

**EFFECT OF MULTISENSORY INSTRUCTIONAL  
STRATEGY ON MISCUES AND READING  
COMPREHENSION OF DYSLEXIC STUDENTS**

Thesis Submitted for the Award of the Degree of

**DOCTOR OF PHILOSOPHY**  
**in**  
**EDUCATION**

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## **DECLARATION**

The thesis entitled “**Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students**” is conducted under the supervision of Dr. Neha Vats, Assistant Professor, School of Education, Lovely Professional University, Phagwara, Punjab, India.

Herewith I declare that the information reported is the result of my research work. The thesis has not been accepted for any degree and is not concurrently submitted to any candidature for any other degree or diploma.

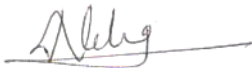
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## **ABSTRACT**

The main purpose of this study was to find out the effect of Multisensory Instructional Strategy on the Miscues and Reading Comprehension of the Dyslexic students. The identification of Dyslexic students was done in two phases, the first was for the screening purpose. The researcher for screening collected the data from teachers by researcher made Teacher's Referral Form followed by Diagnostic Test of Reading Disorders (DTRD) by Swarup and Mehta (2003). The intervention (VAKT) is an multisensory Instructional approach, based on which the lesson plans were made and then were being delivered to the students of class 6th up to 6 weeks in a pre-test and post-test experimental design. The data collected from 42 students (male-25, and female-17) was processed through non-parametric techniques as the data deviated from normalcy. The result indicated significant effect of intervention on reading comprehension of the Dyslexic students. Moreover, effect of VAKT was also found to be significant for the improvement of Miscues (Substitution, Insertion, Omission, Reversal, Self correction and Refusals). Gender difference was not found significant both in reading comprehension as well as Miscues when effect of intervention was calculated through Mann Whitney U Test. Implications for all of the concerned stakeholders were discussed as how the early identification of the dyslexia among the students and adoption of right type of teaching strategies would facilitate the children at large.

# CHAPTER 1

## INTRODUCTION

“If children can’t learn the way we teach, then we have to teach the way they learn”.

- Robert Buck

### 1.1 Introduction

The Indian government’s commitment to “Education for all” and “Right to Education” cannot be achieved till we include every child with special requirements in normal schools. Inclusion in Education is dependent on the belief that all children can receive learning together and they should do so. It is the child’s fundamental right to access education and not to be excluded. It removes the barriers of learning and values the differences. In an inclusive classroom, there are students with different learning needs and the teacher plays an impressive role in dealing with differences in the class.

Education and training are critical components in the development of the potential of children with special needs. Government of India is constantly working for the educational development of children with special needs. India gained independence in 1947. Inclusive education is stated as a fundamental right for all children in Indian constitution. For the first time, the Indian Education Commission (1964-66) clearly mentioned in its report that the disabled children should be the part of normal schools. “The Integrated Education Scheme of Disabled Children” was launched in 1974 and it was revised in 1992. This centrally sponsored scheme emphasized on the integration of all children in the general school setting. The International Year for Disabled Persons (IYDP), 1981 recommended education of the disabled, prevention, rehabilitation, and full participation with equality. India was one of the signatories which made a series of attempts to evolve a National Policy on the Handicapped and a strong national disability prevention program. The National Policy on Education (NPE), 1986 and Programme of Action (POA), 1992 recommended the integration of the children with mild handicapped in normal school. The objective of NPE, 1986 is “to integrate the physically and mentally handicapped with the general community as equal partners, to prepare them for normal

growth and to enable them to face life with courage and confidence”. “The Persons with Disabilities Act, 1995” (PWD, Act) states that “children with disabilities have the right to access education in a free and appropriate environment until they are eighteen years of age”. Sarva Shiksha Abhiyan (SSA), 2001 is a successful step towards inclusive elementary education as no child is forbidden to take admission in general schools due to any degree of disability, kind and category. All children have the opportunity of learning together with their peer group in general schools.

The MHRD prepared the “action plan for the inclusion in Education of Children and Youth with Disabilities (IECYD), 2005” and in this action plan it is clearly mentioned that the Children with special needs (CWSN) should be included in the general educational system. This action plan is a significant move from integration towards inclusion. To fulfill an essential demand of having a comprehensive document or policy statement for the care, education and well-being of the persons with disabilities on a national basis “The National Policy for Persons with Disabilities, 2006” was created. This policy ensures the rights and full participation of disabled persons in society. The “Right of Children to Free and Compulsory Education (RTE) Act, 2009” ensures the “right of children to access free and compulsory education till the age of 14 years”. The government of India passed “The Rights of Persons with Disabilities Act, 2016” in 2016 and it became operational in 2017. This act defines inclusive education as “inclusive education as a system of education where in students with and without disabilities learn together and the system of teaching and learning is suitably adapted to meet the learning needs of different types of students with disabilities”.

## **1.2 Inclusive education**

Inclusive Education denotes that every child regardless of the degree to which he/she may be different will be part of the mainstream education. In an inclusive classroom, there are students with different learning needs and an important role is of the teacher in dealing with differences in the classroom.

The conference “Salamanca World Conference on Special Needs Education” was organized in 1994 and in the conference the significance of inclusive education was recognized and it was stated that, “Those with special educational needs must have access

to regular schools which should accommodate them within a child-centered pedagogy capable of meeting these needs”. Inclusive education movement flows directly from the recognition of equal rights for all children and equal opportunity for all children. It is based on the contention that the education of CWSN should be common with others in general schools. Here, the term ‘CWSN’ refers to children whose needs are different from the majority of children in society. Equal educational opportunities were seen as essential to realizing the rights through participation in the general system of education. Inclusive education is a process of accepting human differences. In inclusive settings children with special needs are enrolled for all his classes under a regular teacher in neighborhood general school. Inclusive educational programming calls for flexible use of settings and supportive staff. It seems logical that when support staff is skillful and motivated, the possibility of successfully educating a child in the mainstream is high.

The National Policy on Education (1986) urged for the inclusion of children with special needs as “equal partners” in regular education. Inclusion in Education includes a natural environment for contact and association with common classmates, to gain knowledge for better adjustment in their class.

According to National Education Policy (2020), “Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation. The Policy also recognizes the importance of creating enabling mechanisms for providing Children with Special Needs (CWSN) or Divyang, the same opportunities of obtaining quality education as any other child”. “Barrier-free access to education for all children with disability” is the newest provision prepared in the National Education Policy 2020.

### **1.3 Learning disability**

Learning disabilities can be assumed as problems one encounter while learning, which often can be seen someone facing problem in “listening, thinking, speaking, reading, writing or doing mathematical calculations” due to problem in psychological process involved in the understanding but not due to primarily having “visual, hearing

impairment, motor handicap, mental retardation, environmental or economic disadvantages as root cause”. These problems are considered as internal and as the result of the malfunction of the nervous system, which may happen at any given point of life time. However, it is crucial to not confuse the learning disabilities with the other disabilities i.e., mental retardation, poor reading, hyperactivity, or emotional problems. A person with a learning disability has a set of unique features that must be considered in order for educational interventions to take place. Occurrence of specific learning disability in India ranges from 5%–15% in various studies (Singh et al., 2017) and boys are more affected than girls (Johnson, 2017).

“Specific learning disability” (SLD) was included in “The Rights of Persons with Disability Act-2016”. “The Rights of Persons with Disabilities Act” (2016) refers to it as “a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or mathematical calculations. The term includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia”.

Each person may have different types of learning disabilities. Researchers speculate that learning disabilities are instigated by the way the human brain processes and processes the information. Children with learning disabilities cannot be doomed as “dumb” or “lazy”. In fact, often they do have moderate to excessive intelligence, but their processing of information is different. These disabilities are thought to be not curable. However, these children can also do wonders and can overcome any hurdle, if provided with the right type of help.

#### **1.4 Definitions of learning disability**

Kirk (1962) defines, “Learning disability refers to retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmetic resulting from possible cerebral dysfunction and/ or emotional or behavioral disturbances and not from mental retardation, sensory deprivation, cultural or instructional factors”.

Kavale and Forness (1966) define, “People with learning disabilities belong to a group of very diverse individuals but they do share one common problem. They do not

learn in the same way or as efficiently as their nondisabled peers. Although most possess normal intelligence, their academic performance is significantly behind their classmates. Some have great difficulty learning mathematics, but most find the mastery of reading and writing to be their most difficult challenge”.

The Association for Children with Learning Disability (USA, 1967)- “A child with learning disability is one with adequate mental ability, sensory processes and emotional stability who has a limited number of a specific deficit in perceptual, integrative or expressive processes which severely impair learning efficiency. This includes children who have central nervous system dysfunctions which are expressed primarily in impaired learning efficiency” (Telford & Sawrey,1977).

“National Advisory Committee on handicapped children” (USA, 1969), adopted the below mentioned definition:

“Specific learning disabilities’ means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, and spell or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbances, or of environmental disadvantages” (Federal Register,1977).

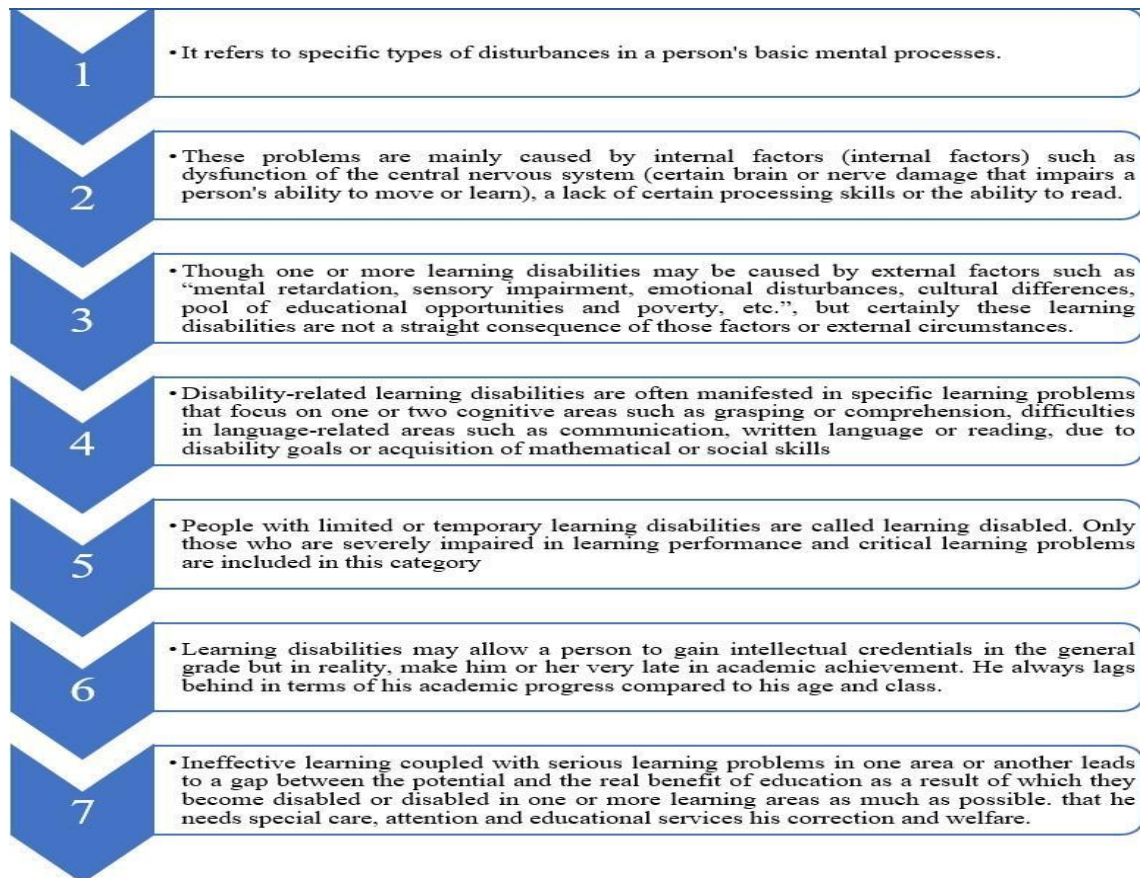
Kirk in 1971 defines the term learning disability as, “The term learning disability is not meant to be used for children with minor or temporary difficulties in learning but with a severe discrepancy between ability and achievement in educational performance and such severed discrepancy described as learning disabilities with significant learning problems that cannot be explained by mental retardation, sensory impairment, emotional disturbance or lack of opportunity to learn”.

“The National Joint Committee of learning disability” (USA, 1981) proposed a worldwide accepted definition as “Learning disability is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities.

These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbances) or environmental influences (e.g., cultural differences, insufficient/ inappropriate instruction, psychogenic factors), it is not the direct result of these conditions or influences” (McLoughlin & Netick, 1983).

The terminology –”learning disability” means the conditions previously known as brain damage, brain dysfunction, sensory aphasia (rules of the ability to understand spoken words, symbols, touch or print) clear aphasia (loss of speech ability), alexia or word blindness (loss of reading ability – low level of alexia is called dyslexia) acalculia (loss of arithmetic ability- at low level is called dyscalculia) - agraphia (inability to learn to write - low level agraphia is called -dysgraphia).

Meta analysis of these definitions about learning disabilities is presented as below:





In this way learning disabilities present many barriers and difficulties in learning. Gradually learning difficulties become so severe that they lead to learning disabilities in one area or another. It creates the difference between the strength and the success of real education that requires special attention, attention and remedial action and in the case of a student being labeled as learning disabled.

### **1.5 Nature and characteristics of disability in learning**

Educational and psychological researches have paid attention to a number of important behavioural and characteristic traits, also overall personality and characters of children with learning disabilities.

1. Learning disabilities usually correspond to substantial problems in development and usage of language, reasoning and mathematical abilities, or skills pertaining to society.
2. They may be subjected to hyperactivity and impulsivity.
3. Mostly, these students have difficulties in learning consequently may have behavioural problems i.e., anxiousness, depression, restlessness.
4. Overtly nothing can be associated with learning disabilities. Their physical appearance may be as fit as a general student could have.
5. Most of them always show substantial educational gaps as their learning potential may differ from their academic achievement scores.
6. Some of them may have suspicious neurological signs and EEG abnormalities.
7. Their “Memory, thinking, attention, general coordination, perception and motor skills” may be impaired.
8. A major problem in all these children is the observed delay in learning and performing educational tasks. As with physical or mental impairments in physical and mental activity, there are limitations in learning and acquisition.
9. They exhibit the following learning characteristics that commonly contribute to learning disabilities. (a) lack of motivation, (b) carelessness, (c) inability to generalize, (d) solving various problems, processing of information, and skills for thinking etc.

10. The students' learning disabilities are so intense that they need special attention, care, and correctional programs to correct learning problems and disabilities.

**1.6 Causes of learning disabilities-** Generally the factors causing learning disabilities may be found to fall in the following three categories-

**1.6.1 Heredity or genetic factors-**

In other cases, the genetic or heredity component is determined to be the primary cause of learning difficulties in children. Many common features identified in learning challenged people are passed down from generation to generation based on the 'like begets like' trend. The following findings support the hypothesis that there is a link between inheritance and disabilities:

- (a) At least one hyperactive or impulsive parent has been discovered in almost 20% to 25% of overactive or impassioned children.
- (b) Emotional imbalances, memory and cognitive impairments, as well as speech and learning disorders, have been reported to be hereditary.
- (c) By further considering genetic studies, scientists and psychologists in the United States have succeeded in discovering specific genes that may be potential in creating reading and learning problems.

**1.6.2. Organic or physiological factors**

Factors such as below-the-knee pain, no matter how minor, create this dysfunction.

- (a) Damage to the brain caused by an accident or a lack of oxygen before, during, or after birth, resulting in neurological problems that may impede their capacity to learn.
- (b) Injury to the spinal cord, message-carrying nerves, and other structures, resulting in their dysfunction and subsequent learning difficulties.
- (c) Biochemical imbalances induced by variables such as the below-mentioned conditions might cause central nervous system dysfunction.

- (d) Colorings and flavourings in many of the foods ingested by children have been linked to hyperactivity, impulsivity, emotional instability, and central nervous system malfunction.

In conclusion, one's learning abilities and capacities are highly reliant on the appropriate functioning of one's nervous system. Any indices which may do neurological damage to the central nervous system can thus affect and could be a reason for major learning issues.

### **1.6.3. Environmental variables-**

In many circumstances, inappropriate and unfavorable circumstances and aspects in a person's physical, social, cultural, and educational environment can create learning impairments. Some of these elements may be considered under-researched.

1. The fetus's low nutrition and unsuitable environment for development in the mother's womb.
2. Premature birth, an unpleasant and unsuitable environment at the moment of birth, or central nervous system impairment.
3. Early-life nutritional deficiencies, chronic diseases, accidental shock, and wounds that can result in nervous dysfunction.
4. Children with lesser or no medical attention always suffer from loss of senses like auditory, visual, tactile, and olfactory or other neural disabilities are learning impaired.
5. Inadequate premature experiences and external cues for the purpose of learning and equation as a result of a flawed educational setup.
6. Inadequate or incorrect instructions acquired as a result of their own family situation or teachers' motivation, expertise, and ability.
7. Emotional distress and a lack of motivation as a result of a variety of variables in a person's surroundings, as well as malfunctioning physiological processes.
8. Inadequate and inappropriate language development, as well as a reduced concentration and attention capacity.
9. The misuse of narcotics and alcoholic materials, such as alcohol usage.

10. Emission and being in the presence of faulty models of learning in a person's ethnographic, demographic and academic environment.
11. Deprivation on a social and cultural level.

### **1.7 Learning Disabilities Types**

The seven diseases are classified as unique learning disabilities by the Learning Disabilities Association of America and many other mental health professionals (Misciagna, 2022).

#### **Dyslexia**

It is a learning disability that affects reading, writing, and understanding. Dyslexics may have trouble decoding words or with phonemic awareness, which is the ability to recognize particular sounds within words. Dyslexia is frequently misdiagnosed for years, leading to difficulties with reading, grammar, reading comprehension, and other language abilities.

#### **Dysgraphia**

Dysgraphia is a condition in which people have difficulty putting their thoughts into writing or drawing. Dysgraphia is characterized by poor handwriting; however, it is not the only symptom. Sufferers have difficulty expressing themselves in writing, whether it's through spelling, grammar, vocabulary, critical thinking, or memory. Dysgraphia can cause problems with letter spacing, poor motor planning and spatial awareness, and coordination between thinking and writing simultaneously.

#### **Dyscalculia**

This learning disability mainly affects mathematical calculations. Dyscalculia affects people's ability to understand arithmetic ideas, numbers, and reasoning. Individuals with "math dyslexia" may have trouble in understanding time from clock, money counting, finding patterns, recalling arithmetic information, and completing mental math problems. The severity of math learning disabilities vary a lot depending on the child's other abilities and weaknesses.

## **Auditory processing disorder**

Patients with auditory processing disorder (APD) have trouble processing sounds. Individuals with APD may be unable to filter various sounds, such as a teacher's speech against background noise, or may misunderstand the order of sounds. The information acquired and processed by the ear is misinterpreted by the brain in APD. Auditory processing disorders are conditions that cause a person to have trouble differentiating between similar sounds, among other things.

## **Nonverbal learning disabilities**

While it may seem that nonverbal learning disabilities (NVLD) refer to a person's incapacity to communicate, it essentially denotes problems understanding nonverbal behaviors or social cues. NVLD patients have trouble understanding nonverbal communication, such as body language, facial expressions, and voice tone.

## **Visual motor and perceptual deficits**

Persons having this type of disability have poor hand-eye coordination, unable to follow the reading text position, have problems in handling pencils etc. related to other fine motor skills. They often commit errors while working on a project or writing by mistakenly using similar looking letters interchangeably.

### **1.8 Other conditions that make learning difficult**

School difficulties aren't always the result of a learning disability. Learning becomes more difficult as a result of anxiety, sadness, stressful situations, emotional trauma, and other disorders that impair concentration. Furthermore, ADHD and autism are sometimes confused with learning difficulties or co-occur.

Autism spectrum diseases can make it difficult for children to communicate, read body language, learn fundamental skills, make friends, and maintain eye contact. Autism is a spectrum illness, which means that each person with autism has their own blend of strengths and challenges. People with autism can learn, reason, and solve problems in a variety of ways, ranging from highly skilled to severely impair. Rare persons with ASD may require a great deal of assistance in their everyday lives, while others may require less assistance and, in some circumstances, live completely independently.

## 1.9 Dyslexia

Rodolf Berlin, a German ophthalmologist and professor in Stuttgart, coined the term “dyslexia” in 1883. The word dyslexia is a derivative of Greek language, implying poor or insufficient, and lexis, which means words or language. As a result, dyslexia is defined as “bad language”.

Dyslexia is a developmental reading disorder and affects around 10 to 15% of the population (Castro, 2016; Wadlington & Wadlington, 2005). Dyslexics have problems in reading, spelling and word recognition (Grigorenko, 2001).

Dyslexia is a major impairment in the ability to read, despite normal IQ, opportunities to read, proper teaching, motivation, and an adequate family environment. It isn't caused by a visual or auditory impairment. It isn't brought on by mental disease or traumatic brain damage. Dyslexia affects girls and boys alike (Shirole, 2019).

Dyslexia is the most prevalent learning disability and only dyslexia has got the recognition as Special learning disability in mainstream, because of the concern of the parents (Thomas & Whitten, 2012). Researchers from all over the world have been interested to know about dyslexia for greater than one hundred years and have attempted to develop many theories for explaining the nature of dyslexia (Snowling, 2009; Ramus et al., 2003). Dyslexia has a variety of definitions since academics are still trying to figure out what the term means. In the neurological theory of dyslexia, a few definitions have been established. Dyslexics have a deficiency in phonological awareness. The research also indicates that people with dyslexia have serious phrase learning difficulties linked to the territories of the mind connected to phonological and orthographic preparing (Davis et al., 2011). This study differs from the previous theories that dyslexia is related to vision, hearing and intellectual deficiencies that are not, at this point substantial (Shaywitz, 2003; Snowling & Hulme, 2012). The dyslexic children and poor readers are not always the same. Other reading problems may be due to lack of cognitive abilities but dyslexia is a language-based disorder caused due to lack of intellectual ability or cognitive processing ability (Das, 2009; Stanovich, 1988). While some experts believe dyslexia is caused by a biological condition, others believe it is caused by a cognitive problem. Isabelle Lieberman made significant commitments to our comprehension of the

cognitive procedures associated with dyslexia and her phonological theory of dyslexia is still broadly acknowledged by different specialists in the field (Pennington, 2003).

Phonemic awareness refers to the knowledge and manipulation of sounds in spoken words. Phonemic awareness includes segmenting, blending, deleting and substituting sounds in words. Dyslexic children mostly have problems with phonemic awareness. This is a slow and laborious task for the individuals who have less phonemic awareness to get meaning from the print by reading and remembering whole words instead of decoding and encoding (Sawyer & Fox, 1991). Lack of fluency and automaticity is often found in reading. Orton (1937) who conducted research on dyslexia stated that the problem in reading occurred when the visual images sent to the proper brain were disturbed by inputs from the left hemisphere.

### **1.10 Definitions of Dyslexia**

Though there are different definitions to explain the term dyslexia, there is no universally accepted definition. One comprehensive definition is supplied by International Dyslexia Association (2002) as, “Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge”.

The Rose Report (Rose, 2009) also provides a widely-accepted definition:

“Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed. Dyslexia occurs across the range of intellectual abilities. It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points. Co-occurring difficulties may be seen in aspects of language, motor coordination, mental calculation, concentration and personal organization, but these are not, by themselves, markers of dyslexia”.

Dyslexia is “evident when accurate and fluent word reading and/or spelling develops very incompletely or with great difficulty. This focuses on literacy at the word level and implies that the problem is severe and persistent despite appropriate learning opportunities” (The British Psychological Society, 1999).

“It is a developmental reading disability in children who have otherwise adequate intelligence, personality and educational opportunities” (Staller, 1982).

The World Federation of Neurology (1968) has defined Dyslexia as follows: “Dyslexia is a disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence, and socio-cultural opportunity; it is dependent upon fundamental cognitive disabilities, which are frequently of constitutional origin”.

“A disorder in children who, despite conventional classroom experience, fail to attain the language skills of reading, writing and spelling, commensurate with their intellectual abilities” (Miles, 1985).

From these definitions of dyslexia, it is found that the dyslexics have difficulties in reading such as problems in accurate word reading, decoding and fluency due to the deficit in the phonological component of language. Therefore, the dyslexics have problems in reading skills due to the phonological difficulties.

### **1.11 Need for a teacher to comprehend dyslexia symptoms**

Dyslexia is frequently misunderstood by teachers. The dyslexia sufferer in the classroom suffers as a result of the teachers’ lack of knowledge and misconceptions (Wadlington & Wadlington, 2005). The problems that dyslexic children have in school are exacerbated by a lack of early detection and teachers’ misconceptions about dyslexia.

Gonzalez and Brown (2018) conducted a case study to investigate early childhood instructors’ perspectives of dyslexia at Head Start Centers in New Jersey and Pennsylvania. The goal of the study was to see how these educators perceive the concept of dyslexia risk and how they identified children with dyslexia. Teachers believed dyslexia was a visual processing disorder rather than a phonological processing disorder, according to the findings of the study. Based on the findings, it is proposed that pre-service and in-service instructors in dyslexia and teaching approaches require professional development.



Khaliq (2017) investigated in Lahore the awareness of dyslexia among elementary school teachers. He also studied teacher's views about their awareness of identification of dyslexic children, their management and in-service and pre- service training of dyslexia. The study revealed that teachers had no awareness about dyslexia and most of them were unable to identify and manage dyslexic students. The teachers revealed that they received insufficient training on dyslexia. Alawadh (2016) studied the challenges faced by primary school teachers of Kuwait while providing intervention for dyslexic children and also explored the importance of providing support for dyslexic students in government primary schools. The results indicated that the teachers were not much aware of dyslexia and lack of proper training. Teachers revealed that they used inappropriate approaches for the identification of dyslexic students. Jusufi (2014) found similar results in his investigation on the perception and awareness of teachers of primary school regarding dyslexia in Prishtina. The study's findings revealed that the majority of the participants had misconceptions about dyslexia but they were aware of their important role for providing equal opportunities for dyslexic children.

Wadlington and Wadlington (2005) developed and validated a scale 'Dyslexia Belief Index' for measuring beliefs regarding dyslexia and by using it, assessed the beliefs of educators regarding dyslexia. The result of the study indicated that the majority of educators believed many misconceptions regarding dyslexia. Most of the educators believed that word reversal is the main factor for the identification of dyslexics. It was recommended that for the better preparation of educators more opportunities should be given to them for learning about dyslexia. A replicated study of Wadlington and Wadlington (2005) was conducted by Tillotson (2011) in the Chippewa Valley of Wisconsin and found that the teachers had misconceptions and were unaware of dyslexia and it could be improved by essential professional development.

Lack of early identification and wrong perceptions of teachers regarding dyslexia increases the difficulties of dyslexic children during their school life. It is important to understand the perception of teachers for preparation and professional development of teachers (Spear-Swerling et al., 2005). So it can be concluded that though the teachers were given adequate training towards special needs education, they still have problems in identifying the dyslexics and to remediate them. Studies in India have shown that

teachers lack knowledge toward symptoms of dyslexia. Therefore, it is the need of the hour for teachers to have knowledge and awareness of dyslexia and its symptoms. The understanding of the symptoms of dyslexia helps teachers to identify the students with dyslexia and those at risk of dyslexia in the early stages of education.

One of the most important difficulties that needs to be addressed is dyslexia, as in India it is estimated that 10-14% of school going students are diagnosed and suffering from Specific Learning Disabilities (Krishnan, 2007; Mehta, 2003). Dyslexia was found to be one of the most common SpLD, affecting 80% of all those identified as having Specific Learning Disabilities (Karande et al., 2005).

In India people are not much aware of the concept of dyslexia. If a child has difficulty reading or writing, he is very often attacked by the harsh comments of the teachers and parents without knowing the real problem of the child. He is being called a lazy or stupid child. Due to this behavior of the teachers and parents, the child lost his self-confidence and started doubting himself and his abilities. If they are identified early and given the appropriate instruction almost all dyslexics can learn to read and write and be successful in life as Thomas Edison, Charles Schwab, Stephen Spielberg and F. Scott Fitzgeald.

The main problem of Dyslexic children is related to reading. In the present research the researcher gave emphasis on the problems faced by the dyslexic students and investigated the accuracy in the form of miscues i.e. substitutions, insertions, omissions, reversal, refusals and self corrections.

### **1.12 Dyslexia's Characteristics**

Reading, writing, phonological awareness, sequential components of language and number, time and direction, and short-term memory are all areas where dyslexics struggle. They also have problems with letter-sound correspondence, accurate and fluent word identification, poor spelling, and limited decoding abilities. Students with dyslexia frequently struggle with comprehension as a result of their laboured reading efforts (Lyon, Shaywitz & Shaywitz, 2003; Ness & South-all, 2010; Norton, Beach, & Gabrieli, 2015; American Psychiatric Association (APA), 2014; Shaywitz, Morris, & Shaywitz, 2008; Snowling & Hulme, 2012). Children with dyslexia have difficulty with reading comprehension and social

skills, according to some research, which may influence their academic performance and earnings as adults (Ghisi M. et al., 2016; McLaughlin M.J. et al. 2014).

Children with dyslexia have difficulty using and understanding symbols and words. It is not uncommon for youngsters with dyslexia to struggle with math as well. For dyslexic students, learning the language of mathematics can be difficult. Learners must learn language (subtract, fractions, triangle), symbols (+, %, percent), and concepts (subtract, fractions, triangle) (doubling, halving). According to educational psychologist Dr. Lynn Joffe, up to 60% of dyslexic students may have substantial challenges in mathematics. This is usually due to three main cognitive issues: phonological deficits, memory problems, and processing speed issues.

According to the International Dyslexia Association's Dyslexia Handbook (2019), dyslexia has the following characteristics:

### **Oral communication**

1. Learning to speak late in life
2. Having trouble speaking words
3. Difficulty learning new words and using age-appropriate grammar
4. Difficulty adhering to instructions
5. Inconsistency with terms such as before/after, right/left, and so on
6. Having trouble remembering the alphabet, nursery rhymes, or songs
7. Problems comprehending concepts and links
8. Difficulty retrieving words or naming issues

### **Reading**

1. Difficulty in learning to read
2. Difficulty recognising or making up rhyming words, or counting syllables in words (phonological awareness)
3. Hearing and manipulating sounds in words are difficult (phonemic awareness)
4. Inability to discriminate between distinct sounds in words (phonological processing)

5. Difficulty in remembering letter sounds (phonics)
6. Difficulty recalling letter names and forms, or quickly naming letters
7. When reading or spelling, reversing the order of letters
8. Misspellings or omissions of commonly used short words
9. “Stumbles” over longer phrases
10. Poor reading comprehension when reading aloud or silently, frequently due to inaccurate word reading
11. Oral reading that is slow and arduous

### **Written Language**

1. Difficulty expressing ideas on paper
2. Numerous spelling errors in written language
3. You might do well on weekly spelling tests, but you might make mistakes in your regular job.
4. Probable difficulty in proofreading

Dyslexia can also cause a variety of other symptoms.

1. Difficulty quickly naming colours, objects, and letters in a sequential order (RAN: Rapid Automatized Naming)
2. Inability to remember lists, directions, or facts
3. Requires repeated viewing or hearing of concepts in order to grasp them.
4. Visual or aural stimuli divert attention away from the task at hand.
5. A drop in achievement test scores or school performance is on the rise.
6. Unpredictable schoolwork
7. The teacher says things like, “If only she’d try harder,” or “He’s a slacker.”
8. Relatives may be experiencing similar issues.

The majority of people have at least one of these features. That isn’t to say that everyone suffers from dyslexia. A person with dyslexia is likely to have multiple of these features that remain over time and obstruct his or her ability to learn (IDA, Dyslexia Handbook, 2019).

### **1.13 Causes of Dyslexia**

1. Although the specific causes of dyslexia are unknown, morphological and brain imaging investigations suggest that dyslexic people's brains develop and function differently. The International Dyslexia Association was founded in the year 2000. Poor phonological skills, sequencing concerns, and organisational difficulties have all been identified as dyslexic brain traits (Juneja, 2018).
2. Dyslexia is a neurobiological disorder, which means that the problems stem from within the brain. The brains of people with and without reading problems have distinct structural characteristics. This indicates that dyslexic children's brain structure and neural connections for processing information may grow differently (Reid, 2007).
3. There are two types of substance in the brain: grey matter and white matter. Grey matter is primarily made up of nerve cells, and its principal role is information processing. White matter is found in the brain's deepest regions and serves as the connecting threads that allow nerves to communicate. The white matter is also in charge of information transmission throughout the brain. Dyslexics have less grey matter in the left hemisphere of the brain than non-dyslexics (Quinn, 2016).
4. When compared to a person who does not have dyslexia, the brain of a person with dyslexia processes phonological information differently (Georgiou, 2015).
5. Dyslexic problems could be caused by a left-hemisphere deficit or a lag in the maturation of left-hemisphere language function (Thomson & Watkins, 1998).
6. Genetic factors have been connected to dyslexia. Genes or chromosomes 6 and 15 have been connected to the failure to memorize spellings (Norton et al., 2015).
7. Although dyslexia is unrelated to race, social status, or intellectual capacity, it does tend to run in families, suggesting that the brain variations that cause dyslexia may be genetic (Hammond & Hercules, 2000).

### **1.14 Dyslexia Types**

To improve the effectiveness of treatment, experts have devised categories to put various frequent kinds together. Knowing the different varieties of dyslexia will enable

educators to create strategies tailored to the needs of the kid in order to provide the best possible support. The following are the most prevalent types of dyslexia:

**1. Acquired Dyslexia-** When someone who is a competent reader loses at least some of their skill owing to a brain damage, they are said to have acquired dyslexia (Hultquist, 2006). When the brain's centers for language processing are affected by a traumatic brain injury or disease, dyslexia can occur. This type of dyslexia is also known as trauma dyslexia since it is the only type of dyslexia with a known etiology, which is caused by brain damage. Primary Dyslexia is a type of dyslexia that affects children. Primary dyslexia is defined as dyslexia caused by a genetically inherited disorder. A child's chances of developing dyslexia are increased if both parents have dyslexia.

**2. Secondary or Developmental Dyslexia-**Secondary dyslexia, also known as developmental dyslexia, affects the fetus during its development. There are issues with brain development that contribute to impairments in neurological abilities such as word recognition and spelling. Hormonal development throughout the early stages of foetal development is thought to be the cause. As a child grows older, developmental dyslexia becomes less noticeable.

Wolf M. (2017) explained three types of dyslexia in his book "Proust and the Squid: The Story and Science of the Reading Brain".

**1. Phonological Processing Deficit-**This is the most common type of dyslexia. It's a phonological processing problem that affects your ability to decode/sound out words. This type of deficiency is also known as Dysphonetic Dyslexia or Auditory Dyslexia. People with this type of dyslexia have a more difficult time comprehending the individual sounds that make up spoken words, as well as mapping the sound, or phoneme, to the written letter, or grapheme.

**2. Rapid Naming Deficit-**According to Dr. Wolf, the second kind of dyslexia is a problem with quick naming. Dyseidetic Dyslexia and Visual Dyslexia are two terms that have been used to describe this combination of problems. Rapid naming dyslexia affects people who have trouble quickly naming colours, numbers, and letters when they are presented with them. People with this type of dyslexia have adequate phonological processing, but the retrieval of language-based information affects their fluency and comprehension. They have trouble recalling what they viewed on a page. This type

affects visual processing, causing the brain to miss parts of what the eyes see. It also impacts the capacity to learn how to spell or form letters, as both require the brain to remember the exact letter sequence or shape, which slows down the learning process.

**3. Double deficit Dyslexia**-Some dyslexics have problems with phonological processing as well as quick naming. Dysphonic or Mixed Dyslexia are other names for this condition. This is the least frequent subtype and the most difficult to treat. These are the children who are most easily identified as dyslexia by teachers and parents since they are detected early on. They struggle to develop reading and writing skills in a traditional school setting because they are unable to compensate with better skills. Structured, cumulative, multisensory support is critical for these youngsters.

### **1.15 Miscue Analysis**

Reading is a difficult task. Reading is the key to unlocking the doors of knowledge. Ken Goodman originated the term “miscue” in 1965 to describe a divergence in oral reading from the printed text, and the taxonomy of miscues was created (Goodman, 1969).

When reading an unfamiliar book aloud, readers create unexpected responses to the text called miscues. Miscues are the outcome of the same linguistic cue systems that elicit expected responses in oral reading; they are not just random errors (K. Goodman & Y. Goodman, 1977).

Miscues are defined as deviations in oral reading from the printed text, as well as substitutions, insertions, omissions, reversals, self-corrections, and refusals, unless the reader actively corrects them. Miscues are divided into twenty-eight categories, according to Goodman. “A miscue is a spot where a reader’s observed reaction (OR) does not match the expected response (ER),” according to Goodman, Watson, & Burke (2005).

A qualitative investigation of a student’s oral reading miscues is recommended by Goodman (1972). These blunders are categorized by category, and symbols are created to represent each type. Students can use Miscue Analysis to help them improve their reading skills. They have the ability to recognize their own strengths and flaws. Teachers are aware of their students’ reading habits (Gopal R. & Mahmud C.T.B., 2018). Miscue Analysis is a method of assessing oral reading faults (Stahl, 2009).

Miscue analysis is based on the premise that “reading is a psycholinguistic process”. It is useful since it informs the teacher about the learner’s reading techniques. Miscues reveal whether or not a reader is comprehending and finding meaning from the text, as well as how easy or difficult it is for them to read. If the message is not jeopardized, it is not required to correct every word. The pattern of errors can reveal both a reader’s strengths and weaknesses.

It allows the investigator to make judgements on a linguistic level that is more delicate than other test processes. Miscue analysis can be used to examine oral reading in even more detail. It has a lot of significance as a source of information about the nature of the reading process. Miscues aren’t labeled errors or mistakes because they represent linguistic understanding, reading aptitude, methods, the reader’s background, and so on. The miscue analysis reveals how the reader integrates the language cueing systems for the formation of meaning during reading. This “on-line” and “real-time” construction is referred to as “ongoing comprehension.”The Reading Miscue Inventory (Goodman, Watson & Burke, 2005) can be used individually, or it can be used with other assessments such the Running Record (Clay, 2000) and the Informal Reading Inventories (Leslie & Caldwell, 2009).

Collecting and analyzing miscues that may serve as indicators to students’ misinterpretations after reading can reveal problems with meaning building. The miscue analysis allows you to comment on the reader’s language cueing systems as well as his or her reading methods.

### **1.16 The cueing System**

A skilled reader employs three distinct cueing systems that interact with one another. To learn more about how miscue analysis works, it’s helpful to grasp the language cueing system. Reading, according to Goodman (1996), is a transaction between a reader and a text. He described that the writer represents ideas using his or her language’s system, while the reader reconstructs the writer’s thought using the writer’s language’s common features, forms, and system. To understand reading, he claims, we must first understand how the linguistic systems that work at various levels inside a text interact. They are as follows:



a. **The syntactic:** The syntactic makes use of grammatical structure, word order, and other factors. Tense, word order, gender, and number are all part of the syntactic cueing system, which governs how words and sentences interact.

Speakers of the language can use this cueing system to organise words into sentences and highlight the relationships between them. Competent language users are aware of the laws of the language and may utilise this knowledge to predict the words based on the sentence structure.

b. **The semantic:** The semantic refers to the meaning of a term. The semantic cueing system encompasses the comprehension of words and sentences as well as their relationships (i.e., vocabulary).

c. **The grapho-phonetic:** The grapho-phonetic means that the appearance of a letter corresponds to its sound. The grapho-phonetic cueing system consists of the orthographic (spelling, punctuation, and print elements) and phonological (linguistic sounds) systems, as well as their interaction. Readers use grapho-phonetic cues to give information about the letters, their sounds, and previous knowledge of the language while they read.

The reader's active search for meaning is aided by all three systems. A professional can examine how the reader employs semantic, syntactic, and grapho-phonetic clues to modify the text as the reader reads the text by looking into patterns of miscues. To put it another way, the cueing systems operate together to support the text's meaning or comprehension. Miscue analysis also indicates strengths and weaknesses in a student's reading, which can aid educators in developing strategies to improve a student's reading.

### **1.17 Patterns of Miscue-Positive, Intermediate and Negative miscues**

Miscues aren't always considered terrible and require correction. They're actually required for qualitative research. They are viewed as signs of possible mental processes that can be positive, negative and intermediate.

### **1.18 Balance of Miscue**

In Miscue analysis judgements are based on the assumption that all oral readers may make mistakes from time to time. Those mistakes which do not change the sense of the passage are 'good'. Indeed, they may indicate that text is being mentally assimilated

and reproduced orally in a slightly different form. Accuracy is not therefore the absolute criterion of success in reading aloud. Miscue analysis allows the teacher to assess the balance between positive, negative and intermediate deviations from the written text.

### **1.19 Recording Reading Behaviors**

Substitution, Insertion, Omissions, Reversals, Refusals, and Self-corrections are the first categories to classify reading behaviour.

#### **Evaluation and Grading of substitutions (Goodman,1972)**

Inquire about each substitution by asking the following three questions:

- Is it grapho-phonic in nature?
- If the reader has been clearly impacted by the visual display (one or more individual letters sounded right) or the general configuration, that is, the reader has shown some awareness of phonic signals, the miscue will be graph phonically comparable.
- Is there any resemblance in terms of syntax? If the error is grammatically acceptable inside the sentence, it will be syntactically similar.
- Does this make sense to you?

The miscue is compatible with the meaning of the sentence or paragraph thanks to semantic cueing.

#### **Convert to Positive, Intermediate or Negative Grades**

##### **Positive**

- (a) Substitutions which are all three cueing systems (that is, the answer is 'yes' to all the questions above) or
- (b) Substitutions which use two of the systems without destroying the general sense.

##### **Intermediate**

- (a) Substitutions which use all two of the three systems but the general sense is impaired, or
- (b) Substitutions which use only one of the three systems.

### **Negative**

No use made of any of the system, the substitution is non-sense or completely inappropriate (the answer is 'no' to all three questions above).

**Evaluation and grading of Insertions, Omissions, Reversals and refusals-mark each miscue as follows:-**

### **Positive**

The meaning of the sentence is preserved without distortion (that is, it syntactically and semantically).

### **Intermediate**

The miscue is appropriate either syntactically or semantically or there is only limited distortion of meaning.

### **Negative**

The miscue is completely inappropriate or changes the meaning radically.

### **Evaluation and Grading Self-Corrections**

**Mark each self-correction as follows:-**

### **Positive**

The self-correction was necessary and valid.

### **Intermediate**

The self correction refers to a miscue which has been classified as positive. (Remember that each self correction should also have been categorized according to the original category or reading behavior it represented).

### **Negative**

Regardless of whether the original word was corrected or not, a self-correction has provided an incorrect word – 'over-correction.' By comparing the percentage of positive, Negative and intermediate miscues a summative appraisal of a reader's performance can be made. On the occurrences of miscues, the percentage of strength outweighed the number of weaknesses for all individuals.

## 1.20 Types of Miscue

Goodman (1969) identified 28 different kinds of errors. Non-response (refusal), substitution, omission, insertion, reversal, self-correction, hesitation, and repetition are eight types of miscues identified by Arnold (1982), whereas Campbell (1993) identified seven types of miscues: substitution, insertion, omission, self-correction, repetition, hesitation, and sounding out.

Davenport (2002) identified eight different forms of miscues, including substitution, omission, partial, insertion, regressions, pauses, repeated miscues, and complicated miscues. Moreover, Goodman, Watson, and Burke (2005) recently published a revised version of RMI that incorporates eight categories of miscues: substitution, omission, insertion, repetition, complex miscue, repeated miscues, multiple miscues, and other extra miscues.

Despite the fact that there are many other sorts of errors, all of these studies have concentrated on the same basic types of errors: substitution, insertion, omission, self-correction, reversal, and refusals. The most common forms of miscue are:

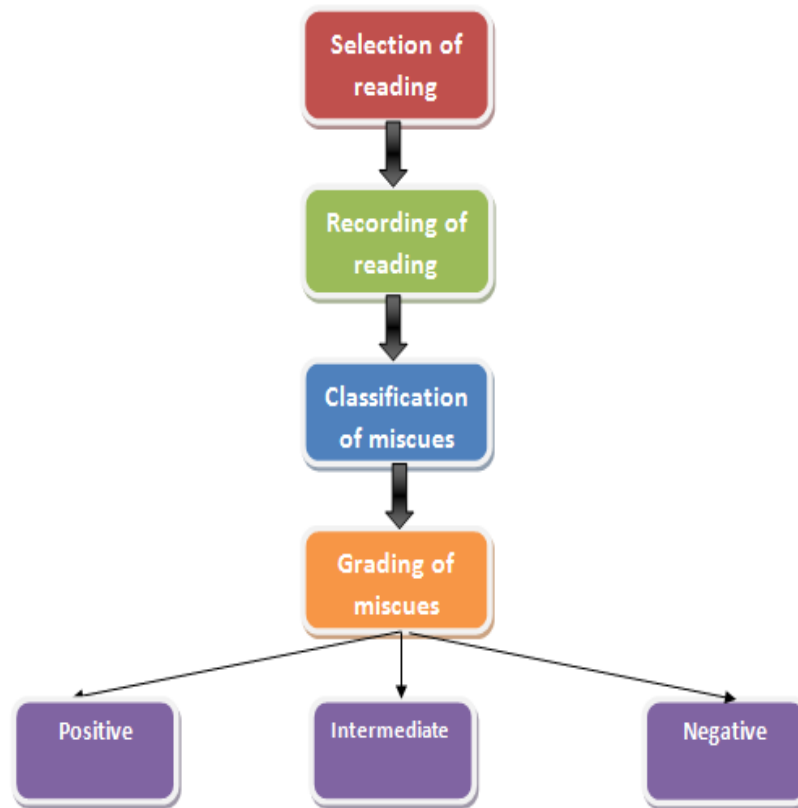
- **Omission-** When a pupil reads aloud, he or she leaves out a word that changes the meaning of the phrase.
- **Reversal-** A child will reverse the print or word's order. It could also mean that the pupil is having trouble scanning the material from left to right.
- **Substitution-** A child substitutes a term that may or may not make sense in the passage instead of reading the word in the text.
- **Self-Correction-** Good corrections demonstrate that the student understands the concept. If the learner's corrections are frequent, he or she may be reading too quickly.
- **Insertion or addition -** An insertion is a word or words that the youngster adds to the text that are not already there.
- **Refusals-** when the reader refuses to read a word on purpose.

## 1.21 Purpose of miscue analysis

The purposes of miscue analysis are:

- To observe whether a reader is using all the cueing systems available and to see to what extent he or she is approaching text as a ‘mature’ or fluent reader.
- Point out developmental stages in reading acquisition.
- To gain a measure of the extent which a reader is reading for meaning in addition to, or as an alternative to, giving comprehension questions.
- To examine individual students’ oral readings in order to obtain insight into their language understanding and method utilization while reading and “meaning making”.
- To assist experts in assessing reading materials. It gives an objective basis for deciding whether or not a given selection should be employed in a reading programme, as well as the acceptability of material for student use.

### 1.22 The Procedure for miscue analysis (Goodman,1973)



**Figure 1.1:** Process of Miscue Analysis

The basic approach, as described by Goodman, Watson, and Burke (2005) is as follows:

1. The researcher must collect and examine a single and complete oral reading experience.
2. Selecting Materials should be unfamiliar and unpracticed to the reader but the concepts should be known to the reader.
  - a. Selection of material one grade level above the student's assigned reading level and one or two alternative selections above and below that are usually sufficient.
  - b. Need at least 25 miscues for an in-depth, well-rounded analysis.
  - c. Choose an entire cohesive text that is both of interest to the student and well-written.
  - d. The kind of text (trade book, textbook, newspapers, basal reader) depends on your objectives.
  - e. Passage should typically be longer than 500 word
3. Prepare a typescript
  - a. To use this to record miscues, verbal asides, and any significant nonverbal actions.
  - b. Should make this typescript and the text look as much alike as possible.  
*Same line length.....spelling....punctuation...*
  - c. Triple space so you have room for writing the miscues.
  - d. Number with the page/line system.
4. Getting ready
  - a. A recording device in good working condition.
  - b. Suitable reading selections
  - c. Type scripts of the selections
  - d. Pencils for writing miscues
5. Informing the Reader
  - a. Make the reader as comfortable as possible

- b. Can sit beside or across
- c. Atmosphere is informal and friendly
- d. Chat briefly before beginning
- e. Briefly tell reader why they are being asked to read and let them know what is expected of them (e.g., “read this story aloud....if you have trouble with it, try to figure it out like you would if I wasn’t here.....after you read it, I’m going to ask you to some questions related to the story”)
- f. Let the reader leaf through to see how long it is and ask if have read the passage before.
- g. Remind them to read aloud if they forget during the reading.
- h. Never stop them except when they are making very few miscues (and go to a more difficult passage) or when they are extremely uncomfortable and are not able to continue independently.

6. Retelling of the text

**Scoring System-** Miscues can be filed through different methods, but the chart below depicts almost all important useful symbols (Chart adapted from M. Walsh, June, 1979).

**Table 1.1 Symbols of Miscues**

<i>Types of Miscue</i>	<i>Symbols</i>	
Refusals	—	Use a broken line to indicate an inability or refusal to attempt a word
Substitution	Play Work	Write the substituted word above the appropriate part of the text
Insertion	his For ^ work	Indicate by using an insertion sign and writing the word above
Omission	Work	Circle the word, words or parts of words missing
Self-correction	Play work <sup>c</sup>	Place a small c beside the corrected word Place an MC for miscorrection
Reversal	work } <u>hard</u>	Symbol that shows which part of letters, words, phrases or clauses have been interchanged

**Table 1.2: The similarities and differences of miscue analysis procedures (Janan D., 2011)**

Miscue Analysis Procedure	Goodman, Watson and Burke, (2005)			Davenport (2002)	Clay (2000)	Arnold (1982)
	Investigates the influence of the reader's miscue on the sentence in the context of entire story or article (p.96)	Informal Procedure	In-Depth Procedure	Over the Shoulder (OTS)	Running Records	Untitled
Purpose	Unfamiliar Text  One grade above the reader's assigned reading  Based on teacher/researcher goals (p. 46)	Examines the acceptability of miscues at text, paragraph, and sentence levels(p.96)	Provides information of each reading miscue in relation to other miscues within the sentence and within the entire text, evaluating how the text and the reader's prior knowledge influence the reading (p.131)	Focuses on ways the reader constructs meaning through the lens of individual miscue(p. 131)	Prime purpose of a Running Records is to understand more about how children are using what they know to get to the message of the text, or in other words what reading processes they are using (p.8)	The aim is to discover the balance between positive and negative strategies being used while reading.  Positive and negative strategies are based on individual miscue acceptability. (p.62)
Selecting material		Readers select or bring their own current reading material (p.130)	Unfamiliar Text  One grade above the reader's assigned reading  Based on teacher/researcher goals(p.46)	Reader's bring their own current reading material (p.156)	Any text in the classroom setting. It can be a new book or a book that has been read before. Usually a leveled book in the Reading Recovery setting	Unfamiliar text  A Readability level of 9-12 month higher than reader's normal reading (p.60)



### **Miscue Analysis Conducting Procedures in this Research-**

The miscue analysis procedure given by Goodman, Watson and Burke (2005) and Arnold (1982) were used in this research. The students were given an unfamiliar text to read. The reading passages were sorted out from the textbook of one grade above the student's current grade i.e. grade VII and from the different board i.e. Rajasthan board of Education. There are four passages for reading aloud. At the end of the passage there is a set of orally administered comprehension questions related to the passage (Arnold, 1982). In the record sheet the miscues committed by the individual in passages were noted/recorded separately. It was taken into consideration that the testing should take place somewhere quiet and free from interruption. No help was given to the students by the researcher. The participants were told before reading that they would not be assisted during the reading. The participants were informed that the oral reading session would be tape recorded. They were also informed of the purpose of this recording. The students were called one by one for reading and instructions were given properly for reading after which he or she had been allowed to read the passage. After reading each passage the comprehension questions were asked. All readings were audio-taped and analyzed afterwards. The recorded oral readings were heard a few times in order to verify, revise and code the participants' miscues on the prepared typescript.

#### **1.23 Reading Comprehension**

Reading skills main aim is to develop the skill of the learner for comprehension. Comprehension means the understanding of the meaning and implications of the ideas in a text material. Comprehension is acquiring meaning from the printed text. The word 'comprehension' means literally "holding together". Comprehension is but one several necessary skills that make up the process of reading.

The levels of understanding are determined by several factors, i.e., type and nature of reading material, clarity in the words expression, purpose, interest, and background of the reader. The meaning understood by the readers does not necessarily be confined to the intended meaning of the author. In fact, it includes determination of the word's meaning in the author's own language setting, and its linkage to the language patterns, followed by the fusion of them into a chain of related ideas.

Comprehension has three levels:

- (1) Literal meaning
  - (2) Interpretation of meaning
  - (3) Evaluation of meaning
- (1) Literal meaning- Reproducing the author's words and putting his ideas into one's own words. He grasps the passage's core idea and follows the order in which the ideas are delivered.
  - (2) Interpretation of meaning- it means the reader will "critically recognize author's motives, intention and purpose, interpret his thoughts, pass judgment on his statement, assess the relevance of the material read" followed by the summarization of the passages. He defines a reading goal, derives and supports conclusions, and makes predictions or inferences..
  - (3) Evaluation of Meaning- includes the critical reaction of the reader to the reading material, which further involves several intellectual processes such as "discriminating, imagining, analyzing, judging and problem solving". This reading also includes the derivation of implication and generalization which is not mentioned by the author.

Reading is a complex process of comprehension and evaluation involving cognitive operations like problem-solving and decision-making. Hence, all aspects of reading skill need to be taught to our students with utmost care.

