

INTEGRATING HOTS IN READING COMPREHENSION IN INCLUSIVE CLASSROOMS: IMPLICATIONS FROM A DYSLEXIA STUDY

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Abstract: *This article describes the qualitative phase of a larger intervention study, where pupils with learning disabilities (nine dyslexic pupils) were engaged in a pedagogically blended 'Reread-Adapt and Answer-Comprehend' (RAAC) and Theatre Art activities to enhance Higher Order Thinking Skills (HOTS) in reading comprehension. Data from pupils' answers in the reading comprehension passages, interviews with the Special Education Needs (SEN) teacher and observations were collected. Qualitative analysis based upon pre-determined categories of learning strategies from literature revealed pupils' application of HOTS in reading comprehension. Drawing from this study, the importance of addressing HOTS in reading comprehension among mainstream and SEN pupils and other implications for inclusive classrooms are discussed.*

Keywords: *Inclusive Classrooms, HOTS in Reading Comprehension, RAAC-Theatre Art Intervention*

Introduction

As in many education systems around the world, in Malaysia, Bloom's Taxonomy (Bloom, et al., 1956) is used to formulate learning outcomes to determine the depth of learning (Anderson & Krathwohl, 2001). The hierarchy of six cognitive skills in the Taxonomy progresses in a linear manner, from simple to complex, where *remembering*, *understanding*, and *applying* are considered as the lower thinking skills, whereas *analysing*, *evaluating* and *creating* are the higher-order thinking skills (HOTS). Examples of component cognitive skills of *analysing* are critical thinking, organising and integrating; for *evaluating* are hypothesising, critiquing and monitoring, and for *creating*, designing, constructing and planning.

Reading comprehension is the ability to interact and understand text in reading materials. This ability is necessary for learning in all fields be it languages, science or mathematics (Gregory & Cahill, 2010). For reading comprehension, two interconnected abilities are necessary (Gough & Tunmer, 1986) which are, word recognition (decoding) and language comprehension (understanding the meaning of the words). For both these abilities, HOTS are essential to assist learners in understanding the text, making inferences, connecting the text to other facts and synthesising all that is read to solve problems.

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Inclusive Education

With the adoption of the United Nations Convention on the Rights of Persons with Disabilities (UN-CRPD) in 2006, inclusive education became an international human right, with 164 nations as signatories, including Malaysia. In the Malaysian Education Blueprint (MEB - 2013-2025) document, a commitment was made to the value of quality inclusive education, that by 2025, 75% of the Special Education Needs (SEN) pupils who have learning disabilities will become part of the mainstream education. HOTS are also prioritised in the Blueprint although not directly for SEN pupils. To ensure the implementation of the MEB is complex, as it involves state and district education offices and thousands of schools throughout Malaysia. The Curriculum Development Division of the Ministry of Education has prepared the Special Education Standard Curriculum for Primary Schools and the Special Education Standard Curriculum for Secondary Schools (KSSR and KSSM respectively), which was implemented in 2017, aligned to the country's National Education Philosophy and designed to be flexible for the teaching-learning processes in all classrooms.

In Malaysia, special education is accessed in three ways through (i) Special Education Schools (schools only for SEN pupils), (ii) Special Education Integration Programmes (mainstream schools which have separate classes for SEN pupils) and (iii) Inclusive Education Programmes (schools where SEN pupils are placed in the same classes with mainstream pupils) (Nasir & Efendi, 2016). Additionally, Malaysia's inclusive programmes have two pathways: full and partial. Full programmes mean that pupils with learning disabilities learn with mainstream pupils for *all* subjects including co-curriculum activities. Partial programmes mean that pupils with learning disabilities learn with mainstream pupils for *selected* subjects and co-curricular activities. Although as noted in the MEB enough opportunities are provided for all pupils with disabilities, the resources and facilities provided through the three programmes are limited (Othman et al., 2022).

The report from the Department of Statistics Malaysia (2022) on the official number of pupils with learning disabilities is shown in Table 1.

Table 1. Type of Schools and Pupil Statistics with Learning Difficulties in Malaysia (2022)

Type of School	Level of Pupils	Total Number of Students with Learning Disabilities (LD)
Special Education Government Schools	Primary	492
	Secondary	721
Special Education Integrated Programme in Government Schools	Primary	44, 116
	Secondary	35,330
Special Education Inclusive Programme in Government Schools	N/A	N/A

Source: Department of Statistics Malaysia (2022)

Overall, rapid progress has been made related to special education in Malaysia since 1990 (Muhamad Nadhir & Alfa Nur Aini, 2016). Table 2 shows the chronology of events from 1990, beginning with the introduction of a special training programme for teachers of SEN in 1990, until the Zero Reject Policy (ZRP) introduced by the Ministry of Education in 2018.

Table 2. Progress of Special Education from 1990 in Malaysia

Time	Action / Policy /
1990	Rapid development of special education in Malaysia (e.g., Development of segregated teacher preparation programme for mainstream and special educators)
1995	Establishment of the Special Education Department in 1995 (currently known as Special Education Division)
1996	A chapter on special education was included in the Education Act 1996
1997	Introduction of the Education Rules (Special Education) by the Ministry of Education in 1997 – included three special education programmes, namely the special school (35 schools), the integrated programme (2659 schools) and the inclusive programme (3373 schools)
Since 2006	All students registered with the special education programmes are eligible to receive monthly allowance since 2006
Since 2008	The adoption of the Persons with Disabilities Act in 2008 – persons with disabilities are not to be excluded from the formal education system
2013	New education regulations for special education were introduced by Ministry of Education to replace the Education Rules (Special Education) 1997 The inclusion of special education in the Preliminary Report of the National Education Blueprint 2013-2025 - two types of inclusive education - full inclusion and partial inclusion.
2018	Zero reject policy (ZRP) for Students with Special Needs (SEN) was introduced by Ministry of Education

Source: Compiled from Muhamad Nadhir & Alfa Nur Aini (2016); Nur Kamariah et al., (2022); Suliati Asri (2023).

Reading Comprehension Disorder

Pupils with Reading Comprehension Disorder (RCD) have trouble learning to recognize, read and pronounce words, but the dominant challenge is in grasping meaning from text. Conditions related to RCD are attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), dyslexia and other learning disabilities (Hendren, et al., 2018).

Importance of Reading Comprehension

Reading comprehension is a complex cognitive human activity and is a challenge to teach, measure and research (Elleman & Oslund, 2019). Numerous cognitive processes are involved such as word reading ability, inference generation, prior knowledge, working memory and many more (Perfetti, et al., 2005). In comparison to all other academic skills, reading comprehension is looked upon as the foundation. Besides interacting with and understanding the text, reading comprehension involves other HOTs such as deductive and critical thinking and goes beyond phonological awareness and helps pupils understand complex concepts (Escar, 2022). Proficiency in understanding written material is vital cutting across all subjects. Reading comprehension is foundational for critical and creative thinking, analytical skills and effective problem-solving (Spolander, 2023). Thus, acquiring reading comprehension skills will prove invaluable for learning subjects, especially in inclusive classrooms where SEN pupils and normal pupils learn together.

