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# An exploration of the impact of picture books on students with dyslexia.

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#### **Abstract**

Learners with dyslexia struggle with reading and comprehension. Many literacy programmes that are developed to help students overcome dyslexia and its related learning difficulties focus largely on phonics instruction. This study is an attempt to elicit the impact of picture books on the comprehension, verbal expression and engagement in reading of students with dyslexia. Research on this study centred on observing a group of six students aged 10 and 11 years old as they demonstrated their comprehension through retelling skills, their verbal expression of thoughts and ideas and their engagement in reading using picture books. This study adapted the Philosophy for Children (P4C) approach developed by Matthew Lipman and his colleagues at the Institute for the Advancement of Philosophy for Children (IAPC). The P4C approach which places emphasis on questioning skills, engaging in meaningful dialogue and reasoning was incorporated into post-reading discussions facilitated by the literacy therapist. The main findings indicated that the use of picture books helped the students recall details and sequence of events in the books as seen in the way they referred to these aspects in the post-reading discussions. They were also able to infer and make connections based on their learned prior knowledge and personal experiences. This study shows that picture books can be an alternative teaching tool to enhance a dyslexic's learning experience and that visual literacy can offer an instructional opportunity to be incorporated into the classroom.

Keywords: dyslexia, picture books, visual literacy, comprehension, retelling, engagement, philosophy for children

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#### **OVERVIEW OF STUDY**

Researchers in the past decade have established picture books to be an effective tool in fostering an aesthetic reading experience for all children (Carr et. al., 2001; Cianciolo, 1997; Nodelman and Reimer, 2003). This study aims to explore the same medium of instruction to engage learners with dyslexia by observing their comprehension through retelling skills, their verbal responses and engagement in reading through picture book reading followed by discussions on the books they have read.

#### LITERATURE REVIEW

#### Overview of developmental dyslexia

Dyslexia is a learning disability defined as a specific impairment in reading despite average or above average intelligence and adequate educational exposure (Chang, et al., 2007). According to Snowling (2000) and Ramus (2004), majority of children with dyslexia have a phonological processing deficit, which has an adverse effect on their word recognition system by interfering with the ability to associate spoken sounds and written letters. The International Dyslexia Association's operating definition is as follows: "Dyslexia is a specific learning disability (Lyon, 1995; Lyon, Fletcher, & Barnes, 2003) that has a neurobiological origin (Brown et al., 2001). It is characterised by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities (Shaywitz, 2003; Wolf, Bowers, & Biddle, 2001). These difficulties typically result from a deficit in the phonological component of the language (Morris et al., 1998) that is often linked to other cognitive abilities and the provision of effective classroom instruction. Secondary issues related to dyslexia may include reduced reading experience and problems in reading comprehension, which can impede vocabulary development and background knowledge (Lyon, Shaywitz, & Shaywitz, 2003, p. 2).

#### Effective reading instruction for dyslexics

Many educational researchers on dyslexia conclude that the most effective way to teach learners with dyslexia is by adopting a systematic, multisensory, sequential phonics-based program with explicit instruction in phonological awareness, sound-symbol correspondence, syllables, morphology, syntax and semantics (Joshi, Dahlgren & Boulware-Gooden, 2002; Manset-Williams & Nelson, 2005; Ritchey & Goeke, 2006; Shaywitz, 2003), such as the Orton-Gillingham (OG) approach, a structured, sequential, multi-sensorial and phonics-based approach channelled to teach the basic concepts of reading, spelling and writing (Ritchey & Goeke, 2006; Rose & Zirkel, 2007). This is hierarchical in nature and focuses on the automaticity of specific sub-skills that follow a 'bottom-up approach'. The simultaneously multisensory nature of the OG, which consists of visual, auditory, kinesthetic and tactile elements, is fundamental to the teaching approach. Teaching using the OG approach involves intensive repetition, which is

necessary in order for students with dyslexia to retain the components of phonological awareness as well as the various rules that need to be understood in order to achieve reading fluency (Shaywitz, 2003). The OG principles have provided a foundation for the DAS Main DAS Literacy Programme (MLP) that functions as a parallel literacy support to students from the mainstream schools, in a combined teaching approach firmly rooted in an Asian context to make learning more relatable to the students' experience. A huge portion of this remediation approach focuses on working knowledge of phonology, morphology and orthography through a multi-sensory approach to successfully transfer literacy knowledge to the student (Ram, 2012).

# Need for a balanced literacy approach

Harper (2012) suggests that a teaching approach that is able to address different problems and difficulties, not restricted to remediating a single sub-disorder, might be the most efficient way to help children overcome dyslexia. Byers and Rose (1993) also believe that the key to helping children with specific learning disorders lies in accurate observation and in the identification of a specific difficulty, followed by giving appropriate assistance. Above and beyond the broad-based literacy approach, there is a need for a syllabus or structured teaching approach that equips students with the ability to think critically, enable them to express their thoughts, form opinions and express them clearly and fluently. Having the ability to communicate their ideas clearly and relate to their experiences creates meaningful learning experiences as it taps on their cognition and individual constructs (Harcombe, 2003 and Resiberg, 2001). More can be done to help students with dyslexia cope with their learning difficulties beyond aspects of reading, writing and spelling.

According to the International Association of Educational Therapists (AET) (2014), the main goal and purpose of educational therapy should 'optimise learning and school adjustment, with the recognition that emotional, behavioural and learning problems are intertwined'. With explicit phonics instruction, students with dyslexia may have attained reading skills that match their chronological age however they may not necessarily create meaning or comprehend what they are reading. They may also have difficulty explaining and conveying their ideas verbally and in writing, due to a lack of understanding. This is exactly where the need for critical thinking and communication skills are highly required. Therefore, in order for a literacy remediation programme, like that of MLP, to be effective and holistic, it should also equip students with cognitive tools to aid their construction of knowledge.

Jonassen (1999) defines these cognitive tools as mental and computational devices that "supports, guides and extends" the thinking processes of learners. Cognitive development promotes students' thinking skills, encourages autonomous learning and optimises intellectual and academic learning (Skuy, 1996 and Harcombe, 2003). As students develop metacognitive strategies, the process of "thinking about thinking", they

are indirectly acquiring problem-solving skills and the ability to monitor themselves (Leaf, 2005, p.108). Having awareness in monitoring and regulating their thinking is highly useful in reading, comprehending and writing (Bower, 1983). Extensive developmental research has proven that 'effective mastery of cognitive, social and emotional competencies is associated with greater well-being and better school performance whereas failure to achieve competence in these areas' may lead to personal, social and academic difficulties (Eisenberg, 2006; Guerra & Bradshaw, 2008; Masten & Coatsworth, 1998; Weissberg & Greenberg, 1998).

As such, in order for the DAS to achieve its vision to 'help shape the lives of dyslexic children who can achieve their true potential in life when given the right guidance and support' (Dyslexia Association of Singapore, 2014), it needs to acknowledge the importance of equipping its students with learning that draws on aspects of emotions, cognition, communication and behaviour. Therefore, this research seeks to explore the use of children's literature as an avenue to explore these affective domains of learning among children with dyslexia and other co-morbids of learning difficulties. Based on a framework that incorporates picture books, dialogue, conversations and questions, a reading intervention programme was developed as part of this research to promote literacy learning in the dyslexic classroom.