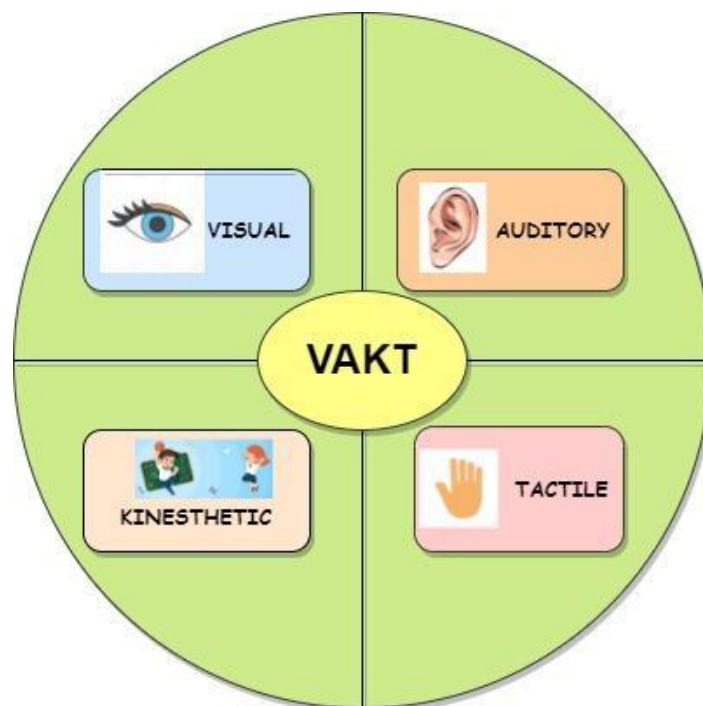
#### **1.24 Multisensory Instructional Strategy**

Multisensory instructional strategy involves the use of more than one sense in the instructional process. It is also known as VAKT (visual, auditory, kinesthetic, and tactile). It involves the use of the sense of hearing, seeing, touching and body movement.

Birsh (1999) defined Multisensory as, "Any learning activity that simultaneously incorporates two or more sensory strategies including visual, auditory, kinesthetic and tactile modalities to facilitate information intake and expression of a learner. Links between the visual, auditory, and kinesthetic-tactile pathways in stimulating learning have been constantly created".

Wadlington and Wadlington (2008) states, " Multisensory approach refers to instruction using visual, auditory and tactile formats simultaneously. Students learn better when instruction is incorporated with multiple senses and movement". The 'multi-sensory approach' makes maximum use of the different senses, in particular integrating seeing, hearing and feeling (Ronu, 2015). It provides a number of routes for information to reach the brain. As it involves constant testing and reflection on the knowledge of the student, it is diagnostic. Thus, these approaches are those which involve the use of two or more of the senses namely visual, auditory, tactile, and kinesthetic at one time. This use of senses facilitates learning and understanding better. In multi-sensory approaches for teaching, two or more senses are engaged in performing various activities: visual activities, auditory activities, tactile and kinesthetic activities; aiming towards the learning of particular content or skill.

Among the pioneers of multisensory methods is Samuel Orton (1937). He has introduced the teaching method emphasizing multisensory visual, auditory and kinesthetic-tactile skills. The memory of dyslexic students in teaching and learning will be enhanced through the multisensory method. The strength of the multisensory method is that it integrates visual, auditory and kinesthetic elements.



**Figure 1.2.VAKT model of multisensory**

Orton (1937) who conducted research on dyslexia stated that the difficulty in reading occurred when the visual images sent to the right brain were disturbed by inputs from the left brain. Recent studies in the same field were conducted by researchers from Georgetown University Medical Center. This study explored children who have difficulties in reading. The findings confirm theories or hypotheses made by Orton. This study showed that differences in phonological skills were related with differences in the brain in the process of reading. Disorder in the nerves will cause shortage in phonological skills amongst dyslexic children.

Multi-sensory instructional approach by using more than one sense motivates a student for learning, and it makes the teaching-learning process interesting. It is a creative process and helps to retain learning more permanently. Multi-sensory instructional approach should be used with learners who feel difficulty in one or more skill areas of reading, spellings, writing, mathematics etc. The multi-sensory instructional approach removes fatigue of students and their boredom too is eliminated which is caused by the use of a single method. Students become more active by this approach and enjoy the learning ((Kelpin, 2019).

Some of the multisensory techniques which could be used to assist a dyslexic student in his / her language learning are-

1. Visual techniques (Sense of sight)-Visual techniques involve the sense of sight. Visual learners learn best by seeing the information. Some of the techniques which could be used to assist the visual learners by the teacher are-
  - Use of flash cards, pictures, images, posters, models, text, graph papers, projectors, computer screens, student's artwork, text on papers, film, videos, flow charts, visual thinking maps, visual image mapping
  - Use of colors for highlighting, outlining new idea and concept, Graphic organizers
2. Auditory techniques (Sense of Hearing) - Auditory techniques focus on sound. Auditory learners learn best by hearing the information. Some of the techniques which could be used to assist the auditory learner are-

- computerized text readers, song, music, movies, videos , language games, chants, rhymes use of phone ,speaking, audio recording and playback
- Repeated reading, peer assisted reading, model reading, books on tape, paired reading, choral reading, podcasts, discussion with peers or teachers on the topic, questioning, brainstorming, explaining the concept to others.

3. Kinesthetic techniques (Body movement, large and gross motor skills)-

Multi-sensory techniques that include body movement are called kinesthetic techniques. It involves large and gross motor skills. Some of the techniques which could be used to assist the kinesthetic learner are-

- Field trips, Role playing, letter sound blending puzzles, sight word jump, Race car blending, participation in projects, Arm tapping, clapping, dancing, Sight word towers
- Sky writing or Air writing, learning games, jumping rope, singing songs, bean bag tossing, competition like flash card races and quizzes

4. Tactile techniques (Sense of touch, Fine motor skills) - Tactile techniques involve the sense of touch. It involves fine motor skills. Some of the techniques which could be used to assist the tactile learner are-

- Sand writing, salt -writing Shaving cream writing , raised line paper, Modeling materials such as clay and sculpting materials, textured objects, Sandpaper letters, Word building with tiles or magnetic letters, finger paint, Play-Dough to do something with their hands.
- Use of manipulative to represent number value for teaching mathematics.

**Rationale for the use of multisensory strategy for dyslexic children-**

Dyslexic students mostly have deficiency in acquiring the language skills, which also involves phonological and orthographic processing, and in the connection between speech and print. Reading and spelling pathways in the brain must be developed in order to connect brain areas and convey information with sufficient speed and precision. The multisensory instructional strategy is one of the most reliable methods for a dyslexic mind to learn to read because it uses “all learning pathways in the brain” (i.e., visual,

auditory, kinesthetic, tactile-VAKT) “simultaneously or sequentially” (International dyslexia Association: Marcia, 1998; Logsdon, 2008).

Multisensory instructional strategy involves the use of more than one sense in the instructional process. This is also considered as VAKT (visual, auditory, kinesthetic, and tactile). It involves the use of the sense of hearing, seeing, touching and body movement. Students with Dyslexia normally learn best when they have a mix of visual, aural, kinesthetic, and tactile input (Ngong, 2019). Jeyasekaran (2015) also stated that the VAKT technique is highly helpful in improving the reading levels in dyslexic children. Dayton (2018) concluded that dyslexia is a neurological issue that affects the aptitude to learn to read. If a student is properly identified and taught through a systematic multisensory approach they can learn to read. This approach, often called the Orton-Gillingham method is the backbone of all effective dyslexia interventions. Many studies have indicated that using a multisensory instructional strategy can help students with dyslexia improve their reading skills (Jeyasekaran, 2015; Majzub, Abdullah & Aziz, 2012; Sweeney, 2009; Giess, 2005; Joshi, Dahlgren & Boulware-Gooden, 2002; HO, LAM & AU, 2001).

From these research studies, it is clearly evident that the multisensory approach is one of the most effective and research proven approaches for teaching reading to all types of readers including children with dyslexia so Multisensory Instructional Strategy was incorporated in the present study. The investigator earnestly believes that the outcome of the study will be useful for educational planners, administrators, educators, parents and those who are concerned with the welfare of the dyslexic children.

### **1.25 Significance of the Study**

Language is an important feature of human life. It is the basis of all learning and communication. Therefore “intentional or conscious use of any sound, sign or symbol to transmit a fact, an idea, a feeling or an emotion from one individual to another may be classified as language”. Reading plays an important role in literacy (Smith, 1971). Annual Status of Education Report (ASER, 2018) indicates the worrying condition of reading level of children of primary schools in India especially in rural areas. According to the report, in all India rural districts only 50.3% children of standard V, 40.7% children

of standard IV, 27.2% children of standard III can read at least standard II level text. This is the biggest challenge our teachers face in classrooms on a daily basis and needs immediate attention. These findings clearly have important implications not only for how children cope with school today, but also for what they will be able to learn at the elementary and secondary level.

Dyslexia is a reading disability that develops throughout time and is one of the most serious problems that has to be addressed as in India it is estimated that 10-14% of school going students are diagnosed and suffering from Specific Learning Disabilities (Krishnan, 2007; Mehta, 2003). Dyslexia was found to be one of the most common Specific Learning Disabilities affecting 80% of all those identified as having Specific Learning Disabilities (Karande et al., 2005).

Children with dyslexia have problems in reading, comprehending spelling and word recognition (Grigorenko, 2001) and therefore are often seen with frustration. Poor reading contributed to dropout rates, truancy, and behaviour problems (Gillingham & Stillman, 1997). Today educators have become aware of dyslexia and researches are being done around the world on dyslexia (Snowling et al., 2020; Perry et al., 2019; Tam & Leung, 2019; Wochos, 2019; Chiarenza et al., 2014; Ecalle et al., 2009; Kirby, Silvestri, Allingham, Parrila, & La Fave, 2008; Kast et al., 2007) but in India not much work is done for the students with dyslexia and there is an urgency to carry out research in this field for the welfare of these students.

The Indian Constitution mandates that the government of India provide a high-quality educational opportunity to every child, regardless of color, religion, caste, creed, sex, or place of birth. Equality of educational opportunity is a fundamental right of every child. The Government should provide the opportunity so the child can learn to the limits of his capacity. But dyslexic children don't have enough opportunity to learn to the best of their ability.

In India people are not much aware of the concept of dyslexia. If a child has difficulty reading or writing, he is very often attacked by the harsh comments of the teachers and parents without knowing the real problem of the child (Eissa, 2010). He is being called a lazy or stupid child. Due to this behavior of the teachers and parents, the

child lost his self confidence and started doubting himself and his abilities. Teachers often have misconceptions about dyslexia. Lack of early identification and wrong perceptions of teachers regarding dyslexia increases the difficulties of dyslexic children during their school life.

The review of previous research revealed that some tools have been developed by the previous researchers ( Khalid, 2018; Kashyap , 2017; Sarita, 2017; Krishnan, 2014; Rekha, 2010; Chadha ,2004; Sunanda, 2004; Khanna, 1999; State Council of Educational Research and Training, Haryana ,1989)and some checklists are available online for identification of children with dyslexia (International Dyslexia Association ,2002) but a comprehensive tool for identifying dyslexic individuals learning at the elementary level needs to be created. In this context the Investigator decided to develop a teacher referral form for the early identification of children with dyslexia at elementary level and this tool can be used by special educators as well as the general classroom teachers to screen the dyslexics in mainstream education. Early diagnosis of dyslexic children should be a regular practice in our classroom. It can be a great relief for parents, teachers and dyslexic children as well.

The main problem of children with dyslexia is related to reading (Grigorenko, 2001; The Diagnostic and Statistical Manual of Mental Disorders, 2013; British Psychological Society, 1999). Hence, it's crucial to pay attention to and study what dyslexic pupils do while reading.

A qualitative investigation of a student's oral reading miscues is recommended by Goodman (1972). Miscue Analysis helps students in improving their reading. They are able to know their strengths and weaknesses. Teachers can understand the reading behavior of their students by using Miscue Analysis (Gopal & Mahmud, 2018). Miscue Analysis is a method of assessing oral reading errors (Stahl, 2009). In the present research the researcher will give emphasis on the problems faced by the dyslexic students and study the patterns of different types of miscues i.e. substitutions, insertions, omissions, reversal, refusals and self corrections. The analysis of oral-reading miscues will be important in prescribing specific interventions for dyslexic children to increase automaticity and efficiency in reading.



One of the aims of this research is to study the reading Comprehension of dyslexic students. Many previous researchers concluded that students with dyslexia and struggling readers have difficulties in reading comprehension (Litcher & Roberge, 1979; Cain, 2010; Gersten, Fuchs, Williams, & Baker, 2001). So these students need to be provided appropriate intervention that focuses on the development of reading comprehension (Oakland et al., 1998). In the present study instruction through Multi Sensory Strategy (MSS) will be given to improve the patterns of miscues and reading comprehension of children with Dyslexia. Multisensory Instructional strategy benefits the children more than any other learning technology (Ronu, 2015; Jeyasekaran, 2015; Wadlington & Wadlington, 2008). The use of Multi Sensory Strategy (MSS) makes learning more permanent (Prasannakumar S., 2015).

Students with Dyslexia usually learn best when instruction incorporates some combination of visual, auditory, kinesthetic and tactile (VAKT) input as well as many opportunities to practice. The researcher developed the multisensory approach intervention for the English language of class VI CBSE Dyslexic students. Almost all students with dyslexia can learn to read and write with early identification and appropriate teaching, much like Thomas Edison, Albert Einstein, Steven Spielberg, and Tom Cruise.

### **1.26 Statement of the study**

The study is designed to study the effect of multisensory instructional strategy on miscues and reading comprehension of dyslexic students.

Therefore, the study is entitled as,

“Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students”.

### **1.27 Operational definition**

**1. Multisensory Instructional Strategy-** Multisensory instructional strategy involves the use of more than one sense in the instructional process. It is also known as VAKT (visual, auditory, kinesthetic, and tactile). It involves the use of the sense of hearing, seeing, touching and body movement.

Birsh (1999) defined Multisensory as, “Any learning activity that simultaneously incorporates two or more sensory strategies including visual, auditory, kinesthetic and tactile modalities to facilitate information intake and expression of a learner. Links between the visual, auditory, and kinesthetic-tactile pathways in stimulating learning have been constantly created”.

Multisensory strategy is the present study operationally defined as the learning activities which incorporate visuals, auditory, kinesthetic and tactile (VAKT) modalities. The researcher developed the multisensory instructional plans to teach the students with dyslexia.

**2. Miscue-** In 1965 Ken Goodman coined the term ‘Miscue’ which is a deviation in oral reading from the printed text. According to Goodman, Watson and Burke, (2005) “a miscue is a place in which a reader’s observed response (OR) does not match the expected response (ER)”.

In the present study the miscue is operationally defined as the deviation in oral reading from the given text. The substitutions, insertions, omissions, reversals, self corrections and refusals miscues were studied in the present study.

**3. Reading Comprehension-** Comprehension is the ultimate goal of all readings. The word ‘comprehension’ means literally holding together. Reading comprehension refers to the reader’s ability to put together the elements of meaning encoded by a writer into his print. For the present study reading comprehension is operationally defined as the understanding of the meaning and implication of the ideas in a given text. For the present study the scores obtained in the Reading comprehension test (developed by the researcher) was taken as a measure of reading comprehension.

**4. Dyslexic Student-**International Dyslexia Association (2002) provides a comprehensive definition of dyslexia as, “Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading

experience that can impede growth of vocabulary and background knowledge”. The scores and profile obtained from Teacher referral form (developed by the researcher), Standard Progressive Matrices (SPM) by Raven, Raven and Court (2002) and Diagnostic Tool for Reading Disorder (DTRD) by Swarup and Mehta (2003) helped to identify students with dyslexia for the present study.

## **1.28 Aims and Objectives**

### **Aims of the study**

- To study the patterns of miscues in the form of substitutions, insertions, omissions, reversal, refusals and self corrections of Dyslexic Students at Elementary School level.
- To study the reading comprehension of dyslexic students at elementary school level.
- To study the effect of multi-sensory instructional strategy on the patterns of miscues and reading comprehension of Dyslexic students at Elementary School level.

**Objectives of the study** – The objectives of the current study are as follows:-

1. To develop and validate the multisensory approach intervention for the English language of class VI CBSE Dyslexic students.
2. To study the miscues in the form of substitutions, insertions, omissions, reversal, refusals and self corrections of dyslexic students of grade VI.
3. To study the reading comprehension of the dyslexic students of grade VI.
4. To study the effect of multi-sensory instructional strategy on the patterns of miscues of dyslexic students of grade VI.
5. To study the effect of multi-sensory instructional strategy on the reading comprehension of dyslexic students of grade VI.
6. To study the interaction effect of multisensory instructional strategy and gender on patterns of miscues of dyslexic students of grade VI.

7. To study the interaction effect of multisensory instructional strategy and gender on reading comprehension of dyslexic students of grade VI.

### **1.29 Research Questions**

The research questions for the present study pertaining to objectives 2 and 3 are stated as below:

1. What types of miscues are committed by the dyslexic students of grade VI?
2. What is the level of reading comprehension of dyslexic students of grade VI?

### **1.30 Hypotheses**

The hypotheses for the present study pertaining to objectives 4 to 7 are stated as below:

#### Hypothesis 1

- a. There is no significant effect of multisensory instructional strategy on patterns of substitution miscues of dyslexic students of grade VI.
- b. There is no significant effect of multisensory instructional strategy on patterns of insertion miscues of dyslexic students of grade VI.
- c. There is no significant effect of multisensory instructional strategy on patterns of omission miscues of dyslexic students of grade VI.
- d. There is no significant effect of multisensory instructional strategy on patterns of reversal miscues of dyslexic students of grade VI.
- e. There is no significant effect of multisensory instructional strategy on patterns of self-correction miscues of dyslexic students of grade VI.
- f. There is no significant effect of multisensory instructional strategy on patterns of refusal miscues of dyslexic students of grade VI.
- g. There is no significant effect of multisensory instructional strategy on patterns of miscues of dyslexic students of grade VI.

## Hypothesis 2

- a. There is no significant effect of multisensory instructional strategy on reading comprehension of dyslexic students of grade VI.
- b. There is no significant effect of multisensory instructional strategy on reading comprehension of boys with dyslexia of grade VI.
- c. There is no significant effect of multisensory instructional strategy on reading comprehension of girls with dyslexia of grade VI.

## Hypothesis 3

- a. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of substitution miscues of dyslexic students of grade VI.
- b. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of insertion miscues of dyslexic students of grade VI.
- c. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of omission miscues of dyslexic students of grade VI.
- d. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of reversal miscues of dyslexic students of grade VI.
- e. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of self correction miscues of dyslexic students of grade VI.
- f. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of refusal miscues of dyslexic students of grade VI.
- g. There is no significant interaction effect of multisensory instructional strategy and gender on patterns of miscues of dyslexic students of grade VI.

## Hypothesis 4.

There is no significant interaction effect of multisensory instructional strategy and gender on reading comprehension of dyslexic students of grade VI.

### **1.31 Delimitations of the study**

1. The sample of the study is confined to dyslexic students of district Roper of Punjab.
2. Problems in reading accuracy were determined by analysis of miscues in the form of substitutions, insertions, omissions, reversal, refusals and self corrections of students with Dyslexia at Elementary School level.
3. Reading comprehension was studied on the reading passage upon which the miscue analysis will be conducted.
4. The study is delimited to students of Grade VI.
5. Reading accuracy and reading comprehension of only the English Language were studied.

## **CHAPTER 2**

### **REVIEW OF RELATED LITERATURE**

Review of related literature is one of the most important aspects of research which helps researchers in every step of his research journey. It keeps the researcher up to date on the work which avoids needless duplication of efforts. It helps in formulation of objectives and hypotheses for the current study. It recommends a method, procedure, data sources, and statistical tools for solving the problem. According to Arlene (2014), “literature review surveys books, scholarly articles, and any other sources relevant to a particular issue, area of research, or theory, and by so doing, provides a description, summary, and critical evaluation of these works in relation to the research problem being investigated. Literature reviews are designed to provide an overview of sources you have explored while researching a particular topic and to demonstrate to your readers how your research fits within a larger field of study”.

The researcher conducted a complete evaluation of literature relevant to the current study, keeping in mind the relevance of doing so and it has been classified into five categories as mentioned below.

- Studies related to miscue analysis of dyslexic and non dyslexic children
- Studies related to dyslexic children and different intervention given to the dyslexic children
- Studies related to reading comprehension of dyslexic and non dyslexic children
- Studies related to Multisensory Instructional Strategy and its effect on the reading ability of dyslexic and non dyslexic children
- Conclusion
- Identification of research gap

#### **2.1 Studies related to Miscue Analysis of dyslexic and non dyslexic children**

Reviews of different studies conducted on Miscue Analysis have been presented below.

Saragih and Huei-Hsuan (2022) looked at two Taiwanese elementary student's oral reading processes. It focuses on the errors that pupils make when reading the material. According to Goodman (1973), Miscue refers to the symptoms that occur when a reader deviates from the assigned text. The importance of analysing reading errors is that it indicates how a reader learns comprehension during the reading process. As a result, instructors should not simply discard reading errors as mistakes. We were able to see from the miscue analysis of their readings that the proficient reader used confirming, omitting, and substitution methods in reading, whereas the struggling reader stumbled frequently, inserted words into the text, and used substitutes as well. It was also found that the proficient reader performed significantly better than the struggling reader. However, according to the miscue analysis, the struggling reader was making an effort to connect with the book, and the detour from it did not interfere with his comprehension of the material; he was simply unable to recount the story in English. In this scenario, miscue analysis was a beneficial tool for teachers to map out students' reading processes and distinguish how different types of diversions from the text affected students' engagement with the text. As a result, English teachers are better equipped to assess students' English abilities in a more precise manner by taking into account their specific circumstances.

Shen (2020) conducted his experimentation on different types of oral miscues and compared their relation with reading comprehension in silent mode among college students over Chinese language learners as second language. Sample size was chosen of 80 students. Four types of mistakes i.e., orthographic, syntactic, semantic and word-knowledge-based were made by the participants. Total 3 out of 4 types were shown to have a negative relationship with silent reading comprehension. A survey result of a similar study shows that verbal reading practice is a very important factor for improvement of reading comprehension.

Jin (2019) conducted reading miscue analysis among Eighth grade students in English language with three genres - comparison or contrast, the process and cause and effect. With 27 samples and one on one interview with samples with reading miscue inventory (Goodman, Watson and Burke, 1987) the results were calculated. Results found that analysis of miscue can be a diagnostic way for an English teacher to recognize a



student's problem related to reading and types of readings. Students can also improve their strategies of reading and develop their skill of reading.

Gopal and Mahmud (2018) analysed student's prose reading ability. Through purposive sampling one from six students were chosen for present study. They used insertions, hesitation, omission, repetition and substitution types of miscues. Data collection was done using descriptive statistics. Investigators found that reading miscue analysis can be a solution of finding out student's reading problems as well as teachers can understand the ability of their learners.

Lang (2018) raised a question if there are any qualitative differences in reading attitude of struggling readers with dyslexia, struggling readers in general without dyslexia with students who have normal readers. The Researcher tested oral reading miscues of 39 students of age group of 8 to 10 and divided them into three groups: typical reader, struggling readers with dyslexia and struggling readers without dyslexia each have 13 members. To get the answer of the question the miscues were analyzed on the basis of miscue analysis procedure and found that students of typical readers performed lesser miscues than other two groups. Semantic synthetic and phonological mistakes were greatly done by other two groups than the typical reader groups. But proper intervention can improve the results for both groups.

Harmey and Kabuto (2018) analysed the oral reading behaviour and learner's responses of the participants. This is a meta-theoretical study in which 74 responses were collected by using item analysis. Also, inferential statistics used to get results. Except one type of miscue i.e., use of meaning and grammar use among students during miscue analysis. They concluded that that reading ability depends on miscue analysis and thus it is very important to detect miscue among students.

Arisandi and Wachyudi (2017) used a diagnostic tool to find out miscues during reading comprehension in an Indonesian EFL reading English course. The study is quantitative study including detection of various types of miscues certainly done by pupils during their reading a text. Results concluded as reading loudly can be the solution for pronunciation and speed of reading affects the occurrence of miscues.

Sitorus et al. (2017) carried out a research with a purpose to find out miscues occurred during a text reading among students. Total 5 students of the same age group and same English learning capability of Taiwan was the sample of the study. In this study students were instructed to read an unfamiliar text and from that miscue analysis was done. More than 25 miscues were found during the analysis phase which belongs to insertion and dialect type of miscue. It was also found that students were made insertion and repetition miscues without tempering their understanding level.

Keh (2016) concluded that English learners' ability can be affected by miscue analysis. 8 English language learners were chosen as the sample for the present study. Their reading ability was recorded and analyzed by their patterns of miscues in both first and second language which are English and Spanish by order. Authors concluded that teachers can help students in improving their reading skill by analysing their miscues occurred during reading a text as well as students can help themselves by studying their miscue patterns.

Mikulec (2015) performed experimentation on 2 participants who are English speakers by origin and have taken Spanish as their second language and have a proficiency in Spanish reading also. They were told to read and retell two different folklores in both languages. After that detailed miscue analysis was conducted and the result shows that though these two students were good Spanish speakers have done different patterns of miscues during their reading phase in both first and second language. It is also found that misuse done by students have not affected their comprehension skill in their first language but affected negatively in Spanish.

Putri (2015) conducted a study on a total of 6 students of 3rd semester in English language of University of Brawijaya multiple theories of miscue analysis were applied for the present study. Students were grouped into two groups based on their performance: good readers and poor readers. Reading session was divided into three parts: read the text loudly, retell the text and finally discuss the same. Whole session was recorded and analysed later. Results found that the good readers group made omissions, substitutions, insertions, self-repetitions and repetition kinds of miscues with 47%, 19%, 14%, 12%, 8% rate. While bad readers made the same misuse in 44%, 25%, 17%, 10% and 4% ratio

respectively. The result of this study shows that good readers and bad readers both have the tendency to occur miscues during their reading session. Good readers have a lower chance of occurrence of miscue in comparison to poor readers. According to the researcher, lecturers should establish their own teaching technique in order to improve students' reading comprehension abilities and avoid miscues.

Pillai and Paramasivam (2014) conducted a study on oral reading capability of non-proficient speakers. By this study they assessed different strategies and types and also frequencies of miscue done by non-proficient students during their verbal reading session and their comprehension based oral reading session. The numbers of miscues made by the students and the frequencies were noted and converted into percentages by using Microsoft Excel software and analysed afterwards. Researchers concluded that non-professional learners have problems in grammar, Indian pronunciation strategy of reading and vocabulary also.

Hapsari (2013) performed experimentation on good English reader students of second semester from University of Brawijaya. The study was based on two research questions: how many kinds of miscues can be done by good readers and why they make such kinds of miscues. The study was designed on the basis of the theory of Goodman and Burke (1973). Results found that good readers even make miscues while reading. They have better skill so they were fluent but still they have shown 34% omission, 29% wrong pronunciation, 15% substitutions etc. But remarkably found that no reversal miscue occurred by them during the entire session. The Researcher suggested that this study will help students to identify their own mistakes and rectify them.

Albertini and Mayer (2011) revealed that miscue analysis is a useful tool to examine and identify the ability of reading and ability of hearing among middle school and primary level school students. This procedure of miscue analysis has been used for the past 30 years by the teachers to understand their learners. They further suggested that recently the same technique is proven useful to detect the hearing ability among deaf and difficult to hear kind of students. It was also found in this paper that miscue analysis technique is not very much useful in case of older or college or university level students because their level of understanding becomes more concrete than elementary level so this

technique is not useful for them. They used 10 college level students and results found that more effective ads had meaningful strategies and needed to find out their pros and cons rather than miscue analysis technique.

Qiuyan and Junju (2011) conducted a study to research the oral reading procedure of an EFL student using miscue analysis. He investigated the features of miscues, the impact of text type on miscues and the other variables responsible for miscue creation. The outcomes indicated that the children used the grapho-phonetic, semantic and syntactic cues in the process of meaning construction. They also utilized cognitive strategies i.e. sampling, correcting, predicting. It was also found that in comparison to semantic acceptable miscues, the miscues with high grapho-phonetic and syntactic acceptability were more frequently produced by the participants.

Juliana and Abosi (2011) conducted a quantitative study on 30 students randomly chosen from two different primary schools. Three passages were given to them to read loudly. Inter processes were recorded and analysed by quantitative and qualitative methods. Total seven types of miscues were found and analysed from the recording and the types and frequencies also causes of misuse were analysed then. Researchers concluded that miscues are not the chief cause of failure in reading comprehension among students.

Fahrenbruck (2009) concentrated over the patterns of commonness and differences of 2nd class pupils' reading performance obtained from the DIBELS appraisal test, i.e. exclusive indices of "Basic Early Literacy Skills" appraisal test and the Miscue Analysis. The study includes 18 students from three second grade classrooms. The discoveries from this analysis study showed that the text utilized in assessment assume a significant role in children's reading process and at last impact the outcome. It was also concluded that DIBELS provides less useful information to the teachers to use to help children grow as readers.

Beatty and Care (2009) explored the areas of reading ability and text reading difficulties among students. They have chosen three language cueing systems for children's reading. With hundred students of preparatory, standard 1 and 2 of the age range 5-8 were chosen for the study. Research results revealed that less mistakes or

miscues are found during reading easier texts while more frequent reading miscues found during reading of difficult texts among students. It was also shown that the use of grapho- phonic queuing systems plays a key role in reading in children.

Huszti (2008) conducted his experimentation with six Hungarian students. Of them three were found successful and the remaining 3 were unsuccessful in reading English language loudly. Previously selected text with 480 words was given to them to read aloud. After recording the entire session to get the answer of Research questions: what types of miscues are generally done by the children? How successful learners differ in miscues patterns from unsuccessful learners and how oral reading affects comprehension skill. Results of the study show that oral reading is not the solution to growing reading comprehension skills.

Almazroui (2007) conducted a case study of a single student Salem, by using methods based on Miscue Analysis and Retrospective Miscue Analysis to identify his reading problems and to get the perspective of the student as a reader. The researcher suggested that he have to re-evaluate himself as a reader by getting the point of his miscues done during his reading comprehension phase. Results used several assessment tools including interviews of Salem's parents and documents related to students from school. Researcher developed her results by studying his responses and other documentations and revealed that Salem makes some miscues which are acceptable for him also, the level of understanding and reading comprehension should be upgraded in course of time.

McKenna and Picard (2006) discussed that Miscue analysis has been utilized by educators and experts for over fifty years. Its motivation is to uncover qualities and shortcomings in how youngsters process content and accordingly educate guidance for the students. But is it still a valuable methodology? The creators attest that miscue analysis can for sure be a valuable device, however not for all the reasons its promoters have declared throughout the years. Rather, teachers should utilize miscue analysis all the more to screen youngsters' utilization of specific techniques during reading, especially as they move from setting reliance to automatic decoding.

Mante (2006) performed a case study in three different subjects like Chemistry, Economics and Literature. The whole study was conducted with two college students with different learning and reading behaviour shown in class. Miscue analysis was conducted in three different subjects by oral reading with retrospective miscue analysis technique. Result release that reading analysis can improve the knowledge base and reading process of students.

Girgin (2006) carried out a study to identify the reading comprehension ability among hearing impaired students. The students were in 8th grade and they were being trained by an auditory oral approach technique. Three types i.e., semantic, syntactic and grapho-phonetic cueing systems were used to get the results. Due to the lack of Turkish reading inventory, story retelling, question answering and filling in the gaps forms of readings were used to get the results. Result concluded that as hearing impaired students when reading a story for their instructional purpose their semantic, syntactic and grapho-phonetic cues were used for increasing understanding level of them, reading Miscue analysis helps them to understand what kind of mistakes they are doing and how to improve that.

Warde (2005) compared in his study the miscues of twenty university students with reading difficulties to twenty individuals intended for gender, age, college CPA, environment, college of major and achievement score of reading. The two passages were selected for reading from a college textbook and students were instructed to read these two passages verbally. The qualitative and quantitative analysis of miscues revealed that the pupils with learning problems produced remarkably more miscues in reading the text in comparison to the control group (1058 words to 137 words) and had a greater percentage of loss-of- textual meaning miscues. It is discovered that reading and coding-decoding difficulties exist for students with learning problems that prevail even into higher classes.

Ebersole (2005) performed a case study among middle school children who have difficulty in reading in Science, Math and literature. Miscue analysis was conducted in three cycles and after each cycle retrospective miscue analysis was done to fetch results. Cradle change in cycle shows lesson number of miscue occurred by students thus

concluding the fact that miscue analysis helps students in increasing knowledge about the reading process.

Laing (2002) found that children who have learned to read typically have no tendency in performing miscue during reading can employ effective decoding strategies then the children have trouble in learning to read. In comparison to children with language and reading difficulties, the study's findings imply that regular children encounter more mistakes that preserve the text's meaning. For children with language learning difficulties, an analysis of oral reading errors could be a useful tool for determining reading efficiency.

Argyle (1989) depicted that at the time of verbal reading people sometimes use other words which are not actually printed in the books. Such kind of misuse can be helpful for a teacher making conclusions about forthcoming learning instructions. Research describes the detailed procedure of miscue analysis and he suggested a possible coding system of different miscues and general steps of miscue analysis. He also revealed that reading miscue analysis helps teachers to systematically increase and change the reading behavior of children which also helps to find out the strength and weakness of a child in reading comprehension. Reading miscue analysis can be effective for both teachers and students in developing their classroom performance.

Taft and Leslie (1985) analyzed the impacts of previous knowledge (high, low) and oral reading accuracy on miscues and comprehension. An expository passage was given to 57 third grade average readers for reading orally. It was found that students with higher earlier information commit less miscue. Likewise, children with high earlier information effectively responded to more comprehension questions of numerous kinds – textually implicit, textually explicit and scripturally implied than kids with low earlier information. Backing for an intuitive compensatory model of reading is talked about.

Christie (1981) explained the procedure of miscue and concluded that the method is similar while using any inventory. A text is given to the reader to read aloud then the miscues are counted. Three scores are given on the basis of syntactic, semantic and grapho-phonetic similarities. After that means and percentages are calculated. This can be used to find out the techniques which the reader is using while reading the text to

understand the meaning. A few research studies have explored the impacts of evaluation level and reading capacity on patterns of miscue of readers. It was concluded that both grade level and reading capacity ought to be contemplated when interpreting children's miscue patterns.

Moyle (1979) conducted a descriptive study among first, second and third standard students. The study treats reading as a psycholinguistic process in which a child can produce miscue in their language learning ability. Total hundred children chosen for the present study and each subject were tested individually to get the results. Reading a story retelling of it and recording it was the way to conduct the study. Study result shows that with gradual increase of class standard number of reading miscues becomes lesser. Omission and substitutions and regressions were found chief problems in different types of miscues.

Allen (1976) analysed the miscues of thirty randomly selected third-year French pupils. From his tests and others, he presumes that the best estimation of the miscue analysis is that it encourages us to find the techniques the reader utilizes. Allen accepts that the miscue analysis is qualitative as well as quantitative.

Goodman (1970) reported that children's miscues can be used as a tool by the teacher for helping them in learning to read. Some errors are better than others and children should learn to correct their own errors. By the process of miscue analysis instructors and teachers will be able to find out a child's reading difficulty and also can explore the types and causes of miscue occur during the reading process. By the same process they can diagnose children's problems related to reading and get a greater in-depth knowledge about the reading process and the complexities of reading comprehension and can resolve these issues also.

Goodman(1969) explained the meaning of miscue and miscue analysis and suggested that reading can be considered as a psycholinguistic process . He presented taxonomy of cues and miscues in reading. The reader should be considered as a user of the language he uses three basic kinds of information i.e. grapho-phonetic, Syntactic and Semantic information.



Goodman (1965) describes reading as reformation of a message from language in written form with some level of comprehension. According to him reading is a psycholinguistic process. The science of linguistics has already pointed out cue systems within language. To know the children's learning process, we have to first know their ability and their language cues. Also, we have to understand the difference between understanding oral languages as well as the similarities of the same.

## **2.2 Summary**

In 1965 Ken Goodman coined the term 'Miscue' which is a deviation in oral reading from the printed text and the taxonomy of miscues was soon developed (Goodman, 1969; Goodman, Fries, & Strauss, 2016). Argyle described the detailed procedure of miscue analysis and he suggested a possible coding system of different miscues and general steps of miscue analysis (Argyle, 1989). Miscues that occur during this phase explain students' ways for overcoming reading challenges (Gopal & Mahmud, 2018). The best estimation of the miscue analysis is that it encourages us to find the techniques the reader utilises. Allen accepts that the miscue analysis is qualitative as well as quantitative (Allen, 1976).

A qualitative investigation of a student's oral reading miscues is recommended by Goodman (1972). Miscue Analysis helps students in improving their reading. They are able to know their strengths and weaknesses. Christie (1981) explained the procedure of miscue and concluded that the method is similar while using any inventory. Teachers can understand the reading behaviour of their students by using Miscue Analysis (Gopal & Mahmud, 2018). Miscue Analysis is a method of assessing oral reading errors (Stahl, 2009).

Various previous researchers conducted miscue analysis (Arisandi & Wachyudi, 2017; Jin, 2019; Keh, 2016 ; Putri,2015 ; Purwandani, 2015; Hapsari, 2013 ; Albertini & Mayer ,2011; Qiuyan & Junju ,2011; Fahrenbruck, 2009; Almazroui, 2007; McKenna & Picard ,2006; Mante, 2006; Warde, 2005; Ebersole, 2005; Sitorus et al., 2017) and concluded that the pupils' reading behaviour has revealed information about their linguistic cueing system and the tactics they employ to comprehend a text during the reading process. Miscue Analysis helps students in improving their reading. They are

able to know their strengths and weaknesses. Teachers can understand the reading behaviour of their students (Gopal & Mahmud, 2018).

According to Juliana and Abosi (2011), the most frequent disability is reading disability. Mispronunciation, substitution, insertion, omission, repetition, reversal, and refusal were the categories they used to classify oral reading errors. According to the findings, the most prevalent sort of mistake made by the students was substitution (8.51 percent), followed by mispronunciation (6.47 percent), and refusal (6.47 percent) (2.23 percent). Children's usage of three language cueing systems for reading was investigated by Beatty and Care (2009). It can be concluded that very few researcher did miscue analysis to explore the miscues of children with dyslexia (Lang, 2018; Prasanti, 2013; Abu-Rabia & Taha, 2004; Thomson, 1978) and more research is needed to explore the reading behaviour of the students with dyslexia by using miscue analysis so specific intervention and strategy can be recommended for improving the reading performance of these students .

### **2.3 Studies related to dyslexic children and different intervention given to the dyslexic children**

Yang et al. (2022) provided reliable estimates of Developmental dyslexia (DD) in children at primary stage around the world and also investigated the potential characteristics associated with that frequency. Developmental dyslexia is unique reading acquisition issues that can have a long-term harmful influence on individuals. Meta-analysis of the studies from 1950 to 2021 was conducted and study quality was assessed using the STROBE criteria. The result concluded that the overall prevalence of DD was 7.10 percent (95 percent confidence interval: 6.27–7.97 percent). Boys had a significantly higher prevalence than girls (boys: 9.22 percent, 95 percent CI, 8.07–10.44 percent; girls: 4.66 percent, 95 percent CI, 3.84–5.54 percent;  $p < 0.001$ ), but there was no significant difference in prevalence across different writing systems (alphabetic scripts: 7.26 percent, 95 percent CI, 5.94–8.71 percent; logographic scripts: 6.97 percent, 95 percent CI, 5.86–8.16 percent).

Snowling et al. (2020) formulated a model-based approach of meta-analysis and interest in dyslexia. Researchers found three results firstly, showing that the outbreak of

dyslexia cannot be measured with a single point of estimation; it is quite widespread. Secondly with children who are not this legacy will content more weak readers than that of dyslexic one. Thirdly, students with dyslexia can be found in lower performance in reading comprehension. These results can be useful to find out and implement any kind of study related to dyslexia.

Perry et al. (2019) developed a computational model to determine how reading comprehension can affect these dyslexic children in their learning outcomes. Total 622 individuals were selected for the study. Of them 388 found dyslexic. On the basis of 3 aspects namely: phonologic, orthographic and vocabulary they were evaluated. On the basis of their reading score the conclusions were made which shows individual differences and heterogeneous effect in individual to individual on the basis of their dyslexic profile.

Tam and Leung (2019) connected their experiment with secondary levels of dyslexic students of age range 7-9. Total 116 students participated in this study. Control group setup was constructed with 98 students and an intervention group with remaining students. Results drawn with the help of self-regulated learning scales. Intervention group showed significant changes in their knowledge best and behavioural outcome in learning. But academic achievement results of post-test did not exhibit greater improvement in comparison to the control group. The study concluded that intervention programs can be effective for dyslexic children in Chinese and English language.

Medina and Guimarães (2019) conducted a study with the purpose to identify the effectiveness of experimental programs by using phonic methods. 7 dyslexic students were chosen for that study of phonemic awareness and their reading comprehension. They were compared with three control groups, one having 4 skilled and younger readers, one with dyslexic children of the same age group and another group with the same age range. Total 4 groups were treated with phone awareness reading comprehension and executive functions before and after intervention given to the experimental group. Results showed higher performance among experimental groups in comparison to other groups. It was also revealed that intervention was not able to affect the cognitive site and executive

function in the experimental group. It was also concluded that isolated word reading can be improved by giving this kind of intervention to dyslexic students.

Hebert (2018) discussed the hustles faced by dyslexic children during writing. The researcher pointed out that an increase in spelling mistakes and writing quality are the key challenges of dyslexic children. By meta-analysis process the researcher conducted systematic analysis of two databases to measure the impact of spelling intervention for students affected with dyslexia. To identify the writing quality increase issue of dyslexic children, he examined relevant meta-analytical data. This research was concluded by giving the suggestion that writing skill and reading skill of dyslexic children can be improved by proper instructional methods.

Duranovic et al. (2018) conducted research to identify the effect of spacing on the reading ability of different kinds of fonts for dyslexic and non-dyslexic children. Result showed the opposite of the research hypothesis. It was found that a new Roman font with one spacing made improvement in reading among dyslexic children while Times New Roman italic and Curlz MT showed negative results for the same.

Sarita (2017) examined the effect of mindfulness intervention on meta-cognitive elements of primary school students with dyslexia. The impact of Mindfulness Intervention was found to be significant for enhancing mindfulness level and meta cognitive skills among students with dyslexia which strengthen the idea to use such interventions/programs in schools to make students more aware and attentive not only about themselves and their surroundings but also working more efficiently on the task at hand.

Kashyap (2017) studied the effect of mindfulness on reading anxiety, reading ability and self-esteem between dyslexic school students of Primary class. This study was based on pretest-posttest control group experimental design. The intervention group was exposed to mindfulness intervention and students in the control group did routine activities as conducted in their class by their teachers. The effect of this intervention was found to be significant for all the variables viz; reading anxiety, reading ability and self-esteem which implies that the intervention can be used in general classrooms in order to help the students to reduce anxiety and to increase their performance level and also to uplift their self-esteem.

Garito (2016) applied a mixed method study design for his study of Chinese dyslexic children in their English word reading profile. Along with reading capability home environments, phonological ability the democratic questionnaire and goal orientation questionnaire were also served. By Mann-Whitney test, it was found that dyslexic children performed poorly in comparison to ordinary developing children in phonological memory awareness and reading comprehension also they have shown lesser performance in miscue analysis. This study concluded that among Chinese children dyslexia is the key factor in growing difficulties in the English language.

Pedersen et al. (2016) conducted a study to identify the relationship of reading comprehension and quality of oral reading among dyslexic students. 16 University students with dyslexia were considered as an experimental group and 16 other students with no problem of reading were considered as control drops for the present study. Day when given to read a text aloud and the quality speed and rescues conducted by them were recorded for getting results. It can be concluded from present study that dyslexic children show lower performance in most aspects. But it was also found that within the group the experimental students with dyslexia showed much better results in reading comprehension.

Richardson (2015) explores the area of academic success in senior secondary students with dyslexia. The sample consisted of 30 students. One on one interviews were conducted with each college going student to identify their strength and weakness resulting from dyslexia and how it affected their academic record. Result found that destruction character switching and reading comprehension wear the chief hazards for the participant group. Environmental assets and internal strength and nonlinear thinking were the key of success found in the study also.

Chiarenza et al. (2014) conducted a before and after experimentation with 73 students of 6 years to 13 years age group. Maintaining a gap of three months the dyslexic children in the rehabilitation program of the study group had shown positive increase in their reading performance.

Wai et al. (2014) investigated the impact of '5 spelling strategies' among dyslexic children. 30 secondary level teachers from Hong Kong were the participants of the study.

Teachers used five spelling strategies which included phonological, mixing of phonological and Ortho graphical technique, visual strategy, rule-based strategy etc. Result found with both strength and weakness of the five spelling strategies.

Moll et al. (2013) performed or studied with children from families with a history of dyslexia and without history of dyslexia. They compared the cognitive malformation related to dyslexia and the familial risk of the same disease. 88 school students were frozen for the study by means of phonology language and rapid automatic reading they were assessed. Detailed analysis was done with a framework of multiple deficit models of dyslexia. It was found in this study that recapitulation of word morphology and rapid naming was associated with dyslexia.

Krishnan (2013) developed a multimedia package for elementary level of dyslexic school students. This package can be assessed with the reading miscue inventory and a standardized and validated reading assessment test. Data analysis reveals that there is a high need for training among upper primary dyslexic school students. It was also found that multimedia packages are very much effective in lowering reading miscue among dyslexic children. Reading attainment score and retention capability were also increased through multimedia packages.

Prasanti (2013) used Reading Miscue Inventory to analyze miscue among dyslexic children. It was a single individual case study of Amelia Septiarisa, dyslexic student. This study includes in depth analysis and case study of Amelia Septiarisa. The researcher investigated and found 2 substitutions, 4 omissions, 50 hesitations etc. from the experimentation conducted. Investigator concluded that Amelia Septiarisa has a laser ability to read verbally and loudly. Present researcher suggested that retrospective miscue analysis can be another way out to analyze the reading miscue among the dyslexic people.

Taghvayi, Vaziri and Kashani (2012) studied the impact of integrative approach and Fernald multisensory technique on increasing reading ability. The goal of the study was to see how two strategies affected 30 male elementary school students. Results showed that integrated approach was more efficient than Fernald method for reading comprehension and understanding of students.

Geeta (2011) investigated the impact of an intervention programme on dyslexic

children's development of life skills. The purpose of the study was to point out Life Skills deficits among dyslexic children and to evaluate the efficacy of intervention programs for developing essential Life Skills among children with Dyslexia. The sample consisted of 30 students in the age range 8 through 11 years, manifesting traits of dyslexic children and having deficits in the Life Skills (social competence, perseverance and self esteem). The findings revealed that the prevalence rate of Dyslexia among IV and V class students is 3.9 percent in Karnal district, Haryana. As far as Life Skills deficits among dyslexic children are concerned, the prevalence rate of Life Skills deficits among Dyslexics has been found to be 3.7 percent. The intervention strategies were found to be effective in developing Life Skills among dyslexic children.

Dahle, Knivsberg and Andreassen (2011) conducted their study over a small group of children with dyslexia and have major problems in reading comprehension in special education. 70 students for each experimental and control group were chosen for this study. Dyslexic experimental group showed more problems related to reading than ordinary children.

Nandhini and Balasundaram (2011) formulated a tool to assess dyslexic student's ability to understand the content of reading elements with their study.

Milani, Lorusso and Molteni(2010) experimented with the benefits of audiobooks of various types and categories. The experimental group with 20 students was treated with audio books and the control group with normal books. After an experimental period post test conducted and result found improvement in reading capability among students and increase seen in school performance also.

Wochos (2010) evaluated the effectiveness of assistive computer-assisted learning with 2<sup>nd</sup> standard school students having developmental dyslexia. The study investigated the impact of a supplemental computer-assisted learning program, total 9 students of 9<sup>th</sup> standard having developmental dyslexia. The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) were used to measure weekly oral reading fluency (ORF) performance using a single-case multiple baseline design within participants. The success of the programme was assessed using a variety of data analytic methodologies. Results of the study revealed that Headsprout Early Reading was effective at improving ORF performance

in seven of the nine participants. Responses from the parent satisfaction survey indicated that parents were highly satisfied with the Headsprout Early Reading program.

Neuropsychological remediation program was developed by Sadasivan (2009) to improve reading of dyslexics. Twenty children from Classes 5 to 7 were randomly chosen for each group. All pupils were estimated on their reading comprehension, phonological consciousness tests and neuropsychological tests before and after experimentation. The results show that the children with reading disabilities treated with neuropsychological reformation programs positively affect the control group on reading capabilities.

Ecalte et al. (2009) conducted a study on the effect of computer-based training with ortho-phonological units in children with dyslexia. two consecutive tests were performed, one with secondary school students with dyslexic students, another with individual case studies in speech therapy clinics. Pretest- training- post test was conducted to complete the study. Result shows that improvement occurred in both the experimental situation with computer-based training programs. Fidler (2009) conducted a similar study with the reading comprehension of adult dyslexic students. The study showed results that most of the students have difficulties caused due to speed of study not related to the comprehension.

Kirby et al. (2008) studied reading strategies of dyslexic college students. 66 students without dyslexia and 36 students with dyslexia were taken as samples of the study. Their rate of study, behavior, strategies and approaches were noted to draw inference. Results found that students without dyslexia showed better results than dyslexic students. Reading ability was also found positively correlated with normal students in comparison to dyslexic students.

Kast et al. (2007) explored the multisensory approach developmental dyslexia containing students. Tests were conducted with 4 groups each with and without developmental dyslexia students. After 3 months of treatment period with multisensory teaching approach including audio visual, gamification etc. parts, resulted in improvement in reading skill, as multisensory approach includes engagement of different types senses together the study become successful.

Stahl and McKenna (2006) reviewed phonics teaching strategies for children with



reading disabilities. The studies reviewed recommended the systematic and consistent program of phonics instruction. The famous method to teach dyslexics was the synthetic phonics programs which comprised the Orton-Gillingham approach. To support this, Ogden et al. (1989) adopted an alphabetic phonics method to teach reading to children for three years. The participants were students with learning disabilities at Grade 1, 2, 3, or 4. The instruction improved reading performance of the participants. The effectiveness was significant for grade one than that of other graders in teaching through the phonics method.

Nelson and Williamson (2006) looked at how self-regulated reading comprehension strategy-based training affected certain self-efficacy attributions and children with reading difficulties. The objective of the study was to compare all these factors in dyslexic and non-dyslexic children of 4th to 8th standard. With the sample size of 20 the study was conducted and found statistically positive results on reading self-efficacy major and less X please its intervention showed higher self-efficacy in post-test in comparison to self-regulatory intervention.

Faught (2005) analyzed the effect of a program based on dyslexia intervention over the instruction on identified dyslexic students. Present study includes Orton-Gillingham training program as intervention. Using the original questionnaire items, the Likert-type questions were computed into four scale items. The first four questions were combined to make up the scale item "Effects of Specialized Training." The next group of four questions made up the second scale item, "Factors of Quality Intervention." The third group of questions made up the scale item "Assessment Related Factors" and the final four questions made up the scale item called "Teacher Preparedness". The GLM one-way ANOVA procedure was utilized to test for significant differences between the training groups on the average responses to the four scales. Significant differences were found for all four areas at the 0.01 level of significance.

Chenunlt (2004) conducted a study to examine the impact of post attention training and curriculum with attention bridges for dyslexic students. With proper attention process training, the study was contracted in a literacy context. The study was designed with 4 to 6th grade students and they were put together in a 'read naturally program'. 20 students with lower marks were identified as an experimental group and registered for an attention

process training program. Significant results were found among the students who attended attention process training programs and shown improvement in their scores after getting proper training. It was also depicted in the study that the attention process training program can increase the cognitive ability of children also.

Megan and Ecalte (2004) performed an audio visual training program with students who have reading disabilities. The study was conducted to get the answers of two Research questions: phonetic features of written words can be improved or not by proper training in this galaxy of children; proper training can be proven efficient or not in dyslexic children's phonological skills. The findings show that audio-visual training improves dyslexic pupils' phonological skills as well as their phonetic features of voice recognition.

Bains (2000) used "multisensory structure linguistic method" and "alphabetic phonetic method" for the purpose of improvement in reading capability of dyslexic children. Three groups experimental design having two experiment and one control group was used. 18 students of 7 to 9 years age group and from middle class socioeconomic background and having IQ of 90 or above were chosen as the sample of study post test result shows significant difference. Multi-sensory structured linguistic method showed much greater result then alphabetic phonic methods technique group. This study proves multisensory structural linguistic methods are better than the other one.

Rozario et al. (1994) used a task-oriented approach in increasing reading skill in English in Kerala, India. Total 25 students were engaged in this study as a sample and found improvement in reading capacity among those children after treatment with a task-oriented approach. Kline and Kline (1975) treated the identified dyslexics by Orton-Gillingham-based instruction and recommended it as the best instructional approach for reading. Phonics method was incorporated in the development of strategic orientation in the present study.

Abu-Rabia and Taha (2004) explored the reading and spelling miscues of dyslexic Arabic readers contrasted and two gatherings of typical readers by matching the age and level of reading. The consequences of the reading miscue analysis uncovered a clear contribution of the uniqueness of the Arabic orthography to the sorts of mistakes done by

aforesaid three different groups. The investigation of the spelling mistakes uncovered that the prevailing sort of miscue was for the most part phonetic because of the constrained orthographic vocabulary.

Thomson (1978) worked on dyslexic student's group over their reading miscues and another student's group who have more than average reading capability was taken as a control group. Goodman's Taxonomy of Oral Miscue (Goodman, 1969) was used by the researcher. For counting the miscues the Neale Analysis of Reading Ability (Neale, 1958) was given to the students. It was contemplated that the dyslexics committed different patterns of miscues at the perceptual instead of semantic level, and didn't commit errors like beginning readers.

#### **2.4 Summary:**

Researchers from all over the world have been interested to know about dyslexia for greater than one hundred years and have attempted to develop many theories for explaining the nature of dyslexia (Snowling, 2009; Ramus et al., 2003). One of the most important difficulties that needs to be addressed is dyslexia, as in India it is estimated that 10-14% of schools going students are diagnosed and suffering from Specific Learning Disabilities (Krishnan, 2007; Mehta, 2003). Dyslexia was found to be one of the most common Specific Learning Disabilities, affecting 80% of all those identified as having Specific Learning Disabilities (Karande et al., 2005).