Tackling Reading Comprehension Disorder

Numerous interventions have been tested to assist pupils with RCD conditions such as dyslexia to improve their reading comprehension. These interventions are divided into phonological interventions, to assist SEN pupils to associate letter symbols with their sounds (Dyslexia UK, 2023). Second, there are morphological training interventions, to guide SEN pupils' understanding of the structure of words as, "combinations of smaller meaningful units, known as morphemes, and the ability to manipulate them" (Melloni & Vender, 2022, p.1). Third, is the cognitive training interventions which are usually based on visual and spatial attention, and memory abilities (Caldani et al, 2021). Fourth is the multisensory approach, (visual, auditory, tactile and kinesthetic activities), which engages various parts of the brain and provides SEN pupils more ways to understand, remember and recall what they have learnt (American University Washington, 2023). Snowling et al. (2020) stated that the multisensory approach provides a more meaningful experience. At present assistive technology approaches have also been conducted integrating all four above-mentioned interventions (Al-Dokhny et al., 2022). Providing adequate remediation for reading comprehension is a growing issue for pupils with dyslexia and other learning disabilities (Protopapas & Parrila, 2019).

Novianti and Syihabuddin (2021) found that the phonological instruction in their study helped elementary dyslexic pupils raise their phonological awareness, reading and spelling skills. It has been found that specific morphological interventions facilitate children with learning disabilities to focus on word structure to improve reading skills (Bowers et al., 2010). The multi-sensory approach has also been found to improve reading ability in students with dyslexia (Lopes et al., 2020), and among students with other disabilities (Gharaibeh & Dukmak, 2022).

In Malaysia, several intervention studies have been conducted specific to dyslexia. Lee (2010) used the Davis Model, which has three components, namely, the Orientation Counselling procedure to correct visual perceptual problems, the Symbol Mastery procedure to aid with problems of reversals, and the Reading Exercises to help in word recognition, to intervene perceptual problems and word recognition in a single case study. Majzub et al. (2012) in another study conducted a multisensory programme among dyslexic students aged between 8 to 9 years of age attending remedial classes, using a quasi-experimental research design. The results indicated significant differences in alphabet identification and alphabet mastery. Subramanian et al. (2013), applied the multi-senses explication activities (such as the Visual, Auditory, Kinesthetic, Tactile -VAKT, Gillingham and Fernald methods) and language games in word mastery for the national language Malay among 5 primary school students aged between 8 to 9 years. This approach was found to trigger an active learning environment for the students and helped with the mastery of words in the language. Intervention programmes based on technology have been conducted. For example, *MyLexics* an educational courseware, was developed and tested by Abdullah et al. (2009) to teach the Malay language to dyslexic pupils. Through multimedia elements, dyslexic pupils can independently and interactively first learn the 'alphabet', then construct 'syllables' by combining the 'alphabets' and finally combining the 'syllables' to construct 'words. Lee (2019) also designed and developed the intervention of a multisensory programme *MyBaca*, a Malay word recognition program for dyslexic pupils. The programme targeted pupils' decoding, reading fluency and motivation.

Special education teachers opine that pedagogies such as multi-sensory approaches and assistive technology tools using mobile learning applications can be effective among pupils with learning disabilities. This approach has already been found effective with mainstream pupils. However, to date, there are no mobile learning applications for learning disabilities based on the Special Education Standard Curriculum for Primary Schools and the Special Education Standard Curriculum for Secondary Schools in the country (Wai, et al., 2022). Nevertheless, organisations such as the Dyslexic Association of Malaysia or *Persatuan Dyslexia Malaysia* (PDM) supports dyslexic pupils with its multi-sensory approach module at its centres (The Sun, 30 October 2023).

One clear need was pointed out by Nurul Anis et al (2018), that although numerous studies have been conducted related to RCD among SEN pupils, no study among pupils with learning disabilities in Malaysia has investigated beyond literacy and linguistic abilities to include cognitive functions

underlying the challenges in the learning process. Thus, this article describes an intervention which tried to fill this gap using a blended pedagogical remediation approach of ‘the Reread-Adapt and Answer-Comprehend’ (RAAC) and Theatre Art instruction, to examine its effect on integrating HOTs in reading comprehension of pupils with dyslexia.

Rationale of the Study

For successful inclusive education which accommodates various abilities in the same classroom, creative pedagogy empowering flexible learning environments is important. This article focuses on pedagogy, which is ‘the central means through which the principle of inclusion is put into action within an education system’ (UNESCO IBE 2009, p. 22). In addition, this study views reading comprehension as a basic skill for all pupils, not only for learning languages but for all subject matter (Gregory & Cahill, 2010). Furthermore, since HOTs are prioritised in the Malaysian Education Blueprint, the focus of the article will be on learning strategies through a planned learning environment (RAAC and Theatre Art) for acquiring HOTs in reading comprehension. The implications of the findings from the study conducted among dyslexic students will be extrapolated for the inclusive classroom.

RAAC and Theatre Art in Reading Comprehension

William J. Therrien (2004) developed the RAAC 7-step intervention which consists of well researched components, namely, repeated reading and question generation. Students reread passages aloud until they satisfy a performance criterion. The reading is done purposefully to adapt and answer story structure prompts that bring about question generation (Therrien & Hughes 2008). The strategic instruction process ‘Reread-Adapt and Answer-Comprehend’ (RAAC) intervention incorporates the following seven steps as sequences (see Appendix A)

Alfassi et al. (2009) found that the RAAC strategy was more effective in promoting reading comprehension among pupils with learning disabilities than traditional methods and observed that “the findings challenged the common perception that literacy is an organic impossibility for people defined as intellectually disabled” (p. 291). Further research showed that teachers found the RAAC intervention increased decoding fluency and reading comprehension for school-age children with learning disabilities (Hua et al., 2012; Schirmer et al., 2012).

Theatre Art in this paper is an adaptation of the Readers’ Theatre where a script is recited by the teacher, followed by the RCD pupils bringing the words to life through facial expression, and voice intonation without the use of costumes or stage settings (Mastrothanasis et al., 2023). Integrating creative teaching approaches and changing the way instruction is designed and delivered can benefit diverse learners (McMahon et al., 2004). This type of teaching is an evidenced-based approach used to scaffold students’ reading fluency, oral language fluency, and expression. Corcoran and Davis’ (2005) research of Theatre Art among second and third-grade students with learning disabilities reported an average of more words read correctly after implementing Theatre Art. A recent study by Fälth et al. (2023), found that a multimodal reading training programme intervention in Sweden and Croatia, improved normal pupils’ literacy development, including decoding, spelling, and reading comprehension. Young and Rasinski (2009) also stated that, “children are more likely to practice or rehearse if they know that they will be performing a reading for an audience” (p. 5). Pupils with learning disabilities using scripts during reading improved in word recognition and comprehension, and became more fluent compared to the traditional approach (Rasinski et al., 2015).

Slade (2012) found that teachers’ early use of Theatre Art on migrant pupils increased their active engagement with the texts and confirmed that Theatre Art is a powerful, analytical, and educational tool that enhanced literacy skills when introduced early. More recently, Kelzang et al. (2023) conducted action research among students in rural Bhutan found that Theatre Art enhanced reading skills as well as generated enthusiasm, raised confidence and motivated mainstream pupils.

