslexic students.

The inability to recognise dyslexic students can affect teachers' ability to create an inclusive learning environment. This can be observed in a study by Yphantides [25] who explored English as a foreign language teachers' experience in teaching students with neurodiverse conditions, including dyslexic students. The findings showed that the participants were not able to recognise dyslexia, lacked training to deal with these students and had low self-efficacy in creating inclusive learning environments. This suggests that the lack of knowledge and understanding of dyslexia, as well as lack of training, can affect the way teachers design their teaching. As a result, inclusive learning environment may not be provided and the learning of students with learning disabilities may be affected.

The lack of knowledge and training to deal with dyslexic students can also affect teachers' attitude towards these students. In their study, Ugwuanyi et al. [26] investigated the experiences of teachers in addressing the need for providing inclusive learning environment to dyslexic students, as indicated in the South African's education policy. They found that these teachers demonstrated unwelcoming attitudes towards dyslexic students as a result of insufficient knowledge about how to deal with these students. Thus, it is crucial to provide training for teachers to deal with dyslexic students. However, the training should be practical and not simply transferring information about dyslexia [27]. This could improve teachers' teaching skills and attitude towards dyslexic students.

In the context of school teachers in Malaysia, understanding teachers' experience in recognising and dealing with dyslexic students help unpack the complexity of designing meaningful learning for dyslexic students. Thus, an investigation on Malaysian teachers' understanding of dyslexia through these aspects is needed to provide insights into how they manage inclusive teaching and the challenges that they face in catering to the needs of students with dyslexia.

### **3 Methodology**

This study is a preliminary study that employs a qualitative design approach to obtain rich information about the live experience of the participants in-depth [28]. It investigated the live experience of school teachers in Malaysia in managing dyslexic students' learning. The population of this study involves teachers teaching students of either the Special Remedial Programme or Special Remedial Education Programme. A total of 4 school teachers from 4 different schools in Johor were randomly invited to participate in this preliminary study.

With the emergence of digital technologies, new forms of data collection in qualitative research also emerge, ranging from synchronous where live online exchanges occur to asynchronous where messages are exchanged or posted [29]. In the context of this study, asynchronous data collection was utilised through online journaling with guided open-ended questions. This was due to the willingness and availability of the participants to meet face-to-face. Google documents were used as the platform for the participants to write their journal entries. [30] argues that online data collection raises

ethical concerns. To ensure confidentiality, four google documents with four different links were prepared. Each link could only be accessed by one designated participant.

The google documents contained information about the research and details of the researchers, questions to obtain the participants' teaching background and four guided open-ended questions to guide the participants in writing their journals. A statement "By responding to the questions in this document, you give your consent to participate in this study" was also included, ensuring that their responses would be treated as confidential. Each link was sent to the designated participant either through email or WhatsApp messages. The participants were required to write one entry but address all the guided questions. In addition, they were given two weeks to complete the journal writing. This is to ensure that they have flexibility but not take too long to write their journals. The data from the journal entries were analysed thematically using Braun and Clarke's [31] six-step thematic analysis.

## **4 Findings and Discussion**

### **4.1 Participants' Profile**

Four teachers of four different schools who had been teaching for either Special Remedial Programme or Integrated Special Remedial Education Programme participated in this preliminary study. Special Remedial Programme focuses on helping students, including those with dyslexia, to master the literacy skills. Once they show signs of mastery, these students will be placed back into the mainstream classes.

The Integrated Special Remedial Education Programme involves teaching students with disabilities such as ADHD, Autism and severe dyslexia. In the event where Special Remedial Education Programme is not available, severe dyslexic students are placed in Special Remedial Programme. Teachers who teach for these programmes undergo trainings but not necessarily specialised for teaching dyslexic students. The participants of this study are given a pseudonym and the name of their schools are disclosed to protect their identity. Their pseudonyms are Aminah, Melati, Diah and Aisyah.

The first participant is Aminah who had been teaching Special Remedial Programme for 18 years since 2007 at a primary school. She taught Bahasa Melayu and Mathematics to a maximum of 3 students who may not necessarily be dyslexic every year. She had specialised training to teach students with literacy issues but not to students with dyslexia. She attended a one-day workshop to learn about dyslexia and how to handle dyslexic students.

The second participant is Melati who had been teaching Special Remedial Programme for 13 years at a primary school. She taught remedial Malay language and Remedial Mathematics. Melati also had specialised training to teach students with literacy issues but not necessarily to dyslexic students. At the time of this research, she had 10 students in her class, all of whom may not necessarily be dyslexic. Similar to Aminah, Melati attended a one-day workshop to learn more about dyslexic students.

