



Effect Of A Phonological Reading And Writing Remediation Program In Children With SLD

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Abstract

This study aimed to investigate the effect of reading and writing remediation program on students with Specific Learning Disorder {SLD} at Ardra Remedial Training Centre ,Punnayoorkulam,Thrissur,Kerala.The sample consisted of 100 students aged between 5 to 15 years,mixed with boys and girls.some of them suffering from SLD with reading disorder and some have SLD with writing and other have both disorder.The intervention was applied for a duration of 3 months with weekly 4 days 45 minutes per day after 20 minutes 10 minutes break for brain gym.The remediation program included multisensory approaches ,brain gym and games and activities. All of the students showed significant abilities after the intervention positive long lasting changes in their reading and writing. The findings of this study suggest that a reading and writing remediation program that includes multisensory activities and games and brain gym can be an effective intervention for students with SLD.

Keywords :-Neuro developmental disorders,reading disorder,writing disorder,remedial education

INRODUCTION

According to DSM -5 SLD to be a type of Neurodevelopmental Disorder that impedes the ability to learn or use specific academic skills{eg reading,writing, or arithmetic }which are the foundation for other academic learning..SLD with reading disorder is kind of learning disability is typified by problematic spelling and decoding skills, as well as difficulty with accurate word recognition. SLD with reading disorder can be seen as a common condition in children, accounting for about 80% of all other specific learning disorders (SLD). As per the recent report on learning disorders, in India the prevalence of SLD with reding disorder is comes around 10% of the child population (Scaria et.al, 2023). Many people with SLD with reading disorder have ordinary or above-average intelligence, proving that SLD with reading disorder and IQ are unrelated. Reading disorder is a life-long condition which may cause difficulties in several important areas of life, such as employment and school achievement. Although there is no cure for dyslexia, early identification and intervention can make individuals able to manage and overcome the challenges associated with this condition. Educational approaches tailored to the individual's needs, such as specialized reading programs and support from teachers and professionals, can significantly improve reading and writing abilities in individuals with dyslexia. Reading disorder is a complex and heterogeneous condition, and its causes can vary among individuals. Biological factors including specific genetic and neurological mechanisms are playing a major role in development of reading disorder. It has been suggested that chromosomes 1, 2, 3, 6, 15, 18, X, and DYX1C1, KIAA0319, DCDC2, and ROBO1 are strongly related to the condition of reading disorder (Mascheretti et al., 2013a). Research indicates that working memory and phonological processing deficiencies in diagnosed reading disorder have been linked to the COMT Val/Met polymorphism (Landi et al., 2013). Children whose parents have reading disorder reported to have the disorder, ranging from 23 to 65 percent (Scarborough, 1990). When it comes to the environmental causes, factors such as poor socioeconomic status (SES) and early experiences are playing a significant role in development of reading disorder (Duncan & Magnuson, 2012). According to epidemiologic data reading disorder is dimensional model in its nature like hypertension. Put differently, reading disability and ability can be seen as a continuum where some people can read fluently in one end and some have difficulty in reading on other end (Gilger et al 1996)

Many hypotheses have been put forth to explain reading disorder, such as the rapid auditory processing theory, phonological theory, the visual theory, the cerebellar theory and the magnocellular theory (Galaburda et al 1994; Livingstone et al 1991). According to phonological theory, reading is a skill that must be taught, whereas speaking is a natural and innate ability. Since reading is a speech sound producing activity written letters, a reader should understand that the sounds of spoken language are represented by the letters and orthography. A reader must have awareness that every spoken letter and word can be broken down into two parts: phonemes and orthography, and such awareness is largely missing in reading disorder people (Shaywitz 2003).

Writing disorder a form of Specific Learning Disability is a neurological disorder characterized by writing difficulties.Individuals with writing disorder may struggle with various aspects of writing such as letter

formation, spacing, spelling and expressing thoughts on paper. These challenges can significantly impact a child's academic performance, self-esteem and overall quality of life.

This research paper aims to seek to explore various remedial strategies and intervention that can help children with writing disorder improve their writing skill.

Phonological awareness refers to the ability of an individual to recognize and manipulate the sounds of spoken language. It involves understanding the individual sounds (phonemes) that make up words and being able to identify and manipulate these sounds at various levels, such as syllables, onset and rime, and phonemic awareness. Phonological awareness skills include activities like identifying rhyming words, blending sounds to form words, segmenting words into individual sounds, and manipulating sounds to create new words. Developing phonological awareness is a crucial early literacy skill, as it lays the foundation for successful reading and spelling. Children with strong phonological awareness are better equipped to understand the relationship between letters and sounds, making it easier for them to decode and encode words in reading and writing.