#### What are picture books?

Picture books are known to be cognitively stimulating because they cover a broad range of topics, consist of delightful words, illustrations, interesting cultural variations and dense information (Nodelman and Reimer, 2003). Several researchers believe that many students respond positively to picture books because they are visual learners (Carr et. al., 2001). Moreover, students in today's modern societies live in a world that has reached unprecedented levels of visual stimulation (Burke & Peterson, 2007). Thus, the interplay between text and illustrations may appeal to students who enjoy the same kind of experience when working on a computer or playing a computer game. Picture books also play a role in creating a safe learning environment for students because they offer a medium in which all students, regardless of background knowledge or level, can succeed.

According to Montgomery (2007) and Muter (2005), the number of children experiencing difficulty acquiring literacy skills is on the rise and this creates a challenging situation for educators, especially those supporting students with dyslexia. Despite the different approaches devised to provide educators with adequate tools and resources, there is a need to explore alternative ways to aid students with dyslexia in acquiring aspects of literacy skills. This research will, therefore, seek to explore picture books as an alternative teaching tool to enhance a dyslexic's learning experience.

#### Relationship between text and images

Sipe (1998, p.97) describes the essence of picture books in "the way the text and the illustrations relate to each other; this relationship between the two kinds of text - the verbal and the visual texts – is complicated and subtle". However, it is the complex and subtle relationship embedded in picture books, that motivates readers to analyse the pictures, sentences and statements and encourages them to stay on point by observing, "focusing on relevant factors, striving for consistency and constructing inferences and explanations" (Splitter & Sharp, 1995). The narrative effect of picture books is created through the synthesising effect of text and images along with the layout and the turning of pages.

Picture books can also be also defined as an 'iconotext' which means "an inseparable entity of word and image" which work together to convey a message (Nikolajeva & Scott, 2001, p. 185). Picture books can also be described as multimodal texts as they contain two semiotic modes, image and writing (Kress, 2003) that are used and combined in multiple ways. The images and words put together, convey a message that is essential for constructing meaning. In other words, the illustrations and text can be described as having a synergistic relationship in picture books. Sipe (1998) identified the reciprocity between these two elements where 'we adjust our interpretation of the pictures in terms of the words and our interpretation of the words in terms of the pictures.'

Picture books in reference to this study do not refer to those illustrations found in school text books and readers, but to those found in commercially produced books. Apart from bringing out what is being said in the written text, the picture and illustrations in these books convey additional meanings that could not have been derived from the verbal narrative alone (Cianciolo, 1997).

#### Benefits of using picture books

Illustrations and images are closely associated with the initial stages of acquiring reading skills and one of their functions is to help children understand that print carries meaning before they can actually read (Harms, 1998; Landers, 1987; Manning, 2004). Thus, the basic function of illustrations in a picture book is to illuminate the text (Heins, 1987) because without illustrations, emergent readers may have a more challenging time in learning the processes of decoding a text, developing recall of details, vocabulary acquisition and comprehension skills. The text and images in picture books are inherently interlinked so that it would be difficult to imagine one without the other. Emergent readers who are exposed to one aspect without the other may be missing an essential step in learning how to read.

Some research in the past, has rejected the relevance and importance of images and illustrations in the reading process (Samuels, 1970 and Peeck, 1974). However, current research in recent years affirms that pictures and illustrations support the facilitation of reading and comprehension when the pictures overlap the process of learning how to read (through common characteristics in relation to the written print) (Harms, 1998; Hibbing & Ranckin-Erickson, 2003; Manning, 2004; Walsh, 2003). These researchers have discovered that illustrations have impacts on comprehension, recall of stories, critical thinking skills and mental imagery. Additionally, characters portrayed in picture books help students make connections with themselves, their experience and their daily lives. Furthermore, by asking open-ended questions during class discussions, valuing responses from students and involving them in various activities as an extension to the stories, teachers are able to nurture emotional regulation in a non-authoritarian way (Hart & Damon, 1988). Cianciolo (1997) defines the pictures' ability to represent additional means of communication and expression as "visual expression".

#### What is visual literacy?

Visual literacy is defined as a set of acquired skills that when developed, enables the viewer to comprehend, interpret, create as well as form visible images and messages in order for them to communicate their ideas effectively to others (Arizpe & Styles, 2003; Considine, 1986; Debes, 1969; Debes, 1968). Arizpe and Styles (2003) suggest that visual literacy encompasses thinking about what images and objects mean, how these images and objects are put together, how readers respond to and interpret them, how they are used as modes of thinking and how societies gave rise to them. Aanstoos (2003) described visual literacy as having the ability to identify and comprehend ideas portrayed through visible actions, images and the ability to convey ideas through imagery.

As described in the literature above, reading picture books employ the active engagement of both text and images. This process of actively and meaningfully engaging in meanings and messages portrayed through print and pictures is only possible if the reader is equipped with visual literacy. Decoding, enunciation and reading fluency can be remediated through a multi-pronged phonological instruction as discussed earlier in this literature. However, developing visual literacy and visual communication skills to connect effective reading with visuals might be lacking in educational programmes like that of DAS MAP literacy remediation classes. Baggette (1998) argues that visual competence (in reference to basic non-verbal and visual communication skills) is largely untaught and gained only through experience and personal development because verbal communication is the primary focus of educational settings

It is not enough for students to simply comprehend and understand books on a literal level alone. They should be able to 'read' beyond the text and be encouraged to think

deeply and creatively and know how to interpret information presented to them in visual means so that they would be able to understand the learning processes and situations they find themselves in (Arizpe and Styles, 2003). Arnheim (1993) believes that visual learning strategies enhance children's cognitive understanding of abstract ideas and concepts where visual examples can be used to enrich their perceptions.

# Picture books as a tool for a balanced literacy approach

As discussed earlier, a holistic literacy intervention programme should promote aspects of cognitive development such as thinking skills and the importance of the construction of meaning through text and visuals. With this objective in place, this research will study the responses of dyslexic students to picture books to discover the impacts and potential aspects of learning that they promote. As evident in some studies, Walsh (2003) explains that, "children's responses reveal that the impact of images can have a holistic effect... multi-varied responses demonstrate the activation of a range of cognitive and affective processes so that the act of reading a pictorial text is paralleled with... reading words".

A study conducted by Arizpe and Styles (2003) on the ability of young children to see and understand the pictures they were looking at as a means of multi-modal reading discovered that students who are given a significant amount of time to analyse and discuss picture books produce "outstanding" results. They also found that through "reading" pictures the students made improvements in cognitive abilities; development of 'visible thinking' at higher cognitive levels during discussions was evident and connections made between text and pictures gave rise to the development of higher order reading skills.

Walsh (2003) found in his study on the effects of young children's oral responses and re-examination of illustrations of visual texts, that pictures significantly influenced their responses. All of them made reference to the pictures accompanying the text in story books in order to get a better understanding of the questions asked. The study also showed that both the younger and older students were dependent on the illustrations to include additional information that was not portrayed in the actual text, as part of their responses and individual retelling. Walsh (2003) also indicated that the process as reading pictures is not just a different process from reading words but can be one that is equally complex. Therefore, using illustrations as a reading tool is beneficial as it promotes the development of the ability to identify and observe details, the ability to make critical interpretations and predictions and the development of the ability to formulate affective and evaluative comments about what they have read.