Blending RAAC and Theatre Art

Thus far no teaching approach can be said to be 'the best practice' for teaching HOTS in reading comprehension to pupils with learning disabilities such as dyslexia. Dyslexic children are diverse (as in other learning disabilities) and perhaps to enhance reading comprehension, two instructional approaches can be combined. Block, et al. (2008) found that by using more than one instructional approach, dyslexic children are better engaged which reinforces comprehension. A mixed method study by Brinda (2008) which combined Theatre Art and text reading found that illiterate children connected with the Theatre Art characters, and this led to the children's willingness to participate and engage well in the lessons. Certo and Brinda (2011) in their research, had sixth-grade urban middle school classes partner with a semi-professional theatre company and used literature adaptations in a Theatre Art performance to assist pupils with reading challenges. They found that this evoked an aesthetic and emotional response in pupils that reading the literature alone did not. Strickland et al, (2013), in their extensive review of literature on repeated reading studies among elementary students with learning disabilities, reported that special education teachers should rethink teaching approaches and use reading programmes such as RAAC to enhance reading fluency and comprehension skills, and additionally use the programme in combination with other interventions. The present article reports a combination of RAAC and Theatre Art intervention study.

Theoretical Framework

The research in the study is about an intervention among pupils with dyslexia through the blending of RAAC and Theatre Art. According to Menghini et al., (2011), the underlying problem for reading comprehension involves a combination of factors. Nonetheless, phonological processing is still believed to be the core problem affecting dyslexic pupils and pupils with other learning disabilities who have difficulty with words (Ramus & Szenkovits, 2009).

Matching graphemes (combination of letters) to phonemes (sounds) of words in a printed text into speech is decoding, while listening comprehension is the ability to recognise speech sounds to understand language from spoken words (Hoover & Gough, 1990). The Simple View of Reading Theory (SVR) proposed by Gough and Tunmer (1986) states that reading comprehension is the combination of decoding skills and listening comprehension and that both must act together for verbalising reading. According to Klingner et al. (2010), among dyslexic and other learners with disabilities, the challenge is to recognise difficult words in print (decoding), determine the meaning from the text (listening comprehension), while at the same time acquiring the language through which that content is taught (reading comprehension). Both decoding and listening comprehension skills are teachable (Kamhi, 2007). In the present study the decoding skills are taught by using the RAAC intervention and the listening comprehension skills are acquired through Theatre Art activities. The comprehension processes put forward by Gregory and Cahill (2010) namely, questioning, using prior knowledge and schemas, inferencing, visualizing, and making connections will underpin the SVR model.

The concept of HOTS in this study is based upon the hierarchical progression of skills embedded in the Taxonomy of Educational Objectives, by Bloom et al. (1956) and revised by Anderson and Krathwohl (2001). This aligns with the interpretation of HOTS in the Malaysian Education Blueprint (2013-2035). When a child upon encountering a problem, can explain and analyse the problem; put forward ideas to plan for action; evaluate the ideas, make a choice, and create a solution, he or she has demonstrated HOTS ably (Kamarulzaman, 2014). Based on the above discussion, the researchers put forward the theoretical framework shown in Figure 1.

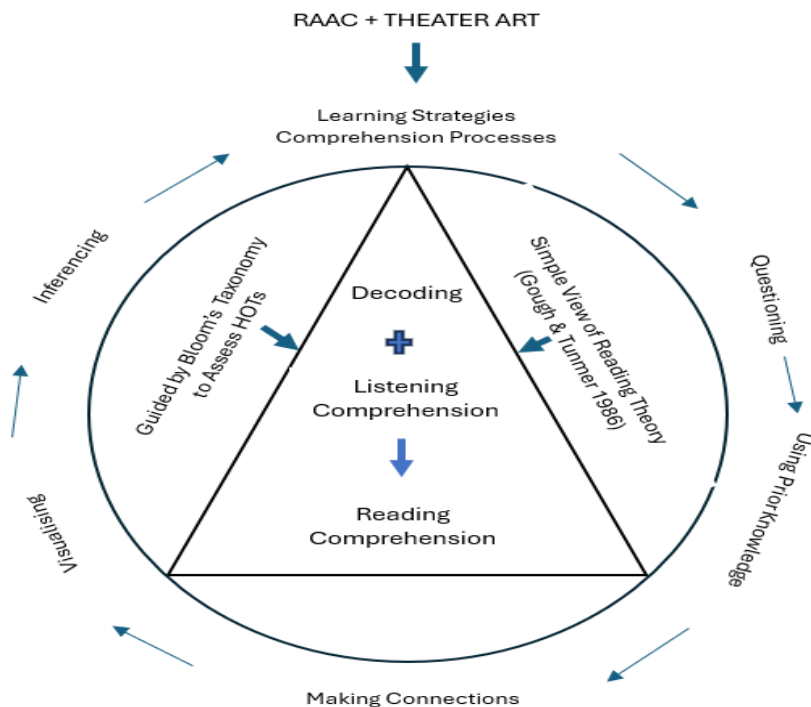


Figure 1. Theoretical Framework for the RAAC + Theatre Art Approach.

Source: Constructed by authors

The Dyslexia Example

This article discusses a part of a larger study which investigated the effectiveness of a blended RAAC – Theatre Art approach to integrate HOTS in reading comprehension among dyslexic pupils. This article will briefly describe the effectiveness of the blended approach, but the focus will be on the learning strategies of pupils with dyslexia related to HOTS in reading comprehension.

Method

The primary dependent variable was the change in reading comprehension as measured by the reading comprehension score (RCS) of questions answered correctly on the application of the independent variables of RAAC and Theatre Art. A multiple baseline across-subject design was used to investigate the effects of the intervention. The study identified and carried out the research in a learning environment which was the PDM.

A case sample was necessary for this study because pupils identified as dyslexic by child psychologists were a specific characteristic necessary for involvement in the study. Nine pupils at the PDM were selected through a purposive sampling process to participate in the research. The pupils were from the intermediate to advanced classes. The criteria for selection of the participants for the research included (i) pupils who were tested for and identified as having dyslexia through formal assessments, (ii) those identified as ESL-developing readers who have acquired fundamental reading skills such as sound-letter relationships and blending words. The idea that dyslexic pupils who have not acquired these fundamental reading skills should not participate in repeated reading was stressed by Therrien and Kubina (2006), and (iii) students who have returned the required consent forms.

The research proposal was evaluated by the Universiti Malaya Research Ethics Committee and approved (UM. TNC2/UMREC-372). The nine pupils (six boys and three girls aged between eight and twelve years old) returned informed consent forms signed by the parents/guardians agreeing to participate in the research.

The study first established a baseline phase (a minimum of three data points) using the traditional teaching method of direct instruction and measured how the dyslexic pupils performed over several sessions. The data points refer to the scores for reading comprehension for each session. Then the intervention of RAAC and Theatre Art instruction began and was later followed by the maintenance base. Each phase was introduced separately, sequentially, and randomly. The key factor in a multiple baseline across-subject design was that the intervention was introduced at a different time for each participant so that some participants continued in the baseline condition while others commenced the intervention condition (Rakap, 2015). This is called the time-staggered approach where the intervention is implemented to one participant at a time, where each participant receives the intervention at different times, thus eliminating the element of coincidence for changes occurring to the dependent variable and ensuring the effect was due to the intervention (Perone & Hursh, 2013).

By introducing the intervention phases in a staggered fashion, the effects could be replicated in a way that demonstrated experimental control (Bulté, & Onghena, 2009). The design also allowed a comparison between the baseline phase and intervention phase and provided for replication within an experiment but did not require the reversal of intervention effects or the withdrawal of interventions. Each dyslexic pupil's data was compared between the intervention and baseline phase, resulting in each pupil acting as their control (Kazdin, 2015).