According to the phonologic model of dyslexia, reading involves both decoding and comprehension of letters. Dyslexic people experience trouble in decoding and word recognition as a deficit in the phonologic module makes them difficult to break down spoken words into their constituent phonologic components and then connect the letter(s) to the voice. Such difficulty in decoding and word identification caused by a deficit in phonologic function can hinder the readers' ability to understand textual meaning and higher-order cognitive processes, and this may lead them to be dyslexic.

There is a substantial body of research that supports the idea of a strong correlation between phonologic awareness and reading deficits in dyslexic children (Lyon et al 2003). Children who struggle with reading confront numerous challenges in both academic and non-academic domains. Interventions and structured literacy programs often focus on addressing phonological awareness deficits in individuals with dyslexia, helping them develop these foundational skills to improve reading and spelling abilities. Early identification and targeted interventions can be crucial in supporting individuals with dyslexia in acquiring strong phonological awareness skills and improving overall literacy outcomes. The current research will involve the implementation of diverse teaching methods, ranging from traditional explicit instruction to more contemporary and innovative approaches. By employing a multi-faceted examination, we seek to discern not only which strategies prove most effective but also to uncover potential nuances in their applicability to different learner profiles.

Understanding the effectiveness of distinct teaching strategies in fostering phonological awareness can have significant implications for educators, curriculum designers, and policymakers. This research endeavors to provide actionable insights that can inform evidence-based practices, ultimately contributing to the development of more tailored and effective interventions for individuals grappling with reading difficulties. As we embark on this exploration, we anticipate shedding light on novel avenues for enhancing phonological awareness instruction, thereby facilitating improved reading outcomes for diverse learners.

Brain gym is a program that uses physical movements to enhance learning and performance. It improves cognitive functioning. Exercises have been found to significantly improve neuropsychological functioning such as sustained attention and focused attention in children. With SLD, these exercises were effective in improving emotion management skills. Promotes concentration, focus, memory, physical coordination and organizational skills. Supports sensory processing speed, which is crucial for children with SLD. Sensory integration is one of the most important types of sensory processing, which requires left and right hemispheric coordination. Brain Gym should be used as a part of a comprehensive intervention plan tailored to specific needs of each child.

Background studies

In a recent study conducted by Vender and Melloni (2021), the intricate relationship between phonological awareness, bilingualism, and dyslexia was investigated. Phonological awareness, identified as a complex and multifaceted skill, was recognized for its pivotal role in shaping the language and literacy development of individuals. The study focused on 40 participants distributed across three groups, engaging in an experimental examination of children with and without a diagnosis of developmental dyslexia. The investigation aimed to discern potential variations in phonological awareness between monolingual and bilingual children, particularly those diagnosed with developmental dyslexia. The study's findings revealed significant difficulties in phonological awareness among children with dyslexia, irrespective of their linguistic background. Both monolingual and bilingual children with dyslexia exhibited challenges in the development of this crucial skill. However, notably, the investigation did not identify any negative effects of bilingualism on phonological awareness in the context of dyslexia.

Neymann et al. (2015) conducted a study titled "the role of phonological awareness in the treatment of dyslexic primary school children." The primary objective of the study was to assess the effectiveness of phonological awareness training as an intervention for dyslexic primary school children, specifically targeting third and fourth graders. The investigation aimed to evaluate the impact of this training on reading improvement, considering both conventional and visually-based reading approaches. The study's findings suggest that phonology-based reading training had a notable positive impact on decoding skills among dyslexic primary school children. The intervention led to a direct improvement in decoding abilities, addressing a key aspect of reading difficulty. However, in terms of reading comprehension, the study suggested that a more comprehensive approach, combining phonology-based training with repeated reading of sight

words, might be more effective. This combined method was proposed to have dual benefits: a direct enhancement of decoding and an additional positive effect on reading comprehension.

Ahmad (2012) investigated the efficacy of "Bijak Membaca," an interactive multimedia application designed to integrate phonic reading techniques and a multisensory approach for improving reading skills in dyslexic children. This application aimed to create a comprehensive learning experience by combining auditory, visual, and kinesthetic elements to address the challenges faced by children with dyslexia. The study demonstrated that the multisensory approach implemented through "Bijak Membaca" proved to be highly effective in comparison to traditional teaching methods for children with dyslexia. The application, by combining phonic reading techniques with interactive multimedia, addressed the diverse needs of dyslexic learners, providing a more engaging and comprehensive learning experience.