Another study by Haring and Fry (1979) on the effects of inclusion and omission of pictures on children's comprehension of the written text showed that the recall of story ideas was supported by the inclusion of pictures with the text. The study also discovered that pictures need not be elaborate in order for students to recall details of the stories

they had read. The findings of this study highlighted the need for educators to be aware and precise of the inclusion and quality of illustrations in their teaching materials. Since the literature on the use of picture books have demonstrated its highly positive impact on typically developing children, this study will evaluate the use of picture books on children with dyslexia.

# Pairing Philosophy for Children & Picture Books

In exploring the value and impact that picture books will have on students with dyslexia, this research will be incorporating and adapting an approach developed by Professor Matthew Lipman and his colleagues at the Institute for the Advancement of Philosophy for Children (IAPC). The Philosophy for Children (P4C) approach places emphasis on questioning skills, engaging in meaningful dialogue and reasoning as part of learning. Murris (2010) explains that the objective of P4C is to improve students' ability to think critically, creatively and collaboratively through guided discussions. The main principle behind P4C is to encourage students to extend and improve their thinking. P4C centralises oracy skills, narrative voice where children are encouraged to exercise freedom of speech and express their thoughts in an environment where they feel safe and secure. These features provide opportunities for children to actively listen to their peers, share experiences and discover new knowledge (Haynes, 2007).

#### **METHODOLOGY**

With picture books as the main medium of instruction, the reading intervention programme developed as part of this research will tap on the P4C approach in the post-reading discussions conducted during each session. The reading of picture books will be followed by a discussion, where students are encouraged to express their comments and views on any aspect of the images or text they have read, raise questions, concerns and observations. In other words, the students are urged to practice freedom of expression and engage in dialogue by responding to their peers.

#### **Research Design**

The research design focused on six participants using a qualitative method and some quantitative measurements in the form of scaled questionnaires (Appendix A – B) for parents and educational therapists of the student participants. It is important to note that concerns regarding internal validity may persist, therefore the quantitative measures were included to contribute to the validity of this explorative study rather than exclusively from the researcher's perspective. Amongst other processes involved in this study, methods drawn from collaborative participatory research were used whereby this study involved only the researcher and the six participants. Thus, this study is viewed as a 'narrow participatory research' and not a 'wide participatory research' (Cornwall and Jewkes, 1995, p. 1668). Furthermore, the participants in this research were only involved

in the data collection process and had no involvement in addressing issues of setting, agenda, ownership of results, power and control. Hence, their expressions, thoughts, and interactions were analysed and formed the foundation of this research but they were not involved in the data analysis of this study as this was done by the researcher cum remediation therapist.

# **Research Sample**

The sample used for this study was a convenience sample, as the participants were selected based on their availability and willingness to respond as a participant. The sample size of this study consisted of 6 students diagnosed with dyslexia, aged 10 and 11 years old. The sample comprised of 3 boys and 3 girls. The sample used for this study was students aged 10 to 11 year olds, and were in Primary 4 and 5 at the time of the study. They were selected based on their word reading accuracy scores of the bi-annual curriculum based assessment (CBA) scores at the DAS. The 6 students are banded as B4 in the previous year which therefore demonstrated that they are at the same level of reading proficiency. Based on the DAS curriculum matrix, students who are reading at B4 have been exposed to basic syllabication rules to decode multi-syllabic words. The study targeted only students in Band B because a student sample with lower than average reading proficiency, would not be able to engage meaningfully in the reading components of the picture book sessions.

Table A: Profile of students and word reading accuracy scores

Student	Age	Gender	Word Reading Accuracy (out of 20 marks)	Word Accuracy Banding	No. of years in DAS
А	11	Female	12	B4	4
В	11	Female	14	B4	3
С	10	Female	12	B4	4
D	11	Male	16	B5	5
Е	11	Male	14	B4	3
F	10	Male	14	B4	4
			Mean 13.66 (st.dev.1.5)		

Table A shows the word reading accuracy scores of the 6 students during their most recent bi-annual CBA. A student who progresses from Band B4 to B5, needs to achieve at least 16 marks for each level of word reading accuracy test. As seen in the table, only Student D was able to progress to B5 as he achieved 16 marks, which is the progress criteria set by the CBA.

All the students selected were attending literacy remediation sessions at the DAS when the study was piloted and were recommended by educational therapists who felt that these students would benefit from the reading intervention programme. During the study that spanned over 10 weeks, the participants continued attending their regular two-hour weekly literacy remediation. Full ethics permission was granted by the researcher's university's ethics review board followed by informed consent from parents and students participating in the research study. Research participants also have the right to withdraw from the study, guaranteed anonymity and access to research findings.

### Questionnaire for parents and educational therapists

On a scale of 0 to 10 (0 = extremely difficult and 10 = extremely easy) parents and educational therapists of each child had to rate their abilities on a range of aspects (Appendix A and B). The rationale of the questionnaires was to understand the students better in six different aspects; their interest in reading, ability to select their own reading material, ability to engage in independent work, their social and communication skills, ability to express themselves in whole sentences and their ability to focus and concentrate when working on tasks. The information gathered from the questionnaires provided the researcher and the educational therapist insight into their learning profile and capacity in coping with the skills attributed to learning at home and in the classroom. The scores across all six questions have been tabulated and their mean values presented in Tables B and C. The responses and mean values from both parents and therapists demonstrated that the strengths of the six students are largely in their ability to interact and communicate with other and their ability to express their thoughts and ideas clearly in complete sentences. These two attributes would allow them to engage more meaningfully in the post-reading discussions when they are encouraged to ask questions and express their thoughts and opinions about the story they have read.

#### Selection criteria for picture books

With the use of picture books as a central phenomenon of this research, there was a need for a rigorous process in selecting books that would align closely to the research. The selection of picture books was guided a set of 4 criteria adapted from Nicholas' (2007) study on studying the impact of picture book illustrations on the comprehension and vocabulary development. The checklist for the selection of picture books is included in Appendix C.

Table B. Mean values of questionnaire responses by parents

QUESTIONS	MEAN VALUES OF RESPONSES FROM PARENTS
1. How easy is it for you to get your child to read?	6.33
2. How easy is it for you to get your child to select his/her own reading material?	6.16
How easy is it for your child to complete his/her school assignments independently?	5.16
How easy is it for your child to participate in social settings and interact/communicate with others?	7.5
5. How easy is it for your child to express himself/herself in whole sentences?	7.5
How easy is it for your child to pay attention and concentrate on various tasks and activities?	6.16

Table C. Mean values of questionnaire responses by educational therapists

QUESTIONS	MEAN VALUES OF RESPONSES FROM EDUCATIONAL THERAPISTS
How easy is it for you to get your student to read?	6.83
2. How easy is it for you to get your student to select his/ her own reading material?	7
How easy is it for your student to complete his/her school assignments independently?	6.66
4. How easy is it for your student interact/communicate with others?	7.33
5. How easy is it for your student to express himself/ herself in whole sentences?	7.33
How easy is it for your student to pay attention and concentrate on various tasks and activities?	6

#### **RESULTS**

Based on the questionnaires to parents and teachers, the students participating in the study showed their strongest skills in interacting and communicating verbally. In the results below, their engagement with the picture books and the ongoing discussion is evaluated in a number of emerging themes. In order to maintain the confidentiality of the research participants, their names have been coded according to letters. Therefore, in in the description of findings, analysis and discussion, they will be identified as Student A, B, C, D, E and F.