Dyslexia is a developmental reading disorder and affects around 10 to 15% of the population (Castro, 2016; Wadlington & Wadlington, 2005). Dyslexics have problems in reading, spelling and word recognition (Grigorenko, 2001), despite normal intelligence, sufficient learning opportunities in school and home, normal mental level and normal vision.

Dyslexia is a language based disorder caused due to lack of intellectual ability or cognitive processing ability (Das, 2009; Stanovich, 1988). Though some experts believe dyslexia is caused by a biological problem, others believe it is caused by a cognitive problem, Isabelle Lieberman made significant commitments to our comprehension of the cognitive procedures associated with dyslexia and her phonological theory of dyslexia is still broadly acknowledged by different specialists in the field (Pennington, 2003). Orton (1937) who

conducted research on dyslexia stated that the problem in reading occurred when the visual images sent to the proper brain were disturbed by inputs from the left hemisphere.

Though there are different definitions to explain the term dyslexia (Rose, 2009; The British Psychological Society, 1999; Staller, 1982; The World Federation of Neurology, 1968; Miles, 1985; International Dyslexia Association, 2002). From the different definitions of dyslexia, it is found that the dyslexics have difficulties in reading such as problems in accurate word reading, decoding and fluency due to the deficit in the phonological component of language. Therefore the dyslexics have problems in reading skills due to the phonological difficulties. Richardson (2015) found in his study that reading, distraction, and/or switching characters were key academic challenges for students with dyslexia also at the college level.

Teachers often have misconceptions about dyslexia (Gonzalez & Brown, 2018; Khaliq 2017; Alawadh 2016; Ade-Ojo, 2012; Wadlington & Wadlington 2005). Teacher's role is very important for early identification and inclusion of dyslexic children in mainstream school. The review of previous research revealed that some tools have been developed by the previous researchers (Saiju, 2018; Kashyap, 2017; Sarita, 2017; Krishnan, 2013; Rekha, 2010; Chadha , 2004; M. K. Kumari Sunanda, 2004; Khanna, 1999; State Council of Educational Research and Training, Haryana, 1989) and some checklists are available online for identification of children with dyslexia (International Dyslexia Association, 2002) but a comprehensive tool for identifying dyslexic individuals learning at the elementary level needs to be created. In this context the Investigator decided to develop a teacher referral form for the early identification of children with dyslexia at elementary level and this tool can be used by special educators as well as the general classroom teachers to screen the dyslexics in mainstream education.

## **2.5. Studies related to reading comprehension of dyslexic and non dyslexic children**

Kohar (2022) conducted a study with a purpose to see how effective the Brain-Based Learning Model was at improving reading comprehension in Indonesian Junior High Schools using the Exposition reading format. A one-group pretest-posttest design was employed in this experiment. The information was gathered through measurement or

testing methods. The normality test, homogeneity test, and t-test were utilised in the data analysis. The Brain-Based Learning Model was determined to be effective in the reading comprehension learning of the seventh-grade students of SMPN Unggulan Sindang Indramayu based on the results of the t-test calculation; the difference between the average score in the pretest and posttest. This model's efficacy was tested on a variety of Exposition Reading structures, including List, Topic, Matrix, Hierarchy, Sequence of Events, and Tree structures. In other words, Brain-Based Learning in Reading Comprehension Learning improved the capacity of seventh-grade students at SMPN Unggulan Sindang Indramayu to comprehend Exposition reading.

Ceyhan and Yildiz (2021) studied the effect of interactive reading aloud (IRA) lessons on 62 students' "reading comprehension levels, reading motivation, and reading fluency skills". In this study the researcher opted for a mixed experimental study design. The intervention was given for 11 weeks. To collect the data "Reading Comprehension Rubric, Motivation to Read Profile scale, and Rubric for Reading Prosody" were used. It was found that the student's level of "reading comprehension, reading motivation and reading fluency skills, independently of the practitioner improved" as compared to the control group.

Snowling et al. (2019) experimented with 8 years old 21 Dyslexic students who fell back in decoding; however had normal oral language and 38 children with Developmental Language Disorder having normal decoding skills along with 29 Dyslexic students meeting both the criteria. The findings suggested the creation of a special intervention aimed at students with poor decoding and oral language abilities in order to improve the overall reading problem of Dyslexic students.

Sajid and Kassim (2019) experimented by giving reading aloud as an intervention to improve the reading proficiency of the Saudi Students. Researcher adopted mixed method design, where a reading test clubbed with the interview and questionnaire of teachers and students was administered within the targeted sample of 30 postgraduate students. As expected, the result of the study showed the positive outcome of the intervention of the students' improved reading skills.

Nippold (2017) explored the connection between the deficiency in reading of adolescents to their reading skills as well as lexical and syntactic development. The results of the study revealed that deficiency in “word reading ability, lexical development, and syntactic development” simultaneously predicted deficiency in the reading comprehension. Furthermore, it was suggested that research be performed to increase adolescent students' reading comprehension

Blick, Nicholson, Chapman and Berman (2017) conducted a study with the purpose of investigating the impact of reading comprehension on the decoding skills of the poor readers. A total of 36 children aged 8 to 12 years old took part in the study. Two groups were formed having 18 students each, in which one represented the poor decoding skill with below average linguistic comprehension and another with average linguistic comprehension. In a reading exercise, a total of 25 Miscues were then categorized as “syntactic, semantic, phonemic, and graphophonic similarity”, however as such no difference was found in the groups of Miscue similarity. After employing multiple regressions on miscues by taking in account of age, pseudo word reading was found the best predictor of quality of miscues.

Stutz, Schaffner and Schiefele (2016) explored the relationship of the “intrinsic and extrinsic reading motivation with reading amount and reading comprehension in a sample of second- and third-grade elementary students”. Further, competition-oriented reading motivation was found to have negative relation with reading comprehension. At last, gender was not found to be a moderator in any of the relationships tested.

Alshehri (2014) investigated the association between students' reading comprehension and their reading aloud method in order to corroborate prior research. The study's sample consisted of 41 male fifth-grade students from Saudi Arabia. Results of pre-test and post-test revealed a significant difference in reading comprehension. Moreover, it was also found that students' reading enjoyment increased while using reading aloud strategy.

The impact of specific reading strategy education on students' reading comprehension was investigated by Tirunch (2014). 10 lessons were delivered using the REAP reading strategy. The results of the analysis of pre and posttest showed that the

experimental group performed better in reading comprehension as compared to the controlled group. In addition, it was also revealed that in the experimental group student's consistency to improvement in reading was improved. Therefore, researcher suggested using this strategy explicitly especially at upper primary grade.

Klauda and Guthrie (2008) studied the associations between the levels of reading fluency which are 1) individual word 2) syntactic unit 3) and the whole passage, in a sample of 278 students studying in the 5<sup>th</sup> grade having different levels of reading ability. Researcher employed Hierarchical regression analyses, and found that each level of reading fluency was related to the reading performance. The study supports "an automaticity effect for word recognition speed and an automaticity-like effect related to syntactic processing skill". Moreover, it was also found that "fluency and reading comprehension have a bidirectional relationship".

Stetter (2007) performed an experiment to improve comprehension strategies in students using Computer assisted instruction (CAI), having the purpose of distinguishing identification of story grammar impact reading ability of the learning disable students when conducted through computer cloud. Researchers took a sample of 9 learning disabled students of 9<sup>th</sup> grade. Results of the study confirmed a little improvement in reading comprehension. If clubbed with potential instructors, chances would be high, claimed the study.

Catts, Adlof and Ellis Weismer (2006) conducted a study to explore the "concurrently and retrospectively the language abilities of children with specific reading comprehension deficits (poor comprehension)". Analysis of the study revealed that poor comprehends possess deficiency in language comprehension; however, they have normal abilities in the processing of phonemes.

Jenkins (2003) studied the "common and distinct contributions of context-free and context reading skill to reading comprehension and the contributions of context-free reading skill and reading comprehension to context fluency". The researcher included 113 students who were then studying in 4<sup>th</sup> grade. The data were collected on "reading comprehension, read aloud a folktale, and read aloud the folktale's words in a random list". Results revealed that context fluency was predicted by list fluency and

comprehension. Result of the study confirmed the theoretical framework that “word level processes contribute relatively more to fluency at lower levels while comprehension contributes relatively more at higher levels”.

## **2.6 Summary**

Students with dyslexia often struggle with comprehension (Lyon, Shaywitz & Shaywitz, 2003; Ness & South-all, 2010; Norton, Beach, & Gabrieli, 2015; American Psychiatric Association, 2014). Many previous researchers concluded that students with dyslexia and struggling readers have difficulties in reading comprehension (Ghisi et al., 2016; McLaughlin et al., 2014; Litcher & Roberge, 1979; Cain, 2010; Gersten, Fuchs, Williams, & Baker, 2001). So these students need to be provided appropriate intervention that focuses on the development of reading comprehension (Oakland et al., 1998).

Previous studies supported the effectiveness of different interventions for enhancing the reading comprehension of the children with dyslexia. Neuropsychological remediation programme was found effective by Sadasivan (2009) ; development of phonemic awareness, reading and executive functions by Medina and Guimaraes (2019); sublexical method by Chiarenza et al. (2014); Mindfulness intervention by Kashyap (2017); five spelling strategies by Wai, Chan and Zhang (2014); integrative approach by Taghvayi, Vaziri and Kashani (2012); the use of audio books by Milani, Lorusso and Molteni (2010); supplemental computer-assisted reading program , Headsprout by Wochos (2010); computer-based training by Ecalle, Magnan, Bouchafa and Gombert (2009); Computer-based multisensory learning by Kast, Meyer, Vogeli, Gross, and Jancke (2007); phonics instruction by Stahl and McKenna ,2006 and Ogden et al. 1989 ; audio-visual training by Magnan and Ecalle (2004); Multisensory Structured Linguistic Method (MSLM) and Alphabetic Phonic Method (APM) by Bains (2000) ; Multimedia Package by Krishnan (2013) ; task-oriented approach by Rozario, Kapur and Rao (1994), Orton-Gillingham-based instruction by Kline and Kline (1975) to improve reading of students with dyslexia. Krishnan (2013) conducted a study with a purpose to develop a multimedia package for students with dyslexia studying in primary level and the results revealed that the developed Multimedia Package is effective in reducing the miscues and enhancing the reading attainment scores of the participants. Kashyap (2017)



found that the intervention can be used in general classrooms in order to increase their reading performance level. Ceyhan and Yildiz (2021) found that the interactive reading aloud practices are effective in improving reading comprehension and reading fluency skills of students. Alshehri (2014) and Sajid and Kassim (2019) also supported the reading aloud strategy to improve reading comprehension. Stutz, Schaffner and Schiefele (2016) Jenkins (2003) carried out studies to enhance reading comprehension skill. Tirunch (2014) found the explicit reading strategy instruction effective in enhancing reading comprehension of the students studying at upper primary level. Gaddy, Bakken and Fulk (2008) found text-structure strategy effective in enhancing reading comprehension skills. Researchers suggested designing more studies to improve the reading comprehension of the students (Nippold, 2017). The study of reading comprehension of children with dyslexia needs to be studied. This research gap was identified by the researcher.

## **2.7 Studies related to Multisensory Instructional Strategy and its effect on the reading ability of dyslexic and non dyslexic children**

Siregar (2022) concluded that people with language difficulties are much like the rest of us, who want to communicate and be understood. Of course, the situations and flaws they encounter present a challenge for them as well as people who engage with them. For themselves and others who deal with them, the situations and shortcomings they encounter become a challenge. Children's social and personal integration is hampered by problems or speech abnormalities produced by unique language disorders induced by brain injury. People with certain language impairments caused by brain damage who mispronounce words will be ashamed and begin to withdraw from others. This study attempts to describe the impact of a learning approach based on Multisensory Stimulation therapy and then examines the outcomes of using Multisensory Stimulation therapy in Transcortical Aphasia patients. This study employs a hybrid strategy in which qualitative and quantitative views are used in tandem. The form of research that was used was classroom-based research. The learning method based on Multisensory Stimulation therapy has a substantial favourable impact, according to this study. However, according to the principles of effectiveness and efficiency, strategies, tactics, and learning models based on Multisensory Stimulation must be devised, implemented, and coordinated.

Theresia and Recard (2021) described the multisensory approach as a method of teaching that engages students by involving their senses of sight, hearing, touch, and physical activity. The purpose of this study is to discuss the role of instructors in using a multisensory approach in primary English home-based learning, to identify the benefits and obstacles of using a multisensory approach, and to offer suggestions for overcoming the challenges. The data for this study came from the researcher's reflections, lesson plans, observation reports, and mentor's feedback, and the research approach was qualitative and descriptive. This study found that a multisensory approach to primary English home-based learning increased engagement. Total Physical Response, colour codes, storytelling, art & craft, and interactive PowerPoint are some of the educational activities that can be used to use a multisensory approach. Technical difficulties arose, as did the need to supervise the children's behaviour. As a result, parental engagement is critical in monitoring children's behaviour during the home-based learning process. It is proposed that the next researcher investigate techniques to maximise home-based learning while retaining social engagement among students.

Fazmina et al. (2020) conducted a study to determine the usefulness of multimodal instructional strategies in improving dyslexic students' scientific achievement. The experimental approach was employed in this work, with a single group pretest treatment posttest design. Purposive sampling was used to choose a sample of 08 dyslexic students in Grade 06 at AK/ Al-Muneera Girls High Schools in Addalaichenai for this study. Data was collected using a diagnostic test, a pre-test, and a post-test. Multisensory Instructional Strategies were implemented through the use of Multisensory Activity Modules. The study's findings demonstrated that multimodal Instructional Strategies were successful in improving dyslexic students' scientific achievement.

Multisensory approach is a necessary component of special education learning, according to Zunaida Yusop and Mohd Yasin (2019). The goal of the study was to evaluate how effective the multisensory method in Special Education Learning Disabilities is at helping children with learning disabilities learn in the classroom by combining cognitive, physical, emotional, and social domains during the learning and teaching process. In this study, the researcher used qualitative approaches such as observation, document analysis, and structured interview protocols. The findings

demonstrate that a multimodal strategy can help special education students (especially for autism students) improve their learning readiness by speeding up their cognitive process.

Dyslexia, according to Dayton (2018), is a neurological condition that inhibits one's ability to learn to read. One in every five people born with this reading problem is misdiagnosed and spends years attempting to learn to read through futile interventions. A student can learn to read if they are correctly identified and taught using a systematic multimodal method. This method, known as the Orton-Gillingham method, lies at the heart of all successful dyslexia interventions.

According to Evanovich and Lauren (2016), the way teachers present instructional programmes can have a significant impact on both their own behaviour and the outcomes for their pupils. This study looked at the effect of Orton-Gillingham Reading intervention on active involvement for children with problematic behaviours. This study found that OG reading teaching provides an explicit instruction programme that promotes students' active involvement with learning when performed with fidelity.

Jeyasekaran (2015) evaluated the effects of a visual auditory kinesthetic tactile strategy on reading level among children with dyslexia at Helikx Open School and Learning Centre in Salem. Three elementary school classrooms were studied in this single-subject alternating treatments design. It was discovered that the VAKT technique is highly helpful in increasing reading levels in dyslexic children.

Prasannakumar (2015) investigated the effects of a multisensory integration approach on memory and scientific achievement in IX grade pupils. The Multisensory Integration Approach was found to be more effective than the traditional strategy in the study.

Obaid (2013) investigated the impact of using the Multi-Sensory Approach in Jordanian public schools for educating children with learning disabilities on sixth-grade arithmetic achievement. The math portion of the test consisted of twenty questions. The study's sample included (117) sixth-grade kids who were divided into four groups that were carefully chosen. Results of the study found a Using a Multi-Sensory approach to teaching mathematics to sixth graders; a significant degree of mathematical achievement was achieved.

Majzub, Abdullah, and Aziz (2012) examined the effectiveness of the multisensory method to the traditional method in educating dyslexic students. The precise goals were to see if there were any significant variations in dyslexic children' alphabet recognition problems and letter mastering skills after the multisensory programme was implemented. The participants in the study were 8 and 9-year-old elementary school students who were enrolled in remedial education programmes at twelve schools in the District of Hilir, Perak, Malaysia. Finally, the t-test (alpha 0.05) revealed that the multimodal technique resulted in significant differences in alphabet identification and mastery. Teacher education programmes can incorporate the multisensory method to help dyslexic pupils learn more effectively.

Krishnan (2013) created a multimedia package for dyslexic primary school kids, as well as a Reading Miscue Inventory (RMI) to identify reading errors and a standardized Reading Assessment Test to compare the severity of dyslexia among primary school pupils. The MMP was found to be successful in reducing Reading Miscues such as “Omissions, Substitutions, Reversals, Additions, Repetitions, Mispronunciations, and Refusals among Dyslexic upper primary school pupils”.

Rahim et al. (2011) investigated the impact of multimodal instruction on gifted and talented kids who also have a specific spelling disability's spelling problems. Multisensory training and computer assisted education were employed in this study in a novel area (to train the twice exceptional students). A total of 360 children were recruited from schools and then assessed for learning disorders and IQ; the final sample included 38 female pupils. The experimental group (n1= 19) received multimodal training. Whereas the control group (n2=19) remained on the waiting list.

After the training technique, students in the experimental group produced less auditory and visual errors than students in the control group. Overall, students in the experimental group outperformed students in the control group in dictation. Working memory software and a metronome were employed as computer-assisted instruction in this study; both technologies encourage students to learn by improving their auditory and visual sensations, as well as their audio-visual coordination.

Hazoury, Oweini, and Bahous (2009) presented a multisensory, systematic, explicit phonics strategy for teaching decoding of the Arabic language to Arab dyslexic pupils, based in part on the Orton-Gillingham approach. Rather than linguistic patterns, this method emphasises vocabulary management, font modification, cumulative, color-coded reading resources, and orthographic patterns. There contains a full theoretical framework as well as a detailed creation of the multimodal teachings, as well as a sample lesson. The findings were taken into account in this study, and students were encouraged to improve their phonological awareness skills.

Gupta and Jamal (2006) conducted an analysis of reading errors of dyslexic readers in Hindi and English. Reading errors were 60% phonological; 15% orthographic; 25% mixed; and 0.38% unrelated in Hindi and English, respectively. The learning problems in their second language were also found in the first language. It is evident from the study that dyslexics had difficulties in phonological awareness skills. The present study took cognizance of the findings and oriented students to develop their phonological awareness skills.

Joshi, Dahlgren, and Boulware-Gooden (2002) conducted a study with the goal of determining the efficacy of a multimodal teaching technique for improving first-grade reading skills. The Houghton-Mifflin Basal Reading Program was used to teach the control group, whereas Language Basics: Elementary, which contains the Orton-Gillingham-based Alphabetic Phonics Method, was used to teach the treatment group. The results showed that students who were taught using the alphabetic phonic method outperformed the control group on phonological awareness measures, decoding, and reading comprehension. The study also advised that further research into the multimodal approach was needed, as well as more teacher training in multisensory methods. This research gap was taken into account in the current investigation.

The usefulness of multimodal training in enhancing “reading and writing skills of Chinese dyslexic children” was investigated by HO, LAM, and AU (2001). In comparison to the Traditional Training Group, the Multisensory Training Group exhibited “significant improvement in reading, writing, and understanding the trained and untrained materials after training”. According to the findings, multimodal training helps

dyslexic youngsters learn to read and write Chinese. Indeed, the study inspired the researcher to create a multimodal technique to help kids enhance their reading skills.

First-grade intervention for high-risk children's reading achievement, according to Litcher and Roberge (1979). Students' letter knowledge, semantics, and phonological awareness improved as a result of the multimodal method. It's worth noting that the traditional strategy improved the control group's vocabulary and comprehension abilities.

## **2.8 Summary**

Students with dyslexia frequently have problems with the basic language skills of processing speech sound (phonetic) and print (orthographic), as well as the building of brain pathways that connect speech and print. Reading and spelling brain connections must have evolved over time to connect the various areas of the brain and send information with appropriate speed and accuracy. Because it utilises all learning pathways in the brain (i.e., visual, auditory, kinesthetic, tactile) concurrently or sequentially, a multisensory instructional strategy is one of the most reliable methods for learning to read for a dyslexic brain (International dyslexia Association, Marcia, 1998; Logsdon, 2020).

Multisensory instructional strategy involves the use of more than one sense in the instructional process. It is also known as VAKT (visual, auditory, kinesthetic, and tactile). It involves the use of the sense of hearing, seeing, touching and body movement. Students with Dyslexia normally learn best when they have a mix of visual, aural, kinesthetic, and tactile input (Ngong, 2019). This is supported by Jeyasekaran (2015) where he stated that the VAKT technique is highly helpful in improving the reading levels in dyslexic children. Multisensory Instructional strategy benefits the children more than any other learning technology (Thomas, 2015; Jeyasekaran, 2015; Wadlington & Wadlington, 2008). The use of Multi Sensory Strategy (MSS) makes learning more permanent (Prasannakumar, 2015). Dayton (2018) concluded that dyslexia is a neurological issue that affects the ability to learn to read. If a student is properly identified and taught through a systematic multisensory approach they can learn to read. This approach, often called the Orton-Gillingham method is the backbone of all effective dyslexia interventions.

Many researchers found a significant effect of multisensory instructional strategy to enhance the reading level of students with dyslexia (Zunaida Yusop & Mohd Yasin, 2019; Kelpin, 2019; Elazab Elshazly, 2016; Jeyasekaran, 2015; RahimOf et al., 2011; Majzub, Abdullah & Aziz, 2012; Sweeney, 2009; Giess, 2005; Joshi, Dahlgren and Boulware-Gooden, 2002; HO, LAM & AU, 2001). From these research studies, it is clearly evident that the multisensory approach is one of the most effective and research-proven approaches for teaching reading to all types of readers including children with dyslexia. The Multisensory Instructional Strategy was incorporated in the present study.

Though numerous works have been done to study the effectiveness of multisensory instructional strategy on reading performance of students but none of the study explored the effectiveness of multisensory instructional strategy on patterns of miscues and reading comprehension of students with dyslexia so more efforts are required to fill the gaps.

## **2.9 Identification of Research Gap**

1. Annual Status of Education Report (ASER, 2018) indicates the worrying condition of reading level of children of primary schools in India especially in rural areas. According to the report, in all India rural districts only 50.3% children of standard V, 40.7% children of standard IV, 27.2 % children of standard III can read at least standard II level text. This is the biggest challenge our teachers face in classrooms on a daily basis and needs immediate attention. These findings clearly have important implications not only for how children cope with school today, but also for what they will be able to learn at the elementary and secondary level.
2. Objective of National Educational Policy 2020, “Our highest priority must be to achieve universal foundational literacy in primary school and beyond by 2025”. It must become an immediate national mission which indeed forms the basis of all future learning.
3. The Indian education system is characterized by high enrollment and low learning. The World Bank decided to devote the 2018 World Development Report to analyze the nature and magnitude of the primary education crisis since it was deemed relevant enough.

4. The multisensory approach intervention for the English language of class VI CBSE Dyslexic students needs to be developed.
5. The study of reading comprehension of children with dyslexia in Punjab needs to be studied.
6. Very few studies on Miscue Analysis of dyslexic students have been done in India yet (Krishnan, 2013). Therefore, this unexplored field in the sphere of education needs to be studied.
7. The interaction effect of multisensory instructional strategy and gender on the patterns of miscues and reading comprehension needs to be explored for more depth of understanding the reading behaviour of the children of different gender.
8. The study of effectiveness of multi-sensory instructional strategy on the patterns of miscues and reading comprehension of dyslexic students needs to be studied.
9. Teacher's role is very important for early identification and inclusion of dyslexic children in mainstream school. Lack of early identification and wrong perceptions of teachers regarding dyslexia increases the difficulties of dyslexic children during their school life. The review of previous research revealed that some tools have been developed by the previous researchers (Saiju, 2018; Kashyap, 2017; Sarita, 2017; Krishnan, 2014; Rekha, 2010; Chadha, 2004; M. K., 2004; Khanna,1999; State Council of Educational Research and Training, Haryana, 1989) and some checklists are available online for identification of children with dyslexia (International Dyslexia Association, 2002) but a comprehensive tool needs to be developed for the identification of students with dyslexia studying at elementary level.

To fill these research gaps the study is designed to study the effect of multisensory instructional strategy on miscues and reading comprehension of dyslexic students. Therefore, the study is entitled as, "Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students".



## **CHAPTER-3**

### **METHOD AND PROCEDURE**

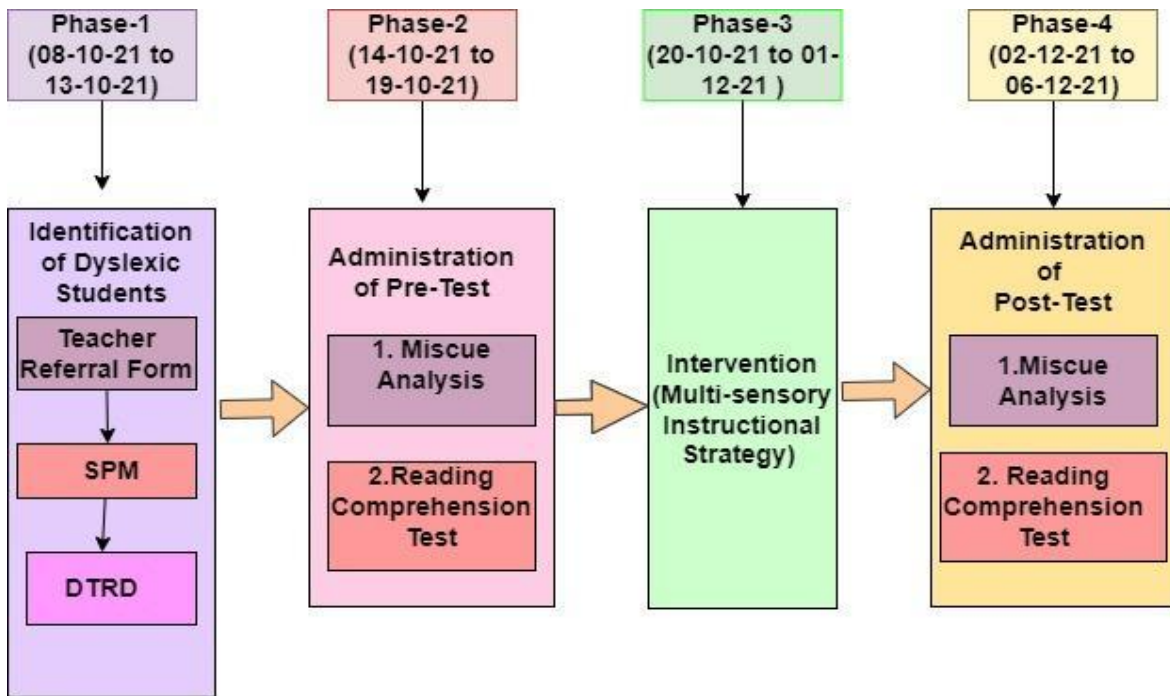
The planning of the educational research cannot be completed without a detailed design of investigation. This is to be considered as the heart and soul of the investigation. It is in reality the blueprint for the entire process of testing the hypothesis and assessing the data. According to Tuckman (1978), “A research design is a specification of operations for the testing of hypotheses under a given set of conditions.” This chapter deals with the detailed description of the design, tools, sample, variables, procedure and statistical techniques used in this study.

#### **3.1 Research Design**

Keeping in view the nature, objectives and main purpose of the study, the Experimental method was used by the investigator. Experiment method is used to evaluate the effectiveness of certain learning experiences, planned and organized, to achieve some desired objectives. According to Koul (2013), “Effectiveness of teaching methods and innovations in the evaluation techniques is also ascertained through experimental research”. The purpose of this study was to study the effect of the Multi Sensory Strategy on the patterns of miscues and reading comprehension of children with Dyslexia So the Pre Experimental Design was adopted for the present study. It was incorporated under “One -Group Pretest- Posttest Design”. In the present study, The Dyslexic Students of grade VI were taught through the Multisensory Instructional Strategy (Intervention) for six weeks after the pretest. After the intervention, post-testing was conducted. Then the data of pre – test and post – tests was compared to get the final result.

**Table 3.1: Description of Research Design**

Research Design	Dyslexic Students (N=42)
Phase	
Pre-test	<input type="checkbox"/> Patterns of Miscues <input type="checkbox"/> Reading comprehension
Intervention	Instruction through Multisensory Instructional Strategy(6 weeks)
Post-test	<input type="checkbox"/> Patterns of Miscues <input type="checkbox"/> Reading comprehension



**Figure 3.1: Research Design**

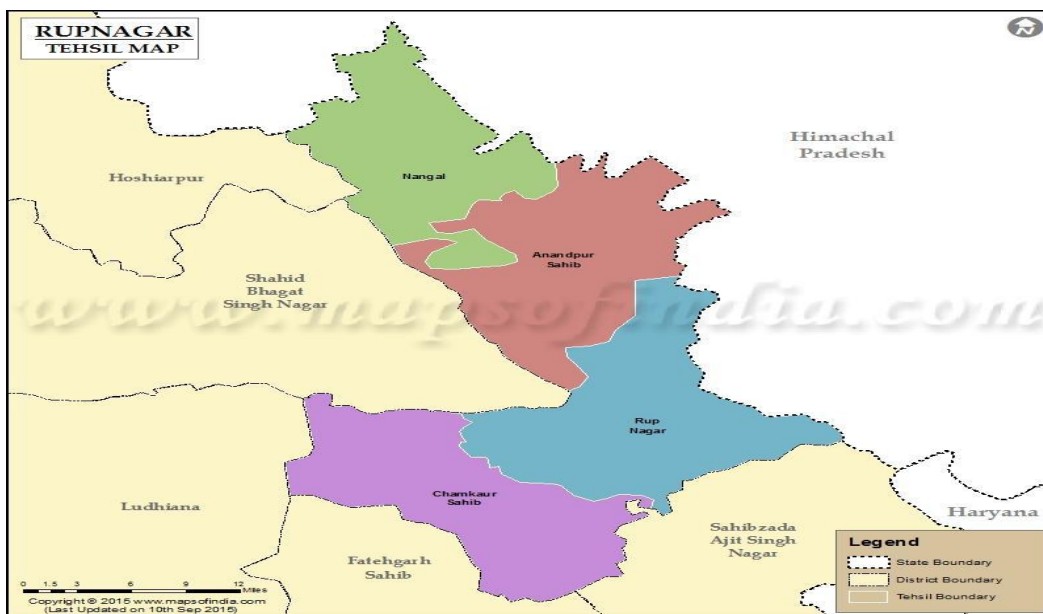
### 3.2 Variables

Variables are attributes and qualities which exhibit differences in magnitude. And which vary along some dimensions. The following variables were taken into consideration to conduct the study.

- **Independent variables**-Independent variable is the variable whose effect is to be studied. Multisensory Instructional Strategy and Gender were the attributes that served as independent variables in the present study.
- **Dependent variables** – Dependent Variables are the variables on which the effects of independent variables are to be studied. Patterns of Miscues and Reading comprehension were the dependent variables for the present investigation.

### 3.3 Sample of the Study

The technique of selecting a sample together with its size is an important aspect of research and this enhances the reliability and validity of research findings. The adequacy of a sample will depend upon our knowledge of the population or supply as well as upon the method used in drawing the sample. Sampling for this study was purposive. The population of the study was the students with dyslexia of the age group 10-12 years, studying in 6<sup>th</sup> grade. The researcher had delimited the study to students with dyslexia studying in 6<sup>th</sup> grade of the CBSE Schools of Ropar District of Punjab so the sample for the present investigation consisted of students with dyslexia studying in 6<sup>th</sup> grade in three CBSE schools of Nangal Tehsil of Ropar district (Punjab).



**Figure 3.2: District Roopnagar (Punjab) Tehsil Map**

(Source-<https://www.mapsofindia.com/maps/punjab/tehsil/rupnagar.html>)

### 3.4 Procedure of sample selection

Ropar district comprises four Tehsils i.e. Rupnagar, Anandpur Sahib, Chamkaur Sahib and Nangal. The researcher randomly selected the Nangal Tehsil for the conduct of the experiment. The sampling frame of the CBSE Schools of Nangal Tehsil of Ropar District was prepared by the researcher on the basis of the list available on the website of CBSE (<https://www.cbsechool.org/schools/rupnagar/>). The researcher visited all the 7 CBSE schools of Nangal Tehsil. Out of these 7 schools only 4 schools permitted the researcher to conduct experiments. Three schools were chosen at random from the four that had provided their approval for the experiment and shown interest in having the intervention programme executed with their children. The students of these institutions mainly come from a similar social, cultural, and economic background. They are all learning English as a second language. The medium of instruction/examination is English in both the schools. With the help of teacher concern and identification tools 42 dyslexic students of grade VI were identified for the study. (Appendix-1, 2, 3)

**Table 3.2: Characteristics of the Sampling Frame**

Characteristic	Description
Grade	6 <sup>th</sup>
Age	10 to 12 years
Gender	Male, Female
Geographical Area	Ropar district ,Punjab (India)

### 3.5 The criteria for sample selection

The present study required a sample of students with dyslexia. Three schools were selected for experimentation. The total students in grade 6<sup>th</sup> in these three schools were 351. First school had four sections having a total 147 students of 6<sup>th</sup> grade. The second school had two sections of 6<sup>th</sup> grade having a total 82 students and the third school had three sections having a total 122 students in grade 6<sup>th</sup>. The Following criteria were used for the identification of required samples from the regular classrooms.

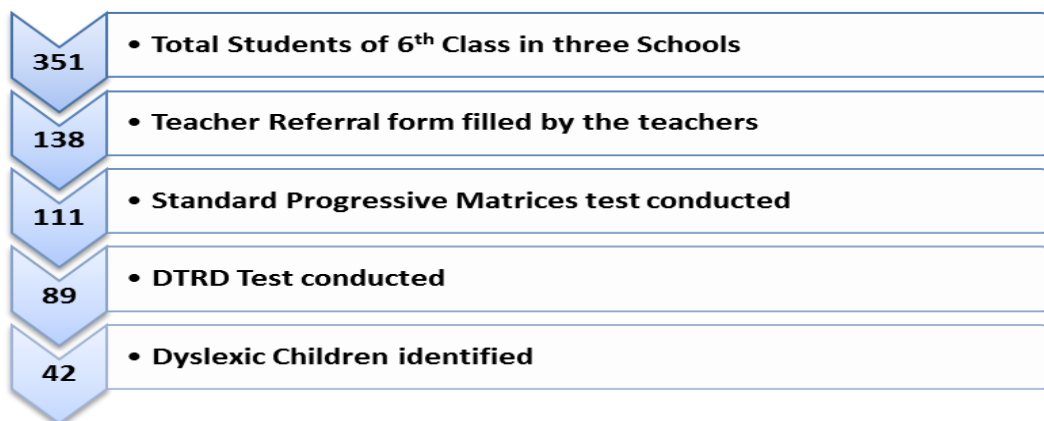
- Teacher referral forms were given to the class teachers and/or English language teachers for the identification of students showing characteristics of dyslexia. The teachers of the three selected schools filled 138 teacher referral forms for the

identification of students showing characteristics of dyslexia. A total of 111 students were identified after screening through teacher referral form

- Standard Progressive Matrices (SPM) Test for intelligence was administered on 111 students screened after teacher referral forms in all the classes. The students who scored below 25<sup>th</sup> percentile were identified as below average intelligence as per the SPM manual and therefore, all the severe dropped from the sample. A total of 89 students were identified as students with average or above average intelligence level.
- Further for the identification of students with dyslexia, students with average and above average intelligence (who scored above 25<sup>th</sup> percentile on SPM) were taken into consideration. Diagnostic Test of Reading Disorders (DTRD) was administered on these 89 students. The scoring was done as per the instructions given in the DTRD manual and 42 students were identified who exhibited characteristics of dyslexia.

### **Exclusion criteria**

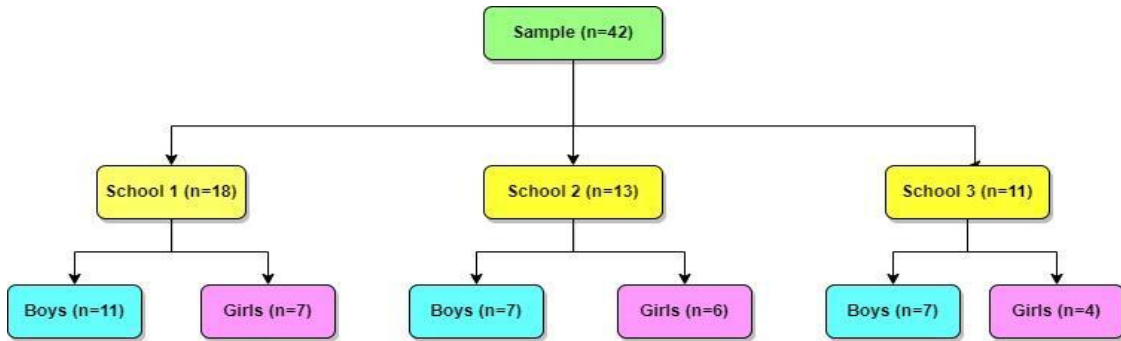
- Those students who were below the age of 10 years.
- Those students who have above the age of 12years.
- Those students who had secured below 25th percentile in the Raven’s Standard Progressive Matrices.
- Those students who were scoring above 40% on the Diagnostic Test of Reading disorder (DTRD).



**Figure 3.3: Process of sample selection**

**Table 3.3: School wise data of the Sample**

S. No.	Name of the schools	Total students in class 6th	Number of Teacher referral form filled by the teacher	Number of students selected after teacher referral form	Number of students with average or above average intelligence selected using SPM	Number of students identified as students with dyslexia using DTRD Test
1.	St.Soldier Divine Public School, Naya Nangal	147	55	44	37	18
2.	SSRVM Sr.Sec. School, Naya Nangal	82	37	28	23	11
3.	BBMB DAV public School, Nangal	122	46	39	29	13
Total		351	138	111	89	42



**Figure 3.4: Sample of the study**

### 3.6 Experimentation

**1. Identification of Dyslexic Students-** Dyslexia is a condition characterized by difficulty in reading. The score and the profile of the students obtained from Teacher Referral Form, Standard Progressive Matrices (SPM) and Diagnostic Test for Reading Disorders (DTRD) were used to identify students with dyslexia for the present study.

**2. Pre- testing phase -**In the pre-testing phase, the researcher administered the Miscue Analysis and reading comprehension Test on the Dyslexic students. It has been taken into consideration that the testing should take place somewhere quiet and free from

interruption. No help was given to the students by the researcher. The test was administered individually. There was a time limitation for the test. The students were called one by one and given proper instructions for administering the test before being allowed to read the material. The students' errors were noted, and the tape-recording process was then followed. Then the students were asked to read the passage silently so that they can concentrate on the passage. After reading each passage the comprehension questions were asked.

**3. Intervention/Treatment phase-**The Dyslexic students were taught through the Multisensory Strategy for six weeks. Researcher developed and validated the multisensory strategy based instructional plans for intervention.

**4. Post- testing phase-**In this phase, post-testing was done by re-administering the Miscue Analysis and Reading Comprehension Test on the Dyslexic Students.

### **3.7 Threats of Internal and External Validity**

The check for risks to the validity of the constructed design for the present investigation is an important phase in the experimental design process. The necessity to detect threats is important in order to reduce risks to the study design's validity, ensuring that the data gathered by the researcher is relevant and excellent. "There are two types of validity such as internal validity and external validity" (Campbell & Stanley, 1963).

#### **3.7.1 Internal Validity**

Internal validity threats are related to the experimental procedures, treatments, or experiences of experiment participants that threaten the researcher's capacity to derive causal findings (Creswell, 2009). The procedures used by the researcher to reduce threats to the experimental design's internal validity were as follows:

##### **History**

The events that influence the study's outcome simultaneously during the testing are known as history threats for the experimental design. By limiting subsequent exposure to the study's data, the history threats were reduced. Instead of using the assigned textbook, the topic was picked from a higher grade level. The time aspect was

one of the primary historical risks that were naturally managed during the experiment because it was conducted for a shorter period of time rather than a longer period of time.

### **Maturation**

Maturation refers to the changes that occur within a sample over time. These modifications threaten the internal validity since they may have an impact on the experimental treatment. The sample for this study was drawn from the same grade level. If one subject's maturational changes occurred, the same could happen to the others. The intervention will last 6 weeks. The researcher was able to control the maturational threat in this way.

### **Testing**

Taking a test once may have an impact on the individuals' performance on subsequent tests, regardless of the treatment. This is referred to as the "testing effect." The pupils in this study are dyslexic students who fall into the category of special needs youngsters. As a result, repeating the test would not threaten the experiment's internal validity.

### **Instrumentation**

A modification in the instruments employed during the investigation has resulted in an instrumentation threat to internal validity. The same testing device was employed in this investigation, and the test was given by the researcher throughout the experiment. The threat of instrumentation on internal validity was therefore mitigated.

### **Statistical Regression**

Subjects who score exceptionally high or extremely low on a pre-test to score closer to the mean on a post-test are referred to as statistical regression. Because their achievement levels were similar, they were all placed in the same group in this study. As a result, this threat is no longer a threat in the present study.

### **Selection**

When there are significant differences between the experimental and control groups even before the experiment begins, selection is a threat. All of the dyslexic



students who were chosen for this study were placed in the same group. As a result, the threat was nullified.

### **Mortality**

When a participant drops out of an experiment for any reason, it is referred to as experimental mortality. The researcher ensured that all of the samples were present during the experiment. In this method, the researcher was able to keep the risk of mortality in the experiment under control. This type of subject loss did not occur in the current study.

### **Selection- Maturation Interaction**

Variables connected to the subject and variables related to time may interact. The children with dyslexia in this study were identified using a screening process. Furthermore, the samples chosen for the study were all in grade VI and were of the same age. As a result, this menace has been eliminated.

### **3.7.2 External Validity**

External validity threats are aspects of the sample, setting, or timing that make it difficult for the researcher to generalize the findings to a population. The researcher's controlling measures in the experimental design to limit the effects on external validity are as follows:

#### **Multiple-treatment interference**

There may be a carryover effect between treatments when the same students undergo two or more treatments, therefore the results cannot be extrapolated to a single treatment. It's also known as the catalyst effect. There is only one group in the present investigation and all participants received only one treatment throughout the study. As a result, the threat was eliminated.

#### **Interaction between the setting and the treatment**

Artificially, there are various threats that impact the interaction between the setting and the treatment, making it harder for the researcher to generalize the results. This type of risk is removed by doing the experiment in a real school classroom.

### **Reactive or interaction effect of testing**

A pre-test could affect a subject's sensitivity or response to the experimental variable. Since the students selected for the study are special needs children, the sensitivity of the pre-test may not affect the external validity. All the students were pretested. If at all any interaction effect occurred it would be common to all. Pre-test was conducted just to measure the difference between the entry level behaviour and exit level behaviour. Immediate post-test were conducted to ascertain the effectiveness of multisensory instructional strategy in enhancing reading comprehension and minimizing the miscues of students with dyslexia.

### **Interaction effects of selection biases and the experimental treatment**

This experimental design is based on achieving the highest level of internal and external validity. The objective of the experiment, the types of variables included in this investigation, and the settings or limiting factors under which it is done were all carefully considered before choosing this experimental design.

### **3.8 Tools and Techniques**

The research instruments which are used to collect data are termed as tools and techniques. Selection of appropriate tools depends on the type of research and objectives of the study, nature of the sample and design of the study. The investigator used the following tools for the collection of data for the present study-

#### **Identification Tools**

- Teacher referral form prepared by the investigator
- Standard Progressive Matrices (SPM) by Raven, Raven and Court (2002)-for selecting the average intelligent and above- average intelligent students.
- Diagnostic Test of Reading Disorders (DTRD) by Swarup and Mehta (2003).

#### **Intervention Tools**

- Instructional Plans based on Multisensory Instruction Strategy-The Instructional plans based on the multisensory Instructional strategy were prepared by the

investigator herself. The dyslexic children were taught through multisensory Instructional strategy.

### **Assessment Tool**

- Miscue Analysis and reading comprehension test prepared by the investigator

### **3.9 Development of Multisensory Strategy Intervention**

The objective of this study is to minimize the miscues and enhance the reading comprehension of the dyslexic students of grade 6. Multi-sensory strategy is adopted to teach Children with dyslexia. In this approach children learn through the VAKT- Visual, Auditory, Kinesthetic and Tactile modalities simultaneously. It involves the use of the sense of hearing, seeing, touching and body movement .The procedure of developing the Intervention based on Multisensory Instructional strategy is as follows-

#### **3.9.1. Instructional Design for Developing the Multisensory Strategy Intervention-**

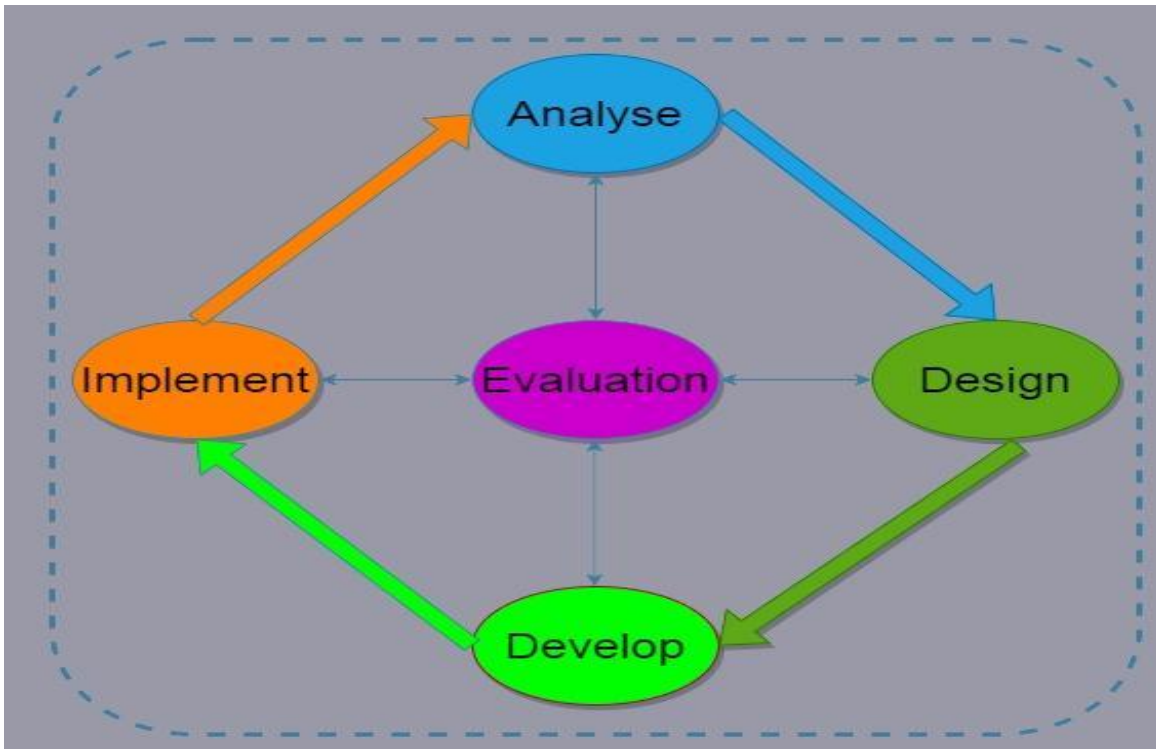
Instructional design refers to the methodical, step-by-step process of creating instructional materials in a consistent and dependable manner in order to maximise learning efficiency. In addition, it is also referred to as a framework to develop lessons or modules that facilitate learning (Merrill, Drake, Lacy & Pratt, 1996). It improves the efficiency, effectiveness, and appeal of knowledge and skill learning. It encourages learners to participate in order for them to learn more quickly and at a deeper level. Hence instructional design is a method for creating effective and efficient learning materials.

#### **ADDIE Model**

ADDIE was one of the instructional design models which was fundamental (Gustafson and Branch, 2002) for all Instructional System Design (ISD) and it represents the supreme model among all ISD models. The abbreviation ADDIE is an acronym for “Analysis, Design, Development, Implementation and Evaluation”.

#### **Rationale for adopting the ADDIE Model**

The ADDIE model, created by Royce in 1970, is the most widely utilised model for creating instructional materials (Sommerville, 1989). The term ADDIE refers to a five-step process for developing successful training and performance instruments.



**Figure 3.5: ADDIE Model.**

**Table 3.4: AIDEE Model**

1	Analyze	Current situation, Characteristics of learners and learning tasks should be considered carefully
2	Design	Develop the objectives and select the appropriate instructional approach.
3	Develop	Required instructional materials and training materials are created
4	Implement	Instructional materials are delivered and distributed
5	Evaluate	To know that the formulated objectives are achieved and the effectiveness of the materials and effectiveness

The ADDIE model is a comprehensive instructional design strategy that includes carefully prepared exercises and feedback. It can be used to create a variety of

educational training packages as well as other types of learning resources. The ADDIE approach is based on the Input-Process-Output (IPO) paradigm, which promotes guided learning for knowledge creation in a group setting.

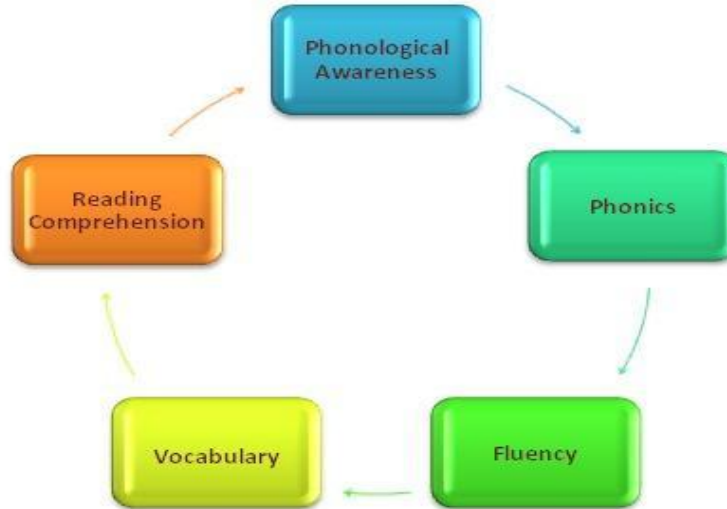


**Figure 3.6 ADDIE Model of Input-Process-Output Paradigm**

To complete its phases, ADDIE uses an Input-Process-Output (IPO) paradigm. It refers to the process of transforming the inputs to outputs or products (Learning materials, resources, experiences, environments etc). The outputs are the end product of the processing of the inputs. ADDIE is the line of best fit for the development of multisensory strategic intervention to minimize the miscues and improve the reading comprehension of students with dyslexia.

### **Development of Multisensory Strategic Intervention based on ADDIE Model**

Reading is a composite of many sub skills namely alphabet knowledge, phonological awareness, word recognition, fluency and comprehension. Among these sub-skills, alphabet knowledge, phonological awareness (Torgesen, 1990; Ehri, 2001) are the prerequisite skills of attaining fluency in reading and reading comprehension. These sub skills are closely interrelated with the acquisition and mastery of learning to read and reading skills. The National Reading Panel (2000) has reported the necessary components which are an integral part of the reading instruction to develop the reading acquisition of all types of readers such as normal readers as well as struggling readers and dyslexics.



**Figure 3.7 Components of Reading**

### **3.9.2 Components of Reading Intervention**

#### **3.9.2.1 Phonological Awareness**

Phonological awareness refers to the ability to recognize, understand, and make judgments about a language's general sound structure. Phonological awareness is categorized into several sub-skills like sentence awareness, rhyme awareness, alliteration, onset and rhyme awareness, and syllabic awareness and phonemic.

#### **3.9.2.2 Phonics**

Phonics is the relationships between the Individual sounds (phonemes) and the letters that represent them (graphemes).The purpose of phonics teaching is to help students understand the alphabetic principle, which states that letters represent spoken language sounds and that the relationship between written letters and spoken sounds is ordered, logical, and predictable.

#### **3.9.2.3 Fluency**

Reading fluency refers to the reader's ability to read effortlessly with accuracy, speed, automaticity, and expression. The National Reading Panel Report (2000) emphasized the training in reading instructions for all types of readers i.e. students with dyslexia and normal readers. There are many techniques to develop reading fluency among learners. Some of the important techniques are neurological impress (Heckelman,

1969), repeated oral reading practice (Samuels, 1979), paired reading (Topping, 1987), radio reading (Greene, 1979), choral reading, pointed reading, echo reading, Cross - age buddy reading, recording - assisted reading and timed repeated reading and charting. In brief, fluency is one of the essential components in the reading programme for all types of readers. As a consequence, fluency facilitates comprehension of the written text. Therefore, the researcher included a reading fluency component in the development of strategic intervention to enhance the oral reading fluency to minimize reading errors. The investigator took these insights into account on the importance of training in oral reading fluency and hence the fluency was another component of reading in the development of intervention to the students with dyslexia.

#### **3.9.2.4 Vocabulary**

Comprehension and vocabulary development are intimately connected. A good vocabulary is necessary for better understanding of the material. According to the National Reading Panel, vocabulary can be learned incidentally when reading a storybook or listening to others and it should be taught both directly and indirectly. Students should participate actively in education that includes acquiring vocabulary before reading, repetition and numerous exposures, learning in rich situations, incidental learning, and the use of technology. A growing vocabulary is an essential component of scholastic and reading success. The more words we know, the better we can read and comprehend the materials we encounter.

#### **3.9.2.5 Reading comprehension**

The term reading comprehension refers to the understanding of meaning from the written text. Reading comprehension is the highest skill in the development of reading acquisition. Therefore it can be developed only after mastering all the prerequisite skills of reading like decoding ability (Cain, Oakhill, & Bryant, 2004), word recognition ability, vocabulary knowledge (Storch & Whitehurst, 2002) and fluency (Allington, 1983). There is a wealth of related literature in the area of dyslexia which states that students with dyslexia and struggling readers have difficulties in reading comprehension (Litcher & Roberge, 1979; Cain, 2010; Gersten, Fuchs, Williams, & Baker, 2001). So

these students need to be provided appropriate intervention that focuses on the development of reading comprehension (Oakland et al., 1998). Therefore, before teaching reading comprehension to these students, the prerequisite reading skills for learning to read should be taught to them through direct, explicit and structured reading intervention and then followed by the intervention in reading comprehension after achieving the fundamental skills for learning to read (National Reading Panel, 2000). The mastery of all of these skills together helps all readers enhance their reading fluency and consequently comprehension (Allison, 2016).