Arthur et.al (2013) aimed to assess and compare the impact of sight word training and phonics training on children diagnosed with dyslexia. Additionally, the researchers sought to explore whether the order in which sight word and phonics training were presented had distinct effects on the learning outcomes of children with dyslexia. The results of the study indicated that sight word training resulted in significant advancements in sight word reading measures, surpassing the gains made from phonics training. However, both types of training, whether focused on sight words or phonics, led to substantial improvements in the reading abilities of children with dyslexia.

Smits-Engelsman and Van Galen{1997} sought to uncover the root cause of dysgraphia in children. Their findings suggest that poor a noisy neuromotor system or struggle to control such a system. A key finding of their research was that the inability to maintain spatial accuracy was the most distinguishing factor between good and poor writers. Essentially dysgraphic writers tend to disregard spatial constraints, leading to more variability in letter size and shape and inconsistent letter formation. Contrary to some beliefs their study did not support the notion that dysgraphia is merely a temporary developmental delay in children. While the study did not include an intervention, the researchers hypothesized that dysgraphia might respond positively to training focused on improving movement strategies.

Feifer{2001} Proposes a classification of dysgraphia into four distinct subtypes. Phonological Dysgraphia is characterised by difficulties in writing and spelling, particularly with unfamiliar words, non words and phonetically irregular words. Students with this subtype struggle with spelling based on sounds and tend to rely more on the visual aspects of letters. Surface Dysgraphia involves difficulties with the orthographic representations of words causing students to over-rely on sound patterns. This is the reverse of phonological dysgraphia. Mixed dysgraphia combines elements of the first two types. Students with mixed dysgraphia trouble with both letter formation and spelling tasks. Semantic or syntactic Dysgraphia is grammatical issues where students struggle with forming comprehensive phrases by joining words correctly.

Methodology

This study adopts a qualitative research design to delve into the effectiveness of various teaching strategies aimed at enhancing phonological awareness in the context of improving reading and writing disorders. Qualitative methods are chosen to capture the subtlety of experiences and perceptions of participants in response to different teaching approaches.

Participants

The present study consists of 100 students -sample from Ardra remedial Training centre, Punnayoorkulam, Thrissur Kerala. Participants for this study were selected using purposive sampling, a method chosen for its ability to target individuals with specific characteristics relevant to the research focus. The sample will consist of children experiencing reading and writing difficulty. We aim for a diverse representation in terms of age, and the severity of reading and writing difficulties.

Data Collection

Semi-Structured Interviews:

Individual semi-structured interviews will be conducted with participants to gather in-depth insights into their experiences with different teaching strategies. The interviews will explore their perceptions, preferences, and perceived effectiveness of each strategy in improving phonological awareness and reading skills.

Observations:

Classroom observations will be conducted in educational settings where the selected teaching strategies are being implemented. This method will provide a real-time understanding of how these strategies are applied and how participants engage with them.

Document Analysis:

Relevant documents, such as instructional materials, lesson plans, and educational resources, will be analyzed to complement the interview and observation data. This will provide additional context and a more comprehensive understanding of the implemented teaching strategies.

Teaching Strategies:

The study will focus on a range of teaching strategies known to target phonological awareness. These may include, but are not limited to, explicit phonics instruction, multisensory approaches, games and activities.. Implemented important teaching strategies are given below:

Multisensory teaching approach

Multisensory teaching is a way of teaching that engages more than one sense at a time ,using sight ,hearing, movement and touch also can represent VAKT Visual, auditory, kinesthetic and tactile. According to Ginde 2010 people naturally learn through multisensory. Most of us learn best through sight and touch and least thoroughly our sense of hearing alone. Based on that information the majority of us would learning best by seeing and doing for example the trainer draw a letter on the board and student practice duplicating on their book or slate, Multisensory teaching is very effective for everyone. Regardless of age, but. In case of dyslexia is critical. The disorders cause varying degree of deficits in the way the brain process information gathered by the senses. It is important to know the learning style of student. Grasping the information and effective learning depends on their learning style. In Multisensory teaching children engage with materials. For example, if teaching about ORANGE child might have the opportunity to visually examine, touch, smell and taste orange and children might have chance to speak about that. This way of teaching helps the children to engage more than one sense at time. It can increase engagement and motivation to dyslexic children. Involving multiple senses enhances the participation and it will be enjoyable learning more than alone way learning. Multisensory approaches might have enhanced memory and ability to learn.