# Theme of positive engagement and improved self-esteem

The theme of improved self-esteem and positive attitude towards engagement was evident for all six participants. These attributes were noticed over the course of the ten weeks of intervention. Over the weeks, the students gradually became more confident and expressive in their reading, despite having difficulty enunciating some words, and had more questions and comments to contribute during the post-reading discussions. Positive engagement was also observed in the way they shifted their bodies to better see the book, furrowed or raised their eyebrows at different junctures of the stories. At various stages and as the plots developed, the students laughed and gasped while some blurted out verbal responses. Also, as the reading progressed towards the end of the books, the students become noticeably quiet and still.

During Session 1 of the intervention, the students' interaction was limited to the post-reading discussion and they maintained eye contact mostly with the therapist, not with the other students in the reading circle. These are presumably due to them being unfamiliar with each other and were getting used to the nature and structure of the reading session. However, as the weeks went by, their body language changed from slouching in the first two sessions to sitting up straight and maintaining good eye contact when addressing another participant's question or comment. These traits of positive engagement were noted in my diary entry after Session 4: "I have realised that the students are much more confident in speaking up and speaking to one another during discussions. They are excited to answer and respond to questions and comments posed by their peers as seen by how quickly they raise and wave their signal cards."

The level of positivity and engagement portrayed by the students could possibly be the result of feeling empowered to be able to decide and choose which questions they would like to ask or discuss after reading the picture books. Due to the nature of the intervention which did not involve any form of marking or assessment of their writing or spelling skills, they might have felt less pressure to be participating in the reading and discussions. The therapist's presence to guide and prompt each of them when they encountered difficulty to pronounce words or correct them when a word was omitted or read wrongly also helped to create a non-threatening and non-evasive environment right

from the beginning of the intervention. Furthermore, in Session 1 and 2, some questions and statements were provided for them (in a box) at the centre of the reading circle as an option or alternative if they could not think of any to contribute to the floor. As they were still new to the structure of the intervention and might have felt uncertain or hesitant about making an accurate statement or asking the 'right' question, most of them preferred to pick something from the box instead of generating their own. This was another contributory factor that eased them into the structure of the reading sessions.

From Session 3 onwards, the therapist did not provide any box with questions and statements as they were encouraged to generate at least one of their own based on their understanding of the book. After the five minutes given was up, Students A, B and E asked for a few more minutes as they had more questions to write on their papers. It was evident from Session 3 onwards that all the participants were eager and enthusiastic about sharing their thoughts during the picture book discussions. There was no emphasis on them to ask the 'right' questions or be accurate in their sentence structures and they were allowed to comfortably express their own thoughts, feelings and opinions about the books and relate them to their own experiences. These consequently, created opportunities for the students to engage in creativity, critical thinking and to listen to their peers' ideas and perceptions.

Another factor that accounted for the students' positive response to the reading intervention was the regular attendance for most of them. As seen in Table D A, four out of the six participants achieved at least 80% attendance. Participation for the research was on a voluntary basis and on top of that it was non-payable, therefore the participants were not obliged to attend if they had compulsory school curricular commitments that coincide with the fixed timing for the intervention. In spite of this, Student C and Student D were late for two out of ten sessions as they had ended school slightly later on those days but according to their parents, both of them insisted that they did not want to miss the sessions. Even though they each missed out on the first few pages of the picture books by the time they arrived, C and D were able to keep up with the stories with a brief summary of details that they missed.

During the post-intervention questionnaires, Student A and Student F's therapists noticed that their self-esteem has improved. A's therapist stated: "In class, she used to get really anxious when she was asked to read a paragraph from a comprehension passage. Sometimes she asks if she could read the shorter and less lengthy ones instead... I can see that she is willing to try. She sounds more confident now as her voice is louder and clearer when she reads..." F's therapist shared similar sentiments about the progress she has made in the aspect of reading as well as comprehension activities: "F used to show task avoidance during the 'phrases to read component' of the lesson... she would sigh and ask if they could skip it and move on to spelling. I notice that she no longer makes any comments about having to read out the phrases individually. Previously, I had to make her repeat the wrongly pronounced word after I have corrected her. Now, she

Table D. Attendance of picture book reading sessions

Student	Α	В	С	D	E	F
Week 1	√	√	√	V		√
Week 2	√	√		V	√	√
Week 3	√	√	√ (Late)		√	√
Week 4	√	√	√	√ (Late)	√	√
Week 5	√	√	√		√	√
Week 6		√	√	√	√	√
Week 7	√	√	√ (Late)		√	√
Week 8		√	√	√ (Late)	$\sqrt{}$	√
Week 9	√	√	√			√
Week 10	√	√		V	√	

repeats after me without being told... She would also raise her hand to volunteer answers for verbal comprehension activities when I am checking their understanding using the 5W1H (who, what, where, when, why, how) strategy..."

The theme of positive engagement emerged from how the students' responded favourably to unstructured nature of the picture book discussions. They seemingly took pride in the questions and statements that they each had to contribute to the reading circle and were clearly happy when other participants were keen to respond to their ideas and views. These were noticeable during the five to ten minutes they were given post-reading to think of questions and statements. Even though this process required some aspects of critical thinking and brainstorming on their part, none of them showed any form of reluctance or avoidance to the task during all sessions. The unstructured approach created an opportunity for them to express themselves in a different way whereby they did not have to abide or subscribe to a set of requirements (in a typical writing assignment) or to respond to a set of questions during a comprehension activity. In fact, the picture books sessions allowed them to do the exact opposite of what they do in a conventional mainstream classroom. The reading circle gave them a platform to ask questions, seek clarification and give their opinions about subject matters that they could relate to. During the post-intervention interviews with the students, they spoke

about how they enjoyed the expressive aspects of the sessions: "I like that we did more speaking than writing." "I think it was very fun because it helps me think and listening to my friends was also interesting..." "I had a lot of fun because there was very little writing." These responses from the students show that the expressive aspect of the intervention was valuable to them as it did not emphasise the challenges and difficulties they have in the aspect of writing.

The use of signal cards during the discussion also had a positive impact on the students' engagement in the reading circle as it incorporated and inculcated habits of active listening and practising mutual respect. The signal cards provided them with a structure to give their peers a chance to speak before they could raise a question or give a comment. This is supported by two of my diary entries: "The students are still getting used to using the signal cards. Today (Session 3), B raised his hand while E was speaking. I had to remind him to wait for E to complete his sentence and that he had to use the cards instead of raising his hand." and another entry that was recorded after Session 5, "The students are taking turns and using the signal cards. Their enthusiasm and excitability is seen in them waving their cards wildly to get a turn to speak." This process of turn-taking, through the use of signal cards, not only eased the flow of discussion among the six students but regulated their behaviour as well because without a structure for them to take turns, it would be difficult to listen to what each of them had to share.

#### Theme of developing language skills

Improving the students' language and literacy skills is the main aim of the intervention programme provided at the DAS and this study sets out to explore if picture books can enhance and complement the existing curriculum used by therapists. For the purpose of this study and in relation to learners with dyslexia, language skills refer specifically to vocabulary and comprehension. Therefore, the theme of development of language skills can be extended into two aspects - the expansion of vocabulary knowledge and how pictures enhance the readers' comprehension of the story.