There are many approaches available in the relevant literature to teach reading skills. But undoubtedly, the multisensory approach is one of the best approaches to teach reading skills (National Reading Panel, 2000). There is a convergence of evidence to substantiate its significance (Oakland, et al., 1998; Joshi, Dahlgren & Baulware-Godden, 2002). As a consequence, multisensory approach is a research proven and evidence based method to develop reading acquisition for all types of learners including students with dyslexia (Stahl, 2006).

The identified components and its teaching strategies were substantiated through the related studies. Hence, the investigator of the present study took cognizance of the input gained from these research studies and incorporated these suggestions in the development of strategic intervention for the students with dyslexia. Therefore, other components and pre-requisite skills of reading were also considered to develop intervention plans for the dyslexic readers.

### **3.9.3 Selection of Reading Strategies for Developing Reading Performance**

Research studies have stated the predominant reading components and its teaching strategies that need to be integrated in teaching reading skills to the students with dyslexia. The following reading components and its teaching strategies were taken from the review of related studies and incorporated in the development of conceptual framework for the present study:

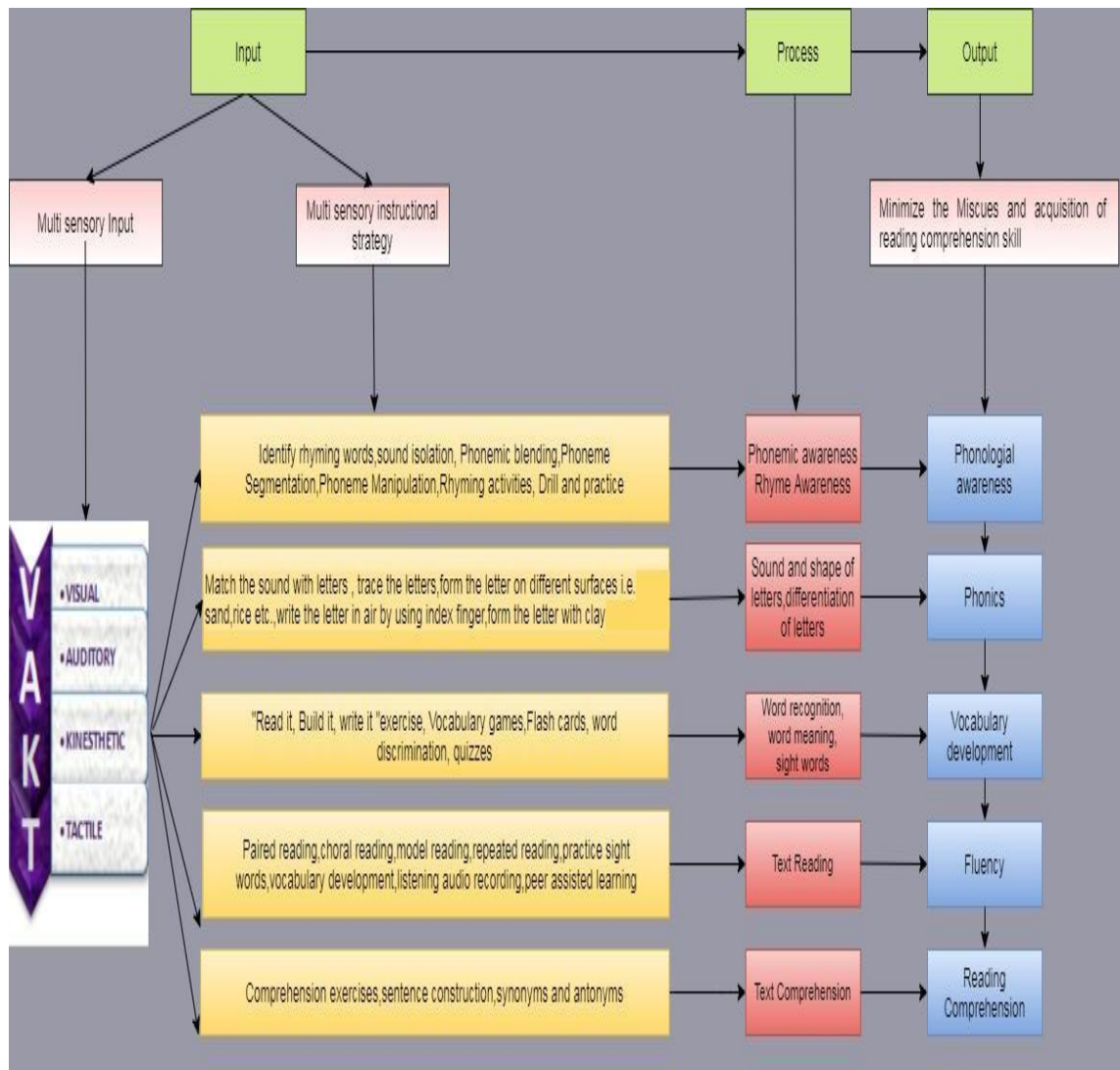


**Table 3.5 Components of Reading and its Teaching Strategies**

S.No.	Components of Reading and its Teaching Reading Strategies	Authors
1.	<p><b>Phonological Awareness</b>-Phonemic awareness, rhyme awareness, -identify rhyming words, sound isolation, phonemic blending, phonemic segmentation, phoneme manipulation, identify rhyming words, rhyming activities ( Odd one out, Rhyming Word Sit Down, Clap and Jump etc.), drill and practice</p>	Torgesen, et al. (1999), Shaywitz & Shaywitz (2001), Nicolson & Fawcett (1995).
2.	<p><b>Phonics</b>- Sound and shape of letters, differentiation of letters</p> <p>Match the sound with letters, trace the letters, form the letter on different surfaces i.e. sand, rice etc., write the letter in the air by using index finger, form the letter with clay.</p>	Ehri (2013), Adams (1990), Oakland, et al., (1998), Mann & Wimmer, (2002)
3.	<p><b>Vocabulary development</b>-Word recognition, word meaning, sight words</p> <p>-“Read it, Build it, Write it” exercise, vocabulary games, flash cards, word discrimination, quizzes</p>	Goswami (1998), Morrow & Morgan (2006)
4.	<p><b>Fluency</b>- Text Reading</p> <p>Paired reading, choral reading, model reading, repeated reading, practice sight words, vocabulary development, listening audio recording, peer assisted reading</p>	Martens, Dobson, Weinstein & Gardner (2004), Dowhower (1994), Glazer (2007) Anderson (2009).
5.	<p><b>Reading comprehension</b>- Text comprehension- comprehension exercises, sentence construction, synonyms and antonyms</p>	Litcher & Roberge, 1979; Cain, 2010; Gersten, Fuchs, Williams, & Baker, 2001

All the listed components of reading and reading strategies were incorporated in the process of developing a multisensory Intervention Plan based on multi sensory instructional approach and technology to minimize the miscues and enhance the reading comprehension in English of students with dyslexia.

### 3.9.4 Conceptual Framework-



**Figure 3.8: Conceptual Framework**

### 3.9.5 Development and validation of Multi-sensory Intervention Plan

Based on the conceptual framework, the researcher developed a Model Multi-sensory Intervention Plan to minimize the miscues and enhance the reading comprehension of the dyslexic students of grade 6 studying in English medium of instruction. Multi-sensory strategy is adopted to teach Children with dyslexia. In this approach children learn through the VAKT- Visual, Auditory, Kinesthetic and Tactile modalities simultaneously. Activities in the lessons were arranged in a sequential order from simple to complex. Only after achieving the objective of the previous lesson, students would learn the next lesson. The concept taught in the previous class will be

reviewed before going to the new lesson. Each activity emphasizes verbalization and visualization for both concept clarity and skill acquisition. Learning activities were linked to the previous activities, wherever possible. Two or more types of activities were used to introduce a concept. Brain-Gym exercises were given to enhance their whole-brain learning which needed to be practiced every day.

The use of Multi Sensory Strategy (MSS) makes learning more permanent. Students with Learning Disability usually learn best when instruction incorporates some combination of visual, auditory, kinesthetic and tactile (VAKT) input as well as many opportunities to practice. The multi sensory instructional plan will focus on the acquisition of prerequisite skills, reading comprehension, fluency, vocabulary and phonological awareness and phonics.

#### **3.9.5.1 Validation of Model lesson Plan**

For the content validity of the model Multi sensory Intervention Plan, it has been sent to a panel of experts. All the suggestions of the experts are incorporated in the 30 Instructional plans (Appendix 15).

#### **List of Experts-**

1. Dr Sudarsana Rana  
Professor  
H.P. University  
Shimla
2. Dr. Manu Chadha  
Associate Professor  
GHG Khalsa College of Education  
Sadhar  
Ludhiana (Pb)
3. Dr. Arpana Sharma  
Associate Professor  
Department of English  
S.V.S.D.P.G.College, Bhatoli  
Distt UNA (H.P.)

4. Mrs. Saloni Arora  
CBSE Trainer and Educator  
(English)  
New Delhi
5. Mrs. Shilpa Arora  
(Special Educator)  
Principal  
Upasana special School  
New Delhi
6. Dr. Parineeta Singal  
Principal  
Moga College of Education for Girls  
Ghall Kalan, Moga (Pb)
7. Dr. V. Ramchandram  
Professor  
Department of Psychology  
Kakatiya University, Warangal  
Telangana
8. Dr. Tripta Sharma  
Principal, Retired  
Lala Lajpat Rai Memorial College of Education for Girls  
Ghall Kalan, Moga (Pb)
9. Dr. Neetee Mehta  
Head  
Department of Education  
Bhagwant University  
Ajmer (Rajasthan)
10. Dr. Pooja Kapoor  
Associate Professor  
Department of Education  
Vallabh Government College, Mandi (H.P.)

11. Dr. V.K. Sharma  
Dean, Faculty of Education  
Motherhood University, Roorkee (UK)
12. Dr. N.K.Choudhary  
Principal  
S.D.College, Hoshiapur (PB)  
Research Guide (Education)  
Panjab University (PB)
13. Dr. Pardeep Thakral  
Principal  
Shree Satya Sai B.Ed. College  
Sri Muktsar Sahib (Pb)

### **Comments of the experts**

The lesson plan has been validated using criteria as content, language, suitability of age and dyslexic students and format appropriateness. The comments of the experts are as follows-

1. In behavioral objectives No.5 –Identify the alphabets of English language (B in this plan).
2. For Tactile vocabulary development shapes of different objects can be presented and this exercise can be followed by identifying the first letter of these objects rather than simply identifying shapes of letters for advanced learning.
3. You have not included kinesthetic activity in the phonological awareness and phonics component. Increase the number of activities for kinesthetic learners.
4. Allot sufficient time for reading so that every student can have an opportunity to read. The teacher is advised to give individual attention while students read.
5. All sentences need to start with capital letters.
6. The lesson plan seems to be lengthy.
7. Mention the numbers in the questions such as five persons, ten persons.

- a. Write the names of the persons starting with the letter 'b'. (Mention the number)
- b. Write the names of the things in your home that start with the letter 'b'. (Mention the number).
8. Change the frame of the question. Avoid yes/ no answers. E.g.-Did the teacher get upset by the responses of students?
9. Same answers of the both questions-
  - (1) Who is the writer of 'My Teacher'?
  - (2) Who is known as the Missile Man of India?
10. Avoid questions with answers "yes" or "No"-

Do you know the importance of turning points in one's life?
11. Questions should be short and explicit.
12. Avoid abbreviations in the instructional plan.
13. Previous knowledge should be written as previous knowledge assumed.
14. Teaching points need to be elaborated.
15. In evaluation and recapitulation there should be variety in questions.
16. After going through the Multi sensory Instructional plan, I think it is appropriate in the form of content, language, and format. The activities are interesting as well as exciting and will meet the different learning styles of the dyslexic learners of class 6. I only suggest you to mention the components or sub-skills of reading in the plans that are to be achieved through teaching –learning process.

### **3.9.5.2 Model Multi-Sensory Instructional Plan**

The model multisensory Instructional Plan is given in Appendix -4 and content map of 30 instructional plans is also given in Appendix-5.

### **3.10 Construction of Miscue Analysis and Reading Comprehension Test**

The test for Miscue Analysis and Reading Comprehension has been developed by the researcher as per the guidelines given by Goodman (1972). It is designed for miscue

analysis and assessing the reading comprehension of the dyslexic students of grade VI studying in CBSE schools with English medium of instruction before and after the implementation of the Multi sensory intervention. The language of the test is English. The passages have been sorted out from the textbook of one grade above the student's current grade i.e. grade VII and from the different board i.e. Rajasthan board of Education. There are four passages for reading aloud. At the end of the passage there is a set of orally administered comprehension questions related to the passage. There is a record sheet in the front page for recording and summarizing the scores of reading accuracy of all passages. In the record sheet the miscues committed by the individual in passages will be noted/ recorded separately.

### **3.10.1 Construction of Miscue and Reading Comprehension Test**

Stanley and Ross (1970) have suggested four basic steps for the construction of objective type tests. This procedure is most popular and widely used in test construction. The steps of objective type test construction are as follows:

- Planning of the test
- Preparation of the test items
- Try-out of the test items or administration and scoring of the test
- Evaluation of the test

The details of the steps involved in the development of the test are given below-

#### **3.10.1.1 Planning the test-**

The aim of the test was to analyze the miscues and assess the reading comprehension of dyslexic students of grade VI studying in CBSE schools with English medium of instruction.

**Preparation of the preliminary draft-** Before constructing the test, the Investigator consulted experts in the field of education, English and special education and went through some of the tests constructed by them. Their advice was used to prepare the tool. Brown (1970) writes that many more items are to be written initially than would be in the final form of the test because many items would be eliminated in succeeding steps of

analysis. While Nunnally (1959) recommends that there should be three times more items in the pool than items used in the final form of the test. The Investigator first prepared 73 items for the test on the basis of review of literature and opinion of subject experts. Four options were given for answering objective type questions. The number of items of the initial stage was about three times more than expected at the final stage.

### **Preparing Blueprint of the preliminary draft of the test-**

The blueprint is a document that depicts the entire test in detail. It depicts the distribution of the number of questions and scores allocated to distinct objectives and content features. It assists the test constructor in preparing appropriate questions per the required objectives. The blueprint is a three-dimensional chart that shows the distribution of questions objectively, content-wise, and Item-wise.

The name of objectives and Weightage given to it is given below in the table 3.6

**Table 3.6 Weightage to the objectives**

<b>S. No.</b>	<b>Objectives</b>	<b>No. of questions</b>	<b>Marks</b>	<b>Percentage</b>
1.	Knowledge	30	60	41.09
2.	Comprehension	25	50	34.24
3.	Application	18	36	24.65
Total		73	146	100

**Table 3.7 Weightage to the content**

<b>Paragraph</b>	<b>No. of questions</b>	<b>Marks</b>	<b>Percentage</b>
Paragraph-1	13	13	17.80
Paragraph-2	13	13	17.80
Paragraph-3	21	13	28.76
Paragraph-4	26	26	35.61
Total	73	73	100



(c) **Weightage to the form of Questions-** In order to keep the objectivity objective type questions were selected for the test and it is represented in table given below-

**Table 3.8: Weightage to the questions**

Item Type	No. of Questions	Marks	Percentage
Multiple Choice Type	73	73	100
Total	73	73	100

### **Blueprint of the preliminary draft**

**Table 3.9: Blue Print**

Objectives	Knowledge	Comprehension	Application	Total
Passage-1	6(6)	6(6)	1(1)	13(13)
Passage-2	6(6)	5(5)	2(2)	13(13)
Passage-3	8(8)	6(6)	7(7)	21(21)
Passage-4	10(10)	8(8)	8(8)	26(26)
Total	30(30)	25(25)	18(18)	73(73)

(Note: the number outside the brackets denotes the number of questions, while the number inside the brackets denotes the scores assigned to each question individually).

#### **3.10.1.2 Preparation of the Test Items and scoring key-**

The preliminary draft of the test consisting of 73 items has been prepared. All items are multiple choice questions. The test has been prepared on the basis of 'Blue-Print' considering the Knowledge, comprehension, application type items. In the present test all the selected items are objective type and each item carries equal marks.

**Expert Opinion-** The Preliminary draft of the test was sent to the language expert .The language expert made necessary corrections in the language of the test. 14 items were rejected by the language expert. Based on her suggestions, 14 items were deleted and some items were modified. Total 59 items remained in the first draft of the test. The first

draft was sent to a panel of experts including teacher educators, CBSE master trainer and special educator.

**Content Validity Ratio-** The Content Validity Ratio originally proposed by Lawshe in 1975 is an item statistic that is useful in the rejection or retention of specific items. The Content Validity Ratio (CVR) was generated for each item which a numeric value indicating the instrument's degree of validity determined from expert's ratings of CV. CVR varies between 1 and -1, and a higher score indicates greater agreement among experts. The formula for the CVR is  $CVR = (N_e - N/2) / (N/2)$ , where  $N_e$  is the number of experts indicating an item as "essential" and N is the total number of experts (Zamanzadeh, 2015).

Table 3.10 shows of items of the tool and the CVR calculations. Items that were marked not essential had a  $CVR < 1$ . This value is based on the total number of experts,  $N = 5$ , and the numerical values of the Lawshe table (Lawshe, 1975, Ayre & Scally,2014). Forty one items had a CVR of 1.00, three items a score of 0.6, ten items a score of 0.2, and five items a score of -0.2. 18 items out of 59 were marked not essential and on the basis of CVR 18 items were deleted. After items have been identified for inclusion in the final form, the content validity index (CVI) is computed for the whole test. The CVI is simply the mean of the CVR values of the retained items. The content validity index of the test is 1. Thus, a second draft of 41 items was prepared.

**Table 3.10: Summary of Item wise Content Validity Ratio (CVR)**

S.No.	Item No.	Accepted	Rejected	CVR	Accept/Reject
1.	Item No. 1	5	0	1	Accepted
2.	Item No. 2	5	0	1	Accepted
3.	Item No. 3	5	0	1	Accepted
4.	Item No. 4	5	0	1	Accepted
5.	Item No. 5	5	0	1	Accepted
6.	Item No. 6	5	0	1	Accepted
7.	Item No. 7	5	0	1	Accepted
8.	Item No. 8	5	0	1	Accepted
9.	Item No. 9	5	0	1	Accepted

<b>S.No.</b>	<b>Item No.</b>	<b>Accepted</b>	<b>Rejected</b>	<b>CVR</b>	<b>Accept/Reject</b>
10.	Item No. 10	3	2	0.2	Rejected
11.	Item No. 11	5	0	1	Accepted
12.	Item No. 12	3	2	0.2	Rejected
13.	Item No. 13	5	0	1	Accepted
14.	Item No. 14	5	0	1	Accepted
15.	Item No. 15	3	2	0.2	Rejected
16.	Item No. 16	2	3	-0.2	Rejected
17.	Item No. 17	5	0	1	Accepted
18.	Item No. 18	5	0	1	Accepted
19.	Item No. 19	5	0	1	Accepted
20.	Item No. 20	5	0	1	Accepted
21.	Item No. 21	5	0	1	Accepted
22.	Item No. 22	3	2	0.2	Rejected
23.	Item No. 23	2	3	-0,2	Rejected
24.	Item No. 24	3	2	0.2	Rejected
25.	Item No. 25	5	0	1	Accepted
26.	Item No. 26	5	0	1	Accepted
27.	Item No. 27	3	2	0.2	Rejected
28.	Item No. 28	5	0	1	Accepted
29.	Item No. 29	5	0	1	Accepted
30.	Item No. 30	2	3	-0.2	Rejected
31.	Item No. 31	3	2	0.2	Rejected
32.	Item No. 32	5	0	1	Accepted
33.	Item No. 33	5	0	1	Accepted
34.	Item No. 34	5	0	1	Accepted
35.	Item No. 35	5	0	1	Accepted
36.	Item No. 36	5	0	1	Accepted
37.	Item No. 37	5	0	1	Accepted
38.	Item No. 38	5	0	1	Accepted
39.	Item No. 39	4	1	0.6	Rejected

S.No.	Item No.	Accepted	Rejected	CVR	Accept/Reject
40.	Item No. 40	5	0	1	Accepted
41.	Item No. 41	5	0	1	Accepted
42.	Item No. 42	5	0	1	Accepted
43.	Item No. 43	2	3	-0.2	Rejected
44.	Item No. 44	5	0	1	Accepted
45.	Item No. 45	5	0	1	Accepted
46.	Item No. 46	5	0	1	Accepted
47.	Item No. 47	5	0	1	Accepted
48.	Item No. 48	5	0	1	Accepted
49.	Item No. 49	3	2	0.2	Rejected
50.	Item No. 50	4	1	0.6	Rejected
51.	Item No. 51	5	0	1	Accepted
52.	Item No. 52	2	3	-0.2	Rejected
53.	Item No. 53	3	2	0.2	Rejected
54.	Item No. 54	5	0	1	Accepted
55.	Item No. 55	5	0	1	Accepted
56.	Item No. 56	4	1	0.6	Rejected
57.	Item No. 57	5	0	1	Accepted
58.	Item No. 58	5	0	1	Accepted
59.	Item No. 59	3	2	0.2	Rejected
Content Validity Index-1					

(N- Total number of Panelists i.e. 5

CVR<sub>Critical</sub> for a panel of 5 is 1, Accepted-41, Rejected-18)

**Scoring of the test-** For each correct answer, a score of 1 will be given and zero will be given for wrong answers. The scoring key for the test is prepared (Appendix-6).

### 3.10.1.3 Try out of the test

**Pilot testing** - The second draft of 41 items that was obtained after the expert opinion was tested on a small sample of 10 students. This pilot testing was done to check the

language difficulty and the complexity of the statements. The second draft of 41 items was then tried out on a sample of 100 students for item analysis.

### **Item Analysis**

It is the process of determining whether or not an item is suitable for inclusion in the final test. It is a statistical strategy that is used to choose and reject test items based on their difficulty index and/or discriminative capacity. The final test items were chosen based on the difficulty index and discriminating power of the items (Table 3.11).

The scores obtained by these 100 students on the second draft were arranged in descending order. The maximum score for the preliminary draft was 41 marks. From the descending order of scores, upper 27% and lower 27% were taken for item analysis. The item-wise scores of these upper and lower groups were entered in an excel sheet. Kelley (1939) suggested that using “The upper and lower 27% groups” method is the best way for computing discrimination. The criteria for selection and rejection of the items for the final draft were set as per the values of DI and DP. The Difficulty Index and Discrimination Power for each item were calculated using the formulae as given below:

$$\text{Discrimination Power (DP)} = \frac{\text{RU} - \text{RL}}{N/2}$$

$$\text{Difficulty Index (DI)} = \frac{\text{RU} + \text{RL}}{N}$$

Where,

RU= Number of right responses in the upper group.

RL= Number of right responses in the lower group.

N=Total number of students in both the groups.

The calculated DI and DP for each item have been given in appendix-7. Items to be in the final test were selected on the basis of difficulty index and discriminative power of the items. **Garret (1962)** suggests that items with a Discriminative power (DP) of 0.20 or more are regarded as satisfactory. Items having zero or negative validity are useless and must be discarded.

The criteria of item discrimination power could be seen in the table below which is proposed by **Ebel and Frisbie (1986)** are:

Discrimination index		Interpretation
$0.70 \leq DP \leq 1.00$	Excellent	Accepted
$0.40 < DP \leq 0.70$	Good	Accepted
$0.20 < DP \leq 0.40$	Satisfactory	Accepted
$0.00 < DP \leq 0.20$	Poor	Rejected

Difficulty Index		Interpretation
0.00- 0.30	Difficult	Rejected
0.31- 0.70	Moderate	Accepted
0.71- 1.00	Easy	Rejected

**Table 3.11 Difficulty Index (DI) and Discriminative Power (DP) for 41 Items of Reading comprehension Test**

Item No.	Difficulty Index	Discriminative Power	Accepted/ Rejected
1	0.99	-0.03	Rejected
2	0.96	0.03	Rejected
3	0.97	0	Rejected
4	0.67	0.25	Accepted
5	0.64	0.40	Accepted
6	0.21	-0.07	Rejected
7	0.65	0.55	Accepted
8	0.66	0.44	Accepted
9	0.43	0.55	Accepted
10	0.46	0.33	Accepted
11	0.80	0.14	Rejected

<b>Item No.</b>	<b>Difficulty Index</b>	<b>Discriminative Power</b>	<b>Accepted/ Rejected</b>
12	0.63	0.59	Accepted
13	0.41	0.44	Accepted
14	0.40	0.51	Accepted
15	0.62	0.70	Accepted
16	0.54	0.70	Accepted
17	0.62	0.81	Accepted
18	0.59	0.81	Accepted
19	0.44	0.51	Accepted
20	0.60	0.48	Accepted
21	0.47	0.29	Accepted
22	0.35	0.51	Accepted
23	0.46	0.55	Accepted
24	0.52	0.48	Accepted
25	0.57	0.44	Accepted
26	0.57	0.77	Accepted
27	0.52	0.62	Accepted
28	0.64	0.55	Accepted
29	0.66	0.55	Accepted
30	0.32	0.40	Accepted
31	0.55	0.44	Accepted
32	0.56	0.74	Accepted
33	0.44	0.44	Accepted
34	0.37	0.81	Accepted
35	0.47	0.70	Accepted
36	0.47	0.44	Accepted
37	0.50	0.59	Accepted
38	0.35	0.44	Accepted
39	0.59	0.44	Accepted
40	0.43	0.62	Accepted
41	0.51	0.77	Accepted

Only the item having Difficulty Index (DI) ranging from 0.31 to 0.70 and Discriminative power (DP) more than 0.20 were accepted for the final draft. The very difficult and very difficult items were rejected. In this way, 5 items were rejected and a final draft of 36 items was prepared (**Appendix-7**).

The distribution of these 36 items of final draft of reading comprehension test is shown in Table 3.12

**Table 3.12: Paragraph wise distribution of items of the final draft of reading comprehension test**

S. No.	Paragraph	Number of items	Maximum marks	S. No. of items in the test
1.	1.	6	6	1-6
2.	2.	6	6	7-12
3.	3.	10	10	13-22
4.	4.	14	14	23-36
Total	4	36	36	

**3.10.1.4 Evaluation of the test-** A good test should be valid, reliable and objective. The final draft of the test is evaluated in terms of various kinds of error measurement.

**3.10.1.5 Validity of the test-**The extent to which a test accurately assesses what it is designed to measure is known as test validity.

- **Face Validity-**

The face validity of a test item is a judgment about how relevant the test items appear to be. “if the test definitely appears to measure what it purports to measure on the face of it, then it could be said to be high in face validity” (Cohen, Swerdlik and Kumthekar, 2014). In order to establish the face validity of the final test, it was given to experts for scrutinizing each item of the test. Based on the experts’ consultation and opinion, it can be said that the tool used in the study possesses face validity.

- **Content Validity-**

“Content Validity refers to the degree to which the test actually measures, or is specifically related to, the traits for which it was designed. It shows how adequately the



test samples the universe of knowledge and skills that a student is expected to master. Content validity is based upon careful examination of course textbooks, syllabi, objectives and judgment of subject matter specialists” (Best & Kahn, 2004). The content validity showed the adequacy of the content of a test. The tool used in the current study possessed content validity. The items in the tool were based on the relevant literature, and consultation with experts in the field. Their valid suggestions were taken into account while constructing as well as restructuring the test and thus, the test possesses content validity. Content validity judgments require subject matter expertise. Therefore five experts were chosen; they were -

**List of Experts-**

1. Dr. V.K. Sharma  
Dean, Faculty of Education  
Motherhood University, Roorkee (UK)
2. Dr. N.K.Choudhary  
Principal  
S.D.College, Hoshiarpur (PB)  
Research Guide (Education)  
Panjab University (PB)
3. Dr. Arpana Sharma  
Associate Professor  
Department of English  
S.V.S.D.P.G.College, Bhatoli  
Distt. UNA (H.P.)
4. Mrs. Saloni Arora  
CBSE Trainer and Educator  
(English)  
New Delhi
5. Mrs. Shilpa Arora  
(Special Educator)  
Principal  
Upasana special School  
New Delhi

To check the content clarity of the items, the tool was given to a panel of the experts. The rephrase or refinement or addition or deletion of the test was made on the basis of feedback and suggestions of the experts

**3.10.1.6 Reliability of the test-**A test is considered as reliable if it regularly measures whatever it is measuring. “A reliability coefficient is an index of reliability, a proportion that indicates the ratio between the true score variance on a test and the total variance. In tests that have a high coefficient of reliability, errors of measurement have been reduced to a minimum, reliable tests are stable in whatever they measure and yield comparable scores upon repeated administration” (Best & Kahn, 2004). In the present study the researcher established the coefficient of reliability using two methods of reliability for the reading comprehension test i.e. test-retest reliability and internal consistency reliability has been used for determining the reliability of the reading comprehension test.

For the test-retest method of reliability the final draft of 36 items was administered on a sample of 50 students. After a gap of 15 days, the test was again conducted on the same group of 50 students. The Test-Retest reliability coefficient of the test is 0.82. “Internal consistency describes estimates of reliability based on the average correlation among items within a test” (Nunnally, 1994). Internal consistency reliability of Cronbach alpha coefficient for the test is 0.857.

#### **3.10.1.7 Objectivity of the test-**

The validity and reliability of a test are both affected by its objectivity. Only objective type elements were included in the diagnostic test, ensuring objectivity. The objectivity of the test items was assured by the use of a scoring system.

#### **3.10.1.8 Practicability of the test-**

The ease of administration, interpretation readiness, initial cost savings, likelihood of obtaining resources, and time required for scoring and analysing findings all contribute to the reading comprehension test's practicality. The administration of the prepared test is easy because it was written on paper. Students were requested to write the correct answer on the question paper. The duration of the test, type of items included and scoring key add to the practicability of the test.

### **3.11. Construction of Teacher Referral Form**

#### **3.11.1 Introduction**

Teacher's role is very important for early identification and inclusion of dyslexic children in mainstream school. Lack of early identification may adversely impact the academic growth of dyslexic. Dyslexia is a developmental reading disorder and affects around 10 to 15% of the population (Castro, 2016; Wadlington & Wadlington, 2005). Dyslexics have problems in reading, spelling and word recognition (Grigorenko, 2001). Though there are different definitions to explain the term dyslexia, there is no universally accepted definition. One comprehensive definition is supplied by International Dyslexia Association (2002) as, "Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge".

From the definition it was evident that the individuals with dyslexia have difficulties in the areas like reading, spelling, phonological awareness tasks and decoding.

Dyslexics have difficulties with letter-sound correspondence, accurate and fluent word recognition, poor spelling and limited decoding abilities. As a result of labored reading efforts, students with dyslexia often struggle with comprehension (Lyon, Shaywitz, & Shaywitz, 2003; Ness & South-all, 2010; Norton, Beach, & Gabrieli, 2015) and social skills, which could influence their academic achievement and earnings as adults (Ghisi et al., 2016; McLaughlin et al., 2014). Students have problems with writing and need to see a reading specialist (Henry et al., 2015).

Reading and learning to read are the core problems of dyslexics and at risk of dyslexics (The Diagnostic and Statistical Manual of Mental Disorders, 2013; British Psychological Society, 1999). Numerous studies have reported that children as well as adults those who are dyslexics have persistent difficulties in reading single words,

sentences and decoding the words in isolation (Prasanti (2013), The World Federation of Neurology, 1968; Payne & Turner, 1999; Hulme & Snowling, 2009; Snowling, 2000). For a dyslexic student, acquiring the skill of learning to read is a much laborious task. Dyslexia is characterized by unexpected and severe problems in learning to read (Fawcett & Nicolson, 1994; Nopola-Hemmi et al., 2001). The skills like ability to analyze the underlying sound structure of words and the ability to spell words correctly were difficult tasks for an individual with dyslexia (Lundberg, 1995). The dimension of reading includes fifteen items which represents the difficulties experienced by a student with dyslexia in acquiring the skill of reading as reported in the theoretical and empirical studies.

Students with dyslexia not only have problems with reading alone, they also have difficulties in mastering another literary skill, writing. Prasanti (2013) reported that dyslexics scored below the mean for age-peers on standardized measures of writing. Screening for writing difficulties of dyslexics and dyslexics was insisted in their research. Students with dyslexia should be screened for writing disabilities also (Berninger, Nielsen, Abbott, Wijsman, & Raskind, 2008). Therefore, in the teacher referral form the dimension writing was included and consists of twelve items taken from the relevant studies and the symptoms of dyslexia listed by the leading organizations in the world conducting research in the field of dyslexia.

Dyslexia has been linked to a loss of ability to do effectively in math and other complex skills. Children with dyslexia have difficulty using and understanding symbols and words. It's not really uncommon for kids with dyslexia to struggle with math as well. For dyslexic students, learning the language of mathematics can be difficult. Learners must learn language (subtract, fractions, triangle), symbols (+, %, percent), and concepts (subtract, fractions, triangle) (doubling, halving). According to educational psychologist Dr. Lynn Joffe, up to 60% of dyslexic students may have substantial challenges in mathematics. This is usually due to three main cognitive issues: phonological deficits, memory problems, and processing speed issues. As a result, the dimension of mathematical aptitude was also included in the teacher referral form.

Behavior is a representation of one's personality, i.e., how one reacts to a circumstance or activity. Dyslexia manifests itself in a variety of behavioural

manifestations in both children and adults. Due to difficulties decoding activities, children are hesitant to read in class. Adults with Dyslexia have low self-esteem as a result of their poor performance in necessary abilities such as report writing and problems caused by poor handwriting. Dyslexic students not only have problems in reading, writing, and phonological awareness tasks, they also have problems in other domains too like deficit in orthographic skills, which are defined as difficulties with letter/number orientation recognition; for example difficulty in remembering names and remembering the alphabet, days of the week, months of the year in a sequential order (Nijakowska,2010). Here all the symptoms of behavior of dyslexics were selected from the relevant research studies. There are ten items in this dimension.

### **3.11.2 Review of previous tools**

The following teacher referral forms, questionnaires and checklists for identification of dyslexia have helped a lot in the construction/development of the present teacher referral form.

Learning Disability Assessing Questionnaire by Saiju (2018)- The researcher prepared a Learning Disability Assessing Questionnaire and it has 47 items with 5 likert scale. It has four dimensions i.e. Dyslexia (12 items), dysgraphia (13 items), Dyscalculia (10), Dyspraxia (12 items).

Kashyap (2017) prepared a teacher referral form showing the characteristics of Dyslexia in seven statements, on the basis of which, the concerned teacher has to suggest the names of the students showing those characteristics.

Sarita (2017) prepared a teacher referral form for the identification of dyslexic students of class 6th and 7<sup>th</sup>. It has 10 items with yes and no options.

Krishnan (2013) prepared a Checklist to identify the prevalent symptoms of dyslexia. It has 25 questions with yes and no answers.

Rekha (2010) developed a Teacher referral form and it has 31 items. Items in this form focus on specific characteristics of dyslexic children and help the teachers to identify dyslexic children in their classroom. On the basis of items, the concerned teacher has to suggest the names of the students showing those characteristics.

Chadha (2004) developed a Teacher Referral Form for diagnosing learning disability. This referral form is in the form of a checklist that can be used by the teachers to identify children with learning disabilities. It contains 13 statements showing the symptoms of learning disabilities. A child exhibiting minimum 5 of these symptoms is considered to be learning disabled.

MK (2004) prepared two questionnaires, one for the teacher and the other for the parents to assess the character of Children with learning disorder. The investigator referred to Clement's (1966) "Minimal Brain Dysfunction in Children" which mentions a list of characteristics prevalent in individuals with learning disability, for developing the questionnaire for this study. The investigator constituted a four member panel to validate the tool prepared by the investigator. Each questionnaire contains 45 statements with five Likert scales.

Khanna (1999) prepared a teacher referral form. The aim of this form is to identify the learning disabled children and problems suffered by them in the areas of reading, writing and problem behaviors. A list of carefully chosen 10 problems was taken in each area. In all there were 30 items in the referral form with yes and no options. These referral forms were given to the counselor of the school, language teacher and science teacher.

State Council of Educational Research and Training, Haryana (1989)-

An observation checklist developed by the "State Council of Educational Research and Training (SCERT, 1989)" in Haryana. There were eleven items on the checklist, each with a yes/no option. Teachers were told to insert a tick mark ( $\surd$ ) if they noticed any observational or functional behavioural difficulties related to Reading Skill Deficits among English-speaking students. English teachers who had been teaching grade VI pupils were requested to complete a checklist of students who had persistently weak and unsatisfactory English performance or had failed the English subject at school.

### **3.11.3 Need of the tool**

From the above discussion it may be concluded that the available tools do not fulfill the requirement for the present study especially on 6<sup>th</sup> class CBSE school students.

This has led the researcher to design and develop a tool as per the requirement of the present study.

#### **3.11.4 Steps for development and standardization of Teacher Referral Form**

The purpose of developing ‘Teacher Referral Form’ was to screen and identify the students showing characteristics of dyslexia studying in CBSE schools in class 6th.

The teachers’ recommendation is one of the most significant factors in the identification process. This tool will be used initially in the identification phase and used only for reference purposes. For the present study, investigator prepared a teacher referral form by keeping the following things in mind: 1. Basic details of the child (e.g. name, gender, grade, age, school etc.) 2. Statements which signify the symptoms of dyslexia. The statements were constructed by the investigator, keeping in view the characteristics of students with dyslexia as identified from review of related literature. For that the investigator reviewed literature and definitions from various sources/authors viz. International Dyslexia Association (2002), Dyslexia Association of India, British Dyslexia Association Management Board (2007) and Dyslexia Consultants (2010) and Reading Difficulty Checklist given by Landmark School Outreach Program.

The steps of development and standardization of teacher referral form are as follows-

##### **3.11.4.1 Planning**

In tool development this stage is the most important stage. To plan the teacher referral form, according to the requirement of the study, the researcher has reviewed the literature thoroughly. Definitions of Dyslexia and the symptoms of Dyslexia were studied carefully. It helped the researcher to identify and shortlist the significant dimensions for the teacher referral form.

**3.11.4.2 Preparation of the First draft** -Before constructing the test, the Investigator consulted experts in the field of education, English and special education and went through some of the tests constructed by them. Their advice was used to prepare the tool. The Investigator first prepared 44 items for the teacher referral form on the basis of review of literature and opinion of subject experts. The draft was sent to the language expert. The language expert made necessary corrections in the language of the test.

The first draft of the teacher referral form is composed of four dimensions i.e. reading, writing, mathematical ability and behaviour based on the difficulties experienced by dyslexics in learning to read and the symptoms of dyslexia that were documented, and the signs and symptoms of dyslexics recorded in the research and the theoretical review of the field, Dyslexia. The dimensions of the tool were taken after the complete exploration of the review of the studies related to dyslexia.

**3.11.4.3 Expert Opinion-** The first draft of the tool was given to ten experts to seek their opinion and suggestions. Experts were Teacher educators, Language experts, Psychologist, Special Educators, clinical psychologist. After discussion with the experts few modifications were made on the first draft and two items were added. The second draft consists of 46 items.

**Table 3.13: The dimension wise distribution of items in the final draft**

Sr. No.	Dimension	Total Items
1.	Reading	15
2.	Writing	13
3.	Mathematics ability	7
4.	Behaviour	11
Total		46

#### **3.11.4.4 Reliability of the Teacher Referral Form**

In the present study the researcher established the coefficient of reliability using Split-half method of reliability. The form has been tried out on the students of class 6 CBSE schools. The teachers were communicated the Google form through mail and social media platforms. Finally, 100 responses were included for the purpose of analysis. The scores of the two halves were correlated and the reliability coefficient of the test is 0.884.

#### **3.11.4.5 Validity of the teacher referral form**

##### **Face Validity**

In order to establish the face validity of the teacher referral form, it was given to experts for scrutinizing each item of the test. Based on the experts' consultation and opinion, it can be said that the tool used in the study possesses face validity.



## **Content Validity**

“Content Validity refers to the degree to which the test actually measures, or is specifically related to, the traits for which it was designed. It shows how adequately the test samples the universe of knowledge and skills that a student is expected to master. Content validity is based upon careful examination of course textbooks, syllabi, objectives and judgment of subject matter specialists” (Best & Kahn, 2004). The content validity showed the adequacy of the content of a test. The tool used in the current study possessed content validity. The items in the tool were based on the relevant literature, and consultation with experts in the field. Their valid suggestions were taken into account while constructing as well as restructuring the tool and thus, the tool possesses content validity. Content validity judgments require subject matter expertise. Therefore ten experts were chosen; they were -

### **List of Experts**

1. Dr. Parineeta Singal  
Principal  
Moga College of Education for Girls  
Ghall Kalan, Moga (Pb)
2. Dr. Arpana Sharma  
Associate Professor  
Department of English  
S.V.S.D.P.G.College, Bhatoli  
Distt. UNA (H.P.)
3. Dr. V. Ramchandram  
Professor  
Department of Psychology  
Kakatiya University, Warangal  
Telangana
4. Dr. Tripta Sharma  
Principal, Retired  
Lala Lajpat Rai Memorial College of Education for Girls  
Ghall Kalan, Moga (Pb)

5. Dr. N.K.Choudhary  
Principal  
S.D.College, Hoshiarpur (PB)  
Research Guide (Education)  
Panjab University (PB)
6. Dr. Neetee Mehta  
Head  
Department of Education  
Bhagwant University  
Ajmer (Rajasthan)
7. Mrs. Shilpa Arora  
(Special Educator)  
Principal  
Upasana Special School  
New Delhi
8. Dr. M.J. Mishra  
Associate Professor  
Department of Education  
Bhagwant University  
Ajmer (Rajasthan)
9. Bela Monika Murmu  
Clinical psychologist  
Mindbliss Hospital  
Una
10. Dr. Pooja Kapoor  
Associate Professor  
Department of Education  
Vallabh Government College, Mandi (H.P.)

**Content Validity Ratio-** The Content Validity Ratio originally proposed by Lawshe in 1975 is an item statistic that is useful in the rejection or retention of specific items. The Content Validity Ratio (CVR) was generated for each item which a numeric value indicating the instrument's degree of validity determined from expert's ratings of CV. CVR varies between 1 and -1, and a higher score indicates greater agreement among

experts. The formula for the CVR is  $CVR = (N_e - N/2) / (N/2)$ , where  $N_e$  is the number of experts indicating an item as “essential” and  $N$  is the total number of experts (Zamanzadeh, 2015).

Table 3.14 shows of items of the tool and the CVR calculations. Items that were marked not essential had a  $CVR < 0.800$ . This value is based on the total number of experts,  $N = 10$ , and the numerical values of the Lawshe table (Lawshe, 1975, Ayre & Scally, 2014). Forty one items have a CVR of 0.800 and five items a score of 1.0. After items have been identified for inclusion in the final form, the content validity index (CVI) is computed for the whole test. The CVI is simply the mean of the CVR values of the retained items. The content validity index of the test is 0.821. Thus, a second draft of 46 items was prepared.

**Table 3.14: Summary of Item wise Content Validity Ratio (CVR)**

S.No.	Item No.	Accepted	Rejected	CVR	Accept/Reject
1.	Item No. 1	9	1	0.8	Accepted
2.	Item No. 2	9	1	0.8	Accepted
3.	Item No. 3	10	0	1.0	Accepted
4.	Item No. 4	9	1	0.8	Accepted
5.	Item No. 5	9	1	0.8	Accepted
6.	Item No. 6	10	0	1.0	Accepted
7.	Item No. 7	9	1	0.8	Accepted
8.	Item No. 8	9	1	0.8	Accepted
9.	Item No. 9	9	1	0.8	Accepted
10.	Item No. 10	9	1	0.8	Accepted
11.	Item No. 11	9	1	0.8	Accepted
12.	Item No. 12	9	1	0.8	Accepted
13.	Item No. 13	9	1	0.8	Accepted
14.	Item No. 14	9	1	0.8	Accepted
15.	Item No. 15	10	0	1.0	Accepted
16.	Item No. 16	9	1	0.8	Accepted
17.	Item No. 17	9	1	0.8	Accepted
18.	Item No. 18	9	1	0.8	Accepted
19.	Item No. 19	10	0	1.0	Accepted

<b>S.No.</b>	<b>Item No.</b>	<b>Accepted</b>	<b>Rejected</b>	<b>CVR</b>	<b>Accept/Reject</b>
20.	Item No. 20	9	1	0.8	Accepted
21.	Item No. 21	9	1	0.8	Accepted
22.	Item No. 22	10	0	1.0	Accepted
23.	Item No. 23	9	1	0.8	Accepted
24.	Item No. 24	9	1	0.8	Accepted
25.	Item No. 25	9	1	0.8	Accepted
26.	Item No. 26	9	1	0.8	Accepted
27.	Item No. 27	9	1	0.8	Accepted
28.	Item No. 28	9	1	0.8	Accepted
29.	Item No. 29	9	1	0.8	Accepted
30.	Item No. 30	9	1	0.8	Accepted
31.	Item No. 31	9	1	0.8	Accepted
32.	Item No. 32	9	1	0.8	Accepted
33.	Item No. 33	9	1	0.8	Accepted
34.	Item No. 34	9	1	0.8	Accepted
35.	Item No. 35	9	1	0.8	Accepted
36.	Item No. 36	9	1	0.8	Accepted
37.	Item No. 37	9	1	0.8	Accepted
38.	Item No. 38	9	1	0.8	Accepted
39.	Item No. 39	9	1	0.8	Accepted
40.	Item No. 40	9	1	0.8	Accepted
41.	Item No. 41	9	1	0.8	Accepted
42.	Item No. 42	9	1	0.8	Accepted
43.	Item No. 43	9	1	0.8	Accepted
44.	Item No. 44	9	1	0.8	Accepted
45.	Item No. 45	9	1	0.8	Accepted
46.	Item No. 46	9	1	0.8	Accepted
Content Validity Index-0.821					

(N- Total number of Panelists i.e. 10  
CVR<sub>Critical</sub> for a panel of 10 is 0.800)

### Suggestions given by the Experts

The first draft of teacher referral form has been modified as per the suggestions given by the experts -

- This tool is complete in every respect. However, some positive aspects of dyslexics like interest in painting, science and co-curricular activities etc. can also be explored by the teacher in the same way in order to help and guide the child in future to take up subjects of his interest and capacity.
- Addition of items regarding oral language can be considered.
- Add a question to check if the child is aware of the same sounding words like- Rain-Rein, I-Eye, Two-To etc.
- There are yes/no options for teachers to mark but I suggest you add one more response option i.e. can't say/ Undecided/ Unsure.

**Scoring** -The scoring for the present questionnaire was based on three- point Likert scale i.e. Yes, No and Can't Say. The scores for positive items were 2, 1, 0 for Yes, Can't Say and No respectively. The maximum obtainable score is Ninety two and minimum obtainable score is Zero.

**Table 3.15: Norms and Interpretation-**

S. No.	Obtained Score	Interpretation
1.	scores>78	Very high risk of dyslexia
2.	Scores 59 to78	High risk of dyslexia
3.	Scores 22 to59	Average risk of dyslexia
4.	Scores 3 to22	Low risk of dyslexia
5.	Scores <3	Very Low risk of dyslexia

#### 3.11.4.6 Teacher Referral Form:

Teacher referral form is given in Appendix -8.

### **3.12 Standard Progressive Matrices (SPM) by Raven, Raven and Court (2000)**

The Standard Progressive Matrices (SPM) is a nonverbal intelligence test. It can be administered individually or in a group also. It is suitable for all ages. This test consists of 60 items divided into five sets of 12 items each. The items in a set are arranged in increasing order of difficulty. Each problem in the test comprises a pattern of diagrammatic puzzles in which one piece is missing. The items are arranged in a sequence of simple to complex. The participants can solve the puzzles at their own speed.

#### **3.12.1 Scoring**

On the response form, each respondent must record his or her responses. The answer key provided in the handbook is then used to score these response sheets. As each accurate response is worth one point, the respondent's total score is equal to the number of correct responses supplied.

#### **3.12.2 Reliability**

The correlation between item difficulties for different socioeconomic classes was determined for the British Standardization, and it varied from 0.97 to 0.99. The correlations for item difficulty determined for different ethnic groups in the United States ranged from 0.97 to 1.00. Two Indian investigations found Kuder-Richardson consistency of 0.67 and Spearman Brown Coefficient of 0.73, according to the SPM manual.

#### **3.12.3 Validity**

The SPM manual lists a number of experiments that have proven Criterion-oriented validity and factorial construct validity. For the sake of concurrent validity Burke and Bingham (1969) established inter-test correlations and discovered a very strong correlation between SPM and WAIS (Wechsler Adult Intelligence Scale),  $r = 0.75$ . SPM and Cattell's Culture Fair Test have a 0.58 connection, according to Narayanan and Paramesh (1978). SPM is a relatively good measure of general intellectual aptitude, as evidenced by these studies.

### 3.13 Diagnostic Test of Reading Disorder (DTRD)

DTRD was created to discover deficiencies in the sub-processes that lead to children's reading failure. Through its eight dimensions, the DTRD's discovered sub-processes span areas in phonemic and linguistic skills. The DTRD is clinical – prescriptive in nature, with the child's test results serving as a foundation for intervention. The exam identifies and analyses process deficiencies that lead to reading fluency and accuracy issues. It's a tool that's used on a one-on-one basis. There are two levels of tests: Level I and Level II. It is a non-timed examination.

The creators of the DTRD concentrated on the processes that will assess the child's fluency and accuracy, the two key characteristics of reading, when he or she is between the ages of 8 and 11. The test identifies and analyses the process flaws that lead to fluency and accuracy issues. Through its two levels, the DTRD tries to measure the following process:

#### 3.13.1 Reliability of DTRD

Table 3.14 provides the reliability coefficient and reliability index for the test (Level-I and Level-II).

**Table 3.16: Reliability coefficient and Reliability index for the test (Level-I and Level-II).**

Level	N	Test-Retest Reliability Coefficient	Reliability Index
Level 1	550	.71	.81
Level 2	550	.70	.78

#### 3.13.2 Validity of DTRD

The validity of the test items was determined using the item analysis approach. Item analysis was used to estimate the discriminatory power of each item in terms of distinguishing between students with and without reading disabilities.

For each item, the validity index and difficulty index were determined. Level-I rbis ranged from 0.20 to 0.57, whereas Level-II rbis ranged from 0.21 to 0.36. Level-I

difficulty indexes ranged from 0.48 to 0.64, while Level-II difficulty indexes ranged from 0.55 to 0.70. The items were cross-validated on a separate sample of children with Level-I (N=146) and Level-II (N=126) reading problems. Level-I biserial coefficient of correlation ranged from 0.24 to 0.53, whereas Level-II biserial coefficient ranged from 0.19 to 0.46.

### **3.14 Statistical techniques**

a. **Descriptive Statistics**-In this study, descriptive statistics such as Means and Standard deviation, as well as Percentage, were used to arrange, summarise, and describe scores on the dependent variable (patterns of miscues and reading comprehension) for various independent variables.

b. **Inferential Statistics** -The significance of the difference between the means of achievement of Dyslexic children's pre-test and post-test was determined using inferential statistics such as Wilcoxon Signed Ranks Test and Mann-Whitney U Test.

### **3.15 Challenges of conducting experiment**

- Fear of school closure due to Covid

It was very challenging to complete the treatment within stipulated time. The chances of closure of educational institutions are again possible if some teachers or students come corona positive during sampling in schools as happened in one school in Nangal during this period.

- As treatment is planned with 6<sup>th</sup> standard students, handling children and giving them multiple instructions in the class was very challenging.
- Sometimes students have taken more time to conduct the multisensory tasks than expected.
- It was very challenging to maintain a proper class schedule and take classes everyday in three different schools. But with the help of very kind and compromising school authorities, it was possible to conduct classes in three different schools.



- Another challenge to conduct the experiments was the expenditure. It became too costly to arrange the entire goods and materials needed for treatment and conveyance.
- It was also very difficult to arrange chosen dyslexic children from different sections and grouped them in one class. As per verbal request before starting the experiment, School authorities arranged remedial classes as per my schedule. As we all know dyslexics have problems in reading, so, this challenge becomes easy to escape by their decision and cooperation.

## **CHAPTER 4**

### **RESULTS AND INTERPRETATION**

Data analysis and interpretation is an important part of the research process. To draw the valid conclusions from the raw data, it has to be tabulated, analyzed and interpreted. After the analysis of raw data it becomes meaningful and helps to test the hypotheses. This chapter deals with the analysis of data and interpretation of results of this study.

Pre Experimental Design was adopted for the present study. It was incorporated under One -Group Pre test- Post test Design. In the pre-testing phase, the researcher administered the Miscue Analysis and reading comprehension Test on the Dyslexic students. Miscue analysis was done to analyse the miscues and study the patterns of miscues of Dyslexic Students at Elementary School level by using miscue and reading comprehension test prepared by the researcher. The reading comprehension scores were analyzed to study the reading comprehension of the dyslexic students. In the present study, The Dyslexic Students of class 6th were taught through the Multisensory Instructional Strategy (Intervention) for six weeks after the pretest. Researcher developed and validated the multisensory strategy based instructional plans for intervention. After the intervention the researcher re administered the Miscue Analysis and reading comprehension Test on the Dyslexic students.