1 Sand Tray

In this method instead of sand we can use suji, rice, shaving cream etc. spread the sand in a tray or table top, use their index and middle finger to write a letter or word in it while writing children say loudly the sound of each letter and blend those sound together and read the whole word together. In this approach children use sight ,touch, sound to connect letters and their sounds. In this approach their muscle memory also activated that help to recall what they learned. This approach is effective and excellent response in children with reading and writing disorder .Through this method they shows more interest in learning and developed phonological awareness, that enhanced children's reading skill. Using sand tray to connect grapheme and the phoneme is an effective way to develop phonological awareness.

Result of sand tray

Sand tray therapy as an intervention for students with reading and writing disorder. Using sand tray to connect grapheme and phoneme is an effective way to develop phonological awareness. Children showed significant changes in their attitude towards reading and writing developed interest in reading and writing After one week students voluntarily spend time to practice sand tray .After one month they are able to read printed text loudly and fluently. As a small sample size potential biases or external factors may have influenced the results.

2 AIR WRITING

It also called sky writing reinforce the sound of each letter make through muscle memory. It also help to reinforce commonly confused letter grapheme like b and d, p and q. Use two fingers as pointer keep the hand straight to write letter in the air. They say the sound of each letter which they write. Also can imagine the letter and can assume some colour for the letters.

Result of air writing

It is a method for children reading and writing disorder .Weekly four days forty five minutes per day .session were conducted. parent and class teachers noticed their changes, enhanced their pronunciation, reading style, letter recognition and also improved their writing skill. Air writing motivated them to practice well and got expected outcome.

3 SAND PAPER LETTER

Enhance student's early literacy skills for children with dyslexia. Weekly four days forty five minutes per day session were conducted. Letter shape cut from the sand paper and trace each letter with fingers and say the sound of letter loudly, that help to letters and sounds retain the tactile memory. Also can arrange the letters and make sight words and simple sentences. Might have colour the letters. This approach contributed to improvement in letter recognition, phoneme awareness and early reading abilities.

Result of sandpaper

This intervention found motivating children with dyslexia. they enjoyed learning that provided happy and fun learning. Emphasize the potential benefits for early literacy skill.

4 WORD BUILDING

Word building activities focus on breaking down words into individual sounds .This help students with reading disorder develop phonemic awareness which is help to understand relation between sound and letters. Word building involved

arranging letter to form words improve spelling skill by reinforce the correct order of letter in words. Expose students to a variety of sense and nonsense words by expanding their vocabulary. It can build with letter tiles or magnetic letters. coloured tiles in different way to help children connect sound with letter. vowels in one colour and constants in another colours. Use three cardboard pieces write on read it build it and write it. first one read it second build it board then third one write it and use different colour tiles. in a read it board and different word tiles to give read then give build it card and build words with letter tiles which word they read. finally gave write it board ask to write same word which they read and build.

Results of word building

Boosted student's confidence. They showed tangible progress in decoding and spelling. They were confident in their literacy skill. Word building activities are interactive that can foster a positive attitude towards learning. It created a positive environment that helped students to develop their reading skill.

5 TAPPING OUT SOUNDS

As a part of multisensory learning method. Tap each sound with thumb and fingers. For example take the word **mat** first step tap thumb with index finger and say sound M then tap thumb with middle finger say sound A, then thumb with ring finger and say sound T, second step tap thumb index middle and ring finger and say the word mat. It reinforced students with reading disorder phonemic awareness by associating specific sound with corresponding movements. This tactile and auditory connection helped students to develop their recognising and manipulating individual sounds in words

Result of tapping out sounds

This method showed more result in students with auditory and kinesthetic modalities physical movement offering kinesthetic element to learning that enhanced memory retention and comprehension skill in auditory and kinesthetic learners. This rhythmic tapping reinforced correct order of letters in words and improved their spelling skills. tapping helped students to maintain attention during learning. Tapping of syllable or beats helped students to calming and regulating their stress and anxiety on reading.