#### **Expanding vocabulary knowledge**

During Session 2 ('The Lost Lake'), Student E raised a question for discussion based on a quote from the book: "A wise man never leaves home without a compass." He asked the group what they had understood by this quote and captured below were the responses to his question.

Because if you don't bring a compass, you'll get yourself lost then you don't know where is the city... (Student D)

Because if it's a very long place... or it might be the North so the compass will show North, so you go North. (Student E)

When you're lost, the compass helps you guide your way. (Student C)

The discussion above portrayed that the three students were describing the functions of a compass in three different ways. Student T explains the function of compass by describing the consequence of not having a compass as seen in 'you'll get yourself lost then you don't know where is the city" whereas Student J explains the context of using the compass in an unfamiliar and huge place so that the compass will 'show' the user which direction leads him to the 'North'. Lastly, Student N accurately describes the function of a compass as an instrument that will help you 'guide your way'. The above example suggests how a single quote from the picture book could develop into a discussion and exploration of meaning among the students whereby each of them had the opportunity to contribute their understanding of a subject matter and build upon each other's knowledge.

During Session 3 ('Fox'), the participants were discussing a comment made by Student E about how Magpie had left Dog, the friend who was by her side when she needed help, to pursue her dreams of flying with a new-found friend, Fox. The use of the word 'betray' by Student E triggered a discussion of its definition and some students were able to relate their own personal experience after gaining an understanding of what it means.

Student E: Sometimes friends that we trust betray us and we feel disappointed.

I think the dog, when he woke up, he must have felt this way. He was disappointed to find Magpie missing."

Student A: It's true because some friends feel like you're trusted but instead you betray them so now nobody will trust you anymore. Like "The Boy Who Cried Wolf"...

Student B: That's like some of my friends... betrayed me.

Student E: But how did your friend betray you? Like how?

Student B: ...But I'm not really disappointed because I have many friends.

Student F: What's betray?

Therapist: Betray means you kind of like, leave them.

Student F: Yes, my friends always leave me behind. In the [school] canteen.

The discussion among four participants and the therapist as described above clearly captured the exploration of the definition of 'betrayal' from a few aspects. Firstly, Student E described the feeling of disappointment that arises from being betrayed by a friend and drew a parallel of this situation to that of the characters in the book. Secondly,

Student A made a link of the concept of betraying someone to another classic children's picture book, 'The Boy Who Cried Wolf', wherein the main character had betrayed the feelings of his villagers more than once. They eventually lost their trust in him so when he sincerely needed their help no one came to his rescue. Taking the discussion further, Student B claimed that he had been betrayed by his friends. In the midst of the discussion, Student F (who had been listening attentively) seeks clarification for the definition of 'betray' and then cited her personal experience of being betrayed by her school mates when they left her behind in the school canteen. Later in Session 5 ('Cat & Rat) Student F proved that she understood the definition of 'betray' or the idea of betrayal when she raised the question: "Why did Rat betray the cat?" She was also able to reason that rat's intention was "to win first place without anybody with him".

In Session 6 ('The Little Match Girl'), another vocabulary expansion opportunity was evident when Student J was unable to recall a word that he wanted to use to describe a character but he stated its definition so that the therapist was able to help him. The participants were discussing and making inferences to reasons as to why Grandma had sewn a scarf for the girl.

Student E: But the grandma is not responsible of (for) the money.

Therapist: Grandmas... will give you something that is practical to you.

Student E: How to say like... 'always see things'?

Researcher: Observant?

Student E: Yes, very observant.

The dialogues extracted from three different sessions, as elaborated earlier, portrays that the post picture book reading discussions gave opportunities for the participants to engage in conversations that explore meanings of words through questioning techniques, relating to their own experience or explaining using their prior knowledge about the word or subject matter.

#### Pictures enhance comprehension

It was evident through the detailed analysis of the students' responses and interaction during the post-reading discussions that the illustrations stood out to them. Given that the pictures enhance the information in the text and expand the narratives in some way, the students seemed to question and analyse what the illustrations are portraying that the written word does not. These were clearly seen in Session 1, 3, 6 and 7 where the students made references to exact scenes, illustrations and pages in the books.

# Session 1: 'Where The Wild Things Are'

Student B: Can we turn back to the page where he was sitting in the tent?

Student A: Which one -the first or second picture?

Student B: It kind of looks like he was pretending or trying to eat him up.

Student D: Where's the fourth monster?

#### Session 3: 'Fox'

But in one of the pictures, the fox said now you and dog will feel (lonely) how I felt. (Student A)

#### Session 6: 'The Little Match Girl'

Student D: How come on the book cover, everybody is looking straight but this woman is looking up?

Student F: Actually the only person looking the other direction is the Little Match Girl. I think it is very sad because nobody saw her suffering although everybody is looking at her.

Student E: Because some of the people are suffering but we don't even care and don't even know and don't even bother.

#### Session 7: 'The Olive Tree'

Student B: But Sameer gave her the olives already... Sameer felt that he should do it and see whether Muna felt sad.

Therapist: Whether she actually felt sorry about it?

Student B: Yes, because he was smiling at first.

As seen from the examples quoted above, the visual elements in picture books work together with words to communicate messages and it is the unique combination of visual as well as verbal elements, through characters' dialogue, that students construct meaning. The process of meaning making and comprehension ties in very closely with the students' ability to refer their peers to specific parts of the book as seen in "front of the book", "turn back to the page", "the first or second picture" and one of the students questioning the illustration of the book cover when he asked "How come on the book

cover, everybody is looking straight but this woman is looking up?" The use of rich imagery offer valuable extensions for discussion and exploration of subject content among readers and as seen in the students' responses, go beyond the basic information portrayed in print.

# Theme of developing critical thinking skills

Critical thinking happens when students present the ability to analyse and evaluate content, evidence, claims and beliefs. By allowing students to be creative, inquiring and questioning topics that interest them, we are fostering critical thinking habits among them. These are skills which are inherently embedded in the nature of the picture book sessions. By encouraging discussions and incorporating open-ended questions, students learn how to interpret information, make judgments based on others' points of view, and draw conclusions based on their understanding of the stories. The development of critical thinking skills among the students in this study can be described in their ability to make inferences, draw connections between characters and evaluating the characters' values through their speech and actions.

#### Inferential skills

Inference making is a foundational skill and a pre-requisite for higher-order thinking skills (Marzano, 2010). During the process of data evaluation, one of the elements that stood out was the students' ability to make inferences and make associations between the characters in the books. Their ability to infer emerged from being able to draw conclusions and make predictions based on information that is implied or not directly and clearly stated. They were able to give probable causes and reasons to explain why the characters were portrayed in a certain manner or why their reactions were as such.