The nine dyslexic pupils selected were assigned to three groups. Each group comprised three participants. The researchers conferred with the principal, administrators, and the special education teacher on the selection. The special education teacher proposed that the pupils be grouped according to their PDM-identified levels, which are advanced high, advanced low and intermediate.

Type of Data and Instructional Materials

The reading materials and comprehension questions used in the research comprised a selection of 30 text passages created and designed for use by government schools in Malaysia. These reading passages, prepared to meet the reading levels of the dyslexic pupils in schools, have been validated by subject matter experts. The researchers modified the text passages from this database of English comprehension tests from the various primary schools in Kuala Lumpur together with the special education teacher. The modified passages were then sent to two subject matter experts and two other special education English language teachers for validation. These text passages were randomly assigned to the baseline, intervention, and maintenance phases.

During the three phases, observations were carried out weekly by the researcher and a peer. Interviews with the teacher probed opinions about the RAAC-Theatre Art approach and how the pupils learnt. The main source of data was the pupils' answers in the passages used for instruction.

Baseline Phase - Decoding

The quantitative data gathered were the reading comprehension scores (RCS). In the baseline phase, the special education teacher and pupil with dyslexia (PWDy) sat face-to-face across a table facing each other and the teacher narrated the text passage to the PWDy. The teacher then handed the pupil a copy of the text passage and gave instructions as follows, "Read this story the best you can. Pay attention to what you are reading, as you will need to answer some questions. If you get stuck, I will tell you the word so you can keep reading." (Observation Notes, Baseline Phase (BP))

Five questions were asked after each reading of the text passage. Three were literal questions which required the participants to remember or understand the text and two were HOTs questions

that required the pupils to analyze and infer from the text. The PWDy was asked to provide written answers to the comprehension questions from the passage. Participants' use of oral answers to supplement their written answers was counted as correct if the participant answered correctly without prompting within 5 seconds (Garwood et al., 2014). The RAAC with Theatre Art intervention was then implemented in the intervention stage to assess the Pupil's RCS to measure any change in the dependent variable.

Intervention Phase – Listening Comprehension

During the intervention sessions, the PWDys were engaged in a blended RAAC and Theatre Art approach, involving aural and oral skills, social interaction, rhythm and pitch skills, fine and gross motor skills and body percussion. Each session was one-on-one with the teacher. The PWDy was given the reading passage and a cue card with questions (see Appendix B).

Time in the Field

The data collection ran for 18 weeks (Monday to Friday) through the baseline, intervention and maintenance phases. Four weeks after the last intervention, the teacher conducted a follow-up maintenance phase for all participants, with four sessions for each participant.

Training of Special Education Teacher

The special education teacher employed by the PDM was assigned to coordinate and institute the RAAC with Theatre Art intervention. The special education teacher is certified and has completed the Dyslexia Training course offered at the PDM and has been trained in the use of Theatre Art by an expert from the Linguist Centre in Kuala Lumpur. Nevertheless, the teacher was given a further three days of training by the researchers to implement the Blended RAAC and Theatre Art Approach.

Analysis of Data

Horner et al., (2005) highlighted the importance of visual analysis in single-subject research, which involves level, trend and variability. To examine levels, the data points for the dependent variable are scrutinised to observe changes from the baseline to the intervention phases. The pattern or direction of the data points can also be viewed to determine either an increasing or decreasing trend. The length of time in which the intervention demonstrates an impact is referred to as the latency of change (Manolov & Onghena, 2022).

In addition, the researchers first collected and analyzed information on the participants' reading comprehension scores for both literal and HOTS questions and then separately analyzed the HOTS construct. For this reason, the data collected was dichotomized into literal and HOTS questions. Improvement Rate Data (IRD) was used to calculate the performance of HOTS in reading comprehension. This is a simple calculation of the per cent of improvement on the RCS of HOTS questions during the intervention performance over the baseline RCS of HOTS questions (Parker et al., 2009), which has been proven effective in research. Following this, a simple effect size calculation was done.

For the qualitative analysis, the three data sources namely, the participants' written answers in the passages, interview excerpts and observation excerpts were triangulated based on the pre-determined themes for reading comprehension learning strategies put forward by Gregory and Cahill (2010) namely, questioning, using prior knowledge and schemas, inferencing, visualizing and making connections. The researchers observed how the participating PWDys progressed through the learning of HOTS in reading comprehension through RAAC with Theatre Art instruction based upon these pre-determined themes for comprehension processes from literature.

Results

The scores of mean and standard deviations for the baseline, intervention and maintenance phases were calculated to indicate improvement or otherwise of all the nine participants (Table 3). Group 1 was made up of PWDys categorized by PDM as Level Advanced High, Group 2 categorized PWDys as Level Advanced Low, and Group 3 categorized as PWDs Level Intermediate.

Table 3. Mean Scores and Standard Deviations (SD) Across the Three Phases for Reading Comprehension

Group 1		Baseline		Intervention		Maintenance	
Pupil	Mean	SD	Mean	SD	Mean	SD	
1	4.00	1.15	4.88	1.25	6.50	0.58	
2	5.00	1.41	6.38	1.74	6.50	0.58	
3	3.50	1.29	4.25	1.04	6.00	0.82	
Group 2		Baseline		Intervention		Maintenance	
Pupil	Mean	SD	Mean	SD	Mean	SD	
4	4.00	0.63	4.83	1.17	5.67	0.58	
5	3.50	0.84	5.50	0.55	6.00	0.82	
6	3.83	0.98	6.00	0.63	6.00	0.82	
Group 3		Baseline		Intervention		Maintenance	
Pupil	Mean	SD	Mean	Pupil	Mean	SD	
7	4.50	1.07	5.75	1.26	6.25	0.50	
8	3.62	0.52	3.75	0.96	4.50	0.58	
9	3.25	0.89	5.00	0.82	5.75	0.96	

In the baseline phase, the mean scores for all nine PWDys were 5.00 and below. Pupil 2 scored the highest mean 5.00 ± 1.41 among all the PWDys. Pupil 9 scored the lowest mean score of 3.25 ± 0.89 . During the intervention phase, there was an increase in mean score for all PWDys with Pupil 2 being the top scorer at 6.38 ± 1.74 and Pupil 8 having the lowest 3.75 ± 0.96 . In the maintenance phase, the levels did not drop but instead increased further with Pupil 1 showing a mean of 6.50 ± 0.58 and Pupil 8 with a score of 4.50 ± 0.58 . These patterns of performance strongly suggested that the independent variable of RAAC with Theatre Art was responsible for the changes in the dependent variable of the PWDys overall performance. The effect size was found to range from 0.25 to 2.21.

Learning Strategies in a Blended RAAC – Theatre Art Approach

The quantitative phase of the study indicated that all participating PWDys showed gains in reading comprehension scores for HOTS questions. The immediate and significant reading gains during RAAC with Theatre Art lent support for the intervention. RAAC with Theatre Art intervention enhanced PWDys HOTS in reading comprehension through learning strategies to which the paper now turns. The discussion will be based on the pre-determined themes for reading comprehension from literature which are questioning, using prior knowledge and schemas, inferencing, visualizing and making connections (Gregory & Cahill, 2010)

Questioning

RAAC posed questions before reading and this strategy frontloaded a great deal of information about the topic to the PWDys before they read and facilitated them to improve memory, identification and integration of main ideas and overall comprehension (Trabasso & Bouchard, 2002). For example,

during the baseline phase, Pupil 6 could not answer the HOTs questions (Questions 4 and 5, refer to Figure 2). She did not try to answer all the questions and left one space empty.