In this study, descriptive statistics were used to arrange, summarise, and describe scores on the dependent variable (patterns of miscues and reading comprehension) for several independent variables using means and standard deviation. The researcher studied the characteristics of the collected data through establishing normality distribution. Since the sample size is less than fifty, kurtosis and skewness were calculated and shown in Table 4.1(a) and 4.1(b)

**Table 4.1(a) Descriptive Statistics of miscues at Pretest**

Miscues	N	Mean	SD	Skewness	SE Skewness	Kurtosis	SE kurtosis
Substitution	42	31.476	17.801	1.368	.365	2.189	.717
Insertion	42	5.119	4.591	1.509	.365	2.087	.717
Omission	42	16.024	13.359	1.318	.365	1.507	.717
Reversal	42	1.500	1.109	0.562	.365	0.017	.717
Self correction	42	6.119	5.283	2.031	.365	5.494	.717
Refusal	42	7.714	10.549	2.668	.365	8.376	.717
Total	42	67.952	33.733	1.580	.365	2.559	.717

The Table 4.1(a) shows the mean, standard deviation, Skewness, standard error of skewness, kurtosis, and standard error of kurtosis of different miscues committed by the students with dyslexia at pretest. The standard value of skewness falls between +1 to -1 and the same for kurtosis from +2 to -2 (Marie, 2016). Since most of the values of skewness (substitution, Insertion, omission, self correction, refusals and total miscues) and kurtosis (Substitution, Insertion, self correction, refusals and total miscues) do not lie within the acceptable limits thus, the distribution of measure cannot be considered as normal for different Miscues committed by the students with dyslexia at pretest. To confirm the same, Shapiro-Wilk test was run to establish the normality distribution for the collected data.

**Table 4.1(b) Descriptive Statistics of miscues at Posttest**

Miscues	N	Mean	SD	Skewness	SE Skewness	Kurtosis	SE kurtosis
Substitution	42	25.452	16.893	1.491	.365	3.165	.717
Insertion	42	3.690	3.257	0.971	.365	0.994	.717
Omission	42	10.119	10.357	1.720	.365	2.574	.717
Reversal	42	0.952	1.080	.828	.365	-0.107	.717
Self correction	42	2.810	2.847	.828	.365	0.020	.717
Refusal	42	3.595	3.982	0.918	.365	-0.580	.717
Total	42	46.619	26.728	1.617	.365	4.730	.717

The Table 4.1(b) shows the mean, standard deviation, Skewness, standard error of skewness, kurtosis, and standard error of kurtosis of different miscues committed by the students with dyslexia at posttest. The standard value of skewness falls between +1 to -1 and the same for kurtosis from +2 to -2 (Marie, 2016). Since most of the values of skewness (substitution, omission, and total miscues) and kurtosis (substitution, omission and total miscues) do not lie within the acceptable limits thus, the distribution of measure cannot be considered as normal for different Miscues committed by the students with dyslexia at posttest. To confirm the same, Shapiro-Wilk test was run to establish the normality distribution for the collected data.

**Table 4.1(c) : Normality Test of the Data (Miscues and Reading comprehension)**

<b>Shapiro-Wilk</b>			
Miscues	Statistics	df	'p' value
Substitution	.917	42	0.005
Insertion	.951	42	0.072
Omission	.987	42	0.895
Reversal	.955	42	0.095
Self correction	.893	42	0.001
Refusal	.814	42	0.000
Total Miscues	.805	42	0.000
Reading comprehension Gain score	Statistics	df	'p' value
	0.875	42	0.000

The Table 4.1© shows the results of the Shapiro-Wilk test of miscues and reading comprehension test. From table 4.1©, it is found out that the miscue scores and reading comprehension gain scores are not normally distributed. It indicates that the significance values of different miscues and reading comprehension are not greater than 0.05. Hence the distributions of the scores are not normal. Since the sample size is small and also not normally distributed, the researcher opted for non-parametric statistical tests equivalent to parametric statistical tests. Inferential statistics in the form of Wilcoxon Signed Rank was used to find the significance of difference between the means of achievement of the pre-test and post-test of Dyslexic children. Mann-Whitney U Test was used to find the

significance of the difference between the means of achievement of the pre-test and post-test among the boys and girls.

The results of the analyses of the data collected for the study are provided under the following six sections-

**4.1 Section 1:** Study of the patterns of miscues of Dyslexic Students at Elementary School level.

**4.2 Section 2:** Study of the reading comprehension of dyslexic students at elementary school level

**4.3 Section 3:** Effect of multi-sensory instructional strategy on the patterns of miscues of Dyslexic students at Elementary School level.

**4.4 Section 4:** Effect of multi-sensory instructional strategy on the reading comprehension of students with Dyslexia of grade VI.

**4.5 Section 5:** Study of the interaction effect of multisensory instructional strategy and gender on patterns of miscues of dyslexic students of grade VI.

**4.6 Section 6:** Study of the interaction effect of multisensory instructional strategy and gender on reading comprehension of dyslexic students of grade VI.

**4.1 Section 1: Study of the patterns of miscues i.e. substitutions, insertions, omissions, reversal, refusals and self-corrections of Dyslexic Students at Elementary School level.**

**Objective 2:** To study the miscues in the form of substitutions, insertions, omissions, reversal, refusals and self-corrections of dyslexic students of grade VI.

**Research Question 1:** What types of miscues are committed by the dyslexic students of grade VI?

The researcher studied the miscues of the selected students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher to know the answer of the first question.

The students were given an unfamiliar text to read. Then the recordings were taped for analysis purposes. In the record sheet the miscues committed by the individual

in passages will be noted/ recorded separately (Appendix 7). After scoring and tabulating the results obtained, it has been presented in Table 4.2 and 4. 3.

**Table 4.2: Percentage wise analysis of different types of miscue (Total Students)**

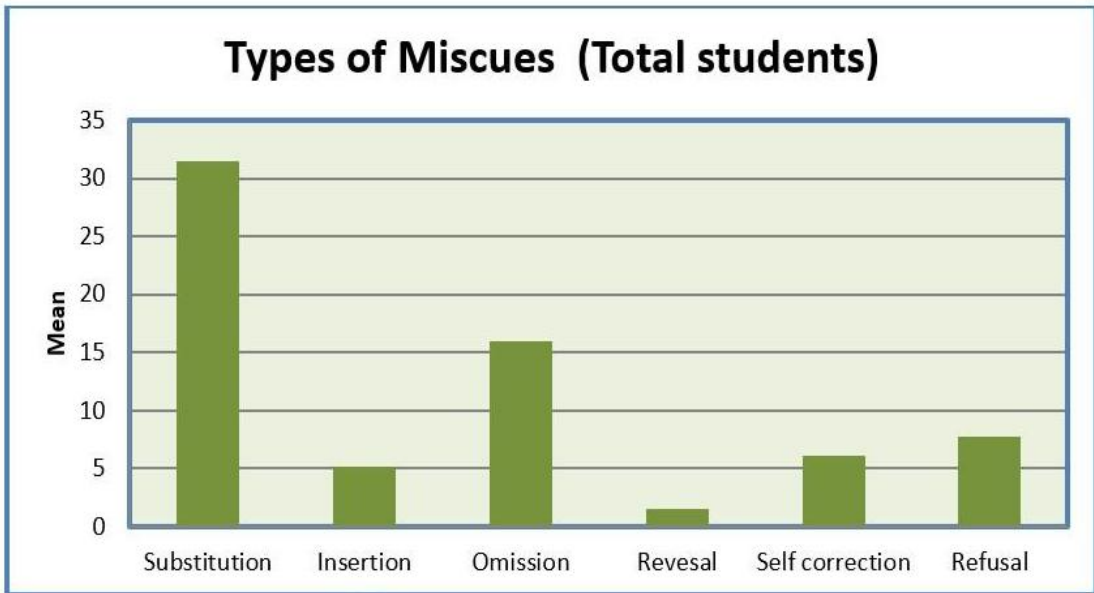
<b>Types of Miscues</b>	<b>Number of miscues</b>	<b>Percentage of miscues</b>
Substitution	1322	46%
Insertion	215	8%
Omission	673	24%
Reversal	63	2%
Self correction	257	9%
Refusal	324	11%
Total	2854	100%

Table 4.2 showing the percentage wise analysis of miscues committed by the students with dyslexia. The percentage for each miscue is calculated by “the total number of each miscue divided by the overall total number of the miscue patterns and is multiplied by 100”. Total 2854 miscues were committed by the 42 dyslexic students. It can be observed in the Table that the participants committed 1322(46%) Substitution miscues, 215 (8%) Insertion miscues, 673 (24%) Omission miscues, 63 (2%) Reversal miscues, 257 (9%) Self-correction miscues and 324(11%) Refusal miscues .It can be concluded that students committed maximum Substitution (46%), followed by Omission (24%), Refusal (11%), Self-correction (9%), Insertion 215(8%), Reversal (2%). Table 4.2 indicates that the students made the most substitution and the least reversal. The results are supported by research findings of Putri (2015) and Juliana and Abosi (2011) who also find the maximum substitution miscues in their studies. According to Campbell (1993), “the substitution miscue is the most frequently produced miscue by the reader”. According to Arnold (1982) and Campbell (1993) “the relative high percentage of self-correction miscues shows the reader’s active monitoring of her reading process”.

**Table 4.3: Descriptive analysis of Miscues of total Students with dyslexia at pretest**

Grade of miscues		Subs.	Inser.	Omi.	Rev.	S.C.	Ref.	Total
Positive	X	11.33	2.30	5.47	0.42	3.33	2.07	24.95
	SD	9.722	3.264	5.700	0.590	4.594	2.672	13.214
Intermediate	X	9.97	1.66	5.57	0.54	1.28	1.47	20.52
	SD	6.880	2.405	8.451	0.832	2.133	2.510	15.751
Negative	X	10.16	1.14	4.97	0.52	1.50	4.16	22.47
	SD	12.485	1.555	5.519	0.740	2.680	7.314	19.481
Total	X	31.47	5.11	16.02	1.50	6.11	7.71	67.95
	SD	17.801	4.591	13.359	1.109	5.283	10.549	33.733

Keys: Subs= Substitution; Inser =Insertion; Omi =Omission; Rev.= Reversal, S.C.= Self correction, Ref.= Refusal; X=Mean; SD=Standard Deviation



**Figure 4.1: Descriptive analysis of Miscues (Total Students)**

Table 4.3 and Figure 4.1 show different type of miscues committed by the students with dyslexia. To create a clear picture of the miscues, each miscue was then divided into positive, intermediate, and negative grades. The students have got 67.95 mean score of total miscues with 33.733 SD. The mean and SD of positive grades are 24.95 and 13.214, and of intermediate grades are 20.52 and 15.751 whereas mean and SD of the negative grades are 22.47 and 19.481.

The students with dyslexia have got 31.47 mean score of substitution miscues with 17.801 SD. The students produced “maximum positive substitution miscues and minimum intermediate substitution miscues”. Mean and SD of positive miscues are 11.33 and 9.722 and of intermediate grades are 9.97 and 6.880 whereas mean and SD of the negative grades are 10.16 and 12.485.

The students' mean insertion miscue score is 5.11, with a standard deviation of 4.591. The students have made “maximum positive insertion miscues and minimum negative insertion miscues”. The mean and SD of positive grades are 2.30 and 3.264, and of intermediate grades are 1.66 and 2.405 whereas mean and SD of the negative grades are 1.14 and 1.555.

The students' mean score for omission is 16.02, with a standard deviation of 13.359. Dyslexic students produced “maximum intermediate omission miscues and minimum negative omission miscues”. Mean and SD of positive are 5.47 and 5.7, and of intermediate grades are 5.57 and 8.451 whereas mean and SD of the negative grades are 4.97 and 5.519.

The students' reversal miscues have a mean score of 1.50 with a standard deviation of 1.109. "Maximum intermediate reversal miscues and minimal positive reversal miscues" were produced by the students. Mean and SD of positive are 0.42 and 0.590 and of intermediate grades are 0.54 and 0.832 whereas mean and SD of the negative grades are 0.52 and 0.740.

The students' self-correction miscues have a mean score of 6.11 with a standard deviation of 5.283. They have committed “maximum positive self-correction miscues and minimum intermediate reversal miscues”. The mean and SD of positive grades are 3.33 and 4.594, and of intermediate grades are 1.28 and 2.133 whereas mean and SD of the negative grades are 1.50 and 2.680.

The students' refusal miscues had a mean score of 2.07 with a standard deviation of 2.672. They have committed “maximum negative refusal miscues and minimum intermediate reversal miscues”. The mean and SD of positive grades are 2.07 and 2.672, and of intermediate grades are 1.47 and 2.510 whereas mean and SD of the negative grades are 4.16 and 7.314.



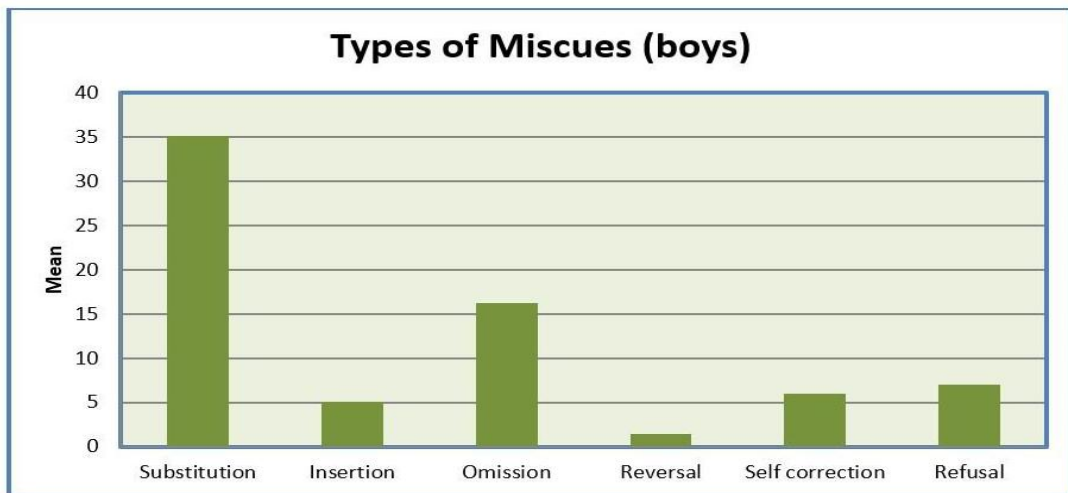
## Discussion

Results showed that the students have got 67.95 mean score of total miscues with 33.733 SD, “they have committed maximum substitution miscues and minimum reversal miscues”. The mean and SD of positive grades are 24.95 and 13.214, and of intermediate grades are 20.52 and 15.751 whereas mean and SD of the negative grades are 22.47 and 19.481. Table 4.1 indicates that “the students have committed maximum substitution miscues and minimum reversal miscues”. The results are supported by research findings of Putri (2015) and Juliana and Abosi (2011) who also find the maximum substitution miscues in their studies. High percentage of self-correction indicates that the reader is actively monitoring the reading process.

**Table 4.4: Descriptive analysis of Miscues committed by the boys with dyslexia at pretest**

Grade of miscues		Subs.	Inser.	Omi.	Rev.	S.C.	Ref.	Total
Positive	X	13.04	1.64	4.00	0.28	3.52	2.00	24.48
	SD	11.64	2.396	3.742	0.542	5.35	2.466	12.417
Intermediate	X	10.44	2.36	6.68	0.48	0.84	1.24	22.00
	SD	7.703	2.77	9.659	0.77	1.52	2.07	18.4
Negative	X	11.60	1.12	5.52	0.68	1.64	3.76	24.32
	SD	14.24	1.013	6.172	0.748	2.928	7.981	21.53
Total	X	35.08	5.12	16.20	1.44	6.00	7.00	70.84
	SD	19.38	4.38	14.27	0.961	5.19	10.84	35.060

Keys: Subs= Substitution; Inser =Insertion; Omi =Omission; Rev.= Reversal, S.C.= Self correction, Ref.= Refusal; X=Mean; SD=Standard Deviation



**Figure 4.2: Descriptive analysis of Miscues (Boys)**

Table 4.4 and Figure 4.2 show different types of miscues committed by the boys with dyslexia. To create a clear picture of the miscues, each miscue was then divided into positive, intermediate, and negative grades. The boys with dyslexia have got 70.84 mean of total miscues with 35.060 SD, “they have committed maximum substitution miscues and minimum reversal miscues”. The mean and SD of positive grades are 24.48 and 12.417, and of intermediate grades are 22 and 18.4 whereas mean and SD of the negative grades are 24.32 and 21.53.

The boys have got 35.04 mean of substitution miscues with 19.38 SD. They “committed maximum positive substitution miscues and minimum intermediate substitution miscues”. Mean and SD of positive are 13.04 and 11.64, and of intermediate grades are 10.44 and 7.703 whereas mean and SD of the negative grades are 11.60 and 14.24.

The mean score of insertion miscues committed by the boys with dyslexia is 5.12 with 4.38 SD. They produced “maximum intermediate insertion miscues and minimum negative insertion miscues”. Mean and SD of positive are 1.64 and 2.396, and of intermediate grades are 2.36 and 2.77 whereas mean and SD of the negative grades are 1.12 and 1.013.

Boys with dyslexia have a mean score of 16.20 with a standard deviation of 14.27 for omission miscues. They produced “maximum intermediate omission miscues and minimum positive omission miscues”. Mean and SD of positive grades are 4 and 3.742, and of intermediate grades are 6.68 and 9.659 whereas mean and SD of the negative grades are 5.52 and 6.172.

The mean score of reversal miscues committed by the boys with dyslexia is 1.44 with 0.961 SD. They have committed “maximum negative reversal miscues and minimum positive reversal miscues”. The mean and SD of positive grades are 0.28 and 0.542, and of intermediate grades are 0.48 and 0.77 whereas mean and SD of the negative grades are 0.68 and 0.748.

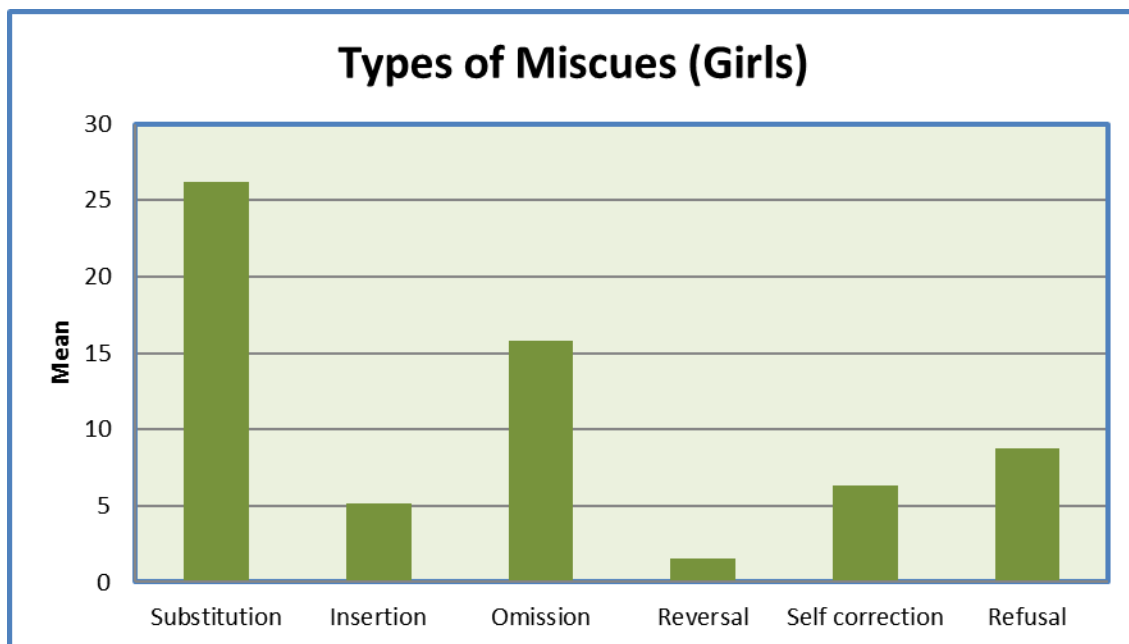
The mean score of self correction miscues committed by the boys with dyslexia is 6 with 5.19 SD. They have committed “maximum positive self correction miscues and minimum intermediate reversal miscues”. The mean and SD of positive grades are 3.52

and 5.35, and of intermediate grades are 0.84 and 1.52 whereas mean and SD of the negative grades are 1.64 and 2.928. Boys with dyslexia have a mean score of 7 with a standard deviation of 10.84 for self-correction miscues. They have committed “maximum negative refusal miscues and minimum intermediate refusal miscues”. The mean and SD of positive grades are 2 and 2.466, and of intermediate grades are 1.24 and 2.07 whereas mean and SD of the negative grades are 3.76 and 7.981.

**Table 4.5: Descriptive analysis of Girls with dyslexia at pretest**

Miscues (Girls)								
Grade of miscues		Subs.	Inser.	Omi.	Rev.	S.C.	Ref.	Total
Positive	X	8.82	3.29	7.64	0.64	3.06	2.176	25.64
	SD	5.271	4.12	7.339	0.606	3.33	3.026	14.675
Intermediate	X	9.29	0.65	3.94	0.64	1.94	1.82	18.30
	SD	5.61	1.22	6.189	0.931	2.73	3.09	10.9
Negative	X	8.05	1.17	4.17	0.29	1.29	4.76	19.76
	SD	9.357	2.157	4.447	0.686	2.339	6.399	16.25
Total	X	26.18	5.12	15.76	1.58	6.29	8.76	63.70
	SD	14.09	5.02	12.32	1.326	5.58	10.34	32.248

Keys: Subs= Substitution; Inser =Insertion; Omi =Omission; Rev.= Reversal, S.C.= Self correction, Ref.= Refusal; X=Mean; SD=Standard Deviation



**Figure 4.3: Descriptive analysis of Miscues (Girls)**

Table 4.5 and Figure 4.3 indicate different types of miscues committed by the girls with dyslexia. To create a clear picture of the miscues, each miscue was then divided into positive, intermediate, and negative grades. Girls with dyslexia have got 63.70 mean score of total miscues with 32.248 SD, “they have committed maximum substitution miscues and minimum Reversal miscues”. The mean and SD of positive grades are 25.64 and 14.675, and of intermediate grades are 18.30 and 10.9 whereas mean and SD of the negative grades are 19.76 and 16.25.

The girls have got a mean of 26.18 substitution miscues with 14.09 SD. They produced “maximum positive substitution miscues and negative minimum substitution miscues”. Mean and SD of positive are 8.82 and 5.271, and of intermediate grades are 9.29 and 5.61 whereas mean and SD of the negative grades are 8.05 and 9.357.

Girls with dyslexia have a mean score of 5.12 with a standard deviation of 5.02. They have committed “maximum positive insertion miscues and minimum intermediate insertion miscues”. The mean and SD of positive grades are 3.29 and 4.12, and of intermediate grades are 0.65 and 1.22 whereas mean and SD of the negative grades are 1.17 and 2.157.

The mean score of omission miscues committed by the girls with dyslexia is 15.76 with 12.32 SD. They have committed “maximum positive omission miscues and minimum intermediate omission miscues”. The mean and SD of positive grades are 7.64 and 7.339, and of intermediate grades are 3.94 and 6.189 whereas mean and SD of the negative grades are 4.17 and 4.447.

The mean score of reversal miscues committed by the girls is 1.58 with 1.326 SD. They have committed “equal positive and intermediate reversal miscues and minimum negative reversal miscues”. The mean and SD of positive grades are 0.64 and 0.606, and of intermediate grades are 0.64 and 0.931 whereas mean and SD of the negative grades are 0.29 and 0.686.

Girls with dyslexia have a mean score of 6.29 with a standard deviation of 5.58 for self-correction errors. They have committed “maximum positive self correction miscues and minimum negative self correction miscues”. The mean and SD of positive

grades are 3.06 and 3.33, and of intermediate grades are 1.94 and 2.73 whereas mean and SD of the negative grades are 1.29 and 2.339.

The mean score of refusal miscues committed by the girls with dyslexia is 8.76 with 10.34 SD. They have committed “maximum negative refusal miscues and minimum intermediate reversal miscues”. The mean and SD of positive grades are 2.176 and 3.026, and of intermediate grades are 1.82 and 3.09 whereas mean and SD of the negative grades are 4.76 and 6.399.

**Discussion-** Different types of miscues committed by the students with dyslexia were then divided into positive, intermediate, and negative grades to create a clear picture of the miscues; each miscue was then divided into positive, intermediate, and negative grades.

The boys with dyslexia have got 70.84 mean of total miscues with 35.060 SD whereas Girls with dyslexia have got 63.70 mean score of total miscues with 32.248 SD. Both Boys and girls produced “maximum substitution miscues and minimum Reversal miscues”. The results showed that the total students also produced “maximum substitution miscues and minimum reversal miscues”. The results are supported by research findings of Putri (2015) and Juliana and Abosi (2011) who also find the maximum substitution miscues in their studies.

#### **4.2 Section 2: Study of the reading comprehension of dyslexic students at elementary school level**

**Objective 3:** To study the reading comprehension of the dyslexic students of grade VI.

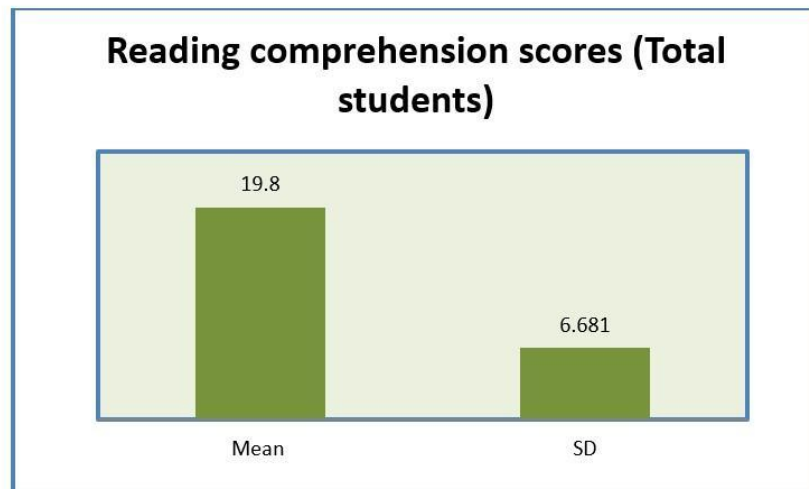
Research Question 2: “What is the level of reading comprehension of dyslexic students of grade VI?”

The scores of 42 dyslexic students were collected by the researcher with the help of a tool (Miscue and reading comprehension test) prepared by the researcher to know the answer of question two. Table 4.6 (a) summarises the findings after scoring and tabulating the results obtained

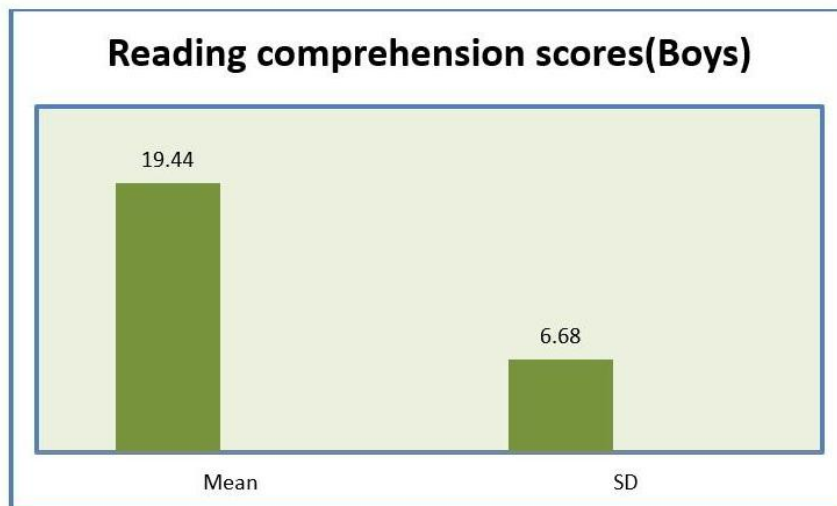
**Table 4.6 (a): Descriptive analysis of reading comprehension of students with dyslexia at pretest**

		Boys	Girls	Total
<b>Reading Comprehension</b>	<b>N</b>	25	17	42
	<b>X</b>	19.44	20.35	19.80
	<b>SD</b>	7.106	6.173	6.681

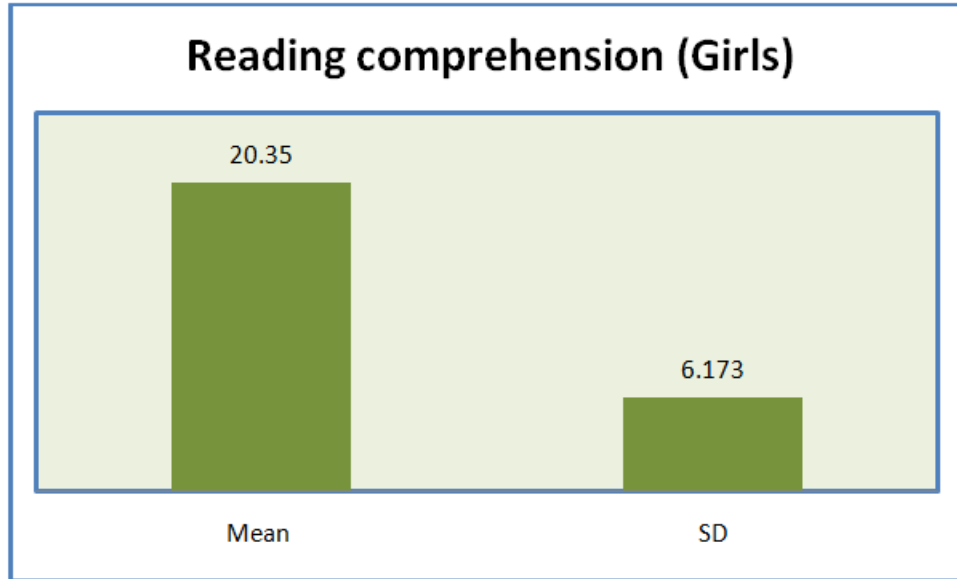
Keys: N =Number of students; X=Mean; SD=Standard Deviation



**Figure 4.4: Descriptive analysis of reading comprehension (Total students)**



**Figure 4.5: Descriptive analysis of reading comprehension (Boys)**



**Figure 4.6: Descriptive analysis of reading comprehension (Girls)**

Table 4.6 (a) and Figure 4.4 show the reading comprehension scores of students with dyslexia. The mean score of reading comprehension obtained by the total students is 19.80. The value of standard deviation obtained by the total students with dyslexia is 6.681.

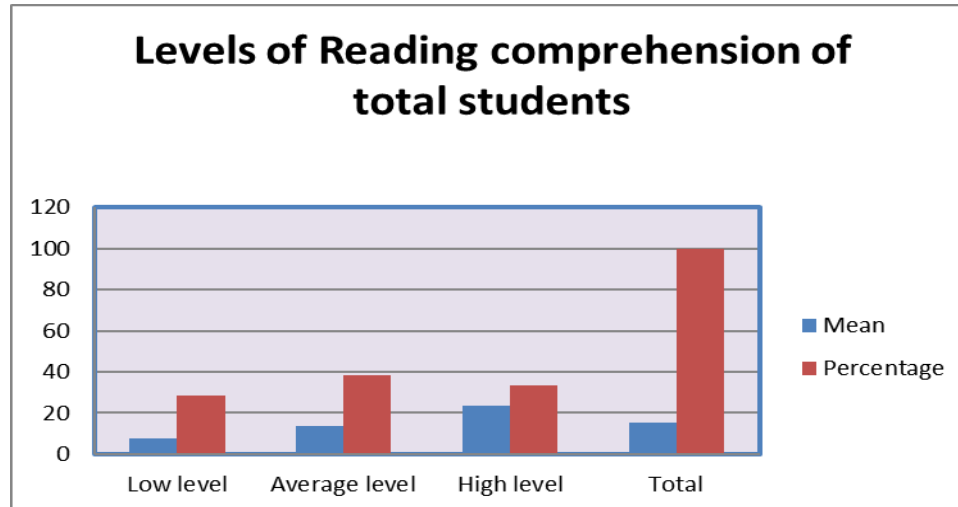
Table 4.6 (a) and Figure 4.5 show the reading comprehension scores of boys with dyslexia. The mean score of reading comprehension obtained by the boys is 19.44. The value of standard deviation obtained by the boys with dyslexia is 7.106.

Table 4.6 (a) and Figure 4.6 show the reading comprehension scores of girls with dyslexia. The mean score of reading comprehension obtained by the girls is 20.35. The value of standard deviation obtained by the boys with dyslexia is 6.173.

**Table 4.6 (b): Levels of Reading comprehension of total students**

Levels of Reading Comprehension	N	Mean	SD	Percentage
Low level	12	7.83	2.329	28.57
Average level	16	13.75	1.612	38.10
High level	14	23.71	8.071	33.33
<b>Total</b>	42	15.38	8.030	100

Keys: N =Number of students; X=Mean; SD=Standard Deviation



**Figure 4.6.1: Levels of reading comprehension of students with dyslexia**

Table 4.6(b) and Figure 4.6.1 show the levels of reading comprehension of the students with dyslexia. It is clear from the Table that only 33.3% students were having high level of reading comprehension. 38.10% students were having average level of reading comprehension while 28.57% students were having low level of reading comprehension.

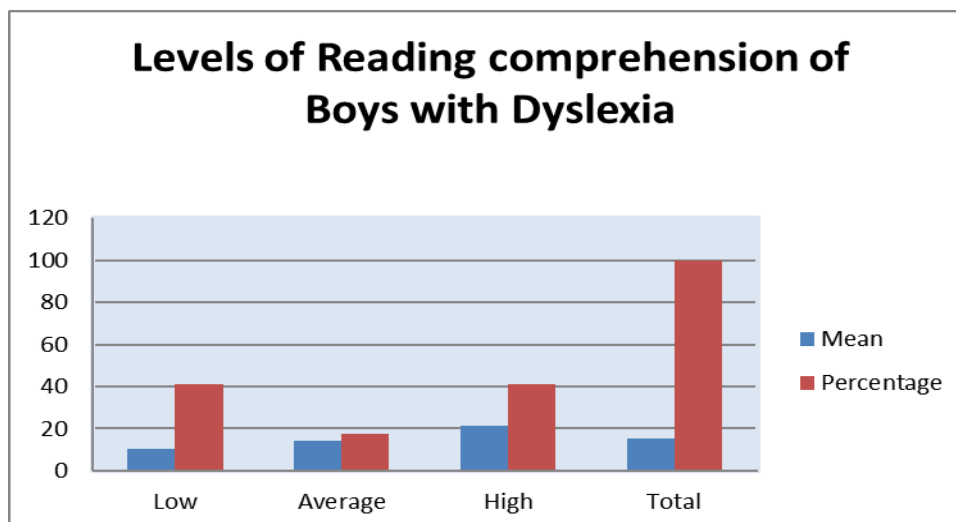
The mean value of reading comprehension obtained by the 12 students of low level of reading comprehension is 7.83 with a standard deviation of 2.32 and similarly mean value for 16 students of average level of reading comprehension is 13.75 with a standard deviation of 1.61. The mean value of 14 students of high level is 23.71 with a standard deviation of 8.07. The mean value of total 42 students is 15.38 with a standard deviation of 8.03.

**Table 4.6 ©: Levels of Reading comprehension of Boys with Dyslexia**

Levels of Reading Comprehension	N	Mean	SD	Percentage
Low	9	7.777	2.538	36
Average	5	13.20	1.095	20
High	11	22.54	9.511	44
Total	25	15.36	9.286	100

Keys: N =Number of students; X=Mean; SD=Standard Deviation





**Figure 4.6.2: Levels of reading comprehension of boys with dyslexia**

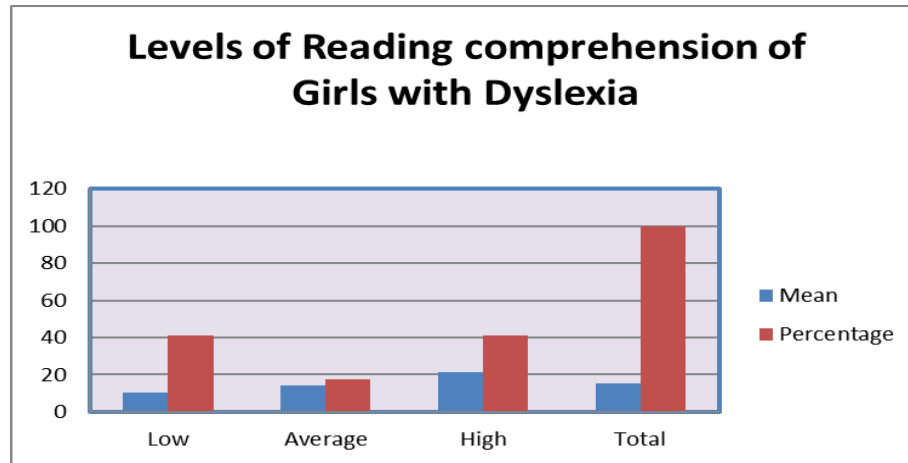
Table 4.6(c) and Figure 4.6.2 show the levels of reading comprehension of the boys with dyslexia. It is clear from the Table that only 44% boys were having high level of reading comprehension. 20% boys were having average level of reading comprehension while 36% boys were having low level of reading comprehension.

The mean value of reading comprehension obtained by the 9 boys of low level of reading comprehension is 7.77 with a standard deviation of 2.53 and similarly mean value for 5 boys of average level of reading comprehension is 13.20 with a standard deviation of 1.09. The mean value of 11 boys of high level is 22.54 with a standard deviation of 9.51. The mean value of total 25 boys is 15.36 with a standard deviation of 9.28.

**Table 4.6 (d): Levels of Reading comprehension of Girls with Dyslexia**

Levels of Reading Comprehension	N	Mean	SD	Percentage
Low	7	10.28	2.429	41.18
Average	3	14.00	0.00	17.64
High	7	21.14	4.450	41.18
Total	17	15.41	5.990	100

Keys: N =Number of students; X=Mean; SD=Standard Deviation



**Figure 4.6.3: Levels of reading comprehension of girls with dyslexia**

Table 4.6(d) and Figure 4.6.3 show the levels of reading comprehension of the girls with dyslexia. It is clear from the Table that only 41.18% girls were having high level of reading comprehension. 17.64% girls were having average level of reading comprehension while 17.64% girls were having low level of reading comprehension.

The mean value of reading comprehension obtained by the 7 girls of low level of reading comprehension is 10.28 with a standard deviation of 2.42 and similarly mean value for 3 girls of average level of reading comprehension is 14.00 with a standard deviation of 0.0. The mean value of 7 girls of high level is 21.14 with a standard deviation of 4.45. The mean value of total 17 girls is 15.41 with a standard deviation of 5.99.

### **4.3 Section 3: Study of the effect of multi-sensory instructional strategy on the patterns of miscues of Dyslexic students at Elementary School level.**

**Objective 4:** To study the effect of multi-sensory instructional strategy on the patterns of miscues of dyslexic students of grade VI.

In the pre-testing phase, the researcher administered the Miscue Analysis and reading comprehension Test on the Dyslexic students. Miscue analysis was done to analyse the miscues and study the patterns of miscues (substitutions, insertions, omissions, reversal, refusals and self-corrections) of Dyslexic Students at Elementary School level by using miscue and reading comprehension test prepared by the researcher. In the present study, The Dyslexic Students of class 6th were taught through the Multisensory Instructional Strategy (Intervention) for six weeks after the pretest. Researcher developed and validated the multisensory strategy based instructional plans

for intervention. After the intervention the researcher re administered the Miscue Analysis and reading comprehension Test on the Dyslexic students. The difference between the data of pretest and posttest has been compared to investigate the influence of multisensory intervention on the patterns of miscues of students with dyslexia.

The Wilcoxon Signed Rank Test was used to examine the significance of the difference in means of achievement between the pre-test and post-test of students with dyslexia due to the multisensory instructional strategy-based intervention.

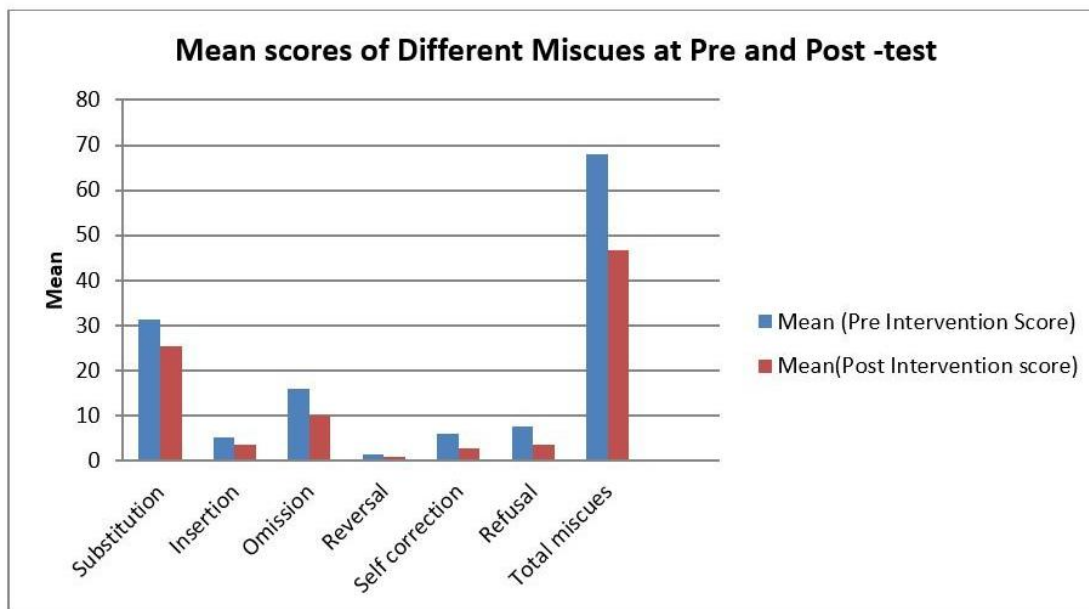
The significance of the difference between the means of achievement of the pre-test and post-test of students with dyslexia due to the multisensory instructional strategy based intervention was determined using inferential statistics in the form of Wilcoxon Signed Rank Test. Table 4.7 shows the results of the analysis of the effect of Multisensory Instructional Strategy (Intervention) on patterns of miscues in dyslexic students.

**Table 4.7: Summary of Wilcoxon Signed Rank Test of different miscues of total students with dyslexia**

Miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Substitution	Pre-test	42	31.48	17.80	19.00	25.00	44.00	-2.557	0.011*
	Post-test	42	25.45	16.89	12.75	23.50	32.25		
Insertion	Pre-test	42	5.12	4.592	2.0	4.00	6.25	-2.085	0.037*
	Post-test	42	3.69	3.257	1.0	3.00	5.250		
Omission	Pre-test	42	16.02	13.359	5.75	13.00	23.00	3.247	0.001**
	Post-test	42	10.119	10.357	3.000	7.000	13.000		
Reversal	Pre-test	42	7.71	10.54	1.75	4.00	8.25	-2.309	0.021*
	Post-test	42	.95	1.081	.00	1.00	2.00		
Self correction	Pre-test	42	6.12	5.283	3.00	5.00	8.00	-3.744	0.000**
	Post-test	42	2.81	2.848	.00	2.00	5.00		
Refusal	Pre-test	42	7.71	10.549	1.75	4.00	8.25	2.184	0.029*
	Post-test	42	3.60	3.982	.00	2.00	7.00		
Total	Pre-test	42	6.12	5.283	3.00	5.00	8.00	-3.744	0.000**
	Post-test	42	2.81	2.848	.00	2.00	5.00		

\*\* Significant at 0.01 level of significance

\* Significant at 0.05 level of significance



**Figure 4.7: Pre-test and Post-test Mean scores on different Miscues committed by the students with dyslexia**

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.7. It shows the mean, standard deviation and percentile values of scores of different miscues committed by the students with dyslexia. The Table shows that the mean score of total students on total miscues is 67.95, with standard deviation 33.733 in pretest and mean score of total students on total miscues is 46.61, with standard deviation 26.728 in posttest.

#### **4.3.1 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Substitution Miscue**

**Hypothesis 1(a):** There is no significant effect of multisensory instructional strategy on patterns of substitution miscues of dyslexic students of grade VI

To test the hypothesis of the study, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.8 and 4.9 have been created after scoring and tabulating the results obtained.

**Table 4.8:** Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of substitution miscues

<b>Patterns of Substitution Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive substitution Post test-Pre test	Negative Ranks	28 <sup>a</sup>	19.21	538.00
	Positive Ranks	11 <sup>b</sup>	22.00	242.00
	Ties	3 <sup>c</sup>		
	Total	42		
Intermediate Substitution Post test-Pre test	Negative Ranks	24 <sup>d</sup>	21.27	510.50
	Positive Ranks	15 <sup>e</sup>	17.97	269.50
	Ties	3 <sup>f</sup>		
	Total	42		
Negative Substitution Post test-Pre test	Negative Ranks	22 <sup>g</sup>	20.41	449.00
	Positive Ranks	16 <sup>h</sup>	18.25	292.00
	Ties	4 <sup>i</sup>		
	Total	42		
Total Substitution Post test-Pre test	Negative Ranks	32 <sup>j</sup>	20.50	656.00
	Positive Ranks	10 <sup>k</sup>	24.70	247.00
	Ties	0 <sup>l</sup>		
	Total	42		

- a. Post Substitution Positive <Pre Substitution Positive
- b. Post Substitution Positive >Pre Substitution Positive
- c. Post Substitution Positive = Pre Substitution Positive
- d. Post Substitution Intermediate<Pre Substitution Intermediate
- e. Post Substitution Intermediate >Pre Substitution Intermediate
- f. Post Substitution Intermediate = Pre Substitution Intermediate
- g. Post Substitution Negative<Pre Substitution Negative
- h. Post Substitution Negative>Pre Substitution Negative
- i. Post Substitution Total= Pre Substitution Total
- j. Post Substitution Total <Pre Substitution Total
- k. Post Substitution Total >Pre Substitution Total
- l. Post Substitution Negative= Pre Substitution Negative

The table 4.8 presents the difference in the ranks between the pretest and the post-test scores of different patterns of substitution miscues committed by the total students. The sum of positive ranks (11) and that of negative ranks (28) of positive substitution miscues indicates that the students' post-test score for positive substitution errors is lower than their pre-test score. The sum of positive ranks (15) and that of negative ranks (24) of Intermediate substitution miscues indicates that the students' post-test score for Intermediate substitution miscues is lower than their pre-test score. The sum of positive ranks (16) and that of negative ranks (22) of Negative substitution miscues indicates that the students' post-test score for Negative Substitution Miscues is lower than their pre-test score. The sum of positive ranks (10) and that of negative ranks (32) of Total substitution miscues indicates that the number of total substitution miscues made by pupils is lower in the post-test than in the pre-test. So it can be concluded that the Substitution miscues committed by the students with Dyslexia are minimized at post-test stage after the Multisensory Strategy based intervention.

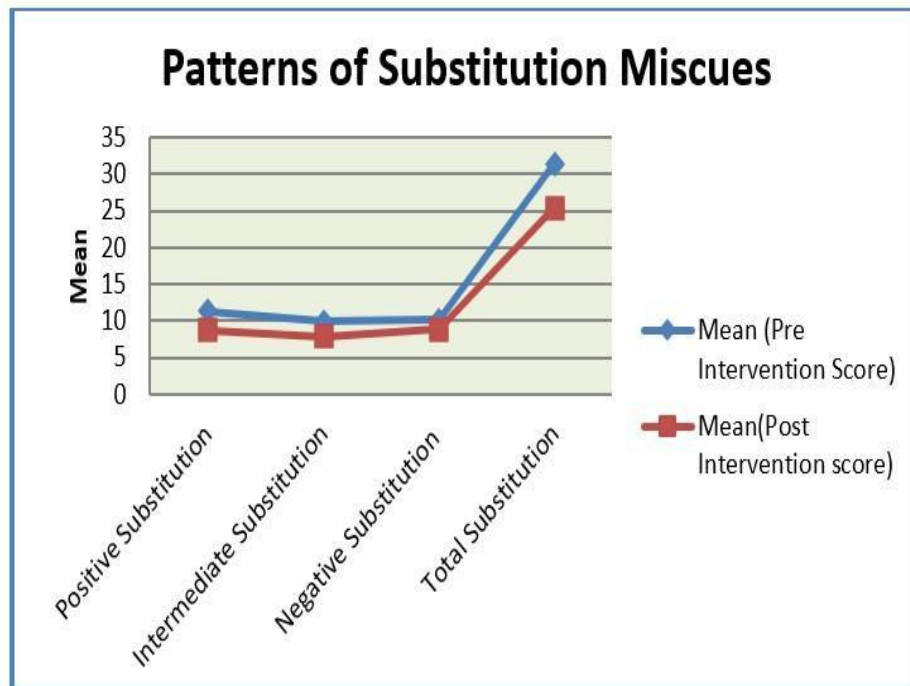
The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.9. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of substitution miscues committed by the students with dyslexia.

**Table 4.9: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Substitution Miscues**

Substitution miscues	Total Students	Percentiles						'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	11.33	9.722	6.00	8.00	16.00	-2.067	0.039*
	Post-test	42	8.74	7.542	3.00	6.50	14.25		
Intermediate	Pre-test	42	9.98	6.88	4.75	8.50	15.00	-1.683	.092
	Post-test	42	7.83	6.64	3.00	6.00	10.25		
Negative	Pre-test	42	10.17	9.72	6.00	8.00	16.00	-1.140	.254
	Post-test	42	8.88	11.38	2.00	4.50	11.25		
Total	Pre-test	42	31.48	17.80	19.00	25.00	44.00	-2.557	.011**
	Post-test	42	25.45	16.89	12.75	23.50	32.25		

\*\* Significant at 0.01 level of significance

\* Significant at 0.05 level of significance



**Figure 4.8: Pre-test and Post-test Mean scores on Substitution Miscues committed by the students with dyslexia**

### **Discussion (Substitution)**

The results of the Wilcoxon Signed Rank test exploring the effectiveness of intervention on substitution miscue committed by the students with dyslexia are presented in the Table 4.9. It showed a statistically significant effect of multisensory instructional strategy on patterns of substitution miscues of dyslexic students. The ‘Z’ value of Substitution miscue is 2.55 ( $p=.011$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of substitution miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘Z’ values of the positive substitution miscues is 0.039 which is also found significant at the 0.05 level of significance ( $p < 0.05$ ) however the ‘Z’ values of Intermediate substitution miscues and Negative

substitution miscues are -1.683 ( $p=$ ) and -1.683 ( $p=.092$ ) respectively which are not found significant at 0.05 level of significance ( $p>0.05$ ).

From Table 4.9 and Figure 4.8, it is evident that at pre- test, the students with dyslexia have got 11.33 mean score of positive substitution miscues with 9.72 SD, whereas at Post-test it decreased to 8.73 with 7.54 SD. At pre- test, the students with dyslexia got 9.97 mean score of Intermediate substitution miscues with 6.88 SD, whereas at Post-test it decreased to 7.83 with 6.64 SD. At pre- test, the students with dyslexia got 10.16 mean score of Negative substitution miscues with 12.48 SD, whereas at Post-test it decreased to 8.88 with 11.38 SD. At pre-test the students made the most positive and the least intermediate whereas the students made the most Negative and the least intermediate at post-test. So it can be concluded that the patterns of grades of substitution miscues are different at pre-test and post-test. Mean score of substitution miscues before the intervention of multisensory instructional strategy is 31.47 with 17.801 SD. After the intervention, the mean score is decreased to 25.45 with 16.893 SD so it can be interpreted that “the multisensory instructional strategy is effective for minimizing the substitution miscues”.

#### **4.3.2 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Insertion Miscue**

**Hypothesis 1(b):** There is no significant effect of multisensory instructional strategy on patterns of insertion miscues of dyslexic students of grade VI

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.10 and 4.11 have been created after scoring and tabulating the results obtained.



**Table 4.10:** Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of Insertion miscues

<b>Patterns of Insertion Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive Insertion Post test-Pre test	Negative Ranks	22 <sup>m</sup>	16.98	373.50
	Positive Ranks	11 <sup>n</sup>	17.05	187.50
	Ties	9 <sup>o</sup>		
	Total	42		
Intermediate Insertion Post test-Pre test	Negative Ranks	19 <sup>p</sup>	18.42	350.00
	Positive Ranks	15 <sup>q</sup>	16.33	245.00
	Ties	8 <sup>r</sup>		
	Total	42		
Negative Insertion Post test-Pre test	Negative Ranks	14 <sup>s</sup>	12.43	174.00
	Positive Ranks	11 <sup>t</sup>	13.73	151.00
	Ties	17 <sup>u</sup>		
	Total	42		
Total Insertion Post test-Pre test	Negative Ranks	23 <sup>v</sup>	20.22	465.00
	Positive Ranks	13 <sup>w</sup>	15.46	201.00
	Ties	6 <sup>x</sup>		
	Total	42		

m. Post Insertion Positive <Pre Insertion Positive

n. Post Insertion Positive >Pre Insertion Positive

o. Post Insertion Positive = Pre Insertion Positive

p. Post Insertion Intermediate<Pre Insertion Intermediate

q. Post Insertion Intermediate >Pre Insertion Intermediate

r. Post Insertion Intermediate = Pre Insertion Intermediate

s. Post Insertion Negative<Pre Insertion Negative

t. Post Insertion Negative>Pre Insertion Negative

u. Post Insertion Total= Pre Insertion Total

v. Post Insertion Total <Pre Insertion Total

w. Post Insertion Total >Pre Insertion Total

x. Post Insertion Negative= Pre Insertion Negative

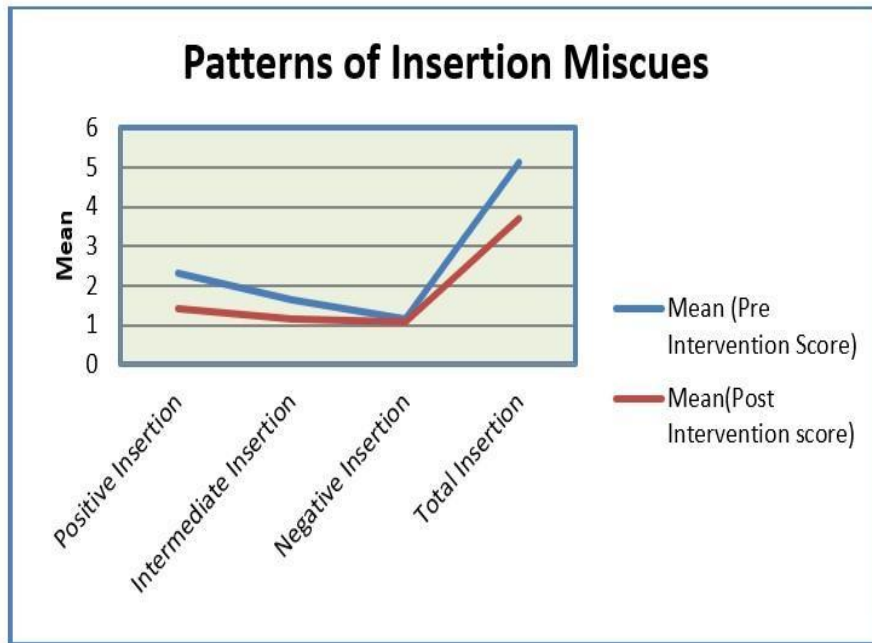
The table 4.10 presents the difference in the ranks between the pretest and the post-test scores of different patterns of Insertion miscues committed by the total students. The sum of positive ranks (11) and that of negative ranks (22) of positive Insertion miscues indicates that the students' post-test score for positive insertion miscues is lower than their pre-test score. The sum of positive ranks (15) and that of negative ranks (19) of Intermediate Insertion miscues indicates the students' post-test score for Intermediate Insertion miscues is lower than their pre-test score. The sum of positive ranks (11) and that of negative ranks (14) of Negative Insertion miscues indicates that the students' post-test score for Negative Insertion miscues is lower than their pre-test score. The sum of positive ranks (13) and that of negative ranks (23) of Total Insertion miscues indicates that the students' post-test score for Total Insertion miscues is lower than their pre-test score. So it can be concluded that the Insertion miscues committed by the students with Dyslexia are minimized at post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.11. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of Insertion miscues committed by the students with dyslexia.