The third participant is Diah who had been teaching Integrated Special Remedial Education Programme for 15 years since 2010 at a primary school. She taught remedial Malay language to 6 students at Year 2 and Year 4. She had undergone several trainings

to manage teaching and learning to students with special needs which include ADHD, autism, hyper and dyslexia. The trainings are not specialised for managing the teaching specifically for dyslexic students.

The final participant is Aisyah who had been teaching Special Remedial Programme for 12 years since 2013 at a primary school. She taught Malay language and Mathematics to 13 students of Year 2, 3 and 4. As a teacher teaching the Special Remedial Programme, Aisyah had undergone specialised trainings to teach students with literacy issues. However, these trainings may not necessarily address the learning needs of dyslexic students.

## 4.2 Understanding the learning needs of students with dyslexia

Both Aminah and Melati attended a one-day workshop to understand more about dyslexia. Although they had been teaching for the Special Remedial Programme, they had limited understanding of the learning needs of dyslexic students.

*In my class, there are students who cannot write on the line [in the exercise books] and write letters with mirror image. For example, “b” becomes “d” [Aminah Ex1].*

Based on the above excerpt, it could be observed that Aminah could actually recognise characteristics of dyslexia but may not know how to design her teaching.

*Before I attended a one-day workshop, I thought that they are slow in reading and therefore, they just need a lot of practice. I did not understand them [Aminah Ex2].*

Although she had years of experience teaching students in Special Remedial classes, Aminah was not able to understand the learning needs of dyslexic students. In the excerpt above, it could be concluded that Aminah believed that students only needed more reading practices to improve their reading. However, after attending a workshop, her perceptions changed.

*After attending the programme, I realise that they need different teaching approaches such as using colours, cue cards, doing phonic exercises and multi-sensory activities which requires them to use their sight, hearing and touch [Aminah Ex3].*

According to Schulman’s Pedagogical Content Knowledge Framework [32, 33], teachers’ content knowledge affects the way they frame their teaching instruction. Within the context of dyslexia, a clear understanding of students’ learning needs helps teachers to employ appropriate instructional strategies and provide the necessary scaffolding to support their learning. In [Aminah Ex3], it could be seen that with the knowledge and understanding obtained from the workshop, Aminah had a different perspective about how to manage the teaching and learning of dyslexic students.

Melati also experienced similar transformation in her understanding. Before she attended a workshop, she had limited understanding of what dyslexia was and how to deal with the learning of these students.

*In my class, I have encountered a student who change simple words like “saya” to “asy” [in his writing]. The mistakes keep*

*occurring although I have asked him to copy the word many times. I did not understand that he is dyslexic [Melati Ex1].*

Despite her experience teaching the Special Remedial classes, Melati's understanding of dyslexia is still limited. As a result, she was not able to address her student's learning needs.

*I thought they just did not want to give attention or did not want to do exercises. I did not understand that their learning styles were different. [Melati Ex2]*

In addition, Melati perceived that her student lacked focus or had no interest in learning. Such perceptions can prevent students with dyslexia from accessing quality education and raises concerns about teachers' ability to provide inclusive learning opportunities. This highlights the importance of content knowledge as highlighted by Schulman [32, 33]

*...I realise that they have their own learning styles...[Melati Ex3]*

After attending a one-day workshop, Melati had a better understanding of dyslexia and the learning needs of dyslexic students. This understanding had transformed her teaching, providing necessary facilitation to her student (discussed in the next section). This finding aligns with the Pedagogical Content Knowledge Framework that highlights the influence of content knowledge on teachers' pedagogy.

With the knowledge about dyslexia, Aminah recognised that her dyslexic student demonstrated low self-esteem and therefore required other forms of support.

*These students can feel low self-esteem and have low confidence...[Aminah Ex4].*

Zisimopoulos and Galanaki [34] indicate that dyslexic students have a lower level of intrinsic motivation which can affect their self-esteem. The finding about low self-esteem in this study aligns with Ibrahim's [5] study.

Both Aminah and Melati demonstrated a better understanding of dyslexia and the learning needs of dyslexic students after a workshop that they attended. Nijkowska [8] highlights the crucial need for teachers to understand the learning needs of dyslexic students as this can influence the way they design their teaching and learning. In the context of the excerpt above, the participants' responses suggest that there could be a transformation in their teaching approaches and strategies. This is discussed in the next section.

In Diah's case, she could specifically describe the behaviours demonstrated by a dyslexic student.

*In my class, there is one student who keep forgetting what he has learnt...often writes words without spacing. He often hesitated and slow when doing any activity in the class...he lacks confidence but love to draw and colour [Diah Ex1].*

Having attended many trainings, Diah may have more exposure to knowledge about dyslexia and how to manage her teaching compared to Aminah and Melati.