COMPREHENSION 5	Questions:
Read the passage below and answer the questions that follow.	1. When is the sun up? <u>Morning</u>
SUN, STARS AND MOON	2. When can you see the stars? <u>in the night.</u>
In the sky, you can see the sun, stars, and the moon.	3. Are there many stars in the sky? <u>yes</u>
The sun is up during the day. It is very hot. The sun gives us light and heat. Plants need the sun to grow.	4. How is the moon different than the sun and the stars? _____
We can see the stars at night. There are more stars than we can count.	5. Do you think it is hot in the night? Why? <u>No because her rain</u>
The moon is out at night. Sometimes we can still see it during the day!	_____

Figure 2. Pupil 6's Baseline Phase Answers

During the intervention phase, Pupil 6 showed improvement. The rereading of the passages three times of RAAC (decoding) together with listening and the movements of Theatre Art (listening comprehension), propelled her to try answering questions even though she was not sure of the answer, and to answer the questions in complete sentences. RAAC provided the guided practice and corrective feedback she needed. The special education teacher assisted Pupil 6 to answer the questions. The special education teacher directed her by pointing to the passage, "See if you can find the answer here". The teacher also scaffolded her learning by asking, "Try and write more in your answer" (Observation Notes, P6, Intervention Phase (IP)). She was able to make connections with text (decoding) which was an important skill in helping her to enhance comprehension (Waller & Barrentin, 2015). The pupil wrote in complete sentences with improved grammar structure. In her written work during the intervention (Figure 3) she answered all five questions in complete sentences. In this passage, the HOTs questions were questions 3 and 4.

COMPREHENSION 12.	Questions:
Read the passage below and answer the questions that follow.	1. Where are Ali and his brothers? <u>Ali and his brothers are at the shopping mall.</u>
Ali and his brothers are at the shopping mall. The three of them are buying things at the book shop. Ali is buying some files and his brothers are buying water coloring sets for their art work.	2. What are they doing? <u>They buying things</u>
After that Ali and his brothers walk to the escalator and they see four boys sitting on the handrail. They are laughing loudly. A security officer comes by and tells the boys not to play around the escalator. The four boys run away quickly.	3. How many brothers does Ali have? <u>Ali has two brothers.</u>
	4. Why did the security guard tell the boys ^{not} to play around the escalator? <u>Because it is very dangerous.</u>
	5. What did the four boys do? <u>The four boys run away quickly.</u>

Figure 3. Pupil 6's Intervention Phase Answers

In her answer to Question 1 during the intervention, she correctly spelt 'shopping' including the additional 'p'. For Question 3. Pupil 6 *analysed* the answer correctly as 'Ali has two brothers'. For Question 4 she answered, 'Because is very dangerous.' Pupil 6 had reasoned that the security guard told the boys not to play around the escalator because it was very dangerous, although she spelt the word with an additional ending 'e'. This word was not found in the text passage. She could *evaluate* 'danger' of the situation. She also made a serious attempt to improve herself and wrote in complete sentences. Walsh and Sattes (2010) found that questions challenged students to think, and Gallagher (2005) asserted that questions deepened the understanding of the reader. Meng et al. (2012) also stated that questioning helps the special education teacher to maintain the PWDys' participation in the classroom and stimulate them for continuous thinking.

Using Prior Knowledge and Schemas

Recall of prior knowledge before reading is important. Piaget's schema theory indicates that when our thinking connects something 'new' to existing 'old' knowledge we can understand better. When PWDys read a text, they tap into a pattern of knowledge that they already have stored in their brains and make meaning by connecting new ideas to the ones they already have. PWDys use the time to think or rethink while they are reading (decoding) and making meaning. For example, Pupil 9, in his baseline answers, gave one-word answers to questions and did not further explain. Questions 3 and 4 were the HOTS questions. He phonetically spelt eight as 'ate' (Figure 4) and could not infer the age from the number of candles, nor could he explain why Nina was happy.

COMPREHENSION 3.	
Read the passage below and answer the questions that follow.	Questions:
It was Nina's birthday. Her parents were having a party for her. They invited her friends and classmates. In the morning Nina's mother cooked many delicious dishes and baked a chocolate cake for her.	1. Who did Nina invite for the party? friends
Soon, all her friends came. Many bought presents with them. When everybody was ready Nina's father lighted the ten colored candles on the cake. Everyone sang the birthday song and ate the cake and played games.	2. What did Nina's mother bake for her? cake
In the evening all her friends went home. Nina thanked her parents for giving her such a wonderful birthday party.	3. How old was Nina? ate eight?
	4. Why was Nina happy? invited her friends
	5. When did her friends go home? sunday

Figure 4. Pupil 9's Baseline Phase Answers

Nevertheless, the special education teacher knew that Pupil 9 likes to look at images in comic books and loves to draw the characters from these books and imagine himself as the characters "He (pupil 9) preferred to sit alone and do his cartoon drawings. He would tell stories about the cartoons and was in his own world" (Teacher Interview 1, BP).

During the RAAC with Theatre Art intervention, the special education teacher constantly prompted and gave examples related to comic stories: "Try to imagine you are the person or animal in the story" (Observation Notes, P9, IP). This resonated well with Pupil 9 who immediately participated in the theatre activities. He acted out the text and comprehended the stories better with the movements. The observation "The teacher guided and prompted pupil 9 to relate what he read to assimilate and accommodate to his existing schema" (Observation notes, P9, IP) aligned with the actions of the teacher. These dynamic interactions (through listening comprehension) pushed

Pupil 9 to think in more complex and divergent ways, thus promoting HOTs. Dyslexic pupils must be engaged in a manner that reverberates closely with their experiences, motivating to bring out their ability and potential (Norland, 2023).