**Table 4.11: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Insertion Miscues**

Insertion miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	2.31	3.265	.00	1.00	3.00	-1.677	.093
	Post-test	42	1.428	1.849	.00	1.00	2.00		
Intermediate	Pre-test	42	1.67	2.406	.00	1.00	2.25	-.914	.361
	Post-test	42	1.166	1.949	.00	.000	2.00		
Negative	Pre-test	42	1.14	1.555	.00	1.00	1.25	-.315	.753
	Post-test	42	1.095	1.764	.00	.00	2.00		
Total	Pre-test	42	5.12	4.592	2.0	4.00	6.25	-2.085	.037*
	Post-test	42	3.690	3.257	1.0	3.00	5.250		

\* Significant at 0.05 significance level



**Figure 4.9: Pre-test and Post-test Mean scores on Insertion Miscues committed by the students with dyslexia**

### **Discussion (Insertion)**

The results of the Wilcoxon Signed Rank test exploring the effectiveness of intervention on Insertion miscue committed by the students with dyslexia are presented in the Table 4.11 .It showed a statistically significant effect of multisensory instructional strategy on patterns of Insertion miscues of dyslexic students. ‘Z’ value of Insertion miscues is 2.085 ( $p=.037$ ) which is significant at the 0.05 significance level ( $p < 0.05$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of Insertion miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘Z’ values of the positive Insertion miscues, Intermediate Insertion miscues and Negative Insertion miscues are 1.67, 0.91 and 0.31 respectively which are not found significant at the 0.05 significance level ( $p > 0.05$ ).

From Table no. 4.11 and Figure 4.9, it is evident that at pre- test, the students with dyslexia have got a 2.30 mean score of positive insertion miscues with 3.26 SD, whereas at Post-test it decreased to 1.42 with 1.84 SD. At pre- test, the students with dyslexia got 1.66 mean score of Intermediate insertion miscues with 2.40 SD, whereas at Post-test it decreased to 1.16 with 1.94 SD. At pre- test, the students with dyslexia got 1.14 mean score of Negative insertion miscues with 1.55 SD, whereas at Post-test it decreased to 1.09 with 1.76 SD. The students made the most positive insertion miscues and the least negative insertion miscues during the pre-test. Similarly, the students made the most positive insertion miscues and the least negative insertion miscues at the post-test. So it can be concluded that the patterns of grades of insertion miscues are the same at pre-test and post-test. The mean score of insertion miscues before the intervention of multisensory instructional strategy is 5.11 with 4.59 SD. It is decreased to 3.69 with 3.25 SD after the implication of intervention so it can be interpreted that “the multisensory instructional strategy is effective for minimizing the insertion miscues”.

#### **4.3.3 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of omission Miscue**

**Hypothesis 1(c): There** is no significant effect of multisensory instructional strategy on patterns of omission miscues of dyslexic students of grade VI

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.12 and 4.13 have been created after scoring and tabulating the results obtained.

**Table 4.12:** Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of Omission miscues

<b>Patterns of Omission Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive Omission Post test-Pre test	Negative Ranks	27 <sup>a</sup>	21.59	583.00
	Positive Ranks	12 <sup>b</sup>	16.42	197.00
	Ties	3 <sup>c</sup>		
	Total	42		
Intermediate Omission Post test-Pre test	Negative Ranks	20 <sup>d</sup>	20.48	409.50
	Positive Ranks	15 <sup>e</sup>	14.70	220.50
	Ties	7 <sup>f</sup>		
	Total	42		
Negative Omission Post test-Pre test	Negative Ranks	24 <sup>g</sup>	18.15	435.50
	Positive Ranks	13 <sup>h</sup>	20.58	267.50
	Ties	5 <sup>i</sup>		
	Total	42		
Total Omission Post test-Pre test	Negative Ranks	30 <sup>j</sup>	23.70	711.00
	Positive Ranks	12 <sup>k</sup>	16.00	192.00
	Ties	0 <sup>l</sup>		
	Total	42		

- a. Post Omission Positive <Pre Omission Positive
- b. Post Omission Positive >Pre Omission Positive
- c. Post Omission Positive = Pre Omission Positive
- d. Post Omission Intermediate<Pre Omission Intermediate
- e. Post Omission Intermediate >Pre Omission Intermediate
- f. Post Omission Intermediate = Pre Omission Intermediate
- g. Post Omission Negative<Pre Omission Negative
- h. Post Omission Negative>Pre Omission Negative
- i. Post Omission Total= Pre Omission Total
- j. Post Omission Total <Pre Omission Total
- k. Post Omission Total >Pre Omission Total
- l. Post Omission Negative= Pre Omission Negative

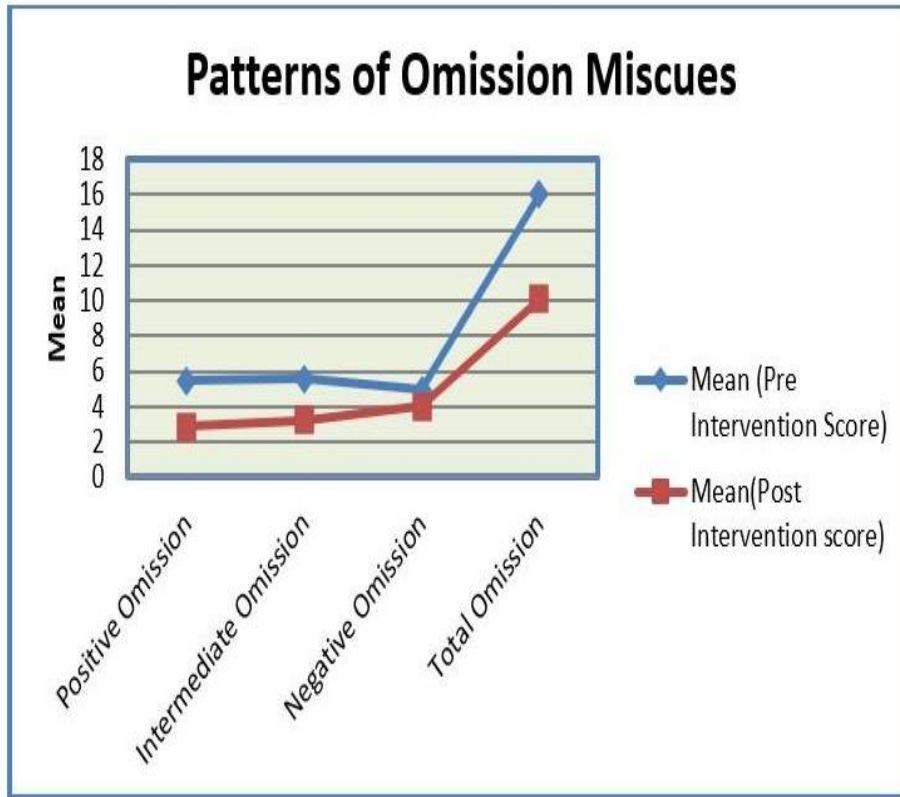
The table 4.12 presents the difference in the ranks between the pretest and the post-test scores of different patterns of Omission miscues committed by the total students. The sum of positive ranks (12) and that of negative ranks (27) of positive Omission miscues indicates that the students' post-test score for positive Omission Miscues is lower than their pre-test score. The sum of positive ranks (15) and that of negative ranks (20) of Intermediate Omission miscues indicates that the students' post-test score for Intermediate Omission Miscues is lower than their pre-test score. The sum of positive ranks (13) and that of negative ranks (24) of Negative Omission miscues indicates that the students' post-test score for Negative Omission Miscues is lower than their pre-test score. The sum of positive ranks (12) and that of negative rank (20) of Total Omission miscues indicates that the students' post-test score for Total Omission Miscues is lower than their pre-test score. So it can be concluded that the Omission miscues committed by the students with Dyslexia are minimized at post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.13. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of Omission miscues committed by the students with dyslexia.

**Table 4.13: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Omission Miscues**

Omission miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	5.48	5.701	1.00	4.50	8.00	-2.698 <sup>b</sup>	0.007**
	Post-test	42	2.88	3.077	.00	2.00	5.00		
Intermediate	Pre-test	42	5.57	8.451	.00	2.00	8.00	-1.552 <sup>b</sup>	0.121
	Post-test	42	3.23	4.071	.00	2.00	5.00		
Negative	Pre-test	42	4.98	5.519	1.00	2.00	7.25	-1.271 <sup>b</sup>	0.204
	Post-test	42	4.00	6.702	.00	2.00	4.00		
Total	Pre-test	42	16.02	13.35	5.75	13.00	23.00	-3.247	0.001**
	Post-test	42	10.11	10.357	3.00	7.00	13.00		

\* Significant at 0.01 level of significance



**Figure 4.10: Pre-test and Post-test Mean scores on Omission Miscues committed by the students with dyslexia**

### **Discussion (Omission)**

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Omission miscue committed by the students with dyslexia are presented in Table 4.13. It revealed a statistically significant effect of multisensory instructional strategy on patterns of Omission miscues of dyslexic students. ‘Z’ value of Omission miscues is 3.247 ( $p=.001$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of Omission miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘Z’ value of the positive Omission miscues is 2.698 which is also significant at the 0.01 significance level ( $p < 0.01$ ). However the ‘Z’ values of

Intermediate Omission miscues and Negative Omission miscues are 1.552 and 1.271 respectively which are not found significant at the 0.05 significance level(  $p>0.05$  ).

From Table no. 4.13 and Figure 4.10, it is evident that at pre- test, the students with dyslexia got 5.47 mean score of positive Omission miscues with 5.70 SD, whereas at Post-test it decreased to 2.88 with 3.07 SD. At pre- test, the students with dyslexia got 5.57 mean score of Intermediate Omission miscues with 1.30 SD, whereas at Post-test it decreased to 3.23 with 4.07 SD. At pre- test, the students with dyslexia got 4.97 mean score of Negative Omission miscues with 5.51 SD, whereas at Post-test it decreased to 4.00 with 6.70 SD. Students made the most Intermediate Omission Miscues and the fewest negative Omission Miscues during the pre-test, whereas they made the most Negative Omission Miscues and the fewest positive Omission Miscues during the post-test. So it can be concluded that the patterns of grades of Omission miscues are different at pre-test and post-test. The mean score of Omission miscues before the intervention of multisensory instructional strategy is 16.02 with 13.35 SD. It is decreased to 10.11 with 10.35 SD at post-test so it can be interpreted that “the multisensory instructional strategy is effective for minimizing the Omission miscues”.

#### **4.3.4 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of reversal Miscue**

**Hypothesis 1(d):** There is no significant effect of multisensory instructional strategy on patterns of Reversal miscues of dyslexic students of grade VI

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.14 and 4.15 have been created after scoring and tabulating the results obtained.



**Table 4.14:** Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of Reversal miscues

<b>Patterns of Reversal Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive Reversal Post test-Pre test	Negative Ranks	11 <sup>a</sup>	9.86	108.50
	Positive Ranks	8 <sup>b</sup>	10.19	81.50
	Ties	23 <sup>c</sup>		
	Total	42		
Intermediate Reversal Post test-Pre test	Negative Ranks	15 <sup>d</sup>	9.60	144.00
	Positive Ranks	4 <sup>e</sup>	11.50	46.00
	Ties	23 <sup>f</sup>		
	Total	42		
Negative Reversal Post test-Pre test	Negative Ranks	14 <sup>g</sup>	9.57	134.00
	Positive Ranks	7 <sup>h</sup>	13.86	97.00
	Ties	21 <sup>i</sup>		
	Total	42		
Total Reversal Post test- Pre test	Negative Ranks	21 <sup>j</sup>	15.31	321.50
	Positive Ranks	8 <sup>k</sup>	14.19	113.50
	Ties	13 <sup>l</sup>		
	Total	42		

- a. Post Reversal Positive <Pre Reversal Positive
- b. Post Reversal Positive >Pre Reversal Positive
- c. Post Reversal Positive = Pre Reversal Positive
- d. Post Reversal Intermediate<Pre Reversal Intermediate
- e. Post Reversal Intermediate >Pre Reversal Intermediate
- f. Post Reversal Intermediate = Pre Reversal Intermediate
- g. Post Reversal Negative<Pre Reversal Negative
- h. Post Reversal Negative>Pre Reversal Negative
- i. Post Reversal Total= Pre Reversal Total
- j. Post Reversal Total <Pre Reversal Total
- k. Post Reversal Total >Pre Reversal Total
- l. Post Reversal Negative= Pre Reversal Negative

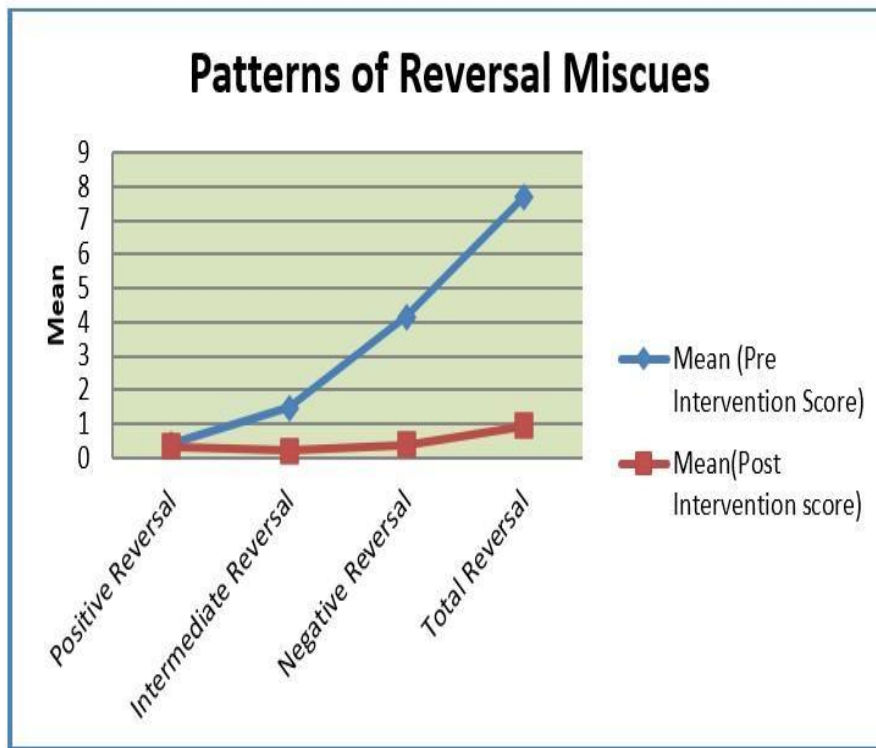
The table 4.14 presents the difference in the ranks between the pretest and the post-test scores of different patterns of Reversal miscues committed by the total students. The sum of positive ranks (8) and that of negative ranks (11) of positive Reversal miscues indicates that the post-test score of positive reversal miscues produced by students is lesser than the pre-test score. The sum of positive ranks (4) and that of negative ranks (11) of Intermediate Reversal miscues indicates that the students' post-test score for Intermediate Reversal miscues is lower than their pre-test score. The sum of positive ranks (7) and that of negative ranks (14) of Negative Reversal miscues indicates that the students' post-test score for Negative Reversal Mistakes is lower than their pre-test score. The sum of positive ranks (8) and that of negative ranks (21) of Total Reversal miscues indicates that the students' post-test score for Total Reversal Miscues is lower than their pre-test score. So it can be concluded that the Reversal miscues committed by the students with Dyslexia are minimized at the post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.15. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of Reversal miscues committed by the students with dyslexia.

**Table 4.15: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Reversal Miscues**

Reversal miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	2.07	2.672	.00	1.00	3.0	-.595	.552
	Post-test	42	.3571	.6921	.00	.00	0.25		
Intermediate	Pre-test	42	1.48	2.511	.00	.00	2.0	-2.053	.040*
	Post-test	42	.2143	.5196	.00	.00	.00		
Negative	Pre-test	42	4.17	7.315	.00	1.50	4.00	-.660	.509
	Post-test	42	.3810	.794	.00	.00	.00		
Total	Pre-test	42	7.71	10.54	1.75	4.00	8.25	-2.309	.021*
	Post-test	42	.95	1.081	.00	1.00	2.00		

\* Significant at 0.05 significance level



**Figure 4.11: Pre-test and Post-test Mean scores on Reversal Miscues committed by the students with dyslexia**

### **Discussion (Reversal)**

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Reversal miscue committed by the students with dyslexia are presented in Table 4.15. It showed a statistically significant effect of multisensory instructional strategy on patterns of Reversal miscues of dyslexic students. The ‘Z’ value of Reversal miscues is 2.309 ( $p=.021$ ) which is found significant at the 0.05 significance level ( $p < 0.05$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of Reversal miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘Z’ value of the Intermediate Reversal miscue is 2.053 which is also found significant at the 0.05 significance level ( $p < 0.05$ ). However

the 'Z' values of Positive Reversal miscues and Negative Reversal miscues are 0.59 and 0.66 respectively which are not found significant at the 0.05 significance level ( $p > 0.05$ ).

From Table no. 4.15 and Figure 4.11, it is evident that at pre- test, the students with dyslexia have got 0.42 mean score of positive Reversal miscues with 0.59 SD, whereas at Post-test it decreased to 0.35 with 0.69 SD. At pre- test, the students with dyslexia got 1.47 mean score of Intermediate Reversal miscues with 2.51 SD, whereas at Post-test it decreased to 0.21 with 0.51 SD. At pre- test, the students with dyslexia got 4.16 mean score of Negative Reversal miscues with 7.31 SD, whereas at Post-test it decreased to 0.38 with 0.79 SD. Students made the most Intermediate Reversal miscues and the least Positive Reversal miscues during the pre-test whereas the students produced the most Negative Reversal Miscues and the least Intermediate Reversal Miscues at the post-test. As a result, it may be stated that the patterns of grades for reversal miscues differ between pre- and post-test. The mean score of Reversal miscues before the intervention of multisensory instructional strategy is 7.71 with 10.54 SD. It is decreased to 0.95 with 1.08 SD at post test so it can be interpreted that "the multisensory instructional strategy is effective for minimizing the Reversal miscues".

#### **4.3.5 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of self correction Miscue**

**Hypothesis 1(e):** There is no significant effect of multisensory instructional strategy on patterns of Self correction miscues of dyslexic students of grade VI

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.16 and 4.17 have been created after scoring and tabulating the results obtained.

**Table 4.16:** Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of Self correction miscues

<b>Patterns of Self correction Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive Self correction Post test-Pre test	Negative Ranks	20 <sup>a</sup>	15.53	310.50
	Positive Ranks	7 <sup>b</sup>	9.64	67.50
	Ties	15 <sup>c</sup>		
	Total	42		
Intermediate Self correction Post test- Pre test	Negative Ranks	12 <sup>d</sup>	12.08	145.00
	Positive Ranks	8 <sup>e</sup>	8.13	65.00
	Ties	22 <sup>f</sup>		
	Total	42		
Negative Self correction Post test- Pre test	Negative Ranks	15 <sup>g</sup>	13.70	205.50
	Positive Ranks	10 <sup>h</sup>	11.95	119.50
	Ties	17 <sup>i</sup>		
	Total	42		
Total Self correction Post test-Pre test	Negative Ranks	27 <sup>j</sup>	20.11	543.00
	Positive Ranks	8 <sup>k</sup>	10.88	87.00
	Ties	7 <sup>l</sup>		
	Total	42		

- a. Post Self correction Positive <Pre Self correction Positive
- b. Post Self correction Positive >Pre Self correction Positive
- c. Post Self correction Positive = Pre Self correction Positive
- d. Post Self correction Intermediate<Pre Self correction Intermediate
- e. Post Self correction Intermediate >Pre Self correction Intermediate
- f. Post Self correction Intermediate = Pre Self correction Intermediate
- g. Post Self correction Negative<Pre Self correction Negative
- h. Post Self correction Negative>Pre Self correction Negative
- i. Post Self correction Total= Pre Self correction Total
- j. Post Self correction Total <Pre Self correction Total
- k. Post Self correction Total >Pre Self correction Total
- l. Post Self correction Negative= Pre Self correction Negative

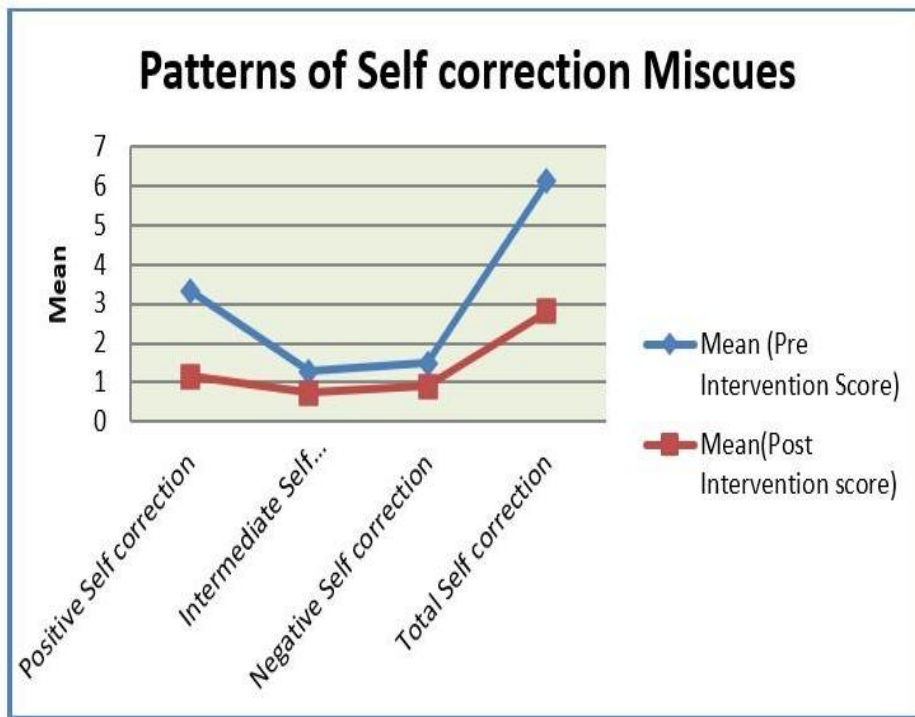
The table 4.16 presents the difference in the ranks between the pretest and the post-test scores of different patterns of Self correction miscues committed by the total students. The sum of positive ranks (7) and that of negative ranks (20) of positive Self correction miscues indicates that students' post-test score for positive Self-correction miscues is lower than their pre-test score. The sum of positive ranks (8) and that of negative ranks (12) of Intermediate Self correction miscues indicates that the students' post-test score for Intermediate Self-Correction Miscues is lower than their pre-test score. The sum of positive ranks (10) and that of negative ranks (15) of Negative Self correction miscues indicates that the students' post-test score for Negative Self Correction Miscues is lower than their pre-test score. The sum of positive ranks (8) and that of negative ranks (27) of Total Self correction miscues indicates that the students' post-test score for Total Self-Correction Miscues is lower than their pre-test score. So it can be concluded that the Self correction miscues committed by the students with Dyslexia are minimized at post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.17. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of Self correction miscues committed by the students with dyslexia.

**Table 4.17: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Self correction Miscues**

Self correction miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	3.33	4.594	.00	2.00	5.00	-2.929	.003**
	Post-test	42	1.17	1.780	.00	.00	2.00		
Intermediate	Pre-test	42	1.29	2.133	.00	.00	2.00	-1.505	.132
	Post-test	42	.74	1.308	.00	.00	1.00		
Negative	Pre-test	42	1.50	2.680	.00	.00	2.00	-1.166	.243
	Post-test	42	.90	1.394	.00	.00	1.00		
Total	Pre-test	42	6.12	5.283	3.00	5.00	8.00	-3.744	.000**
	Post-test	42	2.81	2.848	.00	2.00	5.00		

\* Significant at 0.01 level of significance



**Figure 4.12: Pre-test and Post-test Mean scores on Self correction Miscues committed by the students with dyslexia**

#### **Discussion (Self correction)**

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Self correction miscue committed by the students with dyslexia are presented in the Table 4.17. It showed a statistically significant effect of multisensory instructional strategy on patterns of Self correction miscues of dyslexic students. The ‘Z’ value of Self correction miscues is 3.744 ( $p=0.000$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of Self correction miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘Z’ value of the Positive Self correction miscue is 2.929 ( $p=0.003$ ) which is also found significant at the 0.01 significance level ( $p < 0.01$ ). However the ‘Z’ values of Intermediate Self correction

miscues and Negative Self correction miscues are 1.505 and 1.166 respectively which are not found significant at the 0.05 significance level ( $p>0.05$ ).

From Table no. 4.17 and Figure 4.12, it is evident that at pre- test, the students with dyslexia got 3.33 mean score of positive Self correction miscues with 4.59 SD, whereas at Post-test it decreased to 1.16 with 1.77 SD. At pre- test, the students with dyslexia got a 1.28 mean score of Intermediate Self correction miscues with 2.13 SD, whereas at Post-test it decreased to 0.73 with 1.30 SD. At pre- test, the students with dyslexia got 1.50 mean score of Negative Self correction miscues with 2.68 SD, whereas at Post-test it decreased to 0.90 with 1.39 SD. At the pre-test, students produced the most Positive Self-Correction Miscues and the fewest Intermediate Self-Correction Miscues. Similarly at the post-test, the students produced the most Positive Self-Correction Miscues and the least Intermediate Self-Correction Miscues. So it can be concluded that at the pre-test and post-test, the patterns of grades for self-correction miscues are the same. The mean score of Self correction miscues before the intervention of multisensory instructional strategy is 6.11 with 5.28 SD. It is decreased to 2.80 with 2.84 SD at post-test so it can be interpreted that “the multisensory instructional strategy is effective for minimizing the Self correction miscues”.

#### **4.3.6 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of refusal Miscue**

**Hypothesis 1(f):** There is no significant effect of multisensory instructional strategy on patterns of Refusal miscues of dyslexic students of grade VI

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.18 and 4.19 have been created after scoring and tabulating the results obtained.



**Table 4.18: Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of Refusal miscues**

<b>Patterns of Refusal Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive Refusal Post test-Pre test	Negative Ranks	20 <sup>a</sup>	13.98	279.50
	Positive Ranks	8 <sup>b</sup>	15.81	126.50
	Ties	14 <sup>c</sup>		
	Total	42		
Intermediate Refusal Post test-Pre test	Negative Ranks	14 <sup>d</sup>	12.50	175.00
	Positive Ranks	10 <sup>e</sup>	12.50	125.00
	Ties	18 <sup>f</sup>		
	Total	42		
Negative Refusal Post test-Pre test	Negative Ranks	21 <sup>g</sup>	17.74	372.50
	Positive Ranks	10 <sup>h</sup>	12.35	123.50
	Ties	11 <sup>i</sup>		
	Total	42		
Total Refusal Post test- Pre test	Negative Ranks	26 <sup>j</sup>	19.08	496.00
	Positive Ranks	11 <sup>k</sup>	18.82	207.00
	Ties	5 <sup>k</sup>		
	Total	42		

- a. Post Refusal Positive <Pre Refusal Positive
- b. Post Refusal Positive >Pre Refusal Positive
- c. Post Refusal Positive = Pre Refusal Positive
- d. Post Refusal Intermediate<Pre Refusal Intermediate
- e. Post Refusal Intermediate >Pre Refusal Intermediate
- f. Post Refusal Intermediate = Pre Refusal Intermediate
- g. Post Refusal Negative<Pre Refusal Negative
- h. Post Refusal Negative>Pre Refusal Negative
- i. Post Refusal Total= Pre Refusal Total
- j. Post Refusal Total <Pre Refusal Total
- k. Post Refusal Total >Pre Refusal Total
- l. Post Refusal Negative= Pre Refusal Negative

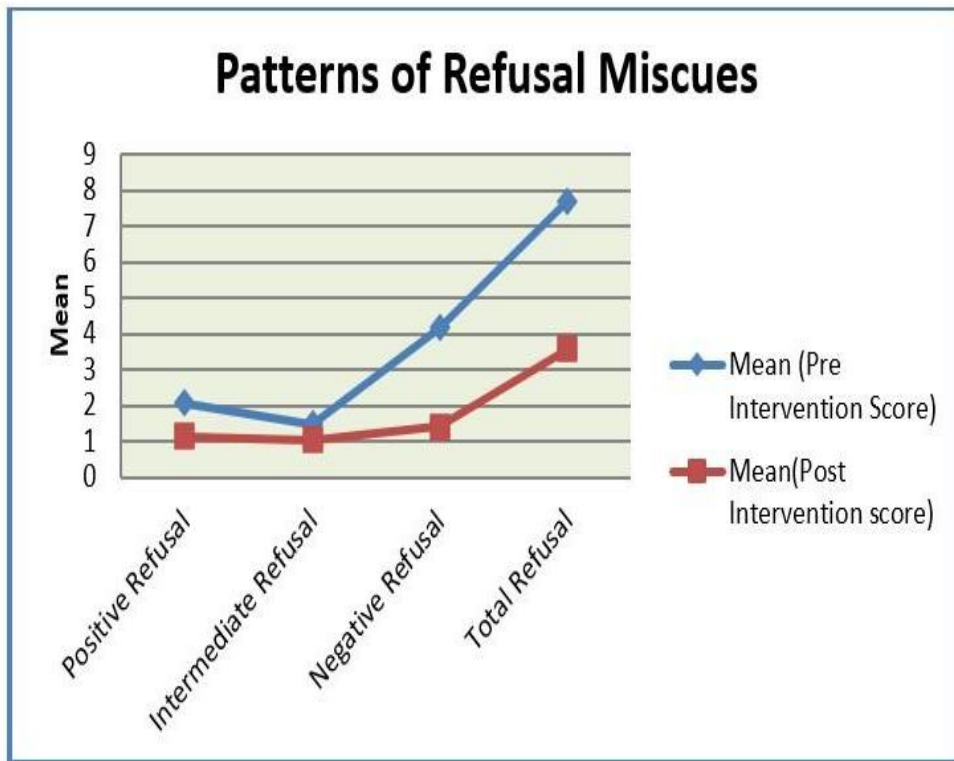
The table 4.18 presents the difference in the ranks between the pretest and the post-test scores of different patterns of Refusal miscues committed by the total students. The sum of positive ranks (8) and that of negative ranks (20) of positive Refusal miscues indicates that the students' post-test score for positive Refusal Miscues is lower than their pre-test level. The sum of positive ranks (10) and that of negative ranks (14) of Intermediate Refusal miscues indicates that the students' post-test score for positive Refusal Miscues is lower than their pre-test level. The sum of positive ranks (10) and that of negative ranks (21) of Negative Refusal miscues indicates that the students' post-test score for Negative Refusal Miscues is lower than their pre-test score. The sum of positive ranks (11) and that of negative ranks (26) of Total Refusal miscues indicates that the students' post-test score for Total Refusal Miscues is lower than their pre-test score. So it can be concluded that the Refusal miscues committed by the students with Dyslexia are minimized at post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.19. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of Refusal miscues committed by the students with dyslexia.

**Table 4.19: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Refusal Miscues**

Refusal miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	2.07	2.672	.00	1.00	3.00	-1.759	.079
	Post-test	42	1.14	1.775	.00	.00	2.00		
Intermediate	Pre-test	42	1.48	2.511	.00	.00	2.00	-	.473
	Post-test	42	1.05	1.794	.00	.00	2.00		
Negative	Pre-test	42	4.17	7.315	.00	1.50	4.00	-2.448	.014*
	Post-test	42	1.40	2.253	.00	.00	2.00		
Total	Pre-test	42	7.71	10.549	1.75	4.00	8.25	-2.184	.029*
	Post-test	42	3.60	3.982	.00	2.00	7.00		

\* Significant at 0.05 significance level



**Figure 4.13: Pre-test and Post-test Mean scores on Refusal Miscues committed by the students with dyslexia**

### **Discussion (Refusal)**

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Refusal miscue committed by the students with dyslexia are presented in the Table 4.19 .It showed a statistically significant effect of multisensory instructional strategy on patterns of Refusal miscues of dyslexic students. The ‘Z’ value of Refusal miscues is 2.184 ( $p=.029$ ) which is found significant at the 0.05 significance level ( $p < 0.05$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of Refusal miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘Z’ value of the Negative Refusal miscue is 2.448 ( $p=0.014$ ) which is also found significant at the 0.05 significance level ( $p < 0.05$ ). However the ‘Z’ values of Positive Refusal miscues and Intermediate Refusal miscues

are 1.759 and 0.718 respectively which are not found significant at the 0.05 significance level ( $p > 0.05$ ). At pre- test, the students with dyslexia have got 2.07 mean score of positive Refusal miscues with 2.67 SD, whereas at Post-test it decreased to 1.14 with 1.77 SD. At pre- test, the students with dyslexia got 1.47 mean score of Intermediate Refusal miscues with 2.51 SD, whereas at Post-test it decreased to 1.04 with 1.79 SD. At pre- test, the students with dyslexia got 4.16 mean score of Negative Refusal miscues with 7.31 SD, whereas at Post-test it decreased to 1.40 with 2.25 SD. The students made the most Negative Refusal Mistakes and the least Intermediate Refusal Mistakes during the pre-test. Similarly, at the post-test, the students made the most Negative Refusal errors and the least Intermediate Refusal mistakes. So it can be concluded that the patterns of grades of Refusal miscues are the same at pre-test and post-test. The mean score of Refusal miscues before the intervention of multisensory instructional strategy is 7.71 with 10.54 SD. It is decreased to 3.59 with 3.98 SD at post-test so it can be interpreted that “the multisensory instructional strategy is effective for minimizing the Refusal miscues”.

#### **4.3.7 Effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Miscue**

**Hypothesis 1(g):** There is no significant effect of multisensory instructional strategy on patterns of Miscues of dyslexic students of grade VI

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.20 and 4.21 have been created after scoring and tabulating the results obtained.

**Table 4.20:** Rank Mean for the Pre-test and the Post-test Scores of the students on patterns of Total miscues

<b>Patterns of Total Miscues</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Positive Total Post test-Pre test	Negative Ranks	31 <sup>a</sup>	22.45	696.00
	Positive Ranks	9 <sup>b</sup>	13.78	124.00
	Ties	2 <sup>c</sup>		
	Total	42		
Intermediate Total Post test-Pre test	Negative Ranks	23 <sup>d</sup>	24.41	561.50
	Positive Ranks	16 <sup>e</sup>	13.66	218.50
	Ties	3 <sup>f</sup>		
	Total	42		
Negative Total Post test-Pre test	Negative Ranks	25 <sup>g</sup>	24.32	608.00
	Positive Ranks	16 <sup>h</sup>	15.81	253.00
	Ties	1 <sup>i</sup>		
	Total	42		
Total Miscues Post test-Pre test	Negative Ranks	41 <sup>j</sup>	21.00	861.00
	Positive Ranks	1 <sup>k</sup>	42.00	42.00
	Ties	0 <sup>l</sup>		
	Total	42		

- a. Post Total Miscues Positive <Pre Total Miscues Positive
- b. Post Total Miscues Positive >Pre Total Miscues Positive
- c. Post Total Miscues Positive = Pre Total Miscues Positive
- d. Post Total Miscues Intermediate<Pre Total Miscues Intermediate
- e. Post Total Miscues Intermediate >Pre Total Miscues Intermediate
- f. Post Total Miscues Intermediate = Pre Total Miscues Intermediate
- g. Post Total Miscues Negative<Pre Total Miscues Negative
- h. Post Total Miscues Negative>Pre Total Miscues Negative
- i. Post Total Miscues Negative= Pre Total Miscues Negative
- j. Post Total Miscues <Pre Total Miscues
- k. Post Total Miscues>Pre Total Miscues
- l. Post Total Miscues= Pre Total Miscues

The table 4.20 presents the difference in the ranks between the pretest and the post-test scores of different patterns of Total miscues committed by the total students. The sum of positive ranks (9) and that of negative ranks (31) of positive Total miscues indicates that the post-test score of positive Total Miscues committed by pupils is lower than the pre-test score. The sum of positive ranks (16) and that of negative ranks (23) of Intermediate Total miscues indicates that the post-test score for Intermediate Total Miscues by Students is lower than the pre-test score. The sum of positive ranks (16) and that of negative ranks (25) of Negative Total miscues indicates that the students' post-test score for Negative Total Miscues is lower than their pre-test score. The sum of positive ranks (1) and that of negative ranks (41) of Total miscues indicates that the total number of errors made by pupils is lower in the post-test than in the pre-test. So it can be concluded that the Total miscues committed by the students with dyslexia are minimized at the post-test stage after the Multisensory Strategy based intervention.

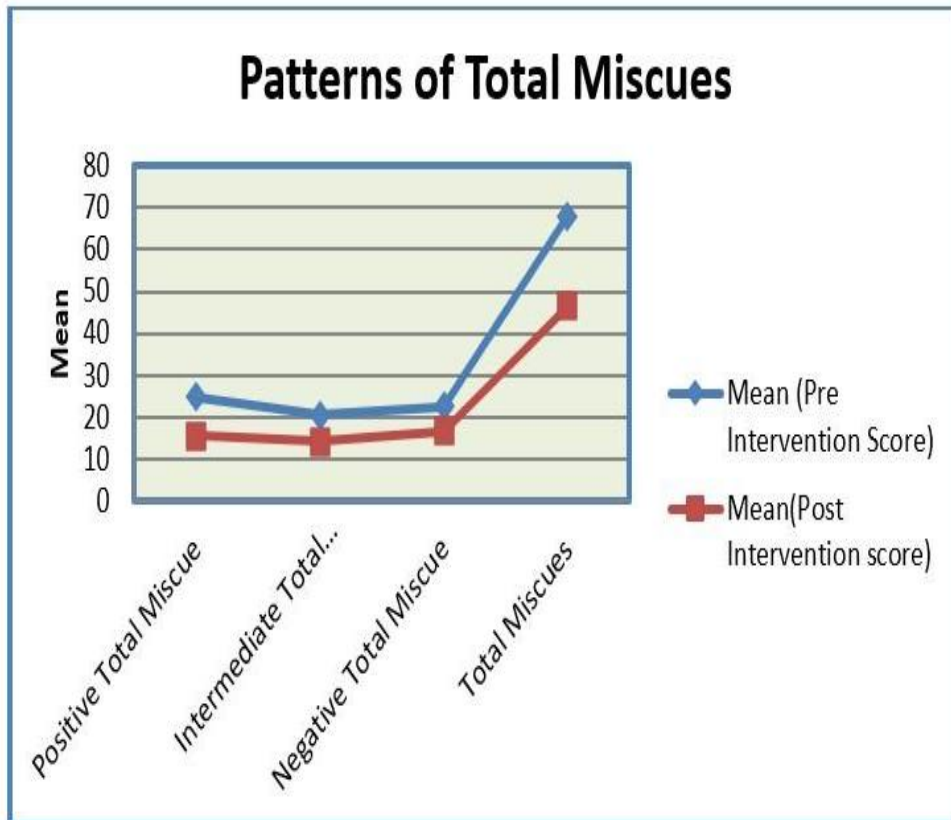
The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.21. It shows the mean, standard deviation and percentile and 'Z' values of scores of different patterns of Total miscues committed by the students with dyslexia

**Table 4.21: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on the patterns of Total Miscues**

Total miscues	Total Students				Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Positive	Pre-test	42	24.95	13.215	14.00	21.50	32.50	-3.845	0.00**
	Post-test	42	15.69	9.241	8.75	14.00	21.25		
Intermediate	Pre-test	42	20.52	15.751	10.75	17.00	25.50	-2.395	0.017*
	Post-test	42	14.24	10.048	6.00	12.50	19.00		
Negative	Pre-test	42	22.48	19.481	9.75	18.50	27.00	-2.301	0.021*
	Post-test	42	16.69	18.672	6.00	10.50	16.25		
Total	Pre-test	42	67.95	33.733	46.00	59.00	75.75	-5.122	.000**
	Post-test	42	46.62	26.729	26.00	42.00	60.00		

**\*\* Significant at 0.01 level of significance**

**\* Significant at 0.05 level of significance**



**Figure 4.14: Pre-test and Post-test Mean scores on Total Miscues committed by the students with dyslexia**

#### **Discussion (Total Miscues)**

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Total miscue committed by the students with dyslexia are presented in Table 4.21. It showed a statistically significant effect of multisensory instructional strategy on patterns of Total miscues of dyslexic students. The  $Z'$  value of Total miscues is 5.122 ( $p=0.000$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on patterns of Total miscues of dyslexic students of grade VI” is rejected. It can also be observed that the ‘ $Z$ ’ value of the Positive Total miscue is 3.845 ( $p=0.000$ ) which is also found significant at the 0.01 significance level ( $p < 0.01$ ). The ‘ $Z$ ’ value of the Intermediate Total miscue is 2.395 ( $p=0.017$ ) which is also found significant at the 0.05

significance level ( $p < 0.05$ ). The 'Z' value of the Negative Total miscue is 2.301 ( $p=0.021$ ) which is also found significant at the 0.05 significance level ( $p < 0.05$ ).

At pre- test, the students with dyslexia got 24.95 mean score of positive Total miscues with 13.21 SD, whereas at Post-test it decreased to 15.69 with 9.24 SD. At pre-test, the students with dyslexia got 20.52 mean score of Intermediate Total miscues with 15.75 SD, whereas at Post-test it decreased to 14.23 with 10.04 SD. At pre- test, the students with dyslexia got 22.47 mean score of Negative Total miscues with 19.481 SD, whereas at Post-test it decreased to 16.67 with 18.07 SD. Students made the most Positive Total miscues and the least Intermediate Total miscues during the pre-test, while they made the most Negative Total miscues and the least Intermediate Total miscues during the post-test. So it can be concluded that the patterns of grades of total miscues are different at pre-test and post-test. The mean score of Total miscues before the intervention of multisensory instructional strategy is 67.95 with 33.73 SD. It is decreased to 46.61 with 26.72 SD at post test so it can be interpreted that "the multisensory instructional strategy is effective for minimizing the total miscues".

#### **4.4 Section 4: Study of the effect of multi-sensory instructional strategy on the reading comprehension of Dyslexic students at Elementary School level.**

**Objective 5:** To study the effect of multi-sensory instructional strategy on the reading comprehension of dyslexic students of grade VI.

##### **4.4.1 Effectiveness of multi-sensory instructional strategy (Intervention) on reading comprehension of boys with dyslexia at Elementary School level.**

**Hypothesis 2 (a):** There is no significant effect of multisensory instructional strategy on reading comprehension of dyslexic students of grade VI.

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.22 and 4.23 have been constructed after scoring and tabulating the findings collected.



**Table 4.22: Rank Mean for the Pre-test and the Post-test Scores of the students on Reading comprehension of students with Dyslexia**

Reading comprehension	Ranks	N	Mean Rank	Sum of Ranks
Post test Total students- Pre test Total students	Negative Ranks	0 <sup>a</sup>	.00	.00
	Positive Ranks	42 <sup>b</sup>	21.50	903.00
	Ties	0 <sup>c</sup>		
	Total	42		

a. Post Test Reading comprehension Total students < Pre Test Reading comprehension Total students

b. Post Test Reading comprehension Total students > Pre Test Reading comprehension Total students

c. Post Test Reading comprehension Total students = Pre Test Reading comprehension Total students

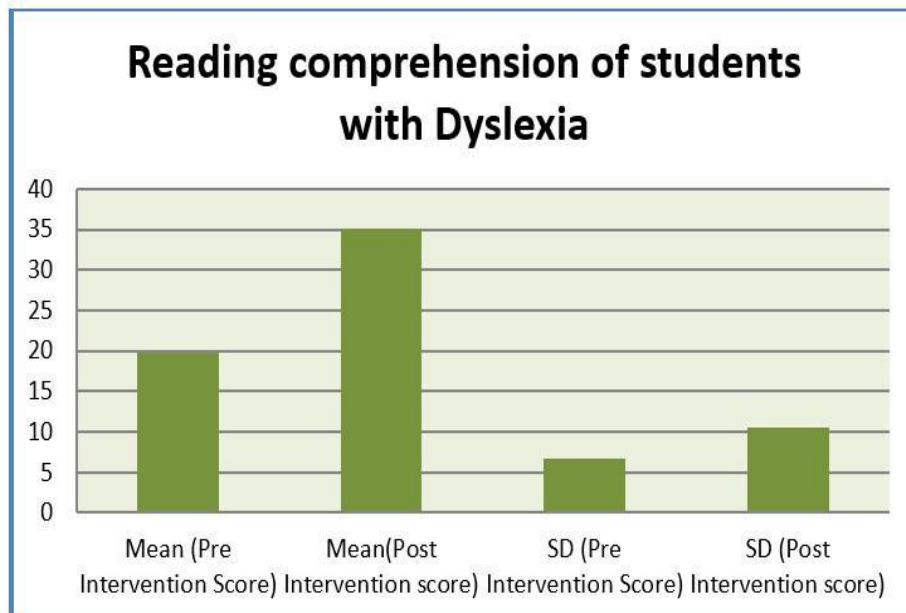
The table 4.22 presents the difference in the ranks between the pretest and the post-test scores of the total students on reading comprehension. The sum of positive ranks (42) and that of negative ranks (0) of Reading comprehension indicates that the students' post-test reading comprehension score is higher than their pre-test score. So it can be concluded that the Reading comprehension scores are improving at the post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.23. It shows the mean, standard deviation and percentile and 'Z' values of scores of Reading comprehension of the students with dyslexia

**Table 4.23: Results** of the effectiveness of multi-sensory instructional strategy (Intervention) on Reading comprehension of total students

Reading comprehension (Total Students)					Percentiles			'Z' Value	Sig.(2 tailed)
		N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
	Pre-test	42	19.81	6.682	15.50	20.00	24.00	-5.653	0.000**
	Post-test	42	35.19	10.472	27.50	34.00	42.00		

**\* Significant at 0.01 level of significance**



**Figure 4.15: Pre-test and Post-test Mean and SD scores on Reading comprehension of the students with dyslexia**

## Discussion

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Reading comprehension of the students with dyslexia are presented in Table 4.23. It showed a statistically significant effect of multisensory instructional strategy on Reading comprehension of students with Dyslexia. ‘Z’ value of Reading comprehension is 5.653 ( $p=.000$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on Reading comprehension of dyslexic students of grade VI” is rejected.

At pre-test, the students with dyslexia have got 19.81 mean score of reading comprehension score with 6.68 SD, whereas at Post-test it increased to 35.19 with 10.47 SD so it can be interpreted that “the multisensory instructional strategy is effective for improving the Reading comprehension of total students with dyslexia of Grade VI”.

### **4.4.2 To study the effect of multi-sensory instructional strategy on the reading comprehension of boys with dyslexia at Elementary School level.**

**Hypothesis 2 (b):** There is no significant effect of multisensory instructional strategy on reading comprehension of boys with Dyslexia of grade VI.

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. After scoring and tabulating the results obtained, it has been presented in Table 4.24 and 4.25.

**Table 4.24:** Rank Mean for the Pre-test and the Post-test Scores of the students on Reading comprehension of Boys with Dyslexia

Reading comprehension	Ranks	N	Mean Rank	Sum of Ranks
Post test Boys- Pre test Boys	Negative Ranks	0 <sup>a</sup>	.00	.00
	Positive Ranks	25 <sup>b</sup>	13.00	325.00
	Ties	0 <sup>c</sup>		
	Total	25		

a. Post Test Reading comprehension Boys < Pre Test Reading comprehension Boys

b. Post Test Reading comprehension Boys > Pre Test Reading comprehension Boys

c. Post Test Reading comprehension Boys = Pre Test Reading comprehension Boys

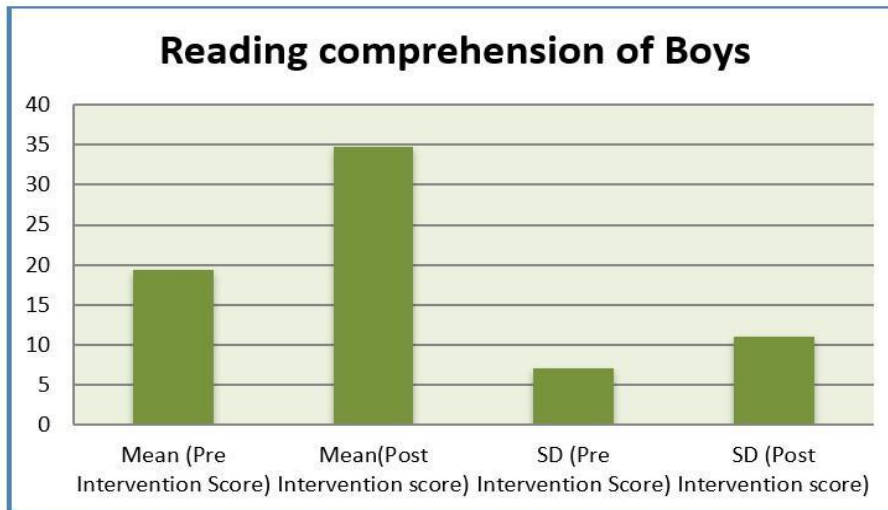
The difference in rank between the pre-test and post-test scores of the Boys on Reading comprehension is shown in table 4.24. The sum of positive ranks (25) and that of negative ranks (0) of Reading comprehension indicates that The Boys' post-test reading comprehension score is greater than their pre-test score. It can be concluded that the Reading comprehension scores of Boys are improving at the post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.25. It shows the mean, standard deviation and percentile and 'Z' values of scores of Reading comprehension of the Boys with dyslexia.

**Table 4.25: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on Reading comprehension of Boys**

Reading comprehension (Boys)				Percentiles			'Z' Value	Sig.(2 tailed)
	N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Pre-test	25	19.44	7.106	14.00	18.00	24.00	-4.378	.000**
Post-test	25	34.80	11.06	26.00	32.00	43.00		

\* Significant at 0.01 level of significance



**Figure 4.16: Pre-test and Post-test Mean and SD scores on Reading comprehension of the Boys with dyslexia**

## Discussion

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Reading comprehension of the Boys with dyslexia are presented in Table 4.25. It showed a statistically significant effect of multisensory instructional strategy on Reading comprehension of Boys with Dyslexia. The ‘Z’ value of Reading comprehension is 4.378 ( $p=.000$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on Reading comprehension of Boys with Dyslexia of grade VI” is rejected.

From the Table 4.25 and Figure 4.16, it is evident that at pre- test, the boys with dyslexia have got 19.44 mean score of reading comprehension score with 7.106 SD, whereas at Post-test it increased to 34.80 with 11.060 SD so it can be interpreted that “the multisensory instructional strategy is effective for improving the Reading comprehension of boys with dyslexia of Grade VI”.

#### **4.4.3 To study the effect of multi-sensory instructional strategy on the reading comprehension of girls with dyslexia at Elementary School level.**

**Hypothesis 2 ©:** There is no significant effect of multisensory instructional strategy on reading comprehension of girls with Dyslexia of grade VI.

To test the hypothesis, the researcher collected the miscues of the 42 students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher at pre intervention and post intervention stage. Tables 4.26 and 4.27 were created after scoring and tabulating the results gained.

**Table 4.26: Rank Mean for the Pre-test and the Post-test Scores of the students on Reading comprehension of Girls with Dyslexia**

<b>Reading comprehension</b>	<b>Ranks</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Post test Girls- Pre test Girls	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	17 <sup>e</sup>	9.00	153.00
	Ties	0 <sup>f</sup>		
	Total	17		

a. Post Test Reading comprehension Girls < Pre Test Reading comprehension Girls

b. Post Test Reading comprehension Girls > Pre Test Reading comprehension Girls

c. Post Test Reading comprehension Girls = Pre Test Reading comprehension Girls

The table 4.26 presents the difference in the ranks between the pre-test and the post-test scores of the Girls on Reading comprehension. The sum of positive ranks (17) and that of negative ranks (0) of Reading comprehension indicates that the Reading comprehension score of the Girls at post-test is greater than that of pre-test. So it can be

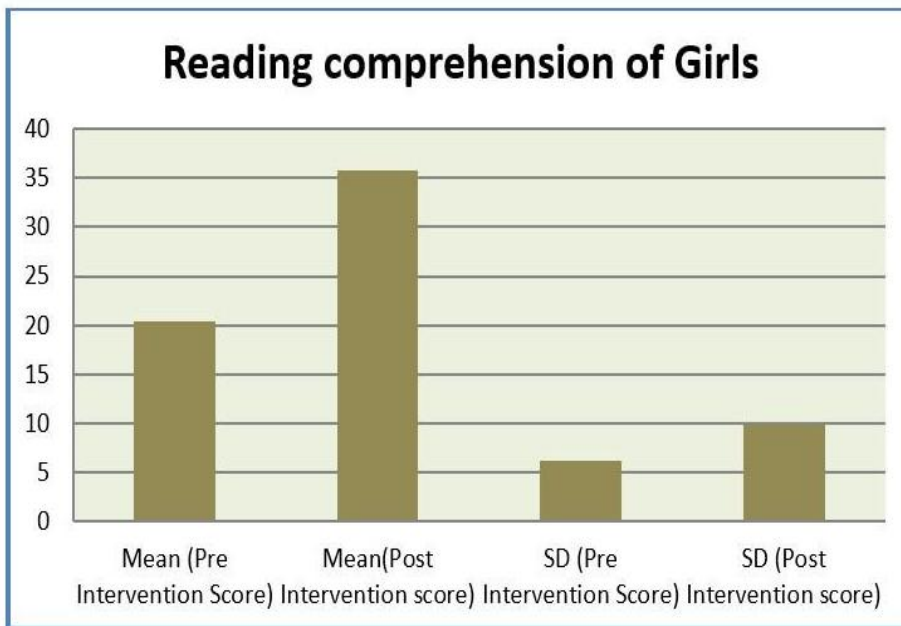
concluded that the Reading comprehension scores of Girls are improving at the post-test stage after the Multisensory Strategy based intervention.