The discussion in this section highlights the importance of training. This has been highlighted in several study such as by Faudzi and Cheng [12] and Knight [14]. The training can be short but practical to make teachers aware and understand about dys-

lexia, as well as how to manage their teaching. This is in line with the findings in Magnin et al.'s [27] study where the training should be practical and not merely a transfer of knowledge.

### 4.3 Managing teaching and learning

Better understanding of dyslexia leads to the implementation of better teaching practices. Based on the discussions in the previous section, it could be observed that both Aminah and Melati transformed their perceptions, leading to a transformation of teaching approaches and strategies after they attended a workshop on managing teaching and learning for dyslexic students.

*...Now I use visual aids. For example, to write "b", I use an arrow and an image to show the direction to write...I use exercise books with thick lines or coloured lines to help them write on the lines...[Aminah Ex5].*

Aminah understood that she needed to change her teaching strategies to address the learning needs of dyslexic students. In addition, she also developed awareness to address these students' self-esteem.

*These students can feel low self-esteem and have low confidence...So, I am aware of the importance of providing emotional support and motivate these students [Aminah Ex6].*

Dyslexic students often experience low self-esteem due to teachers' limited awareness of their specific learning needs (Ibrahim, 2021). In his theory, Maslow [35] highlights that the fulfilment of esteem needs plays a crucial role in raising individuals' confidence and motivation. Based on [Aminah Ex6], it could be observed that Aminah was aware of addressing her students' esteem needs.

Melati also developed the understanding of changing her teaching practices to cater to dyslexic students.

*...I realise that they have their own learning styles...Among the strategies I learnt [from the workshop] included the use of colours, cue cards and dyslexic-friendly phonics [Melati Ex5].*

In this excerpt, Melati acknowledged that her teaching approaches and strategies needed to address learners' different learning needs.

*...I used colours, I employed repetitive reading and conducted phonic exercises. As a result, the student showed slow but consistent improvements [Melati Ex6].*

She observed that dyslexic students required teaching strategies that cater to their learning needs. In addition, Melati also acknowledged the importance of addressing the esteem needs.

*Teachers need to understand the needs of dyslexic students. With empathy and creativity, teachers can help these students in mastering the literacy skills and build their confidence [Melati Ex7].*

These findings highlight the importance of specialised training to obtain knowledge about dyslexia and ways to manage teaching and learning for dyslexic students.

Another participant, Aisyah also demonstrated the use of teaching strategies that address the learning needs of dyslexic students after attending a one-day workshop.

*I use the gradual progression and multi-sensory technique so that the students can process information through sight, hearing and movement. For example, using colours for different syllables to differentiate between vowels and consonants to recognise words [Aisyah Ex1].*

In this instance, it could be seen that Aisyah understood the learning styles and techniques of dyslexic students are different from mainstream students. This is also demonstrated by Diah.

*I would repeat each topic accompanied by pictures and simulation...I linked letters with the shape of common objects that he sees every day...I would ask him to read in front of the class using a microphone to develop his confidence...[Diah Ex2].*

Enhanced knowledge of dyslexia has transformed the participants' teaching practices, enabling them to become more aware of the learning needs of dyslexic students. In addition, they recognised the need to address these students' esteem needs to build their confidence and raise their motivation to learn. This aligns with Shulman's [32, 33] Pedagogical Content Knowledge framework where content knowledge enhances teachers' instructional practices.

#### 4.4 Challenges in teaching students with dyslexia

Despite their understanding of the need to transform their teaching practices to cater to the learning needs of dyslexic students, the participants encountered challenges to fully utilise these practices.

**Time constraints.** In their journal entries, the participants reported that they did not have sufficient time to address the learning needs of dyslexic students. Aminah indicated that teaching and learning in school is bound by the timetable. However, "these students require sufficient time to learn to read and write...." [Aminah Ex7]. Getting these students to focus on learning requires sufficient time.

*We need a lot of time to develop students' trust and confidence to raise their interest in learning [Diah Ex3].*

Given the presence of students with diverse conditions in both the Special Remedial Programme and the Integrated Special Remedial Education Programme, teachers face significant challenges in managing instructional practices within a limited time. Furthermore, when these students are placed back into the mainstream classes, "[teachers] are not able to personalise their teaching for these students without jeopardising the learning of the whole class" [Melati Ex8].

Based on Maslow's Hierarchy of Needs [35], teachers need to create emotional safety environment to develop students' trust, leading to the development of confidence and self-esteem. Within classroom contexts, trust develops over time, requiring active and continuous fostering rather than immediate outcomes [36]. As such, with

limited time, it is challenging to raise dyslexic students' confidence and improve their learning.

**Limited resources.** The insufficient resources to aid teachers' teaching and learning also limits teachers' efforts in providing flexible and personalised teaching for dyslexic students.