6 WORD STICKS\STORYSTICKS

It is not widely recognized terms in common usage. used as a tool for vocabulary building. It is a tactile tool that can help students learn words and meanings To make word sticks will need craft sticks colour markers and list of words .write each word on a separate stick and add images or symbols that shows the words meaning. For eg draw a picture of ball on the stick that has the word "ball" written on it. children can hold the sticks read the words and relate them with the corresponding images to learn new vocabulary.

Result of word sticks

Enhance students spelling skill in a engaging way. Noticed the students with reading and writing disorder showed more interest in this approach.

STORY STICKS

In story sticks list of questions related the story, write each question on a separate stick and decorate with a different colour and story images.

Result of story stick

Helped to develop creativity in story telling and enhance their potential in sequencing and easy to understand the structure of story. It helped to visualize the story element. this method provide increased engagements in hands on learning and more interactive approaches to language development. The result depended on the implementation of method. attitude of children changed after one month they shows readiness of solo reading.

7 SHARED READING

It is interactive read loudly, guided and supported by trainer. we used big books enlarged print and illustration Promote positive attitude towards reading and learning, laid a foundation for future academic success of the children with reading disorder, through supporting literacy skills and love for learning.

Result of shared reading

By applying this method students enhanced their print text awareness including handle book reading from left to right and recognizing roles of letter and words. teacher can be a model of children to adapt reading skill. They adapted reading behavior such as fluency intonation and expression

GAMES AND ACTIVITIES

1 ELKONIN BOXES

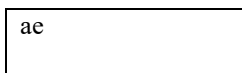
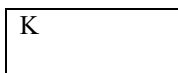
Elkonin boxes are an instructional method use to build phonological awareness by segmenting words into phoneme. Phoneme is a single sound. words are made up phonemes or single sounds. we blend phoneme together to read or say words. segmentation mean to break into separate parts. Primary goal of the Elkonin box helped children to understand the concepts of phonemes. It is a visual aid consist of empty boxes or spaces, each representing a phoneme. Boxes are aligned horizontally each box correspond to specific sound unit with in word.

Implementation

A teacher or trainer says a word aloud and ask the children to segment into individual phoneme

For example

CAT



Kaet

ELKINONIN BOX

[K] [ae] [t]

Cat

Blending |kaet|

Word frame {cat}

Provide visual presentation of the sound within the word

This tool helped children develop crucial phonemic awareness skills that are foundation for spelling and reading

2 BINGO CARD

It proves bingo cards are one of the most effective strategies for developing reading skills in children with reading and writing disorder. Students with less vocabulary, a lack of understanding of sentences, a lack of interest in reading, and laborious reading. Students learning about reading need phonological awareness as the first step. The sample students are suffering from different states of difficulties (VPD, APD, pronunciation, spelling, meaning, complexity of grammar, etc.). Words that are difficult to pronounce are difficult to learn. Many students find problems with constants, others with vowels, blending of sounds, and blending of words. Some sounds are unfamiliar to some students. Short words are easier to learn compared to long words in the initial stage.

Ardra used bingo cards as one of the strategies that applied English vocabulary and reading to students with dyslexia. This teaching strategy encourages students to engage in easy and active learning.

In bingo cards games, different rules are played in different places. Basically, players get 5*5. Each card has letters, words, and numbers. A line with five columns in a horizontal, vertical, or diagonal row. The caller will announce the word. The player must pay attention to the caller's word and mark it quickly and accurately. On their cards.

The caller keeps saying the words until one or more plays claim Bingo. Students are very active in this game. so they have effective learning,

They show more interest and understanding, and the result shows this game was very effective in improving their vocabulary.

Method

Grouping the population as children with their age 5 to 10 years

Children in the age group of 5 to 10 years. We applied sight words to bingo card games. group of 50 students, ages 5 to 10 years old. gave 50 bingo cards with sight words. The caller says one word, and the player strikes that word or takes the same word from the word slip and places it on that. In this game, visual reading disorder students are struggling to find the rows, columns, and words. with the help of some verbal clues, using fingers, scales, and markers for easy spatial awareness. helped them manage easily. After 3 games, the student with mild impairment learned all sight words to pronounce properly, easy reading, and spelling accurately. Students with moderate impairment take 8 games to learn. Students with severe impairments, after 10 games out of 25 words, 12 short words learned to read, and two sight words wrote accurately. All students improved their memory, focus, concentration, eye-hand coordination, cognitive skills, and also changed their behavior. The inclusivity of the class room is possible in this game, which helped to change their social skills, patience, decision-making skills, and mental strength. Compare a visual learner with an auditory learner. The visual learner got the idea easily, and they completed bingo fast.