The results obtained from the Wilcoxon Signed Rank Test are presented in table 4.27. It shows the mean, standard deviation and percentile and ‘Z’ values of scores of Reading comprehension of the Girls with dyslexia.

**Table 4.27: Results of the effectiveness of multi-sensory instructional strategy (Intervention) on Reading comprehension of Girls**

Reading comprehension (Girls)				Percentiles			‘Z’ Value	Sig.(2 tailed)
	N	Mean	SD	25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>		
Pre-test	17	20.35	6.1739	16.00	20.00	24.00	-3.631	.000**
Post-test	17	35.76	9.845	28.00	36.00	42.00		

**\*\* Significant at 0.01 significance level**



**Figure 4.17: Pre-test and Post-test Mean and SD scores on Reading comprehension of the Girls with dyslexia**

## Discussion (Reading comprehension)

The results of the “Wilcoxon Signed Rank test” exploring the effectiveness of intervention on Reading comprehension of the Girls with dyslexia are presented in Table 4.27. It showed a statistically significant effect of multisensory instructional strategy on Reading comprehension of Girls with Dyslexia. ‘Z’ value of Reading comprehension is 3.631 ( $p=.000$ ) which is significant at the 0.01 significance level ( $p < 0.01$ ). Hence the null hypothesis “There is no significant effect of multisensory instructional strategy on Reading comprehension of Girls with Dyslexia of grade VI” is rejected.

From the Table 4.27 and Figure 4.17, it is evident that at pre- test, the girls with dyslexia have got 20.35 mean score of reading comprehension score with 6.173 SD, whereas at Post-test it increased to 35.76 with 9.845 SD so it can be interpreted that “the multisensory instructional strategy is effective for improving the Reading comprehension of girls with dyslexia of Grade VI”.

### 4.5 Section 5: “Study of the interaction effect of multisensory instructional strategy and gender on patterns of miscues of dyslexic students of grade VI”.

**Objective 6:** To study the interaction effect of multisensory instructional strategy and gender on patterns of miscues of dyslexic students of grade VI.

#### 4.5.1: “To study the interaction effect of multisensory instructional strategy and gender on patterns of substitution miscues of dyslexic students of grade VI”.

**Hypothesis 3(a):** There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Substitution miscues of dyslexic students of grade VI.

**Table 4.28: Statistics of “Mann-Whitney U Test” with respect to Patterns of Substitution Miscues**

Substitution Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-2.59	9.961	-7.00	-4.00	2.25
Intermediate	42	-2.14	9.330	-8.00	-2.00	3.25
Negative	42	-1.28	13.087	-6.75	-1.00	3.00
Total	42	-6.02	19.515	-17.25	-7.50	-0.25

**Table 4.29: Results of Mann-Whitney U Test with respect to Patterns of Substitution Miscues**

Substitution Miscues		N	Mean Rank	Sum of Rank	U	Z	'p' value
Positive	Boys	25	23.06	576.50	173.50	-1.001	0.317
	Girls	17	19.21	326.50			
Intermediate	Boys	25	22.30	557.50	192.50	-.513	0.608
	Girls	17	20.32	345.50			
Negative	Boys	25	20.78	519.50	194.50	-.462	0.644
	Girls	17	22.56	383.50			
Total	Boys	25	22.16	554.00	196.00	-0.423	0.672
	Girls	17	20.53	349.00			

The results of the "Mann- Whitney U Test" with respect to patterns of substitution miscues are presented in Table 4.29 .The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of substitution Miscues at post intervention stage. It can be observed from Table 4.29 that the U statistic for substitution miscues is 196.00 and the 'Z' value of Substitution miscues is 0.423 (p=0.672) which is not found significant even at the 0.05 significance level (p> 0.05). Hence the null hypothesis "There is no significant interaction effect of multisensory instructional strategy and gender on patterns of substitution miscues of dyslexic students of grade VI " is accepted. The U statistic for Positive Substitution miscues is 173.5 (Z=1.001, p= 0.317), for Intermediate Substitution miscues is 192.5(Z=0.513, p=0.608) and for Negative Substitution miscues is 194.5 (Z=0.462, p=0.644) which are also not found significant even at 0.05 significance level (p> 0.05).

It can be concluded that "there is no significant interaction effect of multisensory instructional strategy and gender on patterns of substitution miscues of dyslexic students of grade VI". The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.



**4.5.2 “To study the interaction effect of multisensory instructional strategy and gender on patterns of insertion miscues of dyslexic students of grade VI”.**

**Hypothesis 3(b):**“There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Insertion miscues of dyslexic students of grade VI”.

**Table 4.30: Statistics of “Mann-Whitney U Test” with respect to Patterns of Insertion Miscues**

Insertion Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-0.88	3.29	-2.00	-1.00	1.00
Intermediate	42	-0.50	2.97	-1.25	0.00	1.00
Negative	42	-0.047	1.87	-1.00	0.00	1.00
Total	42	-1.42	3.87	-3.00	-1.00	2.00

**Table 4.31: Results of “Mann-Whitney U Test” with respect to Patterns of Insertion Miscues**

Insertion Miscues		N	Mean Rank	Sum of Rank	U	Z	‘p’ value
Positive	Boys	25	24.44	611.00	139.000	-1.905	.057
	Girls	17	17.18	292.00			
Intermediate	Boys	25	19.78	494.50	169.500	-1.117	.264
	Girls	17	24.03	408.50			
Negative	Boys	25	20.92	523.00	198.000	-.386	.699
	Girls	17	22.35	380.00			
Total	Boys	25	22.90	572.50	177.500	-.902	.367
	Girls	17	19.44	330.50			

The results of the “Mann- Whitney U Test” with respect to patterns of Insertion miscues are presented in Table 4.30 The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Insertion Miscues at post intervention stage. It is can be observed from the Table 4.30 that the U statistic for Insertion miscues is 177.50 and the ‘Z’ value of Insertion miscues is 0.902 ( $p=0.367$ ) which is not found significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Insertion miscues of dyslexic students of grade VI” is accepted. The U statistic for positive Insertion miscues is 139.0 ( $Z=1.905$ ,  $p= 0.057$ ), for Intermediate Insertion miscues is 169.5( $Z=1.117$ ,  $p=0.264$ ) and for Negative Insertion miscues is 198.0 ( $Z=0.386$ , $p=0.699$ ) which are also not found significant even at 0.05 significance level( $p > 0.05$ ).

It can be concluded that “there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Insertion miscues of dyslexic students of grade VI”. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

**4.5.3: “To study the interaction effect of multisensory instructional strategy and gender on patterns of omission miscues of dyslexic students of grade VI”.**

**Hypothesis 3©:** “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of omission miscues of dyslexic students of grade VI”.

**Table 4.32: Statistics of “Mann-Whitney U Test” with respect to Patterns of Omission Miscues**

Omission Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-2.59	6.000	-6.25	-2.50	1.00
Intermediate	42	-2.33	7.665	-4.00	0.00	2.00
Negative	42	-0.97	7.330	-4.25	-1.00	2.00
Total	42	-5.90	10.933	-14.00	-5.50	1.00

**Table 4.33: Results of “Mann-Whitney U Test” with respect to Patterns of Omission Miscues**

Omission Miscues		N	Mean Rank	Sum of Rank	U	Z	‘p’ value
Positive	Boys	25	24.32	608.00	142.00	1.811	0.070
	Girls	17	17.35	295.00			
Intermediate	Boys	25	21.42	535.50	210.50	0.051	0.959
	Girls	17	21.62	367.50			
Negative	Boys	25	20.34	508.50	183.50	0.747	0.455
	Girls	17	23.21	394.50			
Total	Boys	25	22.64	566.00	184.0	0.731	0.465
	Girls	17	19.82	337.00			

The results of the “Mann- Whitney U Test” with respect to patterns of Omission miscues are presented in Table 4.33. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Omission Miscues at post intervention stage. It can be observed from Table 4.33 that the U statistic for Omission miscues is 184.0 and the ‘Z’ value of Omission miscues is 0.731 ( $p=0.465$ ) which is not found significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Omission miscues of dyslexic students of grade VI” is accepted. The U statistic for positive Omission miscues is 142.0 ( $Z=1.811$ ,  $p= 0.070$ ), for Intermediate Omission miscues is 210.50 ( $Z=0,051$ ,  $p=0.959$ ) and for Negative Omission miscues is 183.50 ( $Z=0.747$ ,  $p=0.455$ ) which are also not found significant even at 0.05 significance level ( $p > 0.05$ ).

It can be concluded that “there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Omission miscues of dyslexic students of grade VI”. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

#### **4.5.4: “To study the interaction effect of multisensory instructional strategy and gender on patterns of reversal miscues of dyslexic students of grade VI”.**

**Hypothesis 3(d):**“There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Reversal miscues of dyslexic students of grade VI”.

**Table 4.34: Statistics of “Mann-Whitney U Test” with respect to Patterns of Reversal Miscues**

Reversal Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-0.07	0.77	-1.00	0	0
Intermediate	42	-0.33	0.95	-1.00	0	0
Negative	42	-0.14	1.15	-1.00	0	0
Total	42	-0.54	1.43	-1.00	-0.50	0

**Table 4.35: Results of “Mann-Whitney U Test” with respect to Patterns of Reversal Miscues**

Reversal Miscues		N	Mean Rank	Sum of Rank	U	Z	‘p’ value
Positive	Boys	25	22.76	569.00	181.00	0.892	0.372
	Girls	17	19.65	334.00			
Intermediate	Boys	25	22.48	562.00	188.0	0.695	0.488
	Girls	17	20.06	341.00			
Negative	Boys	25	20.32	508.00	183.0	0.814	0.416
	Girls	17	23.24	395.00			
Total	Boys	25	22.98	574.50	175.5	0.976	0.329
	Girls	17	19.32	328.50			

The results of the “Mann- Whitney U Test” with respect to patterns of Reversal miscues are presented in Table 4.35. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Reversal Miscues at post intervention stage. It can be observed from the Table 4.35 that the U statistic for Reversal miscues is 175.5 and the ‘Z’ value of Reversal miscues is 0.976 ( $p=0.329$ ) which is not found significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Reversal miscues of dyslexic students of grade VI” is accepted. The U statistic for positive Reversal miscues is 181.0 ( $Z=0.892$ ,  $p= 0.372$ ), for Intermediate Reversal miscues is 188.0 ( $Z=0.695$ ,  $p=0.488$ ) and for Negative Reversal miscues is 183 ( $Z=0.814$ ,  $p=0.416$ ) which are also not found significant even at 0.05 significance level ( $p > 0.05$ ).

It can be concluded that “there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Reversal miscues of dyslexic students of grade VI”. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

#### **4.5.5 “To study the interaction effect of multisensory instructional strategy and gender on patterns of self correction miscues of dyslexic students of grade VI”.**

**Hypothesis 3(e):** “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of self correction miscues of dyslexic students of grade VI”.

**Table 4.36: Statistics of “Mann-Whitney U Test” with respect to Patterns of Self correction Miscues**

Self correction Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-2.16	4.90	-3.00	0	0
Intermediate	42	-0.54	2.19	-1.00	0	0
Negative	42	-0.59	2.80	-1.25	0	0.25
Total	42	3.30	5.46	0.00	3	6.00

**Table 4.37: Results of “Mann-Whitney U Test” with respect to Patterns of Self correction Miscues**

Self correction Miscues		N	Mean Rank	Sum of Rank	U	Z	‘p’ value
Positive	Boys	25	21.98	549.50	200.50	0.315	0.753
	Girls	17	20.79	353.50			
Intermediate	Boys	25	22.42	560.50	189.50	0.637	0.524
	Girls	17	20.15	342.50			
Negative	Boys	25	18.78	469.50	144.5	1.807	0.071
	Girls	17	25.50	433.50			
Total	Boys	25	23.02	575.50	174.50	0.980	0.327
	Girls	17	19.26	327.50			

The results of the “Mann-Whitney U Test” with respect to patterns of Self correction miscues are presented in Table 4.37. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Self correction Miscues at post intervention stage. It can be observed from Table 4.37 that the U statistic for Self correction miscues is 174.50 and the ‘Z’ value of Self correction miscues is 0.980 (p=0.327) which is not found

significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Self correction miscues of dyslexic students of grade VI” is accepted. The U statistic for positive Self correction miscues is 200.5 ( $Z=0.315$ ,  $p=0.753$ ), for Intermediate Self correction miscues is 189.50 ( $Z=0.637$ ,  $p=0.524$ ) and for Negative Self correction miscues is 144.5 ( $Z=1.807$ ,  $p=0.071$ ) which are also not found significant even at 0.05 significance level ( $p > 0.05$ ).

It can be concluded that “there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Self correction miscues of dyslexic students of grade VI”. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

**4.5.6: “To study the interaction effect of multisensory instructional strategy and gender on patterns of refusal miscues of dyslexic students of grade VI”.**

**Hypothesis 3(f):** “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Refusal miscues of dyslexic students of grade VI”.

**Table 4.38: Statistics of “Mann-Whitney U Test” with respect to Patterns of Refusal Miscues**

Refusal Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-0.92	3.21	-2.00	0	0
Intermediate	42	-0.42	3.23	-1.25	0	0.25
Negative	42	-2.76	6.77	-4.00	-0.50	0.25
Total	42	-4.11	10.27	-5.25	-1.50	1.00



**Table 4.39: Results of “Mann-Whitney U Test” with respect to Patterns of Refusal Miscues**

<b>Refusal Miscues</b>		<b>N</b>	<b>Mean Rank</b>	<b>Sum of Rank</b>	<b>U</b>	<b>Z</b>	<b>‘p’ value</b>
Positive	Boys	25	22.50	562.50	187.5	0.656	0.512
	Girls	17	20.03	340.50			
Intermediate	Boys	25	22.88	572.00	178.0	0.922	0.357
	Girls	17	19.47	331.00			
Negative	Boys	25	23.06	576.50	173.5	1.010	0.312
	Girls	17	19.21	326.50			
Total	Boys	25	23.82	595.50	154.5	1.491	0.136
	Girls	17	18.09	307.50			

The results of the “Mann-Whitney U Test” with respect to patterns of Refusal miscues are presented in Table 4.39. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Refusal Miscues at post intervention stage. It can be observed from Table 4.39 that the U statistic for Refusal miscues is 154.5 and the ‘Z’ value of Refusal miscues is 1.491 ( $p=0.136$ ) which is not found significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis “There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Refusal miscues of dyslexic students of grade VI” is accepted. The U statistic for positive Refusal miscues is 187.5 ( $Z=0.656$ ,  $p=0.512$ ), for Intermediate Refusal miscues is 178.0 ( $Z=0.922$ ,  $p=0.357$ ) and for Negative Refusal miscues is 173.5 ( $Z=1.010$ ,  $p=0.312$ ) which are also not found significant even at 0.05 significance level ( $p > 0.05$ ).

It can be concluded that “there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Refusal miscues of dyslexic students of grade VI”. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

**4.5.7: “To study the interaction effect of multisensory instructional strategy and gender on patterns of Total miscues of dyslexic students of grade VI”.**

**Hypothesis 3(g):**“There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Total miscues of dyslexic students of grade VI”.

**Table 4.40: Statistics of “Mann-Whitney U Test” with respect to Patterns of Total Miscues**

Total Miscues	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Positive	42	-6.28	15.60	-14.50	-2.50	2.00
Intermediate	42	-5.78	20.67	-17.25	-5.50	3.50
Negative	42	-21.33	28.16	-32.00	-16.00	-10.25
Total	42	1.40	0.49	1.00	1.00	2.00

**Table 4.41: Results of “Mann-Whitney U Test” with respect to Patterns of Total Miscues**

Total Miscues		N	Mean Rank	Sum of Rank	U	Z	‘p’ value
Positive	Boys	25	24.82	620.50	129.5	2.128	0.423
	Girls	17	16.62	282.50			
Intermediate	Boys	25	22.16	554.00	196.0	0.423	0.672
	Girls	17	20.53	349.00			
Negative	Boys	25	20.14	503.50	178.50	0.872	0.383
	Girls	17	23.50	399.50			
Total	Boys	25	23.40	585.00	165.0	1.219	0.223
	Girls	17	18.71	318.00			

The results of the Mann-Whitney U Test with respect to patterns of Total miscues are presented in Table 4.41. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Total Miscues at the post intervention stage. It can be observed from Table 4.41 that the U statistic for Total miscues is 165.0 and the 'Z' value of Total miscues is 1.219 ( $p=0.223$ ) which is not found significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis "There is no significant interaction effect of multisensory instructional strategy and gender on patterns of Total miscues of dyslexic students of grade VI" is accepted. The U statistic for positive Total miscues is 129.5 ( $Z=2.128$ ,  $p=0.423$ ), for Intermediate Total miscues is 196.0 ( $Z=0.423$ ,  $p=0.672$ ) and for Negative Total miscues is 178.50 ( $Z=0.872$ ,  $p=0.383$ ) which are also not found significant even at 0.05 significance level ( $p > 0.05$ ).

It can be concluded that "there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Total miscues of dyslexic students of grade VI". The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

**4.6 Section 6:** "To study the interaction effect of multisensory instructional strategy and gender on reading comprehension of dyslexic students of grade VI".

**Objective 7:** To study the interaction effect of multisensory instructional strategy and gender on reading comprehension of dyslexic students of grade VI.

**Hypothesis 4:** "There is no significant interaction effect of multisensory instructional strategy and gender on reading comprehension of dyslexic students of grade VI".

**Table 4.42: Statistics of “Mann-Whitney U Test” with respect to Reading comprehension of students with Dyslexia**

Reading comprehension	N	Mean	SD	Percentiles		
				25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Gain score	42	15.38	8.030	10.00	14.00	18.00
Gender	42	1.40	0.496	1.00	1.00	2.00

**Table 4.43: Results of “Mann-Whitney U Test” with respect to Reading comprehension of Students with Dyslexia**

Reading comprehension		N	Mean Rank	Sum of Rank	U	Z	‘p’ value
	Boys	25	20.64	516.00	91.0	-0.554	0.580
	Girls	17	22.76	387.00			

The results of the “Mann- Whitney U Test” with respect to reading comprehension scores are presented in Table 4.43. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Reading comprehension scores at post intervention stage. It can be observed from Table 4.43 that the U statistic for Reading comprehension is 191.0 and the ‘Z’ value of Reading comprehension is 0.554 ( $p=0.580$ ) which is not found significant even at the 0.05 significance level ( $p > 0.05$ ). Hence the null hypothesis “There is no significant interaction effect of multisensory instructional strategy and gender on Reading comprehension of dyslexic students of grade VI” is accepted.

It can be concluded that “there is no significant interaction effect of multisensory instructional strategy and gender on Reading comprehension of dyslexic students of grade VI”. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

## 4.7 Discussion

The students with dyslexia have difficulties in reading such as problems in accurate word reading, decoding and fluency due to the deficit in the phonological component of language. Many previous researchers concluded that students with dyslexia and struggling readers have difficulties in reading comprehension (Ghisi et al., 2016; McLaughlin et al., 2014; Litcher & Roberge, 1979; Cain, 2010; Gersten, Fuchs, Williams, & Baker, 2001). So these students need to be provided appropriate intervention that focuses on the development of reading comprehension (Oakland et al., 1998).

The purpose of this study is to study the effect of multisensory instructional strategy on miscues and reading comprehension of the dyslexic students. The researcher developed and validated the multisensory instructional strategy based intervention for the English language of class VI CBSE Dyslexic students (described in chapter 3) and studied the effect of the intervention. Multisensory instructional strategy involves the use of more than one sense in the instructional process. It is also known as VAKT (visual, auditory, kinesthetic, and tactile). This is supported by Jeyasekaran (2015) where he stated that the VAKT technique is highly helpful in improving the reading levels in dyslexic children. Multisensory Instructional strategy benefits the children more than any other learning technology (Thomas, 2015; Jeyasekaran, 2015; Wadlington & Wadlington, 2008). The use of Multi Sensory Strategy (MSS) makes learning more permanent (Prasannakumar, 2015). Dayton (2018) concluded that dyslexia is a neurological issue that affects the ability to learn to read. If a student is properly identified and taught through a systematic multisensory approach they can learn to read.

To refer to the study's first research question i.e. "What types of miscues are committed by the dyslexic students of grade VI", the researcher conducted the miscue analysis of the selected students with dyslexia with the help of the tool (Miscue and reading comprehension test) prepared by the researcher. A qualitative investigation of a student's oral reading miscues is recommended by Goodman (1972). Miscue Analysis helps students in improving their reading. Miscue Analysis is a method of assessing oral reading errors (Stahl, 2009). Various previous researchers conducted miscue analysis (Arisandi & Wachyudi, 2017; Jin, 2019; Keh, 2016; Putri, 2015; Purwandanik, 2015;

Hapsari,2013; Albertini & Mayer,2011; Qiuyan & Junju,2011; Pelatti, 2010; Fahrenbruck, 2009; Almazroui, 2007; McKenna & Picard, 2006); Mante, 2006; Warde, 2005; Ebersole, 2005; Sitorus et al., 2017) and concluded that the pupils' reading behaviour has revealed information about their linguistic cueing system and the tactics they employ to comprehend a text during the reading process.

The findings of the research revealed that the participants committed 1322(46%) Substitution miscues, 215 (8%) Insertion miscues, 673 (24%) Omission miscues, 63 (2%) Reversal miscues, 257 (9%) Self-correction miscues and 324(11%) Refusal miscues. It can be concluded that students committed maximum Substitution (46%), followed by Omission (24%), Refusal (11%), Self-correction (9%), Insertion 215(8%), Reversal (2%). Results showed that the students have got 67.95 mean score of total miscues with 33.733 SD, “they have committed maximum substitution miscues and minimum reversal miscues”. The mean and SD of positive grades are 24.95 and 13.214, and of intermediate grades are 20.52 and 15.751 whereas mean and SD of the negative grades are 22.47 and 19.481. The boys with dyslexia have got 70.84 mean of total miscues with 35.060 SD, “they have committed maximum substitution miscues and minimum reversal miscues”. The mean and SD of positive grades are 24.48 and 12.417, and of intermediate grades are 22 and 18.4 whereas mean and SD of the negative grades are 24.32 and 21.53. The girls with dyslexia have got 63.70 mean score of total miscues with 32.248 SD, “they have committed maximum substitution miscues and minimum Reversal miscues”. The mean and SD of positive grades are 25.64 and 14.675, and of intermediate grades are 18.30 and 10.9 whereas mean and SD of the negative grades are 19.76 and 16.25.

The results are supported by research findings of Putri (2015) and Juliana and Abosi (2011) who also find the maximum substitution miscues in their studies. High percentage of self-correction indicates that the reader is actively monitoring the reading process.

To refer to the study's second research question i.e. “What is the level of reading comprehension of dyslexic students of grade VI”, the researcher gathered reading comprehension scores from dyslexic students with the help of a tool (Miscue and reading comprehension test) prepared by the researcher. The mean score of reading

comprehension obtained by the total students is 19.80. The value of standard deviation obtained by the total students with dyslexia is 6.681. The mean score of reading comprehension obtained by the boys is 19.44. The value of standard deviation obtained by the boys with dyslexia is 7.106. The mean score of reading comprehension obtained by the girls is 20.35. The value of standard deviation obtained by the boys with dyslexia is 6.173.

The findings also revealed that only 33.3% students were having high level of reading comprehension. 38.10% students were having average level of reading comprehension while 28.57% students were having low level of reading comprehension. Only 44% boys were having high level of reading comprehension. 20% boys were having average level of reading comprehension while 36% boys were having low level of reading comprehension while only 41.18% girls were having high level of reading comprehension. 17.64% girls were having average level of reading comprehension while 17.64% girls were having low level of reading comprehension.

To explore the effectiveness of multisensory instruction based intervention on the patterns of different miscues i.e. substitution, insertion, omission, reversal, self correction, refusals committed by the students with dyslexia “Wilcoxon Signed Rank Test” was used. It is found that the pattern of grades of Total miscues, Substitution miscues, Omission miscues and Reversal miscues are different at pre test and post-test and the pattern of grades of Insertion miscues, Self correction miscues, Refusal miscues are same at pre test and post-test. The results revealed a statistically significant effect of multisensory instructional strategy on substitution, insertion, omission, reversal, self correction and refusals miscues of dyslexic students. It can be concluded that the multisensory instructional strategy based intervention is effective for minimizing the miscues of the students with dyslexia.

## **CHAPTER 5**

### **FINDINGS, IMPLICATIONS, LIMITATIONS, SUGGESTIONS AND CONCLUSION**

#### **5.1 Introduction**

One of the most important difficulties that need to be addressed is dyslexia, as in India it is estimated that 10-14% of school going students is diagnosed and suffering from Specific Learning Disabilities (Krishnan, 2007; Mehta, 2003). The main problem of Dyslexic children is related to reading. A qualitative investigation of a student's oral reading miscues is recommended by Goodman (1972). Miscue Analysis helps students in improving their reading. Reading's final aim is comprehension. Comprehension is acquiring meaning from the printed text. In the present study instruction through Multisensory Strategy (MSS) was given to improve the patterns of miscues and reading comprehension of children with Dyslexia.

#### **5.2 Findings of the study**

The following are the findings of the study which were derived from the results of data analysis based on the hypotheses formulated for the study.

1. The findings of the research revealed that the participants committed 1322(46%) Substitution miscues, 215 (8%) Insertion miscues, 673 (24%) Omission miscues, 63 (2%) Reversal miscues, 257 (9%) Self correction miscues and 324(11%) Refusal miscues. It can be concluded that students committed maximum Substitution (46%), followed by Omission (24%), Refusal (11%), Self correction (9%), Insertion 215(8%), Reversal (2%). Results showed that the students have got 67.95 mean score of total miscues with 33.733 SD, "they have committed maximum substitution miscues and minimum reversal miscues". The mean and SD of positive grades are 24.95 and 13.214, and of intermediate grades are 20.52 and 15.751 whereas mean and SD of the negative grades are 22.47 and 19.481. The students made the most substitution miscues and the fewest reversal miscues. The boys with dyslexia have got 70.84 mean of total miscues with 35.060 SD,



“they have committed maximum substitution miscues and minimum reversal miscues”. The mean and SD of positive grades are 24.48 and 12.417, and of intermediate grades are 22 and 18.4 whereas mean and SD of the negative grades are 24.32 and 21.53. The girls with dyslexia have got 63.70 mean score of total miscues with 32.248 SD, “they have committed maximum substitution miscues and minimum Reversal miscues”. The mean and SD of positive grades are 25.64 and 14.675, and of intermediate grades are 18.30 and 10.9 whereas mean and SD of the negative grades are 19.76 and 16.25.

2. The mean score of reading comprehension obtained by the total students is 19.80. The value of standard deviation obtained by the total students with dyslexia is 6.681. The mean score of reading comprehension obtained by the boys is 19.44. The value of standard deviation obtained by the boys with dyslexia is 7.106. The mean score of reading comprehension obtained by the girls is 20.35. The value of standard deviation obtained by the boys with dyslexia is 6.173. The findings also revealed that only 33.3% students were having high level of reading comprehension. 38.10% students were having average level of reading comprehension while 28.57% students were having low level of reading comprehension. Only 44% boys were having high level of reading comprehension. 20% boys were having average level of reading comprehension while 36% boys were having low level of reading comprehension while only 41.18% girls were having high level of reading comprehension. 17.64% girls were having average level of reading comprehension while 17.64% girls were having low level of reading comprehension.
3. The results of Wilcoxon sign Rank Test revealed a statistically significant effect of multisensory instructional strategy on patterns of substitution miscues of dyslexic students. It can be interpreted from the results that the multisensory instructional strategy is effective for minimizing the substitution miscues.
4. The results revealed a statistically significant effect of multisensory instructional strategy on patterns of Insertion miscues of dyslexic students. It can be interpreted

- from the results that the multisensory instructional strategy is effective for minimizing the insertion miscues.
5. The results revealed a statistically significant effect of multisensory instructional strategy on patterns of Omission miscues of dyslexic students. It can be interpreted that “the multisensory instructional strategy is effective for minimizing the Omission miscues”.
  6. The results revealed a statistically significant effect of multisensory instructional strategy on patterns of Reversal miscues of dyslexic students. It can be interpreted that “the multisensory instructional strategy is effective for minimizing the Reversal miscues”.
  7. The results revealed a statistically significant effect of multisensory instructional strategy on patterns of Self correction miscues of dyslexic students. It can be interpreted that “the multisensory instructional strategy is effective for minimizing the Self correction miscues”.
  8. The results revealed a statistically significant effect of multisensory instructional strategy on patterns of Refusal miscues of dyslexic students. It can be interpreted that “the multisensory instructional strategy is effective for minimizing the Refusal miscues”.
  9. The results revealed a statistically significant effect of multisensory instructional strategy on patterns of Total miscues of dyslexic students. It can be interpreted that “the multisensory instructional strategy is effective for minimizing the Total miscues”.
  10. The results revealed a statistically significant effect of multisensory instructional strategy on Reading comprehension of students with Dyslexia. It is evident from the results that the multisensory instructional strategy is effective for improving the Reading comprehension of total students with dyslexia of Grade VI.
  11. The results revealed a statistically significant effect of multisensory instructional strategy on Reading comprehension of Boys with Dyslexia. It can be interpreted

- that “the multisensory instructional strategy is effective for improving the Reading comprehension of boys with dyslexia of Grade VI”.
12. The results revealed a statistically significant effect of multisensory instructional strategy on Reading comprehension of Girls with Dyslexia. It can be interpreted that “the multisensory instructional strategy is effective for improving the Reading comprehension of girls with dyslexia of Grade VI”.
  13. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of substitution Miscues at post intervention stage. It can be concluded that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of substitution miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.
  14. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Insertion Miscues at post intervention stage. It can be concluded that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Insertion miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.
  15. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Omission Miscues at post intervention stage. It can be concluded that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Omission miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.
  16. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of

- Reversal Miscues at post intervention stage. It can be concluded that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Reversal miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.
17. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Self correction Miscues at post intervention stage. It can be concluded from the results that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Self correction miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.
  18. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Refusal Miscues at post intervention stage. It can be concluded from the results that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Refusal miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.
  19. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the Patterns of Total Miscues at the post intervention stage. It can be concluded from the results that there is no significant interaction effect of multisensory instructional strategy and gender on patterns of Total miscues of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

20. The hypothesis tested by the Mann-Whitney analysis shows that there is no significant mean rank difference between the boys and the girls on the reading comprehension scores at post intervention stage. It can be concluded that there is no significant interaction effect of multisensory instructional strategy and gender on reading comprehension scores of dyslexic students of grade VI. The Multisensory Instructional Strategy Intervention does not vary in its effect on the basis of gender. It can be equally beneficial for boys and girls with Dyslexia of Grade VI.

### **5.3 Educational Implications**

The study is non parametric so all the implications are limited to the sample.

Findings of the study suggested that the use of the Multisensory Instructional Strategy (VAKT) minimizes the Miscues of Dyslexic students in the English language, therefore inclusion of this study is highly recommended for the teachers to teach Dyslexic students.

Moreover, the results also indicated that the use of the VAKT strategy improves the reading comprehension of Dyslexic students thus incorporation of this strategy would be very useful to develop and improve the reading skills.

The VAKT teaching strategy found to be effective in improving the English reading performance of students with dyslexia may seem to be effective in the context of general students as well.

Considering the positive outcomes of VAKT strategies on reading comprehension and Miscues, it should be made a part of pre-service as well as in-service training to the teachers.

In this study, we developed the teachers' referral form as a screening tool to identify the Dyslexic students in their class, thus this practice can be made a part of school activities before commencing another session to take input from the teachers about the possibility of the student being Dyslexic for further consideration.

The study will contribute to the literature by providing insights into how dyslexic students process print, insights which can be translated into more effective differentiation and instruction.

Analysis of oral-reading miscues will be useful in prescribing specific intervention to improve automaticity and efficiency in reading for dyslexic children. It will ensure the academic success of dyslexic children.

The findings of this study will be of immense value to the Directorate of School Education both at the state and national level and hence necessary steps can be taken to improve the reading abilities of students particularly, the dyslexic students.

Assistance Program has to be carefully built in and sufficient support should be provided by the teachers to students with Dyslexia. Extreme attention should be given to every word they pronounce even the slight mistake should be corrected appropriately. Each Child needs should be addressed individually.

Parents have to give more attention to school activities and learning strategies of students with Dyslexia.

The findings of the study will be used for planning instructional lessons as well as for research purposes and it will be helpful in improving the teaching learning process.

#### **5.4 Limitations of the Study**

The main focus of this study was to investigate the effect of multisensory intervention on miscues and reading comprehension of students with dyslexia. The aim of the study was to present reliable data but despite the best intentions and efforts, many times few limitations remain. These limitations are important to be mentioned in order to avoid the same in the future researches. These limitations were:

1. Due to the elaborated identification procedure and experimental design, the sample size taken in the study was small.
2. Only Audio recordings of reading were done while collecting the data on miscues from the students.

3. In the intervention, due to the limited time provided for teaching each activity was given less time, because of which not all students might have participated.
4. Triangulation method could have been successfully implemented if the researcher had planned for it prior to the conduct of the experiment.
5. Only the class teacher was being taken in the study for the screening purpose of the students with Dyslexia, parents were not included in the study neither at the time of the screening nor for discussion of the implication of the intervention.
6. Follow up of the intervention programs was not being taken up in the study.

### **5.5 Suggestions for Further Research**

The course timeline and other factors did not allow researcher to consider all dimensions of the problem area. During the course of present study the researcher identified various areas where future research work can be done. Some suggestions for future research are listed below-

1. The area of the present study was delimited to the Punjab State only. Further studies can be conducted among students of other States of India.
2. The present study was conducted in schools following CBSE syllabus. The future studies can be conducted in the schools following other syllabus i.e. similar State boards/ICSE. A comparative study can be carried out with the purpose to study the effect of multisensory intervention on reading comprehension and miscues among the students with dyslexia studying in different types of schools.
3. The sample size in this study was limited to 42 pupils. To revalidate the findings of the current study, more investigations with a larger sample size can be done.
4. The purpose of this study was to determine the impact of a multisensory intervention on reading comprehension and miscues of students with dyslexia in English language only. It is advised that similar research be conducted in other languages as well.

5. The population of the study consisted of elementary school students with dyslexia. Similar study can be carried out on primary and college students with dyslexia.
6. The effect of multisensory instructional strategy can be studied on students with other types of specific learning disabilities like dysgraphia, dyspraxia, dyscalculia, attention deficits, hyperactive disorder, Autistic spectrum disorder and other behavioral disorders.
7. The study can be replicated with a longer duration of intervention.
8. A study may be conducted considering the other factors like socio economic status, home environment, and parental involvement.
9. The research was limited to a group of English-medium schools. It can also be applied to Hindi-medium students.
10. Previous research review indicated the lack of standardized diagnostic tools for identifying children with learning disabilities. Hence more studies are needed to develop standardized diagnostic tools for the identification of children with dyslexia and other learning disabilities at all levels.
11. Video recording of reading could have been done with proper consent from school administration and parents
12. Studies can be conducted to find out the effectiveness of Multi Sensory Strategy on academic achievement of the learning disabled students with different learning styles.
13. In the present study substitution, insertion, omission, reversal, refusals and self correction miscues were considered for study. A Study may be conducted considering the other miscues as well.

## **5.6 Conclusion**

The results of the present study revealed a statistically significant effect of multisensory instructional strategy on patterns of substitution, insertion, omission, reversal, self correction, refusal miscues of dyslexic students. It can be interpreted from



the results that the multisensory instructional strategy is effective for minimizing the substitution, insertion, omission, reversal, self correction, refusal miscues. The results also revealed a statistically significant effect of multisensory instructional strategy on Reading comprehension of students with Dyslexia. It is evident from the results that the multisensory instructional strategy is effective for improving the Reading comprehension of students with dyslexia of Grade VI. Based on the gender of children with dyslexia, the Multisensory Instructional Strategy Intervention does not vary in its effect either on reading comprehension and pattern of miscues. It can be equally beneficial for boys and girls with Dyslexia of Grade VI. In the light of above findings, it can be concluded that Multi-sensory instructional approach should be used with learners with dyslexia. If a student is properly identified and taught through a systematic multisensory approach they can learn to read.

Hence the planners, administrators and curriculum designers can incorporate multisensory instructional strategy which would yield to innovative techniques in teaching. No effort should be spared towards the implementation of multisensory instructional strategy to enhance the reading abilities of dyslexic students. This research was done on a small scale with the constraint of time and finance. Keeping the outcome of this research in mind, the scholars can conduct this research on a much larger scale.

In drawing conclusion, to the present study, one needs to emphasise the importance of the role of teachers in realizing the fullest potential of the children. A teacher, who is aware about the problem of reading difficulty, can make a huge difference in making the teaching –learning process highly effective. Future research is recommended to continue to explore the significance of a multisensory instructional approach.

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## APPENDIX-1

### Permission letter from the school -1

To  
The Principal  
SSRVM Sen. Sec. School  
Naya Nangal (PA)

Sub- Permission for conduction of research on students of class 6

Respected Mam/Sir

My name is Sangeeta Singh Hada and I am pursuing Ph.D. (Education) from Lovely Professional University, Punjab under the kind guidance of Dr. Neha Vats. My research topic is "Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students". For my research work I need your kind permission for conducting my research in your school. During my research the dyslexic children of class 6 will be identified through testing, and intervention through the multisensory strategy will be given to them for six weeks in some chapters of English subject. I will also conduct pre test and post test to know the effect of the intervention given to them. Students with Dyslexia usually learn best when instruction incorporates some combination of visual, auditory, kinesthetic and tactile (VAKT) input, thus multisensory approach will be beneficial to them. The investigator earnestly believes that the outcome of the study will be useful for educational planners, administrators, educators, parents and those who are concerned with the welfare of the dyslexic children. I assure you that I will not cause any disturbance in their classes or syllabus. Further I am also assuring you I will not violate any emergency protocol regarding present COVID 19 situation.

Kindly allow me to perform the same actions for the smooth conduction of my research work and oblige.

Thanking You

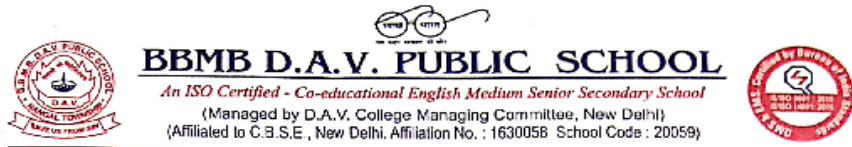
Principal  
SSRVM Sen. Sec. School  
Sec - II Naya Nangal  
Ropar  
5/11/21.

Yours Faithfully

Sangeeta Singh Hada  
Research Scholar  
Lovely professional University  
Punjab  
9417589182

## APPENDIX-2

### Permission letter of school-2



BDPS/07/Research/7486

07/10/2021

Ms. Sangeeta Singh Hada  
Research Scholar  
L.P.U

Subject: Approval of research - "Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students".

This is with reference to your letter dated 07/10/2021 regarding approval for research. I am glad to announce that we hereby grant you the permission to research the topic of "Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students".

You are required to submit the following documents from the off-campus site administrator: A statement that the site will receive a copy of the IRB approval letter, 1. Investigator's first and last name, 2. Specification of how the investigator will contact and/or recruit participants at the site to collect data at the location, 3. Summary of the protocol to confirm their understanding of the study, 4. The agreed upon data collection methodologies must be specified, 5. Whether, the School will receive any benefits, including a copy of the study results, 6. Your on-site research activities will be finished by 06.12.2021, 7. Off-Site Official's first and last name, signature, Title & contact information.

As a Research Scholar, your dream of studying above-mentioned topic will provide you with interesting facts and we hope you continue doing research using surveys/questionnaire/any other method without disturbing the regular studies of the students. Employees will not be allowed time from their work duties to complete the surveys. You are also required to provide to my office a copy of the Lovely Profession University approved, stamped consent document, and will provide a copy of any aggregate results of the research.

Our office will provide de-identified information regarding employee, students etc. for use in your research.

  
PRINCIPAL  
BBMB DAV PUBLIC SCHOOL  
NANGAL TOWNSHIP

NANGAL TOWNSHIP, TEH. NANGAL, DISTT. ROPAR (PB.) - 140124  
Ph. : (O) 01887-225588, 223124 (R) 295288  
Website : www.bbmbdavnangal.in E-mail : bbmbdavnangal1@gmail.com

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## APPENDIX-3

### Permission letter of school-3

To  
The Principal  
St. Soldier Divine public school  
Naya Nangal, Distt. Ropar (PB)

Sub- Permission for conduction of research on students of class 6

Respected Mam/Sir

My name is Sangeeta Singh Hada and I am pursuing Ph.D. (Education) from Lovely Professional University, Punjab under the kind guidance of Dr. Neha Vats. My research topic is "Effect of **Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Students**". For my research work I need your kind permission for conducting my research in your school. During my research the dyslexic children of class 6 will be identified through testing, and intervention through the multisensory strategy will be given to them for six weeks in some chapters of English subject. I will also conduct pre test and post test to know the effect of the intervention given to them. Students with Dyslexia usually learn best when instruction incorporates some combination of visual, auditory, kinesthetic and tactile (VAKT) input, thus multisensory approach will be beneficial to them. The investigator earnestly believes that the outcome of the study will be useful for educational planners, administrators, educators, parents and those who are concerned with the welfare of the dyslexic children. I assure you that I will not cause any disturbance in their classes or syllabus. Further I am also assuring you I will not violate any emergency protocol regarding present COVID 19 situation.

Kindly allow me to perform the same actions for the smooth conduction of my research work and oblige.

Thanking You

Yours Faithfully

*Sangeeta Singh Hada*  
Sangeeta Singh Hada  
Research Scholar  
LPU (PB)  
(9417589182)

*Permission granted  
for above said subject.*

*Mrs. M. A.*  
07/10/2021  
Principal

St. Soldier Divine Public School  
Naya Nangal, Distt. Ropar (Pb.) 140126

## APPENDIX 4

### Model Multi-Sensory Instructional Plan

Name of the Teacher -  
Subject- English  
Topic-Turning Point

Class- VI  
Date-  
Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'b'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The Turning Point”
- ✓ Flash cards showing the difficult words and the letter ' b’
- ✓ Picture of A. P. J. Abdul Kalam
- ✓ Ball and bat
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter ‘b’

**Motivational Act-**


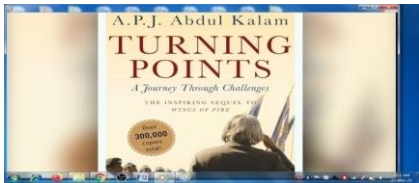
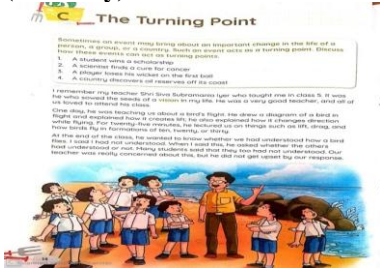
Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

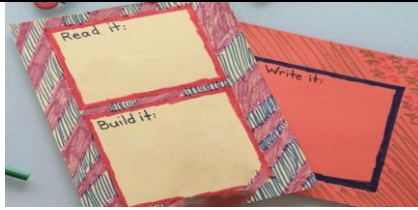
The students might have some knowledge of former president of India Dr. A. P. J. Abdul Kalam and they can recognize him.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will play an audio clip of Dr. A. P. J. Abdul Kalam and ask the students to identify the voice. Students will listen and tell that this voice is of Dr. A. P. J. Abdul Kalam. (<b>Auditory</b>)</p> <p>2. Then the teacher will show a picture of Dr. A. P. J. Abdul Kalam to the students and ask to tell something about him. Students will try to answer that he was the President of our country.(<b>Visual</b>)</p>	<p>Teacher will ask the students to answer the following questions-</p> <p><b>1. What is the full name of Dr. Abdul Kalam?</b></p> <p>(a) Avul Jakir Jalaluddin Kalam (b) Avul Pakir Jainulabdeen Abdul Kalam (c) Abdul Sakir Jainulabdeen Kalam</p>

	 <p>3. Teacher will further refine their answer that Dr. Avul Pakir Jainulabdeen Abdul Kalam was the eleventh president of India and a famous scientist. He was born on 15<sup>th</sup> October 1931 in Rameswaram, Tamilnadu and today we are going to read a passage from the lesson “The Turning Point” an edited extract from “My Teacher” written by him. <b>(Auditory)</b> Well Students! Today we shall learn about the turning point of the life of Dr. A. P. J. Abdul Kalam.</p>	<p>(d) None of the above</p> <p><b>2. When was Dr. A.P.J. Abdul Kalam born?</b>          (a) 15 October 1931          (b) 2 September 1929          (c) 15 August 1923          (d) 29 February 1936</p>
<p><b>Teaching Points</b></p> <p>2. I remember my teacher..... there were twenty of them.</p> <p>Loud reading</p>	<p><b>Teaching-learning activities</b></p> <p>Teacher will show a video to the students and ask them to watch it carefully.  <a href="https://youtu.be/MuOk-w0_T8I">https://youtu.be/MuOk-w0_T8I</a>  <b>(Visual)</b></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one.  <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter ‘b’. <b>(Kinesthetic)</b></p>	<p><b>Evaluation</b></p> <p>Teacher will ask students to share their observations orally.</p>
<p>Exposition of difficult words- Vision, Lift, Drag</p>	<p><b>Vocabulary Development</b></p> <p><b>Read it, build it, write it Exercise -</b></p>	





In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (Vision, Lift, Drag) already written. **(Visual)**

The teacher will ask the students to touch the plastic letters and identify the shape of different letters. **(Tactile)**

The students and the teacher will read the word that is in the “Read It” box. **(Auditory)**.

With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box. **(Kinesthetic)**

The teacher will explain the meaning of the words by saying that vision is the ability to imagine how a country, society, industry, person etc. could develop in the future and to plan for this. E.g. He was a man of great vision and lift is to rise to a higher position or level. E.g. Tom can lift heavy weights. Drag is to pull (someone or something) along forcefully, roughly, or with difficulty. For example- We dragged the boat up the beach. **(Auditory)**

The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words. **(Kinesthetic)**

The teacher will ask the students to read out the passage silently.

Teacher will explain that sometimes an event may bring an important change in the life of a person, a group, or a country. Such an event acts as a turning point. In this lesson the turning point of Dr. A.P.J. Abdul Kalam is described. When he was in class 5, one day his teacher was teaching about a bird’s flight. But the students were unable to understand the concept. The teacher did not get upset by the responses of students and took them all to the seashore that evening. He drew their attention to

Teacher will ask the students to answer the following questions-

1. What was the name of Dr Kalam’s teacher? In which class did he teach Dr Kalam?
2. What was the teacher concerned about?
3. Are you allowed to ask questions in class? How does asking questions help you?

Silent Reading by the students

Explanation by the teacher



the seagulls flying in formation, there were about twenty of them. **(Auditory)**

### Phonological awareness and phonics

letter 'b'



The teacher will show the flash card to the students that have written the letters 'b' and some objects to the students (bat, ball). **(Visual)**

The teacher will ask the students to recognize the objects and tell the first letter of these objects (b). The students will be asked to repeat the letter and words. The teacher calls out some words start with 'b'. For example-bag, box, big. The student repeats it. **(Auditory)** and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/b/). They feel the sand moving to form the letter 'b'. **(Tactile)**



The teacher will explain that some words have the same initial sound. For example the words box, bag and but have the same first sound i.e. /b/. Now teacher will say some more words starting with similar initial sound **(Auditory)** and ask students to repeat these words such as bear, bus, big, bike and identify the initial sound /b/ which is similar in these words **(kinesthetic)**

After that the students will be given worksheet and asked to colour the letter 'b' in the worksheet **(Kinesthetic)**.



Teacher will ask the students to answer the following questions-

1. Which name of a fruit starts with the letter 'b'?
2. What is the first sound in these words i.e. bad, bed and bird?

### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the first part of the story "Turning point". In this story he explained an incident happened during his school days. It was a turning

point of his life. Now answer the following questions-

1. Who is known as Missile Man of India?
2. Kalam writes, 'He was a very good teacher and all of us loved to attend his classes'. Why do you think the children felt so?
3. How did the teacher explain a bird's flight to the students in the class?
4. Why did the teacher take the whole class to the seashore?

### **Home Work**

1. Write the name of ten persons starts with the letter 'b'.
2. Write the name of five things in your home starts with the letter 'b'.
3. Fill in the blanks by using suitable words given in bracket.  
(Vision, good, five, loved, teacher, eleventh)

Dr. APJ Abdul Kalam was the-----President of India. Shri Siva Subramania Iyer was the----- of Dr. Kalam in class-----. It was he who sowed the seeds of a -----in his life. He was a -----teacher. All students-----to attend his class.

## APPENDIX 5

### Contents Map (30 Multisensory Instructional Plans)

**Class-6, Subject-English**

**Time-40 Minutes**

Instructional plans	Reading Comprehension	Fluency	Vocabulary	Phonological Awareness	Phonics
Instructional plan-1 to 4 (The Turning Point)	Text comprehension exercises Sentence parts of sentences Types of sentences Analysis of simple sentences Sequencing events in stories	Text Reading- Paired reading, model reading, listening audio recording,	One word :many meaning word meaning. - "Read it, Build it, Write it" exercise,	Phonemic awareness, drill and practice	Sound and shape of letters, differentiation of letters Match the sound with letters, trace the letters, form the letter on different surfaces i.e. sand, rice etc., write the letter in the air by using index finger, form the letter with clay.
Instructional Plans 5 to 10 (Dinner By Moon light)	Text comprehension exercises ,sentence construction,	Text Reading model reading, repeated reading, practice sight words, listening audio recording,	word meaning, sight words vocabulary games -"Read it, Build it, Write it" exercise,	sound isolation, phonemic blending	Sound and shape of letters, differentiation of letters Match the sound with letters, trace the letters, form the letter on different surfaces i.e. sand, rice etc., write the letter in the air by using index finger, form the letter with clay.
Instructional Plans 11 to 14 (Conquering Mount Everest)	Text comprehension exercises ,sentence construction,	Text Reading Paired reading, choral reading, model reading, practice sight words, listening audio recording	word meaning, sight words word discrimination, quizzes, Synonyms -"Read it, Build it, Write it" exercise,	phonemic segmentation	Sound and shape of letters, differentiation of letters Match the sound with letters, trace the letters, form the letter on different surfaces i.e. sand, rice etc., write the letter in the air by using index finger, form the letter with clay.
Instructional Plans 15 to 20(Just before recess)	Text comprehension exercises, synonyms	Text Reading Paired reading, model reading, repeated reading, practice sight words, listening audio recording, peer assisted reading	word meaning, sight words, Antonyms -"Read it, Build it, Write it" exercise,	Rhyming activities (identify rhyming words, Odd one out, Rhyming Word Sit Down, Clap and Jump etc.) , drill and practice	Sound and shape of letters, differentiation of letters Match the sound with letters, trace the letters, form the letter on different surfaces i.e. sand, rice etc., write the letter in the air by using index finger, form the letter with clay.
Instructional Plans 22 to 30 (The curious Robot)	Text comprehension exercises, antonyms	Text Reading model reading, listening audio recording, peer assisted reading	Word Recognition, word meaning,	rhyming activities (identify rhyming words, Odd one out, Rhyming Word Sit Down, Clap and Jump etc.)	Sound and shape of letters, differentiation of letters Match the sound with letters, trace the letters, form the letter on different surfaces i.e. sand, rice etc., write the letter in the air by using index finger, form the letter with clay.