In Session 1, in response to the question "Did Max give up being king because he was lonely?" Student A's response was "He gave up being king because he wanted to be loved not lonely". Subsequently, Student B reasoned that "he (Max) misses his mother" therefore he denounced his role and wanted to go home instead. The picture book used in Session 2 centralised on a father-son relationship so one of the students questioned the absence of a mother figure in the story and the students inferred a few reasons for this - that he could have been adopted, his parents were separated or divorced, his mother was too occupied with work to spend time with them or that she had passed on. In Session 3, the picture book began with the setting of a forest on fire and the animals were running for their lives. Student B formulated the question "Why was the forest of fire?" and the predictions in his peers' responses showed their application of their prior knowledge as seen in "people want to use the place for landscape to build stuff", "war", "burn to get crops" and "to make the soil fertile". These responses show that the students have sound awareness on the subject matter of deforestation and Man's reasons for burning forests which made them draw the link to the story. While discussing

reasons why The Little Match Girl (Session 6) died on the streets while most people are enjoying their Christmas feasts, Student C shared that "The highest rate of suicide is during Christmas.." as told by his church pastor. He added that "They don't have a family to celebrate so they might as well be a dead soul". In response to this statement, Student E drew a parallel to The Little Match Girl who had a family but they were poor, she had no presents for Christmas and so it drove her to end her life.

The process of making inferences and teaching the skill of inference itself can be difficult as it involves the process of active reading and making meaning as readers go along. This is especially challenging for students with dyslexia as some of them still struggle enunciation. However, a shared reading session where of reading is facilitated and guided by the therapist, indirectly allow students to channel their thoughts and ideas into an inferring and meaning-making mode as they bounce questions and ideas during the post-discussions. As seen in the examples above, in order to infer meaning, the students must combine the information that the author has written and illustrated with their own reading experiences and life experiences.

#### Making connections between characters in picture books

Student B was able to point out that in the 'Where The Wild Things Are' (Session 1) the line, "I am going to eat you up" was repeated in the book but said by two separate characters in two separate settings. This showed that he paid attention to the dialogue or speech used in the picture book and appreciates the juxtaposition used by the author when the same dialogue was used by different characters.

The story was funny. It was funny when Max said – "I want to eat you up." (to his mother). Then the wild things said the same thing to him. Max being his mother and the monster being him. The similarity between what the characters said to each other when they were punished was funny. (Student B)

Going further into the discussion, the students discussed how the main character's (Max) behaviour was influenced by the animal costume that he had put on. They inferred that Max was playing up the role of a wolf because he was wearing a wolf suit and wanted to 'eat up' his mother and the monsters.

- Student F: Did the wolf suit that Max wore influence his behaviour?
- Student B: This question is kind of realistic.
- Student A: Yes, because wolves are carnivorous. So he wanted to behave like them
- Student D: I wanted to say exactly the same thing as M!

# Student M: But how can the wolf influence the monsters? Shouldn't it be the other way around?

The above discussion captures how at the participant's were able to make a link between two separate factors- behaviour and child's play but they did not specifically rationalise if he was behaving as such because he was having fun playing up the role of the animal or he was purely up to childish mischief.

The students were also able to recognise and discuss the nature and dynamics of family relationships in two of the picture books used in the study – 'The Lost Lake' (Session 2) and 'The Little Match Girl' (Session 6). In 'The Lost Lake', the father-son relationship was described in the line "There isn't a sign of people anywhere. It really seemed as of dad and I were all alone in the world. I liked it just fine." When asked why the author felt this way, Student A responded that "it feels wonderful and peaceful" for the father and son to be spending time alone on their own. Subsequently, Student C added that it gave "the father and him... some time to bond". Later in the discussion, Student B reinforced the nature of the father-son relationship with his statement that "Dad and the author shared a special relationship..." because "Dad gave him coffee even though he was too young..."

On the other hand, the relationship between the grandmother and her granddaughter was presented in "The Little Match Girl". Student E inferred that "there was a smile on the little match girl's lips when she passed away" because "she's happy she wants to go [to be reunited] with her grandma [who had passed on]". Student D felt that the closeness between both characters was "Maybe because the grandma is the person who truly cares and loves her the most, more than anyone else" and the reason why the little match girl was the favourite grandchild, even though she had siblings, was because she (the Little Match Girl) "was very wise and quiet and very 'peacemaker' like that... everybody likes peacemakers".

Apart from making connections between characters in a picture book, as depicted by the previous examples, an interesting observation was made by two of the students in the study. Student B and E drew a parallel between two female child characters from two different books- 'Sallamah' (Session 4) and 'The Little Match Girl' (Session 6) both of whom were faced with emotionally challenging life situations. Sallamah was despondent to find out that she was adopted and wanted to find out who her real parents were. The Little Match Girl was desperately trying to sell the matches to provide some income for her poor family to survive and make it through winter. Student B identified that both characters were searching for things that would complete their lives – family, identity and money. This is seen in the following exchange of responses between them:

Student B: It [The Little Match Girl] is linked to the other one. The book about the adopted one [qirl].

Therapist: What Sallamah Didn't Know? How can you link this story to that?

Student B: The girl sitting outside the door could be like her [Sallamah] sitting at the tree [on the front cover of the book].

Student E: Because the Match Girl is always thinking why is her life so bad and why didn't she earn any money? Just like the 'kampong' [village] girl... [she could not understand] why her name was different.

Therapist: So how would you compare the two girls? What is similar about them?

Student B: They are curious. This story is linked back to Sallamah because they [both girls] want something. They are searching for something. This one [the little match girl] is searching for two things—the grandmother and money. The other one [Sallamah] is searching her identity and parents.

# **Evaluating characters through speech and actions**

Another aspect of being able to think critically stems from the students' ability to question and evaluate the characters' intentions and motives in a story.

In Session 3, Student A questioned why the main character, Fox, was alone and do not move around in a pack. The other students had varied responses to this question. Firstly, they questioned if his "bossy character and attitude" left him without any companion. He wanted a companion but did not know how to befriend others. Secondly, they rationalised that Fox might have been betrayed by his own pack, therefore he was all alone. Following this, other students raised the fact that Fox was alone by choice. He might have been a victim of betrayal therefore he chose to be alone for his own benefit and to make others feel the pain of being betrayed.

Maybe he wants to be lonely. He feels lonely but he wants to be lonely. So he doesn't have to share his food and die. (Student D)

...He was betrayed before, so now he's doing the same thing (to Magpie)... (Student J)

'What Sallamah Didn't Know' (Session 4), raised questions about reasons for giving the child up for adoption, racial identities and racial disparities because the main character Sallamah, born a Chinese, was adopted by a Malay family at birth and how she struggled with her identity when she found out the truth. Four out of the six students though of a similar question for discussion- they each questioned why Sallamah was

given away by her biological family. They inferred from prior knowledge that since the story took place in a village during the pre-modernity period, the most possible reason for the adoption was because the Chinese family had "too many mouths to feed", "too poor to afford another baby" and "there was no (insufficient) food for the baby". Student E also questioned why there was a need for the adopted family to change her original Chinese name (as stated in her birth certificate which was kept a secret from her) to a Malay one.

In Session 5 ('Cat and Rat'), Student B questioned Rat's moral capacity as he had cheated in the race and therefore should not deserve to be part of the twelve months of the lunar calendar. Following that, Student F also formed a moral judgment about Cat who "lost because she cheated" in the race. She also inferred that Rat had "betrayed" Cat "because Rat wanted to win first place without anybody with him". F's use of the term "betray" is significant here as it clearly demonstrated her understanding of the word and her ability to use it accurately in this context after the discussion in Session 3 ('Fox') where she sought clarification for its meaning.

The students' interest to seek inquiry into the characters' motives, actions and reasons prove how the post-reading discussion creates opportunities for them to engage in a discourse that stimulates in-depth thinking about the stories they have read, analyse, reflect and integrate meaningful associations between characters.