Group of students with 10 to 15 years

Gave bingo cards with subject, verb, object, and modifiers. The caller randomly said the words when the player drew bingo and asked to make sentences with bingo words. Students showed interest in making simple sentences with these words and tried to add more words and make complex sentences. We found bingo card play effective for both visual and auditory learners. They show active participation and significant development in their reading skills.

Rhyming games

Rhyming games are a fun way to help individuals with reading and writing disorders develop phonological awareness.

Rhyme match: In this game one person says a word and other person has to say a word that rhymes with it. For example if the first person says "Bay" the second person says "hay"

Rhyme story: it is a story telling game where each sentence must rhyme with the previous one, for example "Once upon a time in a land quite sunny, lived a funny bunny who loved nothing more than honey"

Rhyme scavenger hunt: create a list of items that rhyme {book hook, pink ink} have players find these items around the class room or outside.

ACTIVITIES

Phonemic awareness activities

Phoneme isolation: recognizing the individual sounds in words, for example "tell me the first sound you hear in the word taste"

{\T}

Phoneme identity: Recognizing the common sound in different words for example "Tell me the sound that is same in mike, man, mango, mat"

Phoneme substitution: In which one can turn a word {such as "Ban"} into another {such as "fan"} by substituting one phoneme such as "C" for another "f", phoneme substitution can take place for initial sounds {ban, fan}, middle sound {bun, fun} or ending sound {bat, fat}

Oral segmenting: The teacher says a word for example "bat" and student says the individual sound {b\ a\ t\}.

Oral blending: the teacher says the sounds of a word {b\ a\ t\}, student says the word "bat"

Sound deletion: Teacher says a word, student has to repeat it. Then instruct them to repeat the word without first letter, "mill" into "ill"

PHONOLOGICAL AWARENESS ACTIVITIES

1 counting words in a sentence and segmenting syllables in a word

Counting words in a sentence, give a story book and ask read some sentences and find words in that sentence, find syllable in the words. This activity is crucial for students who have low language skills

2 counting syllables

Counting syllable is an effective activity for students with SLD. Words are made up of syllables. It can be explained to children that their mouth knows where the syllables are

Ask children to close their lips tightly and shout "class room". Then they can hear two shouts, and feel two pushes of air. They feel to open their mouth two times, that means class room has two syllables.

3 segmenting syllables

Segmenting syllable is easy for children after learning the counting of syllable. It involves breaking down a word into its individual sound units. Prepare a set of cards with words written. Say a word by teacher, student find word card from the group of cards. Place on a desk and swipe left right and say the word loudly

Discussion and Result

The study involved 100 students aged between 5 to 15 years with varying degrees of specific learning disorder. The students were divided into three groups based on their disorders, reading, writing and both. The intervention was applied for a duration of 3 months, with weekly sessions of 45 minutes per day, 4 days a week. The remediation program included multisensory approaches, brain gym and games and activities.

The result of the study indicates that the reading and writing remediation program was effective in improving the abilities of students with SLD. Post intervention, all students showed significant improvement in their reading and writing abilities.

The use of multisensory activities, brain gym and games and activities contributes to this development. These findings are consistent with previous research that suggest multisensory activities, brain gym and game and activities can be beneficial for students with SLD. The significant increase in their scores post intervention score indicates that the students were able to make substantial progress in a relatively short period of time.

This study provides promising evidence supporting the use of multisensory reading and writing remediation programs for students with SLD.

Pre and post intervention score

Disorder	Pre test	Post test
Reading disorder	45	80
Writing disorder	40	70
Writing and reading disorder	35	65

Conclusion

Implementation of multisensory approaches in training of students with SLD with the age group of 5 to 15 at Ardra Foundation has significant insights and positive outcome. Through visual, auditory, tactile and kinesthetic strategies we

aimed to provide positive learning environment that address the unique need of students with SLD. Through this support students achieved attention and interest of learning. Notable improvement have been observed in the development of reading and language skill. Boosted children's confidence and self esteem. Fostered creativity and critical thinking skill among the dyslexic students. The success of multisensory approach at the ardra foundation is not only attributed to the effort within the class room but also the collaborative support of the communities including parents and educators. Application of multisensory approaches for students with writing and reading disorder has proved to be a transformation education strategy. By doing so we can continue to create an inclusive and supportive learning environment that nurtures the diverse talent and abilities of each students with reading and writing disorder in the Ardra Foundation.