*Not all schools are equipped with exercise books with special lines, coloured cue cards or interactive learning software [Aminah Ex8].*

This is also experienced by Melati.

*Not all schools have phonic reading books or dyslexic-friendly workbooks. Most teachers have to create their own materials which requires extra time and energy [Melati Ex9].*

For Aisyah,

*Instructional materials specifically designed for dyslexic learners are limited and require teachers to make extensive modifications [Aisyah Ex2].*

According to Shulman [32, 33], the application of content knowledge in classroom practices depends largely on access to instructional resources. This suggests that teachers require appropriate materials and tools to design and implement effective strategies for students with dyslexia. In the context of this study, it could be concluded the participants' instructional strategies were limited due to lack of resources. The issue of limited resources is commonly associated with the lack of institutional support [37]. This highlights the need for institutions or relevant agencies to play their roles in providing support in terms of resources or any institutional support.

**Diverse mastery levels.** Based on their profile as discussed in Section 4.1, Melati and Aisyah had more students in their classes (10 and 13 students, respectively) compared to Aminah and Diah (3 and 6 students, respectively). With this situation, Melati and Aisyah had to handle students with diverse mastery levels.

*Some students are still not able to recognise alphabet while others keep making mistakes. It is difficult to create activities which are suitable for all levels at one time [Melati Ex10].*

This shows that the students have diverse abilities and mastery levels. This challenge is also experienced by Aishah.

*The various mastery level of the students requires flexible lesson plans which is challenging due to the varying levels of understanding and acceptance between dyslexic students and their peers [Aisyah Ex3].*

Addressing this challenge requires the teachers to apply differentiated learning principles. According to Tomlinson, differentiated learning refers to adapting instructional strategies and approaches to cater to the students of varying abilities [37]. It involves the modification of content, process and products that suits each level. In order for teachers to design differentiated instructions, they need to be equipped with knowledge

and skills to do so. This raises the need for specialised training to address the learning needs of dyslexic students.

**Diverse family support.** In sustaining dyslexic students' learning progression, active parental involvement at home is essential. However, the participants reported mixed involvement by parents.

*Some parents understood [about their child's condition] and gave full cooperation while others were not aware that their child requires special approach. As a result, there is no continuity in the students' learning at home [Aminah Ex9]*

The lack of involvement by parents can also lead to demotivation in learning. This was reported by Melati:

*The students can easily be demotivated when they often fail and their parents do not understand their condition [Melati Ex11].*

At some point, teachers had to organise meetings with parents to make them understand about their child's condition.

*We had to have several discussions with parents to help them to accept their child's condition [Diah Ex4]*

In their study, Piao and Rangra (2024) highlighted the need for strong collaboration between parents and schools to support the learning of dyslexic children. In addition, to help dyslexic students develop self-confidence, parents need to play their role in addressing their children's esteem needs. This indicates that learning support for dyslexic students must extend beyond the school context and be reinforced at home.

## 5 Conclusion

This study explored teachers' experience in managing their teaching to address the learning needs of dyslexic students. The study examined teachers' understanding of dyslexia and how they managed their teaching, as well as the challenges in addressing the learning needs of these students. The findings have raised concerns in relation to teachers' knowledge about dyslexia and ability to manage teaching that supports the learning of dyslexic students. These findings raised the importance of practical training that is not only about transferring knowledge but also about how to manage teaching and learning that cater to the learning needs of dyslexic students. The findings have also highlighted four main challenges in crafting teaching and learning for dyslexic students. These challenges include time constraints in creating and implementing the lessons, limited resources to assist teachers in their teaching, diverse mastery levels of the students in one class and the lack of parental support.

The discussion in this study has raised the need for an ecosystem to support both the teachers and dyslexic students. Firstly, teachers teaching in Special Remedial Programme/ Integrated Special Remedial Education Programme as well as teachers teach-

ing in the mainstream need to be equipped with the knowledge and skills to teach students with special needs, particularly dyslexic students. In addition, they also need to be equipped with the knowledge and skills to address the students esteem needs. As such, training modules that specifically covers all these aspects need to be developed, and teachers are trained through these modules to assist them in managing the learning needs of dyslexic students. Secondly, the related institutions or agencies need to make teaching resources and any support available for teachers to access and assist them in designing their teaching and implementing their instructional strategies. Thirdly, parents and family members need to be provided with knowledge about providing support to their children at home to help build their confidence. With the existence of such ecosystem, it is hoped that the learning environment that supports the learning needs of students with dyslexia can be provided.

**Acknowledgments.** This research is funded by the Qualitative Research Association (QRAM). We would like to express our appreciation to those involved in this research.

**Disclosure of Interests.** The authors have no competing interest on this study.

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