# Theme of relating to prior knowledge and personal experience

Another theme that emerged during the data evaluation process was the students' ability to connect and relate to prior knowledge and to tap on their own learned experiences. Although this was not obvious in all the ten sessions, there were instances in which the picture books stimulated connections to what they already know and this had a positive impact on their comprehension.

During the discussion of 'The Lost Lake' Student E mentioned that the formation of a lake and canyon can take up to thousands of years and that there is "a famous canyon in America... called the Grand Canyon". Other instances of the students connecting their general knowledge were seen in their sharing of information that the "smallest country on Earth has 66 people and they are all men", their discussion of the possible causes of forest fires (Session 3), that dogs too have "cataract" like human beings do (Session 3), the highest rates of suicide recorded worldwide is usually during Christmas time (Session 6) and that "some magazines are restricted to children" because their content is meant for adults only (Session 2). Although students' prior knowledge may be incomplete with some gaps and misconceptions, their ability to see relationships between what they are reading and what they already know is significant.

Apart from relating to prior knowledge, the students also drew relevance from the stories to their own real-life experiences and their openness in speaking about their personal and familial issues became apparent too. For example, when they were discussing the subject of 'family' after reading 'The Little Match Girl', Student D said "I don't have a father... He ran away when I was a baby". The rest of the students did not show any visible reaction to her comment. In fact, the discussion continued with Student E redefining 'family'- that everyone comes from a family, with a mother and a father, "but some families do not live together". Afterwards, Student D spoke about her family again, "I don't have a father because he ran away and married a different woman". Once again, none of the students had any visible or verbal response to the insight D gave about her family background and upon analysis, their 'silence' could suggest two things. Firstly, the students were aware of how personal and emotionally-sensitive the subject matter was and secondly, they were not sure how to respond to D, therefore, they chose to remain silent. This situation illustrates an aspect of social and emotional competence among the students in the study, as seen in their ability to exercise sensitivity, by not reacting, when their peer spoke about a topic that could possibly trigger some negative or uncomfortable sentiments.

The implicit characteristics of the students' social and emotional competence was also apparent in the discussion of author Hans Christian Andersen's purpose and underlying message of 'The Little Match Girl'. Their responses to the author's are captured below:

- Student E: Because some of the people are suffering but we don't even care and don't even know and don't even bother... [This story is meant] to tell people to help [poor] people if we see any.
- Student C: This story shows what she has been through and it's quite sad because she can't live until she's an adult and had to die at a young age. If somebody had bought some matches, she could have gone home and go have some food and warmth. The Match Girl tried her best but it was no use and she died.
- Student D: Maybe the writer is trying to write that poor people don't have what they actually want to have. So we have to appreciate whatever we are given. We are not like the poor and we get whatever we want. But the poor don't. They [The author] are [is] trying to say appreciate whatever we have.
- Student E: ... Everybody have what they wanted but we didn't even think about people that don't have what they wanted and when we see people begging, sometimes people just walk away.
- Student F: Sometimes I feel sad about them [beggars]. But I don't have money.

These responses demonstrate the students' social awareness about the less fortunate that exist within their society and that they ought to receive help but some people are ignorant because they "don't even care and don't even know and don't even bother... to help" and "when we see people begging, sometimes people just walk away". Student C reasoned that the Little Match Girl's life could have been saved if someone made a difference to reach out to her but because no one did, "she can't live until she's an adult and had to die at a young age". On top of that Student D explained how the message of Hans Christian Andersen's book served as a reminder to "appreciate whatever we have". Their ability to analyse the situation, recognise the author's purpose and describe the effect it brings about to readers is evident of their social and emotional capacity.

#### **DISCUSSION**

# Research Question 1: How was the students' comprehension through the retelling of details influenced by the illustrations of picture books?

The research findings showed that the students' process of meaning-making and comprehension tied in very closely with their ability to formulate questions and responses that relate to the pictures portrayed in the books. The students' references to specific pages and scenes showed that the pictures helped them remember the sequence of events in the story. They were also able to recognise the changes in facial expressions and body language of the characters and were able to explain how these changes drove the characters' motive or actions. The students' responses tell us a great deal about their precision in paying attention to details and what Walsh (2003) described as the ability to make critical interpretations and developing the ability to formulate affective and evaluative comments on what they have read.

In some instances, some students actually questioned if there was a reason why the illustrations were portrayed in a certain way. They were also able to infer and make connections between the characters within the same book and across different books when they recognised similarities or drew parallels between the images. These observations are in line with the importance of visual literacy as prescribed by Arizpe and Styles (2003) where students are encouraged to read beyond the literal meanings portrayed, to reflect deeply and creatively on the visual representations and interpret the information or underlying ideas. Gyselinck and Tardieu (1999) proposed that the effect of pictures on reading comprehension largely depended on the repetitive effect they portrayed. This means that when the information depicted in the picture also appears in the text, it helps to reduce readers' cognitive load.

When the pictures provide information that is difficult to understand through the text, it promotes readers' reading comprehension especially for students with dyslexia who struggle with reading skills. Pan and Pan (2009) confirmed the proposition of Gyselinck and Tardieu (1999) by suggesting that a picture which closely reflected the structure and

complexity of the text had a more facilitative effect. This, therefore, means that on one hand, the integration of information between the text and the picture can improve the reading performance of readers. On the other hand, the facilitative function of the picture diminishes or disappears when it does not positively match with the linguistic complexities of the reading text. These therefore closely support this study's findings that pictures when matched appropriately with the text help readers understand its content and help them make meaningful connections.

# Research Question 2: How do picture books encourage students to express their thoughts and opinions verbally?

The second research question seeks to find out the students' ability to respond to the picture books through verbal response by sharing their thoughts and opinions. One of the significant aspects that surfaced was instances in which the picture books stimulated the students to make connections to their prior knowledge. According to Bower, Lobdell & Swenson (1994), when children are able to link new information to their prior knowledge, their interest and curiosity are activated and the instruction becomes purposeful. This was evident in the quality of their responses as they were observed to infer and make connections based on their learned prior knowledge and personal experiences. Being able to draw from their prior knowledge certainly gave them substance to incorporate into the post-reading discussions and offer new information to their peers.

The structure of the discussions that promote active listening and turn-taking, through the use of signal cards, have also provided a safe space for the students to share not only their experiences but their deepest thoughts and feelings too. This is reinforced by Hansen and Zambo (2005) and Zambo (2006) that when students can relate to a character's feelings they would be more open to talk openly about their own and be receptive to ideas that are placed in the context of the character's life. Furthermore, there were no judgements projected on their feelings that they were experiencing, therefore, the students could bring their own life experiences into the picture book sharing making it more personal and meaningful.

# Research Question 3: How did picture books impact, if at all, the interest and level of engagement in reading?

The research findings showed that student interest and engagement was the most impacted area in the study. The level of student engagement gradually increased as the weeks went by and in some weeks, student engagement was heightened when the content of picture books piqued on their interest and curiosity. The observation of their body language, described as relaxed, happy, calm and at ease and the quantity of responses suggest their enjoyment and engagement level of the picture book experience. Splitter and Sharp (1995) postulated that the complex and subtle

relationship between text and images in picture books keep readers engaged through the analysis of pictures, sentences and statements because these enable them to focus on features and factors that would lead to their construction of inferences, evaluations and explanations. The students' high level of engagement is indirectly supported by findings discussed in research questions 1 and 2, because their ability to comprehend, remember specific details and images and expressing their thoughts and opinions can only stem from how connected they are with the picture books and content. This research has also shown that the read-aloud sessions heightens students' engagement and fosters a positive classroom experience because the students seemingly disconnect the idea of learning conventionally, from an enriching picture book experience that could offer them a form of enjoyment and pleasure.