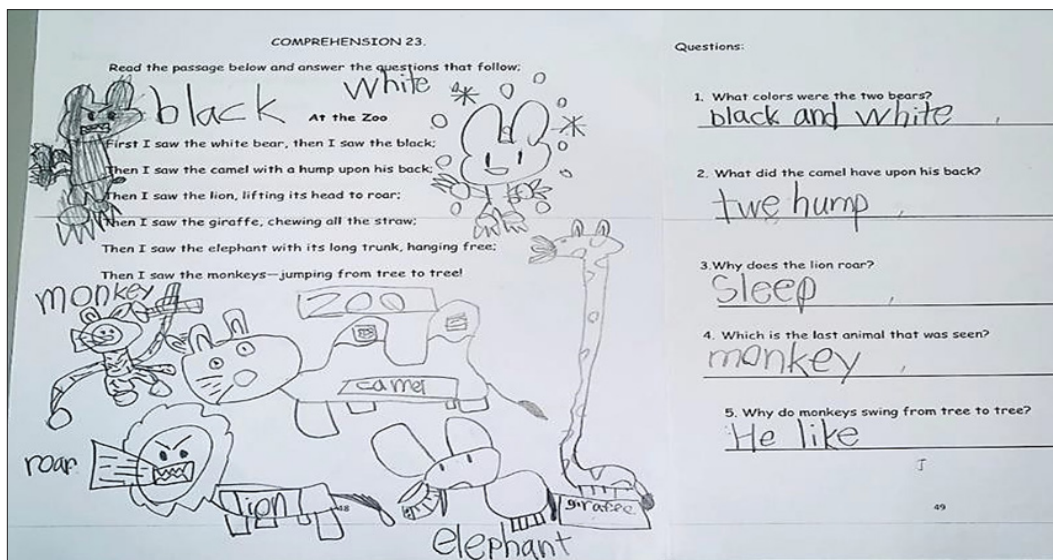


Figure 5. Pupil 9's Intervention Phase Answers

Figure 5 shows Pupil 9's work during Intervention. Pupil 9 drew the animals in the zoo. Drawing helped him relate to his existing schema and he became more engaged with the text passage. Pupil 9 not only stated the colours of the bears but drew the bears, with the bad black bear as gnashing his teeth, and the good white bear as smiling. He also drew stars and circles around the white bear. He also illustrated the lion as fierce looking and noted that the lion "roar(ed)". The monkey was represented as making noise by the triangulated speech bubble. The HOTs questions were questions 3 and 5. Pupil 9 gave unique imaginative conclusions in his answers to Questions 3 and 5, which implied that the lion roared because it was going to sleep, and he concluded that the monkeys were enjoying themselves when they swung from tree to tree. According to Gotlieb et al. (2019), "imagination. the ability to mentally simulate situations and ideas not perceived by the physical senses – lays the foundation for creativity" (p. 709). Thus, it could be that Pupil 9 manifested *creativity* (HOTs) in his answers through the cognitive mechanism of imagination (Majid et al., 2015). Pupil 9 understood stories because he has read comic books and has formed an existing schema for story structure. The intersection of RAAC and Theatre Art creates a conducive environment for dyslexic pupils which enhances cognitive growth and the development of HOTs (Barr, 2019).

Making Inferences

Often PWDys infer answers without being aware they are engaged in inferencing. They often are not able to explain how they refer to explicit information in the text to arrive at their answers. Research shows that when text is repeatedly read, PWDys improve in recognizing words and become more fluent as they develop prosody (Rasinski et al., 2015). In the present study, PWDys recognized clues in the text (decoding) when they acted out the story to gain a deeper understanding of what they were reading. They made inferences about things that were not explicitly stated in the text to conclude the set of facts or circumstances. The example of Pupil 3 is given in Figures 7 and 8.

<p>COMPREHENSION 2.</p> <p>Read the passage below and answer the questions that follow.</p> <p>Nasri and his friends are at the playground. The five of them are playing at the slide. After a while Nasri wants to play hide and seek. So they all run to look for places to hide. Rajan is the catcher. He catches Lee Hong first, followed by Alex. Nasri is the last to be caught. They have a lot of fun.</p>	<p>Questions:</p> <p>1. Where were Nasri and his friends? / playground</p> <p>2. How many of Nasri's friends were there? 5 friede</p> <p>3. What did Nasri want to play? ' hideand see</p> <p>4. Who was the second person caught in the game of hide and seek _____</p> <p>5. Do you think they will go to the playground again? / yee is so fun</p>
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Figure 6. Pupil 3's Baseline Phase Answers

During the baseline phase, Pupil 3 gave one-word answers and answered verbally. She could not spell well and sometimes had difficulties in forming the alphabet when writing out words. She mixed up the letters in the words and got confused in her writing (Figure 6). Questions 2 and 5 were the HOTS questions. The incorrect answer given in question 2 indicates that Pupil 3 could not infer from the simple information given in the passage.

When exposed to RAAC's rereading and Theatre Art movements to explain the meaning of words, Pupil 3 got excited and started to think better, resulting in her making attempts to search for words and short phrases from the passage (decoding) to answer the questions in full sentences and was also keen in answering the HOTS questions (questions 3 and 4). She also asked questions related to the topic. "The pupil got excited about the lesson and took the initiative to act out the passage without being prompted" (Observation notes, P3, IP) The special education teacher also confirmed that, "...all I can say is, the children really enjoy it, this method of teaching" (Teacher Interview 2, IP). In addition, Medina and Campano, (2006) stated, "through theatre the pupils find a safe space to fictionalize reality and enact more empowering individual and collective representations from which others might learn" (p. 333).

In Figure 7, Pupil 3 in answering Question 3 has analysed the information (HOTS) and inferred in her answer, '... inside because it was raining'. In Question 4, Pupil 3, shows evaluation (HOTS) of the situation that playing in the rain is unsafe and infers that this can cause one to fall sick.

<p>COMPREHENSION 24.</p> <p>Read the passage below and answer the questions that follow:</p> <p>The Thunderstorm</p> <p>The children were outside playing catch. They heard a thunder in the sky. They didn't want to stop playing, but they knew it wasn't safe to be out in the rain.</p> <p>Also, they did not want to get wet. They decided to go inside and play. They loved listening to the thunder as they played their game.</p> <p>The children went outside again after the rain had passed. They saw a rainbow!</p>	<p>Questions:</p> <p>1. What were the kids playing outside? / The catch</p> <p>2. What did they hear? ' thundet</p> <p>3. Where did they go? Why? / in inside beseu feinig</p> <p>4. Is it safe to play in the rain? Why? / no beseu can get sick</p> <p>5. What did they see after the rain? ' raribow</p>
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Figure 7. Pupil 3's Intervention Phase Answers

Visualizing

Not all thinking is done in words. PWDys form visual images or pictures in their minds that are equally as meaningful, or more meaningful than words. Eide and Eide (2011) confirmed that dyslexic brains function differently and often have inherent advantages, “dyslexic brains store information like murals or stained glass, connect ideas like spider webs or hyperlinks, and move from one thought to another like ripples spreading over a pond” (p. 8). Pupil 8 demonstrated this.

During the baseline phase (Figure 8) Pupil 8 had difficulty with letter formation and his writing ‘floated’. He used mostly the upper case for /P/, /A/, /D/, /S/ and /Y/ and mixed up his upper-case /L/ and lower-case /l/. He reversed his /g/ and /b/ with /d/. Pupil 8 gave single-word answers to comprehension questions. Questions 2 and 5 were the HOTs questions. The incorrect answer given in question 2 (like Pupil 3) indicates that Pupil 8 could not analyse the given information.

COMPREHENSION 2.

Read the passage below and answer the questions that follow.

Nasri and his friends are at the playground. The five of them are playing at the slide. After a while Nasri wants to play hide and seek. So they all run to look for places to hide. Rajan is the catcher. He catches Lee Hong first, followed by Alex. Nasri is the last to be caught. They have a lot of fun.

Questions:

1. Where were Nasri and his friends? Parkh ovd
2. How many of Nasri's friends were there? five
3. What did Nasri want to play? hide and seek
4. Who was the second person caught in the game of hide and seek? Alex
5. Do you think they will go to the playground again? Yes ALA AGAIN

Figure 8. Pupil 8's Baseline Phase Answers

During the intervention phase (Figure 9), RAAC engaged Pupil 8 in repeatedly reading texts aloud, which improved his reading ability and improved decoding of words. He livened up and eagerly participated in the Theatre Art activities. He was particularly excited about listening and following the actions of the teacher (listening comprehension). “*He (the teacher) used actions and clues as prompts to his pupils and encouraged them to express their own feelings and experiences*” (Observation notes, P8, IP).

Stahl (2004) mentioned that teachers modelling with movements can become a useful tool for higher-level thinking. The special education teacher stated, “*No pictures are used...unless needed to clarify*” (Teacher Interview 1, IP). Nevertheless, Pupil 8 supplemented his reading or writing words by drawing his images and these images scaffolded him to visualize things better. In answer to question 3, Pupil 8 answered that there are five parts in an apple. Interestingly, Pupil 8 visualized and drew a sectioned-up apple (although not instructed to do so) to show the inside and tried to name the leaf, stem, skin, flesh and seed as given in the passage. This is an indication of *analysing* the structure of the apple (HOTs). Drawing gives PWDys the ability to frame their thoughts in an organized manner. Drawing gives them the freedom to imagine. Pupil 8 told the observer, “*I want to do more reading and answering questions. I love stories. I can imagine*” (Observation notes, P8, IP). Questions 4 and 5 were the HOTs questions. Pupil 8's answer to Question 4 did not show any HOTs. The answer to Question 5 shows a simple *inference* that eating apples is good.

COMPREHENSION 25.

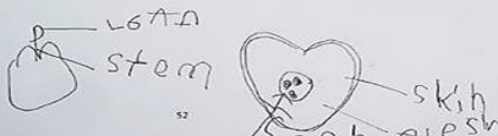
Read the passage below and answer the questions that follow:

Apples

Do you like apples? Apples can be red, or green. Each color tastes different. They are fruit.

Apples grow on trees. You can pick them to eat. When you pick an apple, you twist it and then pull it off the tree.

There are five parts of an apple. The outside is the skin. The inside is the flesh. There are seeds inside of the apple. The stem is on top. Some apples have leaves by the stem. What else do you know about apples?



52

Questions:

1. Where do apples grow?
tree
2. What is this passage about?
Apple
3. How many parts does an apple have?
5
4. What is something you wonder about apples after reading this passage?
eat
5. Do you like to eat apples? Why?
Yes Good

53

Figure 9. Pupil 8's Intervention Phase Answers

Connecting

Theatre Art required PWDys to act out the activities that described the problem. The PWDys need to identify the relationship between two ideas presented in a text passage. This level of thinking helps PWDys gain even more understanding of the text passages and encourages them to elaborate their answers and explain their thoughts in more detail. Pupil 1 demonstrates this.

During the baseline phase (Figure 10), Pupil 1 gave single- or two-word answers to the questions. Questions 2 and 5 were the HOTS questions. The answer for question 2 (like Pupils 3 and 8) indicates that Pupil 1 could not understand and analyse the information provided.

COMPREHENSION 2.

Read the passage below and answer the questions that follow.

Nasri and his friends are at the playground. The five of them are playing at the slide. After a while Nasri wants to play hide and seek. So they all run to look for places to hide. Rajan is the catcher. He catches Lee Hong first, followed by Alex. Nasri is the last to be caught. They have a lot of fun.

Questions:

- ✓ 1. Where were Nasri and his friends?
Playground
2. How many of Nasri's friends were there? (2)
Five
- ✓ 3. What did Nasri want to play?
hide and seek
- ✓ 4. Who was the second person caught in the game of hide and seek?

5. Do you think they will go to the playground again? (2)
yes play

Figure 10. Pupil 1's Baseline Phase Answers

The special education teacher in RAAC explained that he was going to read the passage three times slowly and instructed Pupil 1 to think about both the questions posed and his responses to them. The teacher then acted out the text-passage with movements facial expressions and prosody to explain the meaning of the text-passage. Pupil 1 became active in Theatre Art. He was attentive (listening comprehension) concentrated on the actions and used his visualization to understand the purpose of reading. The special education teacher provided feedback to Pupil 1 as to the content and explained concepts and processes. Pupil 1 modelled the special education teacher's actions and acted out the story based on his background knowledge and thinking of text content. "He (Pupil 1) liked the movement and actions when reading the comprehension passage. He smiled and looked happy when the teacher used actions when explaining the comprehension he was reading" (Observation notes, P1, IP).

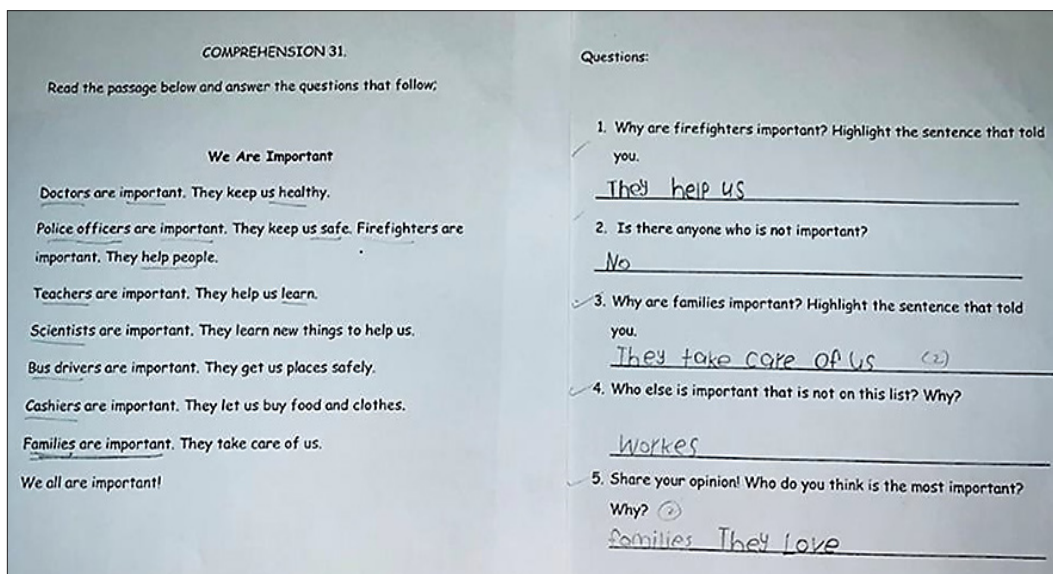


Figure 11. Pupil 1's Intervention Phase Answers

During the intervention phase, Pupil 1 started to explain some answers. His handwriting improved and he wrote longer sentences and gave logical answers to the questions asked. In Figure 11, in answer to Question 1, Pupil 1 paraphrased 'They help people' to 'They help us', identifying himself with the people. In answer to Question 4, he wrote 'workes'. When asked, Pupil 1 enlightened the observer that he meant 'workers'. The word 'workers' was not in the text-passage (creating), thus exhibiting HOTs. Questions 4 and 5 were the HOTs questions. For Question 5 he modified 'They take care of us' to 'They love'. Pupil 1 could connect text-to-self when he analysed and related the story to incidents he experienced at home and made sense of his experiences. "He (Pupil 1) loved the RAAC-Theatre Art reading sessions because he could relate the stories with himself". (Teacher Interview 3, IP)

Limitations of the Study

Critical case samples were necessary for the involvement in the study. These pupils were identified as dyslexic by child psychologists. This means that it is difficult to generalize the results because each case is context-specific (Creswell & Creswell, 2018). Nevertheless, the findings are applicable for assisting reading comprehension disorders which are present in several types of learning disabilities. Furthermore, the intervention blended two different strategy instructions of RAAC and Theatre Art so interpretation should be made with caution as this study was not designed to determine the

effects of separate components. The findings could not tell which component in the intervention package was responsible for HOTS in reading comprehension.

Creating Inclusive Learning Environments: Implications from the Dyslexia Example

Malaysia's target to place 75% of pupils with learning disabilities in mainstream schools by 2025 is drawing near. In inclusive classrooms, the pupils are diverse in their abilities and therefore the teaching-learning approaches must be well designed to create a conducive learning environment. One necessity for inclusive education to succeed is in the pedagogies planned which needs to be implemented in a creative differentiated manner.