## Other aspects of student learning

Apart from their ability to comprehend stories with the inclusion of pictures and how responsive and engaged the students were, one of the driving factors of this project was the selection and use of appropriate picture books as the main instrument that stimulates learning. Costello and Kolodziei's (2006) guidelines as used in Nicholas (2007) study was useful in the selection of picture books to be used in this study. Criteria such as the students' cultural relevance, rich vocabulary, colourful and attractive illustrations and thematic-appropriateness to the students' level were identified and taken into consideration in the selection process. Also, understanding the student's abilities through their educational therapists and parents were just as important to effective instruction, of read-aloud and discussions, as selecting the appropriate instructional materials

#### CONCLUSION

# Implications for teaching children with dyslexia

This study has shown that there is potential in using picture books as part of providing dyslexia literacy remediation such as the integration of text and images to promote comprehension and make meaningful comprehension, stimulating students to make connections to prior knowledge and regulating their interest and engagement towards a reading task. Contrary to what many educators and parents believe, picture books can be used as teaching tools beyond kindergarten or first and second-grade emergent readers. Apart from teaching them to read using a single-model approach, dyslexia remediation therapists should explore using pictures to teach dyslexic students aspects of visual literacy such as how to see and examine what they are looking at in the layout and illustrations. Going beyond the literal meaning of the illustrations, it is important for students to be able to understand and grasp the many layers of subtle and non-literal meanings that could be associated with the pictures.

#### LIMITATIONS OF THE STUDY

This study did not include a control group to be used as a benchmark to compare the effectiveness of using books with and without pictures. The inclusion of a control group would provide a broader and comprehensive understanding to measure the aspects of interest, engagement, thoughts and expressiveness of the students. The participants in the study were also limited to one DAS learning centre located in a district where the students' parents are middle to high-income earners and the majority of them live in private housing. The social and economic measures of the students' background may influence their ability to relate the picture books in terms of vocabulary, knowledge and experiences. According to Aikens & Barbarin (2008), children's initial reading competence is correlated with the home literacy environment, the number of books owned and parent distress. Families from lower social and economic statuses are less likely to have the financial resources or time availability to provide their children with academic support. They may be unable to afford resources such as books, computers, or tutors to create a positive literacy environment (Orr, 1992). Therefore, it would add value to include students from different demographic locations as this will ensure that the data will comprise of students who have different social and economic profiles, lived realities and experiences.

#### Conclusion

A method for incorporating picture books into the classroom effectively is to have educators trained to teach visual literacy skills. Literacy remediation therapists can be offered specialised training on methods to teach their learners the aspects and elements of understanding and appreciating visual literacy and how it can be applied into their learning. As emphasised by Arizpe and Styles (2003) in their study on the influence of illustrations in picture books, incorporating associated graphics and images only adds to an advantage for both typically developing learners and learners with dyslexia. In today's modern world, children in society are exposed to images through different platforms of mass media and are more graphically oriented than past generations. Thus, combining visual and verbal aspects, through picture books and discussions respectively, in the teaching approach can help students with dyslexia understand their existing world, absorb the meaning of what is around them and learn how to critically reflect on what they read, listen and observe.

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# **APPENDIX A:**

### QUESTIONNAIRE FOR PARENT OF RESEARCH PARTICIPANT

Name of Ch	ild:										
On a scale c child's abiliti your child.		•		•						•	
Please elabo lines provide			ices in	more d	etail by	explai	ning or	giving	examp	les in the	ļ
Question 1:	How e	asy is i	t for yo	u to ge	t your c	hild to	read?				
0	1	2	3	4	5	6	7	8	9	10	
Explain:											
Question 2:	How e	•	t for yo	u to ge	t your c	hild to	select ł	nis/her	own rec	ading	
0	1	2	3	4	5	6	7	8	9	10	
Explain:											
Question 3:		easy is i	•	ur chilo	I to con	nplete h	nis/her	school	assignn	nents	
0	1	2	3	4	5	6	7	8	9	10	
Explain:											

Question 4: How easy is it for your child to participate in social communicate with others?								ial setti	settings and inter		
	0	1	2	3	4	5	6	7	8	9	10
Explain	l:										
Questic	on 5: I	How eas	sy is it	for you	r child t	o expr	ess him	self/he	rself in	whole s	sentences?
	0	1	2	3	4	5	6	7	8	9	10
Explain	1:										
Questic	on 6:	How ed	,	•	ur child	l to pay	/ attenti	on and	conce	ntrate c	on various
	0	1	2	3	4	5	6	7	8	9	10
Explain	1:										

# **APPENDIX B:**

### QUESTIONNAIRE FOR EDUCATIONAL THERAPIST OF RESEARCH PARTICIPANT

Name of Stu	dent: _									
On a scale c student's abi describes yo	lities b	ased o		•						,
Please elabo lines provide			ices in	more d	etail by	explai	ining or	giving	examp	les in the
Question 1: I	How ea	ısy is it	for you	to get	your stu	udent to	read?			
0	1	2	3	4	5	6	7	8	9	10
Explain:										
Question 2:	How e	•	it for yo	u to ge	t your s	tudent	to seled	ct his/h	er own	reading
0	1	2	3	4	5	6	7	8	9	10
Explain:										
Question 3:		easy is endentl	•	ur stude	ent to c	omplet	e his/he	er class	assign	ments
0	1	2	3	4	5	6	7	8	9	10
Explain:										

Question 4: How easy is it for your student to participate in communicate with others?									lass ac	tivities (	ies and inter	
	0	1	2	3	4	5	6	7	8	9	10	
Explair	າ:											
Questi	on 5:	How ea	sy is it	for you	r studei	nt to ex	press h	imself/	herself	in whol	e senter	 nces?
	0	1	2	3	4	5	6	7	8	9	10	
Explair	າ:											
			sy is it	for you							on varic	
	0	1	2	3	4	5	6	7	8	9	10	
Explair	າ:											

#### **APPENDIX C:**

# CRITERIA CHECKLIST FOR SELECTING PICTURE BOOKS adapted from Nicholas J. L. (2007)

Book Title:	 	
Evaluator's Name:		

# Child appropriateness:

- Children are the primary intended audience for the book.
- ♦ The book displays respect for a child's understandings, abilities and appreciations.

### Visual appropriateness:

- The book provides the child with a visual experience.
- Story-line and theme developed through the pictures is apparent.
- Pictorial interpretation of the story and theme is apparent.
- Delineation of plot, theme, characters, mood and setting through the illustrations is apparent.

# Text appropriateness:

- The text demonstrates uniqueness in the use of language and style.
- The book offers engaging pictures and writing that invites a child's response.
- The text provides stimulating presentation of facts and ideas.

#### Overall value:

- The book has been given a local or international award. (e.g. Caldecott Medal, Parents' Choice Award etc.)
- Clarity and accuracy of presentation in text and illustrations
- The book is rich in imagery and language