Interventions for Reading Comprehension – What is the Significance?

Schools focus mainly on literacy skills, namely reading and writing, and leaving out HOTS, be it among pupils with or without learning disabilities. Furthermore, research on elevating HOTS among pupils with learning disabilities is rarely the focus. The RAAC- Theatre Art pedagogy in the present study is just one pedagogical approach which supports learning strategies (questioning, using prior knowledge, making inferences, visualising and connecting) that need to happen among all student for HOTS attainment in reading comprehension. Through these simple strategies will emerge more complex cognitive comprehension processes such as abstract thinking, metaphorical thinking and meaning, thus giving rise to HOTS.

Teacher Skills and Resources

To achieve HOTS in reading comprehension, the skills and awareness of teachers need to be upgraded. Anuar (2019) has pointed out that the skills of special education teachers need enhancement. Zalizan (2010) mentioned that the training of teachers in various pedagogies to prepare them with deep conceptual understandings of special inclusive education remains a challenge. The resources and facilities for teaching-learning need to be enriched and should focus on how HOTS can be improved in inclusive classrooms. Hasliza Yunus and Noor Aini Ahmad (2022) reported that teachers struggle and lack awareness of RCD in learning disabilities among children. According to the president of the PDM, "Malaysia is in dire need of a broader education system and more awareness programmes on children with dyslexia" (The Sun, 17 January 2023). Leaders of inclusive schools must also increase their knowledge and awareness to support the overall inclusive programme running in their schools

Embedding HOTS in Reading Comprehension Across Subjects

In an inclusive classroom, both the mainstream and pupils with learning disabilities intersect and meet to learn various subject matter together. The authors suggest inclusive classrooms place a focus on enhancing HOTS in reading comprehension in all subject matter. As reading comprehension is fundamental for all subjects, improvement in this skill can bring about better learning overall in various subjects. The teaching-learning materials for multiple teaching approaches to enhance HOTS in reading comprehension can also be created and made easily accessible for all inclusive schools. This is to ensure progress of basic linguistics skills together with HOTS as a foundation to underpin the process of learning for all. To provide easy access to all these materials, an online platform can be created where the three types of schools (special schools, integrated schools and inclusive mainstream schools) can attain these resources effectively.

Conclusion

The implementation of the special education policy in Malaysia is 'top down'. This gives rise to a gap between the actual end outcome of the policy envisioned by the Ministry of Education and the ability of the implementers on the ground (Nazmin Abdullah, 2023). This type of implementation also affects factors such as the preparation of teachers and facilities specifically needed for inclusive classrooms. It is insufficient alone that the target of 75% is met statistically, the quality of teaching-learning in inclusive classrooms must also reflect deep conceptual insight and practice to attain the target of the MEB.

The learning and teaching of HOTs in reading comprehension is a multi-faceted process that consists of decoding the meaning, listening and interacting with the text. Reading comprehension is an essential skill for all subjects. The researchers suggest that HOTs in reading comprehension are made the central foundational pedagogical focus in inclusive classrooms for all subjects. The Ministry of Education can restructure and revise the training of special education teachers to uplift knowledge and enhance awareness of the latest pedagogies. Collaborative international partnerships can also be initiated to elevate SEN teacher training and resources for reading comprehension. Nonetheless, implementing this will not be an easy task as it needs multi-stakeholder participation, planning and collaboration.

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Appendix A. Reread-Adapt and Answer-Comprehend (RAAC) Intervention Sequence

Step	Description
Step 1 Prompt Student	“Read this story the best you can and as quickly as you can. Pay attention to what you are reading, as you will need to answer a few questions.”
Step 2 Read Prompts	Ask student to read question-generation prompts (“who, what, where, when, how” questions).
Step3 Reread	Ask student to reread passage aloud until reaching goal between 2 to 4 times
Step 4 Correct Errors	<ul style="list-style-type: none"> • If student pauses during reading, say the correct word and have student repeat. • Correct all other errors after passage read and ask student to repeat them
Step 5 Praise	Provide feedback to student on improvements in speed and accuracy.
Step 6 Adapt & Answer	<p>Ask student to adapt and answer questions placed on cue cards.</p> <p>Error correction process:</p> <p>a. First try: If no answer or incorrect answer, prompt student to “See if you can find the answer in the passage.”</p> <p>b. Second try: If no or incorrect answer, prompt and point to sentence(s) in the passage “See if you can find the answer in this sentence.”</p> <p>c. Third try: If no or incorrect answer, provide answer and point to where you found the answer</p>
Step 7 End & Adjust	<p>When session ends, adjust the difficulty of the reading material for next time.</p> <ul style="list-style-type: none"> • Lower the reading material by one grade level, if fluency goal not reached after three sessions in a row, • Raise the reading material by one grade level, if fluency goal reached in three sessions in a row.

Source: Modified from Therrien et al., (2006), p. 25

Appendix B. Procedure for the RAAC-Theatre Art Intervention Phase

No.	Step	Description
1	Prompting	A cue card with questions is given to the PWDy who is asked to read and once completed the card is then taken away.
2	Reading for the first time	A passage is then given to the PWDy. The teacher instructs the pupil to read the text and to pay attention to the text, as the questions in the cue card must be answered. The instruction is like the Baseline Phase. The PWDy reads the text aloud, and if the PWDy does not say the initial word within 3 seconds, the teacher says the word. Furthermore, if the PWDy hesitates for 3 seconds on any word, the teacher says the word. A second cue card for vocabulary is then given to the PWDy and the teacher explains the meaning of each word.
3	Reading for the second time	The PWD reads the passage the second time following the steps as stated in 2.
4	Reading for the third time	The PWD reads the passage the third time following the steps as stated in 2.
5	Adapt & Answer	The cue card with the questions is given to the PWDy again. The PWDy must read and answer the questions. <ul style="list-style-type: none"> i) If no answer or incorrect answer the 1st time: The teacher prompts the PWDy to look for information in the passage. <i>'See if you can find the answer in the. . .'</i> ii) If no answer or incorrect answer the 2nd time: The prompt is given again. iii) If no answer or incorrect answer the 3rd time: The teacher provides the answer and points to where it can be found. The passage and the cue card are taken away.
6	Passage Retell	The PWDy is instructed to try and remember and retell the passage just read. The teacher acts out the story in the passage. The PWDy is asked to imitate the teacher's actions, act out the passage, and asked to retell the passage (embedded Theatre Art intervention).
7	Ask comprehension questions and record answers.	The teacher reads and asks comprehension questions. The PWDy writes down the answers. If the PWDy does not say anything or gets off track for 5 seconds, it is marked as an error, and the next question is put forward. If the PWDy asks the teacher to repeat the question, the teacher can repeat the question once. If the PWDy asks the teacher to spell out words or give a verbal explanation to the answer, the teacher can record down the verbal answer.
8	Scoring for correct reading comprehension score (RCS)	Five questions are put forward. Three are literal questions – remembering and understanding (lower order thinking skills) and two - explaining and analyzing (higher order thinking skills). The PWDy writes the answers. Oral answers which are received unassisted within five seconds are considered for scoring. Rubrics are used for evaluation and the performance is recorded in forms (Rasinski et al., 2005). All literal questions answered correctly are scored one point each and higher order thinking skills questions answered correctly are scored two points each, making a total of seven points for the five questions.

Source: Prepared by authors