#### Multisensory Instructional Strategy (VAKT)

<p><b>Visual Input-</b> 1. Use of flash cards, 2. Pictures, 3.images,4. Posters, 5.models, 6.text, 7.charts, 8.projectors, 9.computer screens, 10.text on papers, 11.videos, 12.flow charts, 13.visual thinking maps, 14.visual image mapping, 15. Plastic letters 16.Use of colors for highlighting, 17. Outlining new idea and concept,18. Graphic organizers 19.Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"</p>	<p><b>2.Auditory Input—</b> 1. Song, 2. Music, 3 movies, 4videos, 5.language games,6. Chants, 7.rhymes, 8.use of phone, speaking, 9.audio recording and play back, 10.Repeated reading, 11. Peer assisted reading, 12. Model reading, 13. Books on tape, 14. Paired reading, 15. Choral reading, 16.podcasts, 17. Discussion with peers or teachers on the topic, 18. Questioning, 19. Brainstorming, 20.explaining the concept to others.</p>	<p><b>3.Kinesthetic Input-</b> 1. Role playing, 2.letter sound blending, 3.puzzles, 4.sight word jump, 5.participation in projects, 6.Arm tapping, 7.clapping, 8.jumping,9. dancing, 10.Sight word towers, 11.Sky writing or Air writing, 12.learning games, 13.jumping rope, 14.singing songs, 15.competition like flash card races and quizzes 16.Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it", Use of color for highlighting</p>	<p><b>4. Tactile Input-</b> 1.Sand writing, 2.salt –writing, 3.Saving cream writing , 4.raised line paper, 5.Modeling materials such as clay and sculpting materials, 6.textured objects, 7.Sand paper letters, 8.Word building with tiles, 9.Plastic letters or magnetic letters, 10.finger paint, 11.Play-Dough to do something with their hands,12.Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it",</p>
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## APPENDIX-6

### SCORING –KEY

#### Miscue and Reading Comprehension Test

(Final draft)

QUE. No.	ANSWER	MARKS	QUE. NO.	ANSWER	MARKS
1	b	2	19	c	2
2	a	2	20	b	2
3	d	2	21	c	2
4	d	2	22	c	2
5	a	2	23	a	2
6	d	2	24	c	2
7	c	2	25	c	2
8	b	2	26	a	2
9	a	2	27	a	2
10	d	2	28	a	2
11	d	2	29	b	2
12	a	2	30	a	2
13	c	2	31	a	2
14	b	2	32	d	2
15	b	2	33	a	2
16	b	2	34	c	2
17	a	2	35	d	2
18	c	2	36	d	2

# APPENDIX-7

## MISCUE AND READING COMPREHENSION TEST

(Prepared by the researcher)

### Record Sheet

Name:

M

F

School



Date of birth

Age at test

Date




Count	Substitution	Insertions	Omissions	Reversals	Refusals	Total	Self Corrections
Raw							
%							

**Comments**

---

	Substitutions	Insertions	Omissions	Reversal	Self-Corrections	Refusals	Total	Behavior %
No. of Positives								
No. of Intermediates								
No. of Negatives								
Total								

## The True Successor



### Paragraph -1

Once upon a time, there was a great kingdom, named Mahapal. It was a very fertile kingdom and people of the kingdom were happy. Mahapal was ruled by king Mahender, who was a noble king. He took care of the people like his own children. But the people of Mahapal were not happy about the fact that the king Mahender didn't have a child of his own. One day the ministers came to the king with a request. King asked, "What is it?" The ministers said, "We request you to kindly adopt a child, for our generations to thrive." Then the king replied, "You are correct. I am old now and I should look out for a person to succeed me." "Shall we look out for a child?" ministers asked. "No, no, I am not young enough to bring up a child now. Let's find a loyal person who can sit on the throne." The king answered. The ministers asked anxiously, "Is there going to be competition?" "Yes, a different kind of competition. Pass on my instructions." The king said.

**Comprehension questions-** Tick the correct answer-

1. The kingdom was –
  - (a) Barren
  - (b) Fertile
  - (c) Infertile
  - (d) So poor
2. How did the king treat the people of the kingdom?
  - (a) He took care of the people like his own children.
  - (b) He treated them like enemy
  - (c) He didn't take care of the people of his kingdom.
  - (d) None of the above
3. Who suggested the king to adopt a child?
  - (a) His wife
  - (b) His friends
  - (c) His uncle
  - (d) His ministers
4. Ministers went to the king and requested him to \_\_\_\_\_.
  - (a) consult an astrologer
  - (b) resign
  - (c) throw a party
  - (d) adopt a child
5. The king replied that
  - (a) He would look out for a person to succeed him.
  - (b) He would adopt a small child
  - (c) He would not look out for a person to succeed him.
  - (d) None of the above
6. Which statement is /are correct-
  - (a) The kingdom was fertile.
  - (b) The people were happy.
  - (c) The king had no child.
  - (d) all of the above

## Paragraph -2



As per the king's instructions the people of the city were made to assemble in the palace on the full moon day. The ministers were supposed to call one person from each family to the palace. The king announced, "People of this great kingdom, I welcome you all. I want to select a talented and good individual to ascend the throne after me. For this reason, I am holding a small competition. I will hand out plant-seeds to each person. The seeds are to be planted and maintained well for three months. Whoever brings back the best-grown plant with colorful flowers will be chosen as the crown prince. If a person who can take care of the plant and make them grow can also make the kingdom prosper." The people were excited. They took the seeds and went back home.

### Comprehension Questions-

7. What were the ministers supposed to do?
  - (a) Call all the people of the kingdom
  - (b) Call only women of the kingdom
  - (c) Call only one person from each family
  - (d) None of the above
8. What did the king announced?
  - (a) Now I will no longer your king.
  - (b) A competition for selecting a successor
  - (c) I have selected a successor
  - (d) None of the above
9. Why did the king organize a competition?
  - (a) To choose his successor.
  - (b) To choose new wife
  - (c) To choose new minister
  - (d) None of the above
10. How much time did the king give to the people to grow the plants?
  - (a) One year
  - (b) One month
  - (c) Six month
  - (d) Three month
11. What did the king want to distribute to the people.
  - (a) flowers
  - (b) Money
  - (c) Fruits
  - (d) Seeds
12. What was the competition?
  - (a) To grow the biggest, healthiest plant with the seeds given by the king.
  - (b) Painting
  - (c) Archery
  - (d)Wrestling

### Paragraph-3



After the three months the people returned with their flower pots in which beautiful and colorful flowers were blossoming. There were green plants in pots all over the palace ground. Each pot was bearing a tag with the name of the owner in bold letters. The minister appointed a team of judges to select the winner. “Your Highness! All the plants are bright and beautiful!” “My lord! It is difficult to select the right person. Hearing this the king said. “Come, let’s go to the garden.” The king was very pleased to see the beautiful and colorful flowers in his garden. He said, “All the pots are beautiful!” “Your Highness! Our judges are not able to select the right parson.” The minister replied. “There is a man who has not succeeded in growing any plant. There is only soil in the pot. Not even a tiny plant. Shall I send him back?” The king demanded, “Show me the pot with no plant.” “Yes, my lord.” The minister brought the pot. The king saw the name tag and called for the man. Someone from the crowd screamed, “Look at the pot, not even a single tiny plant. He might be severely punished for this.” The owner of the pot, Vikram, came to the king trembling with fear. “Why there is no plant in the pot?” the king asked. Trembling with fear and folded hands Vikram answered, “Your Excellency! My lord, I tried my best even by adding more fertilizers and carefully watering the seeds. I am sorry to say that I could not bring up a plant.”



#### Comprehension Questions-

13. What did the people return after three months?
  - (a) Gifts
  - (b) Money
  - (c) Pots with plants
  - (d) Fruits
14. Whom did the ministers appoint to select the right winner?
  - (a) A team of players
  - (b) A team of judges



- (c) A team of ministers
  - (d) King and his family
15. What did the king said after having a look over the plants?
- (a) All the pots are empty
  - (b) All the pots are beautiful
  - (c) All the pots are ugly
  - (d) None of the above
16. Which statement is correct-?
- (a) Only one man brought a pot with beautiful plants.
  - (b) Only one man brought an empty pot.
  - (c) All persons brought a pot with beautiful plants.
  - (d)None of the above
17. What was the guess of the crowd for the person with empty pot?
- (a) He will be punished
  - (b) He will be praised
  - (c) He will receive gifts
  - (d) None of the above
18. Who was the owner of the empty pot?
- (a) Mahender
  - (b) Minister
  - (c)Vikram
  - (d)Rajan
19. What was the condition of Vikram before the king?
- (a) Happy
  - (b) Confident
  - (c) Trembling with fear
  - (d) None of the above
20. What did the king ask Vikram?
- (a) Why you came late?
  - (b) Why there is no plant in the pot?
  - (c) Why you are trembling?
  - (d) all of the above.
21. What did Vikram reply?
- (a) I didn't try.
  - (b) I am not interested in growing plants.
  - (c) I tried my best.
  - (d) none of the above
22. After three months, Vikram went to the king with a/an \_\_\_\_\_.
- (a) beautiful blooming flower
  - (b) bag of gold
  - (c) empty pot
  - (d ) pot with full of money

#### Paragraph-4



Hearing this king was very happy and he stood up and addressed the people. “My dear people, this man Vikram who has not grown any plant will be my successor.” The people were disappointed. The ministers and the judges were shocked. The king continued, “I was looking for a man with a strong character and I have found him. I had all the seeds roasted before I gave them out. This fact was kept as a secret.” “I was on the lookout for an honest person. When I saw the pot without any plant, I knew that I’ve found the honest man.” The people were surprised. The ministers and the judges appreciated the king for his wise decision. King Mahender declared Vikram the prince of Mahapal. The people were happy with the king’s decision. At last, they could get their true successor.

23. What was the mood of the king after listening to Vikram’s reply?
- (a) Happy
  - (b) Sad
  - (c) Angry
  - (d) None of the above
24. Who became the prince of Mahapal?
- (a) Mahender
  - (b) Rajan
  - (c) Vikram
  - (d) Ram
25. What was the mood of the people after knowing that Vikram will be the successor without growing any plant?
- (a) Angry
  - (b) Happy
  - (c) Disappointed
  - (d) None of the above
26. What was the mood of the ministers and judges after knowing that Vikram will be the successor without growing any plant?
- (a) Socked
  - (b) Angry
  - (c) Happy
  - (d) None of the above
27. What type of person was the king looking for?
- (a) Honest man
  - (b) Skilled man
  - (c) A good gardener
  - (d) Fool man
28. What was the secret fact?
- (a) The seeds had been roasted before giving them out.
  - (b) The seeds had been boiled before giving them out.

- (c) Both
  - (d) Nothing
29. When did the king feel that he had found the right man?
- (a) When he saw the pot with most beautiful plant.
  - (b) When saw the pot with no plant
  - (c) When he saw a minister
  - (d) None of the above
30. Why was Vikram`s pot different from other person`s pots?
- (a) He planted the roasted seeds given by the king.
  - (b) He was a bad gardener.
  - (c) Vikram did not work hard at growing the seed.
  - (d) He didn't water the plant.
31. What was the reaction of the ministers and the judges after knowing the secret plan of king for selecting the successor?
- (a) They criticized the king for his wise decision
  - (b) They appreciated the king for his wise decision
  - (c) Some ministers appreciated and some criticized the king for the decision
  - (d) They opposed the king`s decision.
32. Which of the following idioms best describes the theme of this story?
- (a) It is always best to face the music.
  - (b) Don`t count your chickens before they hatch.
  - (c) A bird in the hand is worth two in the bush.
  - (d) Honesty is the best policy
33. What was the main problem in the story?
- (a) The king had no successor.
  - (b) Vikram's seeds did not grow
  - (c) Vikram lost his land where he grew flowers
  - (d) Vikram`s parents died
34. What lesson can readers learn from "The True Successor"?
- (a) To be thankful
  - (b) To be friendly
  - (c) To be honest
  - (d) To be creative
35. Why did the king choose Vikram as his successor?
- (a) He didn't have anyone else to choose.
  - (b) He was his son.
  - (c) Everyone told him to choose Vikram
  - (d) Vikram proved that he was honest.
36. What quality of Vikram is portrayed in the story?
- (a) Clever
  - (b) Intelligent
  - (c) Handsome and powerful
  - (d) Honest and truthful

## APPENDIX 8

### TEACHER'S REFERRAL FORM

1. Name of the teacher-

2. Name of the student-

3. Name of the school-

4. Class-

5. Date of birth-

6. Gender of the student-

Instructions- 1.Please read each statement carefully and indicate your answer by putting tick mark against relevant response option provided against each statement.

2. Use 'Can't say' option only when you are not very sure of a clear 'Yes' or 'No' response option.

#### 1. Reading

Characteristics	Yes	No	Can't say
1. The student has difficulty in reading accurately.			
2.The student reads slowly and laboriously			
3. The student often adds letter/words while reading.			
4. The student often omits letter/words while reading			
5. The student reverses letters/numbers while reading (e.g. 'b 'as'd', '9' as '6').			
6.The student substitutes letters/words while reading (e.g. 'home' for 'house').			
7. The student makes wild guesses at unfamiliar words.			
8. The student confuses between similar looking words like on/no, bread/Breed etc.			

9. The student frequently loses place while reading.			
10. The student has poor reading comprehension.			
11. The student has difficulty in reading words in isolation.			
12. The student mispronounces words.			
13. The student has difficulty with letter names.			
14. The student has difficulty in creating or identifying rhyming words (e.g. pen, men).			
15. The student often repeats the words/lines while reading			

## 2. Writing

16. The student has difficulty in writing accurately.			
17. The student has slow writing speed.			
18. The student has difficulty in copying from book/ blackboard.			
19. The student reverses letters while writing (e.g. b/d, p/q).			
20. The student often omits letters/ words while writing (e.g. limp/lip).			
21. The student frequently omits punctuation marks/capital letters.			
22. The student often transposes (changes the order of) letters and numbers while writing (e.g. 'Loin' for 'Lion', '27' for '72').			
23. The student has difficulty in writing from dictation.			
24. The student has illegible or untidy handwriting.			

25. The student has difficulty in cursive writing.			
26. The student often misspells words.			
27. The student has limited vocabulary.			
28. The student has difficulty in writing same sounding words i.e. Two-To, Eye-I			

### 3. Mathematical ability

29. The student misreads numbers (e.g. '6' as '9').			
30. The student confuses with mathematical signs (e.g. >/<).			
31. The student often commits mistakes in calculation.			
32. The student has difficulty in copying of digits.			
33. The student has difficulty in remembering the sequence of numbers.			
34. The student has difficulty with remembering multiplication tables.			
35. The student has difficulty with math's vocabulary.			

### 4. Behavior

36. The student has difficulty in remembering and following the directions.			
37. The student has confusion with left / right.			

38. The student has difficulty in following routines and multi-step instruction.			
39. The student has difficulty in remembering sequential information (e.g. alphabets, time table, and days of week).			
40. The student has difficulty in remembering new words /sight words (e.g. of sight words-and, or, the)			
41. The student avoids reading aloud.			
42. The student finds difficulty in organizing his/her work or material.			
43. The student has poor self-esteem.			
44. The student has poor eye-hand coordination.			
45. The student has difficulty with learning to spell.			
46. The student is curious and talented in arts/music/sports/drama/other co-curricular activities.			

## APPENDIX 9




### MISCUE ANALYSIS TABLE

Miscue Analysis Table					
Name of the student					
Name of the school			Class		
Substitution Miscue patterns					
Text	Miscue	Grapho phonic similarity	Semantic acceptably	Syntactic acceptability	Grade(Positive, Intermediate, Negative)
Insertion Miscue patterns					
Text	Miscue	Grapho phonic similarity	Semantic acceptably	Syntactic acceptability	Grade(Positive, Intermediate, Negative)
Omission Miscue patterns					
Text	Miscue	Grapho phonic similarity	Semantic acceptably	Syntactic acceptability	Grade(Positive, Intermediate, Negative)
Reversal Miscue patterns					
Text	Miscue	Grapho phonic similarity	Semantic acceptably	Syntactic acceptability	Grade(Positive, Intermediate, Negative)
Self correction Miscue patterns					
Text	Miscue	Grapho phonic similarity	Semantic acceptably	Syntactic acceptability	Grade(Positive, Intermediate, Negative)
Refusals Miscue patterns					
Text	Miscue	Grapho phonic similarity	Semantic acceptably	Syntactic acceptability	Grade(Positive, Intermediate, Negative)



# Appendix 10

## Experiment completion certificate of school -1)




**BBMB D.A.V. PUBLIC SCHOOL**  
*An ISO Certified - Co-educational English Medium Senior Secondary School*  
(Managed by D.A.V. College Managing Committee, New Delhi)  
(Affiliated to C.B.S.E., New Delhi. Affiliation No. : 1630058 School Code : 20059)

B.Dos/7/7555 Dt:-23.12.2021

TO WHOM IT MAY CONCERN

With extreme pleasure and happiness, we hereby certify that Mrs. Sangeeta Singh Hada has completed her experimentation from this institution from 8<sup>th</sup> October, 2021 to 6<sup>th</sup> December, 2021 for the purpose of research on the topic titled as "Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Student". I would like to congratulate her in completing the project on time and with hard work, perfection and dedication despite so many challenges that cropped up during this process.

We wish her a very bright future.



PRINCIPAL  
BBMB DAV PUBLIC SCHOOL  
NANGAL TOWNSHIP

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## Appendix 11

### Experiment completion certificate of school -2



School No. 25227

Ph. : 01887-222242, Mob. : 94171-17349

**St. Soldier Divine Public School**

PACL ROAD, NAYA NANGAL, DISTT. ROPAR (PB.) - 140126  
E-mail : ssdps\_nn@yahoo.in, Website : www.ssdpsnayanangal.in

Sr. Sec. School Affiliated to C.B.S.E. Delhi Affiliation No. 1630465

Ref. No.....

#### TO WHOM IT MAY CONCERN

This is to certify that Ms. Sangeeta Singh Hada, Research Scholar, Lovely Professional University, Punjab, has completed her experimentation from this institution from 8<sup>th</sup> October, 2021 to 6<sup>th</sup> December, 2021 for the purpose of fulfillment of her study titled as "Effect of Multisensory instructional Strategy on Miscues and Reading Comprehension of Dyslexic Student". She has completed her experimentation with all necessary requirements and materials successfully. I wish her all the best for her future.

Thanking You

  
17/12/21

Nirmal Vasudeva

(Principal)

Nirmal Vasudeva

Principal


St. Soldier Divine Public School

Naya Nangal, Ropar, Punjab

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## Appendix 12

### Experiment completion certificate of school -3



# S.S.R.V.M. Senior Secondary School

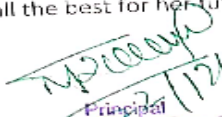
**NH. Sector - II Naya Nangal (Pb.)**  
(Opp. Captain Anmol Kalia Park Shivalik Avenue)

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Ref No. 370/21 Dated 22/12/21

TO WHOM IT MAY CONCERN

This is to certify that Mrs. Sangeeta Singh Hada ,Research Scholar, Lovely Professional University, Punjab, has completed her experimentation from this institution from 8<sup>th</sup> October, 2021 to 6<sup>th</sup> December,2021 for the purpose of fulfillment of her study titled as – “Effect of Multisensory Instructional Strategy on Miscues and Reading Comprehension of Dyslexic Student”. She is dedicated, hardworking and highly committed. We wish her all the best for her future.



Principal  
SSRVM Sen. Sec. School  
Sec - II Naya Nangal  
Ropar (Pb)-140126

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**Appendix -13**  
**Talley chart of different miscues committed by the dyslexic students at Pretest**

S.No.	Student	School	Class	SUB-P	SUB-I	SUB-N	SUB-T	INS-P	INS-I	INS-N	INS-T	OMI-P	OMI-I	OMI-N	OMI-T	REV-P	REV-I	REV-N	REV-T	S.C-P	S.C.I	S.C.N	S.C.T	REF-P	REF-I	REF-N	REF-T	TOTAL-P	T-I	T-N	Grand Total
1	1	St.Soldier	6A	10	21	32	63	0	0	0	0	13	30	12	55	0	0	0	0	3	5	1	9	11	4	38	53	37	60	83	180
2	2	St.Soldier	6A	20	6	12	38	0	3	0	3	1	2	1	4	1	0	1	2	0	0	7	7	3	1	1	5	25	12	22	59
3	3	St.Soldier	6A	34	8	3	45	3	0	0	3	1	1	0	2	1	0	1	2	3	0	0	3	6	9	5	20	48	18	9	75
4	4	St.Soldier	6B	12	2	11	25	3	1	1	5	3	2	4	9	0	3	1	4	8	0	0	8	1	2	0	3	27	10	17	54
5	5	St.Soldier	6B	10	7	8	25	1	2	1	4	0	13	2	15	0	0	0	0	0	0	1	1	0	0	7	7	11	22	19	52
6	6	St.Soldier	6B	4	2	9	15	1	1	2	4	4	0	1	5	0	1	1	2	2	2	1	5	1	0	4	5	12	6	18	36
7	7	St.Soldier	6C	5	14	1	20	1	0	1	2	10	6	1	17	0	0	0	0	0	0	0	0	4	1	2	7	20	21	5	46
8	8	St.Soldier	6C	5	22	4	31	1	2	0	3	0	3	4	7	2	0	0	2	0	0	13	13	2	0	0	2	10	27	21	58
9	9	St.Soldier	6D	6	17	69	92	0	0	1	1	2	0	25	27	0	0	2	2	3	0	0	3	0	0	0	0	11	17	97	125
10	10	St.Soldier	6D	8	6	8	22	2	1	1	4	2	0	1	3	0	1	0	1	7	0	3	10	2	0	4	6	21	8	17	46
11	11	St.Soldier	6D	11	34	26	71	1	11	1	13	9	38	4	51	0	2	0	2	0	2	0	2	2	4	0	6	23	91	31	145
12	12	ssrvn	6A	3	7	11	21	1	0	1	2	6	0	8	14	0	1	2	3	5	0	1	6	0	0	4	4	15	8	27	50
13	13	ssrvn	6A	22	2	1	25	1	1	1	3	8	1	1	10	0	1	0	1	4	0	0	4	3	2	2	7	38	7	5	50
14	14	ssrvn	6A	6	15	7	28	2	0	2	4	2	0	2	4	1	0	0	1	10	0	0	10	1	3	0	4	22	18	11	51
15	15	ssrvn	6A+	7	7	5	19	12	5	3	20	7	1	2	10	0	0	1	1	4	3	1	8	0	0	1	1	30	16	13	59
16	16	ssrvn	6A+	0	4	7	11	0	5	1	6	5	7	11	23	0	0	2	2	25	0	0	25	0	0	1	1	30	16	22	68
17	17	ssrvn	6A+	14	14	5	33	0	0	0	0	7	1	6	14	0	0	1	1	2	1	1	4	3	0	17	20	26	16	30	72
18	18	ssrvn	6A+	16	9	19	44	0	4	1	5	0	10	1	11	0	0	2	2	0	0	4	4	2	0	1	3	18	23	28	69
19	19	BBMB	6 Rose	6	10	13	29	2	3	1	6	5	4	9	18	1	0	1	2	0	5	0	5	0	0	1	1	14	22	25	61
20	20	BBMB	6 Rose	24	17	7	48	2	2	0	4	9	13	16	38	0	1	0	1	7	0	0	7	4	2	3	9	46	35	26	107
21	21	BBMB	6 Lotus	55	4	2	61	0	8	3	11	0	19	9	28	0	0	1	1	0	0	2	2	1	0	0	1	56	31	17	104
22	22	BBMB	6 Lotus	10	15	0	25	1	5	3	9	1	8	1	10	0	1	0	1	0	0	0	0	0	1	0	1	12	30	4	46
23	23	BBMB	6 lily	16	10	2	28	3	0	0	3	1	1	1	3	0	0	0	0	0	0	4	4	3	0	0	3	23	11	7	41
24	24	BBMB	6 lily	16	6	17	39	1	3	1	5	0	4	2	6	1	0	0	1	4	2	2	8	1	0	1	2	23	15	23	61
25	25	BBMB	6 lily	6	2	11	19	3	2	3	8	4	3	14	21	0	1	1	2	1	1	0	2	0	2	2	4	14	11	31	56
26	26	St.Soldier	6A	20	11	5	36	3	0	0	3	8	24	14	46	1	0	0	1	0	0	0	0	9	2	5	16	41	37	24	102
27	27	St.Soldier	6A	9	19	2	30	3	1	6	10	12	0	6	18	1	0	1	2	6	5	0	11	6	0	4	10	37	25	19	81
28	28	St.Soldier	6B	3	9	0	12	2	1	0	3	0	4	2	6	2	1	0	3	0	0	8	8	1	2	0	3	8	17	10	35
29	29	St.Soldier	6C	7	0	2	9	2	0	0	2	4	0	1	5	1	0	0	1	6	0	0	6	1	0	0	1	21	0	3	24
30	30	St.Soldier	6C	2	2	7	11	0	0	4	4	7	11	6	24	0	2	2	4	0	9	1	10	0	0	20	20	9	24	40	73
31	31	St.Soldier	6C	19	15	10	44	7	0	0	7	14	2	7	23	1	0	0	1	2	0	1	3	0	0	0	0	43	17	18	78
32	32	St.Soldier	6D	17	4	3	24	1	0	0	1	1	0	0	1	0	0	0	0	2	1	0	3	0	0	0	0	21	5	3	29
33	33	SSRVM	6A	8	4	9	21	0	0	0	0	5	2	5	12	1	0	2	3	1	1	3	5	0	0	3	3	15	7	22	44
34	34	SSRVM	6A	7	6	4	17	5	1	0	6	4	0	0	4	0	0	0	0	3	3	0	6	0	0	2	2	19	10	6	35
35	35	SSRVM	6A+	7	7	5	19	1	0	3	4	3	1	3	7	1	1	0	2	2	2	0	4	0	0	0	0	14	11	11	36
36	36	SSRVM	6A+	5	15	25	45	0	0	1	1	6	1	15	22	1	1	0	2	3	6	1	10	3	6	9	18	18	29	51	98
37	37	BBMB	6 Rose	6	13	33	52	15	1	0	16	12	5	2	19	0	1	0	1	13	5	6	24	9	11	17	37	55	36	58	149
38	38	BBMB	6 Rose	11	17	21	49	0	1	0	1	5	8	2	15	0	0	0	0	1	1	2	4	0	0	2	2	17	27	27	71
39	39	BBMB	6 Rose	7	7	2	16	10	5	0	15	11	8	4	23	0	2	0	2	1	0	0	1	2	2	4	8	31	24	10	65
40	40	BBMB	6 Lotus	11	9	4	24	2	0	0	2	7	0	2	9	1	3	0	4	1	0	0	1	2	2	1	5	24	14	7	45
41	41	BBMB	6 Lotus	5	15	4	24	0	1	0	1	0	0	0	0	0	0	0	0	6	0	0	6	1	6	14	21	12	22	18	52
42	42	BBMB	6 lily	6	5	1	12	5	0	6	11	31	1	2	34	1	0	0	1	5	0	0	5	3	0	0	3	51	6	9	66
	Total			476	419	427	1322	97	70	48	215	230	234	209	673	18	23	22	63	140	54	63	257	87	62	175	324	1048	862	944	2854
	Mean			11.33	9.98	10.17	31.48	2.31	1.67	1.14	5.12	5.48	5.57	4.98	16.02	0.43	0.55	0.52	1.50	3.33	1.29	1.50	6.12	2.07	1.48	4.17	7.71	24.95	20.52	22.48	67.95
	S.D.			9.72	6.88	12.49	17.80	3.26	2.41	1.56	4.59	5.70	8.45	5.52	13.36	0.59	0.83	0.74	1.11	4.59	2.13	2.68	5.28	2.67	2.51	7.31	10.55	13.21	15.75	19.48	33.73

**Appendix -14**

**Talley chart of different miscues committed by the dyslexic students at Posttest**

S.No.	Student	School	Class	SUB-P	SUB-I	SUB-N	SUB-T	INS-P	INS-I	INS-N	INS-T	OMI-P	OMI-I	OMI-N	OMI-T	REV-P	REV-I	REV-N	REV-T	S.C-P	S.C.I	S.C.N	S.C.T	REF-P	REF-I	REF-N	REF-T	TOTAL-P	T-I	T-N	Grand Total
1	1	St.Soldier	6A	3	9	22	34	0	5	0	5	5	22	8	35	0	0	0	0	0	0	0	0	4	8	12	8	40	38	86	
2	2	St.Soldier	6A	8	4	3	15	6	2	0	8	4	7	0	11	0	1	1	2	0	0	1	1	0	4	6	10	18	18	11	47
3	3	St.Soldier	6A	24	9	14	47	1	4	0	5	5	6	1	12	2	0	0	2	0	0	0	4	0	0	4	36	19	15	70	
4	4	St.Soldier	6B	1	8	6	15	4	2	2	8	5	3	4	12	0	1	0	1	0	2	0	2	1	1	2	4	11	17	14	42
5	5	St.Soldier	6B	15	3	5	23	3	0	0	3	5	2	2	9	0	0	0	0	1	0	0	1	2	0	3	5	26	5	10	41
6	6	St.Soldier	6B	10	8	8	26	3	0	1	4	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	13	11	9	33
7	7	St.Soldier	6C	4	5	6	15	1	1	0	2	0	2	0	2	0	0	3	3	0	1	1	2	2	0	0	2	6	10	10	26
8	8	St.Soldier	6C	26	3	1	30	0	0	0	0	0	1	0	1	2	0	0	2	0	0	3	3	0	2	0	2	28	6	4	38
9	9	St.Soldier	6D	3	11	30	44	0	1	3	4	0	2	3	5	0	0	1	1	0	0	0	0	2	0	0	2	5	14	37	56
10	10	St.Soldier	6D	18	4	11	33	1	0	0	1	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	21	7	11	39
11	11	St.Soldier	6D	6	10	34	50	7	1	2	10	5	3	21	29	1	0	1	2	2	1	1	4	0	0	2	2	21	15	61	97
12	12	ssrvn	6A	3	4	5	12	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8	2	0	10	15	6	5	26
13	13	ssrvn	6A	16	4	2	22	0	0	1	1	1	2	3	6	0	0	2	2	1	0	0	1	4	1	5	10	22	7	13	42
14	14	ssrvn	6A	15	1	2	18	1	0	0	1	0	3	0	3	0	0	0	0	0	0	1	1	0	0	2	2	16	4	5	25
15	15	ssrvn	6A+	3	7	0	10	6	1	7	14	3	3	7	13	0	2	0	2	3	4	1	8	0	1	0	1	15	17	16	48
16	16	ssrvn	6A+	24	0	1	25	0	9	0	9	4	5	4	13	0	0	0	0	1	0	2	3	2	4	1	7	31	18	8	57
17	17	ssrvn	6A+	25	14	7	46	0	1	1	2	0	7	0	7	1	0	0	1	2	1	1	4	0	0	0	0	28	23	9	60
18	18	ssrvn	6A+	13	16	0	29	0	5	2	7	1	10	5	16	0	2	0	2	0	0	0	0	0	7	3	10	14	40	10	64
19	19	BBMB	6 Rose	1	8	1	10	0	0	0	0	4	0	2	6	0	0	0	0	1	0	0	1	0	0	0	0	6	8	3	17
20	20	BBMB	6 Rose	14	25	24	63	0	3	2	5	0	5	0	5	0	0	0	0	7	0	0	7	4	2	1	7	25	35	27	87
21	21	BBMB	6 Lotus	17	11	2	30	1	0	0	1	7	5	4	16	1	0	0	1	0	0	0	0	4	4	0	8	30	20	6	56
22	22	BBMB	6 Lotus	4	12	1	17	0	0	0	0	1	6	4	11	0	0	0	0	5	0	0	5	0	0	0	0	10	18	5	33
23	23	BBMB	6 lily	10	3	3	16	0	0	0	0	2	0	0	2	0	1	0	1	0	0	0	0	1	0	0	1	13	4	3	20
24	24	BBMB	6 lily	23	9	6	38	4	0	1	5	6	0	1	7	0	0	2	2	4	3	0	7	1	0	0	1	38	12	10	60
25	25	BBMB	6 lily	6	24	57	87	1	0	3	4	13	1	29	43	0	0	2	2	4	0	0	4	3	0	9	12	27	25	100	152
26	26	St.Soldier	6A	5	3	24	32	0	0	0	0	6	0	24	30	0	0	0	0	0	0	0	0	0	0	0	0	11	3	48	62
27	27	St.Soldier	6A	8	0	16	24	2	2	2	6	4	2	4	10	0	0	0	0	1	1	5	7	1	0	1	2	16	5	28	49
28	28	St.Soldier	6B	1	0	4	5	0	0	0	0	2	1	4	7	0	0	0	0	0	0	0	0	0	0	0	0	3	1	8	12
29	29	St.Soldier	6C	1	1	2	4	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	2	2	4	8
30	30	St.Soldier	6C	5	19	4	28	0	3	0	3	0	6	4	10	2	1	0	3	0	2	3	5	0	1	3	4	7	32	14	53
31	31	St.Soldier	6C	7	7	10	24	2	5	0	7	9	2	2	13	0	0	0	0	0	4	1	5	0	0	0	0	18	18	13	49
32	32	St.Soldier	6D	8	2	3	13	0	0	3	3	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	8	2	11	21
33	33	SSRVM	6A	4	5	0	9	2	1	0	3	6	0	0	6	2	0	0	2	4	5	2	11	0	0	0	0	18	11	2	31
34	34	SSRVM	6A	2	10	1	13	3	0	2	5	1	1	0	2	0	0	2	2	4	0	0	4	0	0	1	1	10	11	6	27
35	35	SSRVM	6A+	0	3	8	11	1	2	1	4	0	2	1	3	2	0	2	4	0	0	1	1	0	0	0	0	3	7	13	23
36	36	SSRVM	6A+	9	8	10	27	1	1	0	2	0	0	0	0	1	0	0	1	3	2	1	6	0	2	0	2	14	13	11	38
37	37	BBMB	6 Rose	3	3	12	18	2	0	6	8	8	10	18	36	0	1	0	1	0	1	4	5	1	0	3	4	14	15	43	72
38	38	BBMB	6 Rose	5	4	2	11	1	0	0	1	1	2	4	7	1	0	0	1	1	3	0	4	0	0	0	0	9	9	6	24
39	39	BBMB	6 Rose	7	22	18	47	2	0	1	3	1	1	1	3	0	0	0	0	1	0	0	1	1	3	5	9	12	26	25	63
40	40	BBMB	6 Lotus	1	3	3	7	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	2	2	1	3	9	13
41	41	BBMB	6 Lotus	7	22	3	32	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	4	16	22	3	41
42	42	BBMB	6 lily	2	5	2	9	0	0	6	6	5	8	4	17	0	0	0	0	4	0	3	7	3	6	2	11	14	19	17	50
			Total	367	329	373	1069	60	49	46	155	121	136	168	425	15	9	16	40	49	31	38	118	48	44	59	151	659	598	701	1958
			mean	8.7381	7.8333	8.881	25.452	1.4286	1.1667	1.0952	3.69048	2.881	3.2381	4	10.119	0.3571	0.2142857	0.38095	0.95238	1.16667	0.7381	0.904762	2.80952	1.14286	1.04762	1.40476	3.59524	15.6905	14.238	16.69	46.619
			SD	7.5419	6.6476	11.381	16.893	1.8498	1.9496	1.7643	3.25717	3.0779	4.0714	6.7027	10.358	0.6922	0.5196488	0.79487	1.08093	1.77951	1.30775	1.393531	2.84766	1.77477	1.79365	2.25301	3.98203	9.24065	10.048	18.672	26.7289

**Appendix -15**

**30 Instructional Plans**

# MULTI-SENSORY INSTRUCTIONAL PLAN-1

Name of the Teacher -  
 Subject- English  
 Topic-Turning Point

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'a'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The Turning Point”
- ✓ Flash cards showing the difficult words and the letter 'a' and words start with the letter 'a'
- ✓ Picture of A. P. J. Abdul Kalam
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'a'

**Motivational Act-**


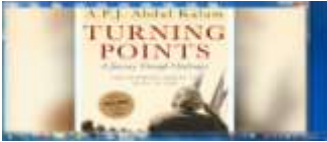


Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of former president of India Dr. A. P. J. Abdul Kalam and they can recognize him.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**




Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	1. The teacher will play an audio clip of Dr. A. P. J. Abdul Kalam and ask the students to identify the voice. Students will listen and tell that this voice is of Dr. A. P. J. Abdul Kalam. <b>(Auditory)</b> 2. Then the teacher will show a picture of Dr. A. P. J. Abdul Kalam to the students and ask to tell something about him. Students will try to answer that he was the President of our country. <b>(Visual)</b>	Teacher will ask the students to answer the following questions- <b>1. What is the full name of Dr. Abdul Kalam?</b> (a) Avul Jakir Jalaluddin

	 <p>3. Teacher will further refine their answer that Dr. Avul Pakir Jainulabdeen Abdul Kalam was the eleventh president of India and a famous scientist. He was born on 15<sup>th</sup> October 1931 in Rameswaram, Tamilnadu and today we are going to read a passage from the lesson “The Turning Point” an edited extract from “<b>My Teacher</b>” written by him. <b>(Auditory)</b> Well Students! Today we shall learn about the turning point of the life of Dr. A. P. J. Abdul Kalam.</p>	<p>Kalam (b) Avul Pakir Jainulabdeen Abdul Kalam (c) Abdul Sakir Jainulabdeen Kalam (d) None of the above</p> <p>2. When was Dr. A.P.J. Abdul Kalam born? (a) 15 October 1931 (b) 2 September 1929 (c) 15 August 1923 (d) 29 February 1936</p>
<b>Teaching Points</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>
<p>2. I remember my teacher ..... there were twenty of them.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <a href="https://youtu.be/MuOk-w0_T8I">https://youtu.be/MuOk-w0_T8I</a> <b>(Visual)</b></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter ‘a’. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p>
<p>Exposition of difficult words- Vision, Lift, Drag</p>	<p><b>Vocabulary Development</b> <b>Read it, build it, write it Exercise -</b></p>  <p>In this activity, students are given some plastic</p>	



<p>Silent Reading by the students</p> <p>Explanation by the teacher</p>	<p>letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (Vision, Lift, Drag) already written. <b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.</p> <p>With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box.<b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that vision is the ability to imagine how a country, society, industry, person etc. could develop in the future and to plan for this. E.g. He was a man of great vision and lift is to rise to a higher position or level. E.g. Tom can lift heavy weights. Drag is to pull (someone or something) along forcefully, roughly, or with difficulty. For example- We dragged the boat up the beach.<b>(Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The teacher will ask the students to read out the passage silently.</p> <p>Teacher will explain that sometimes an event may bring an important change in the life of a person, a group, or a country. Such an event acts as a turning point. In this lesson the turning point of Dr. A.P.J. Abdul Kalam is described. When he was in class 5, one day his teacher was teaching about a bird’s flight. But the students were unable to understand the concept. The teacher did not get upset by the responses of students and took them all to the seashore that evening. He drew their attention to the seagulls flying in formation, there were about twenty of them.<b>(Auditory)</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. What was the name of Dr Kalam’s teacher? In which class did he teach Dr Kalam?</li> <li>2. What was the teacher concerned about?</li> <li>3. Are you allowed to ask questions in class? How does asking questions help you?</li> </ol>
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### Phonological awareness and phonics

letter 'a'	<p>a ant axe arm</p>  <p>The teacher will show the flash cards to the students that have written the letters 'a' and some words start with the letter 'a' (ant, axe, arm). <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'a'. For example-an, at, and. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/a/). They feel the colours moving to form the letter 'a'. <b>(Tactile)</b></p>  <p>The teacher will explain that the words ant, at, axe begin with the same sound i.e. /æ/. After that the students will be given worksheet and asked to colour the letter 'a' in the worksheet <b>(Kinesthetic)</b>.</p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"><li>1. Which name of a fruit starts with the letter 'a'?</li><li>2. Which words begin with the same sound- ant, bat, and axe?</li></ol>
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### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the first part of the story "Turning point". In this story he explained an incident happened during his school days. It was a turning point of his life. Now answer the following questions-

1. Who is known as Missile Man of India?
2. Kalam writes, 'He was a very good teacher and all of us loved to attend his class. Why do you think the children felt so?'
3. How did the teacher explain a bird's flight to the students in the class?
4. Why did the teacher take the whole class to the seashore?

### Home Work

1. Write the name of ten persons starts with the letter 'a'.
  2. Write the name of five things in your home starts with the letter 'a'.
  3. Fill in the blanks by using suitable words given in bracket.  
(Vision, good, five, loved, teacher, eleventh)
- Dr. APJ Abdul Kalam was the-----President of India. Shri Siva Subramania Iyer was the----- of Dr. Kalam in class----- . It was he who sowed the seeds of a -----in his life. He was a -----teacher. All students-----to attend his class.

## MULTI-SENSORY INSTRUCTIONAL PLAN-2

Name of the Teacher -  
 Subject- English  
 Topic-Turning Point -2

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'b'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The Turning Point”
- ✓ Flash cards showing the difficult words and the letter ' b ’
- ✓ Ball and bat
- ✓ Picture of seashore
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labelled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter ‘b’

**Motivational Act-**

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of birds and they can recognize him. The students familiar with the alphabets

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency & Vocabulary Development

Teaching Point	Teaching Learning Activities	Evaluation
1.Introduction	<p>1. The Teacher will play an audio clip of birds chirping and ask the students to identify the voice. Students will listen and tell that this voice is of birds.</p> <p style="text-align: right;"><b>(Auditory)</b></p> <p>2. Then the teacher will show a picture of seashore to the students and ask to tell something about him. Students will try to answer that it was a picture of seashore.</p> <p style="text-align: right;"><b>(Visual)</b></p> <p>3. Teachers will further refine their answer and say that today we are going to read the second passage from the lesson “The Turning Point” an edited extract from “My Teacher” written by him.</p> <p style="text-align: right;"><b>(Auditory)</b></p>	<p>Teacher will ask the students to answer the following questions:-</p> <p>i. What is the meaning of “Seashore”?</p> <p>ii. Do you visit the seashore?</p>

It was a marvelous formation.....  
.....  
.....  
thought to mystery.



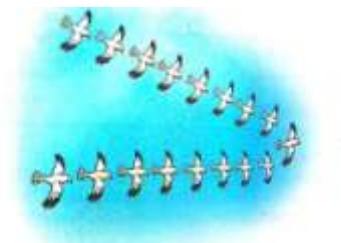
Teacher will show a video to the students and ask them to watch it carefully.

( Visual)

<https://youtu.be/R8kjRjGfcZY>



Teacher will ask students to share their observations in oral form.



He wanted us to understand the principles of flight. So he said that he would take all of us to the seashore. That evening, the whole class was on the beach. He drew our attention to the seagulls flying in formation; there were about twenty of them.

It was a marvelous formation of birds with a purpose, and we were all amazed as we began to recall what we had heard that morning. The teacher then asked us to look at the birds' wings, how they flapped to generate lift. He asked us to look at the tail and the combination of flapping wings and twisting tail. We looked closely and found that the birds in that position could fly in the direction they wanted to. Then he asked us a question, "Can you tell me where the bird's engine is and how it is powered?"

We knew the answer to that question. All the aspects of the principles of flight became clear to us within the next fifteen minutes. We understood clearly the dynamics of a bird's flight with the practical example of it in front of our eyes. Our teacher was the greatest. He had given us a lesson in theory as well as in practice. This is real teaching and learning.

Loud reading

Now teacher will read this passage (**Auditory**) and ask the students to underline difficult words and circle the words with letter 'b'. (**Kinesthetic**)

**Vocabulary development:-**

**"Clay and Play"**

In this activity, teacher will divide the students into two teams:-

Team A & Team B. Now both teams will be provided with clay.

Now a member of team A will come and make a word with clay. (**kinesthetic**) Now a member of team B will come and he/she will be blind folded. He will touch the word & has to identify it. (**Tactile**)

After identifying he has to express that word to team B only through body gestures. (**Kinesthetic**)The

Teacher will ask the students to answer the following questions:-

- i). How A.P.J. Abdul Kalam and other students came to know the principle of bird's flight?
- iii). How birds come to the position of flight?

<p>Paired Reading</p> <p>Exposition of difficult words- Marvellous, dynamics Explanation</p>	<p>members of the team B has to identify the word by seeing expressions (<b>Visuals</b>) and if they guess the right word and make a sentence by using that word then the team will get marks. <b>Auditory</b>)</p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed.</p> <p>Teacher will explain that, that was a marvelous formation of birds with purpose and they were all surprised that morning. Then teacher asked them to look at bird's wings, how birds flapped their wings to generate flight. Teacher asked them to look at the tails of birds and combination of flapping wings and twisted tail. They looked so closely and found that in this position the birds could fly easily. Then the teacher asked them a question," Can you tell me where the bird's engine is and how it is powered?"They knew the answer because they understand the principles of flight, because they understood clearly the dynamics of a bird's flight practically. The A.P.J. Abdul Kalam said that their teacher was greatest. He gave them a lesson in theory as well as in practice. A.P.J. Abdul Kalam said that this is the real teaching and learning to him. (<b>Auditory</b>)</p>	<p>Teacher will ask the following questions:-</p> <p>i). Why all students were surprised that morning?</p> <p>ii). How bird's generate their Flight?</p> <p>iii). How all students came to know The principle of bird's flight?</p>
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**Phonological awareness and phonics**

<p>letter 'b'</p>	<div> </div> <p>The teacher will show some objects to the students (bat, ball).(<b>Visual</b>)</p> <p>The teacher will ask the students to recognize the object and the first letter of these objects (b).</p> <p>The students will be asked to repeat the letter and words. The teacher calls out some words start with 'b'. For example-bag, box, big. The student repeats it. (<b>Auditory</b>) and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/b/).They feel the sand moving to form the letter 'b'. (<b>Tactile</b>)</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'b'?</li> <li>2. What is the first sound in these words i.e. bad, bed and bird?</li> </ol>
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After that the students will be given worksheet and asked to colour the letter 'b' in the worksheet (**Kinesthetic**).



The teacher will explain that some words have the same initial sound. For example the words box, bag and but have the same first sound i.e. /b/. Now teacher will say some more words starting with similar initial sound (**Auditory**) and ask students to repeat these words such as bear, bus, big, bike and identify the initial sound /b/ which is similar in these words (**Kinesthetic**).

At the end of the lesson, pupil teacher will say that today we have learnt about the first part of the story "Turning point". In this story he explained an incident happened during his school days. It was a turning point of his life. Now answer the following questions-

1. Who is known as Missile Man of India?
2. Kalam writes, 'He was a very good teacher and all of us loved to attend his classes'. Why do you think the children felt so?
3. How did the teacher explain a bird's flight to the students in the class?
4. Why did the teacher take the whole class to the seashore

#### **Homework**

1. Write the name of ten persons starts with the letter 'b'.
2. Write the name of five things in your home starts with the letter 'b'.
3. Fill in the blanks by using suitable words given in bracket.  
(Vision, good, five, loved, teacher, eleventh)

Dr. APJ Abdul Kalam was the-----President of India. Shri Siva Subramania Iyer was the----- of Dr. Kalam in class----- . It was he who sowed the seeds of a -----in his life. He was a -----teacher. All students-----to attend his class.

## MULTI-SENSORY INSTRUCTIONAL PLAN-3

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic-Turning Point -3

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'c'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The Turning Point”
- ✓ Flash cards showing the difficult words and the letter 'c' and words start with the letter 'c'
- ✓ Picture of 'The turning point'
- ✓ Objects starts with the letter 'c'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labelled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'c'


**Motivational Act-**




Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the second part of 'The turning point'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**



<b>Text Comprehension, Fluency and Vocabulary Development</b>		
<b>Teaching Point</b>	<b>Teaching Learning Activities</b>	<b>Evaluation</b>
1.Introduction	<p>1. The teacher will show a picture of the lesson of 'The turning point' and ask students to tell something about it. <b>(Visual)</b></p> <div style="text-align: center;">  </div> <p>The teacher will play an audio clip of the third part of 'The turning point'. <b>(Auditory)</b></p> <p>Well Students! Today we shall learn about the 'The turning point'.</p>	<p>Teacher will ask the students to answer the following questions:-</p> <p>1. Why did the teacher take the whole class to the seashore?</p> <p>3. Which topic was the teacher teaching?</p> <p>2 How all students came to know the principle of bird's flight?</p>

Teaching Point	Teaching Learning Activities	Evaluation
<p>For me, this incident..... ..... my mission of life.</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b>  <a href="https://youtube/ Amnys0PfMhM">https://youtube/ Amnys0PfMhM</a></p>  <p><b>(Auditory)</b></p> 	<p>Teacher will ask students to share their observations in oral form.  Teacher will ask the students to answer the following questions:-  1. Who inspired A.P.J. Abdul Kalam for studying science of Flight?  2. A.P.J. Abdul Kalam asked whom for the advice?</p>
<p>Loud reading</p>	<p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b>  Teachers will ask the students to underline difficult words and circle the words with letter 'c'. <b>(Kinesthetic)</b></p>	
<p>Multiple meaning words</p>	<p><b>Vocabulary development</b>  Teacher will show flash cards showing multiple meaning of the word 'fly' to the students and explain that some words are more than one meaning and they are called multiple meaning words. For example the word 'fly' means</p> <ol style="list-style-type: none"> <li>1. A black insect with two wings  Eg. There is a <b>fly</b> buzzing around the room.</li> <li>2. To move through the air with the help of wings  Eg. She wants to become a pilot so she can <b>fly</b> airplane.</li> </ol>  <p>Teacher will explain the concept by giving other example <b>i.e.</b>  <b>arm</b>  I have an ant bite on my <b>arm</b>.  It's important to <b>arm</b> yourself with a solid education.  Bark  The tree <b>bark</b> is rough to the touch  I hope her dog doesn't <b>bark</b> when I knock on the door.</p>	



<p>Paired Reading</p>	<p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed. <b>(Auditory)</b></p>	
<p>Explanation</p>	<p>Teacher will explain that, A.P.J. Abdul Kalam said that this incident was not only an understanding for him A.P.J. Abdul Kalam decided that he wanted to study all he could about the concept of flight, But he was not aware at that time that he would move towards the study of the science of flying. It was his teacher and that bird's flight that inspired him to move towards his goal. After the class Abdul Kalam asked Mr. Iyer for advice. He told him about his interest in further studying the science of flight. His teacher patiently explained that he should complete class 8, go to high school and then college and he should take up sciences for studying. That lesson and that advice really gave A.P.J. Abdul Kalam's life a mission <b>(Auditory)</b></p>	<p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. How A.P.J. Abdul Kalam developed his interest towards science of flight?</li> <li>2. What is the mission of Abdul Kalam's life?</li> </ol>

**Phonological awareness and phonics**

<p>letter 'c'</p>	<p>c carrot cup car</p>  <p>The teacher will show the flash cards to the students that have written the letters 'c' and some words start with the letter 'c' (carrot, cup, car). The teacher will also show the some objects starts with the letter 'c'. <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the and words. The teacher out some words start with For example-cut, come, The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/c/). They feel the sand moving to form the letter 'c'. <b>(Tactile)</b></p>  <p>The teacher will explain that some words end with the same sound. For example the words disc, epic, tic end with the same sound i.e. /k/.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'c'?</li> <li>2. What is the first sound in cat, can and cap?</li> <li>3. What is the last sound in tic, epic, disc?</li> </ol>
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	After that the students will be given worksheet and asked to colour the letter 'c' in the worksheet <b>(Kinesthetic).</b>	
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#### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the third part of story "Turning Point". In this story he explained an incident happened during his school days. It was a turning point of his life. Now answer the following question:-

- i. How Abdul Kalam developed his interest in science of flight?
- ii. Abdul Kalam asked whom for advice?
- iii. What was the mission of A.P.J. Abdul Kalam's life?

#### **Homework**

1. Write the name of ten persons starts with the letter 'c'.
2. Write the name of five things in your home starts with the letter 'c'.
3. Write the multiple meaning of the following words and make sentences-  
Park, left, train.

## MULTI-SENSORY INSTRUCTIONAL PLAN-4

Name of the Teacher -  
 Subject- English  
 Topic-Turning Point-4

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'd'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "The Turning Point-4"
- ✓ Flash cards showing the difficult words and the letter 'd' and words start with the letter 'd'
- ✓ Picture of A. P. J. Abdul Kalam
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"
- ✓ Worksheet of letter 'd'

**Motivational Act-**


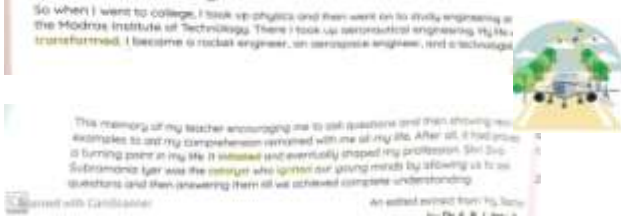

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.


**Assumed Previous Knowledge-**


The students might have some knowledge of the third part of 'The turning point'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching Point	Teaching Learning Activities	Evaluation
1.Introduction      So when I went to collage..... ..... Achieved complete	1. The teacher will show a picture of the lesson 'The turning point' to the students and ask to tell something about him. <b>(Visual)</b>  The teacher will play an audio clip of the fourth part of 'The turning point'. <b>(Auditory)</b>  Well Students! Today we shall learn about the 'The turning point-4'.  Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b> <a href="https://youtu.be/YBJGP9VcSpk">https://youtu.be/YBJGP9VcSpk</a>	Teacher will ask the students to answer the following questions:-  1. Who inspired A.P.J. Abdul Kalam for studying science of Flight? 2. A.P.J. Abdul Kalam asked whom for the advice?  3. What was the

<p>understanding.</p> <p>Exposition of difficult words- initiated, catalysis, ignited</p>	<p>Teacher will ask students to share their observations in oral form. Now teacher will read this passage.</p> <p><b>(Auditory)</b></p>   <p>Teachers will ask the students to underline difficult words and circle the words with letter 'd'.</p> <p><b>(Kinesthetic)</b></p> <p><b>Vocabulary Development</b> <b>Read it, build it, write it Exercise -</b></p>  <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled "Read It", "Build It", and "Write It". On "Read it" box some difficult words (initiated, catalysis, ignited) already written.</p> <p><b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the "Read It" box. <b>(Auditory)</b>.</p> <p>With the teacher's help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the "Build It" box. Once they have successfully built the word, the student writes it in the "Write It" box. <b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that the meaning of the word initiated is started. The meaning of the word catalyst is someone or something that causes a change. <b>Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words. <b>(Kinesthetic)</b></p>	<p>mission of A.P.J. Abdul Kalam's life?</p> <p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. What is the name of the collage from where A.P.J. Abdul Kalam completed his graduation?</li> <li>2. What was the A.P.J. Abdul Kalam's teacher's name?</li> </ol>
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<p>Paired reading</p>	<p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed.</p>	
<p>Explanation</p>	<p>Teacher will explain that when A.P.J. Abdul Kalam went to college, he took physics and went on to study engineering at the Madras Institute of Technology.</p>  <p>There he took up aeronautical engineering. His life was transformed He became a rocket engineer, an aerospace engineer and a technologist. This memory of his teacher encouraged him to ask questions and it had proved a turning point in his life. It initiated and eventually shaped A.P.J. Abdul Kalam's profession. Shri Siva Subramanian Iyer was the one who initiated Abdul Kalam's and other students mind by allowing them to ask questions and they completely understand the concept.</p> <p style="text-align: right;"><b>(Auditory)</b></p>	<p>Teacher will ask the following questions:-</p> <ol style="list-style-type: none"> <li>1. What is the name of institute from where Abdul Kalam had completed his college?</li> <li>2. Who became the technologist?</li> <li>3. Who encouraged Abdul Kalam to ask questions?</li> <li>4. What was the name of the teacher who inspired Abdul Kalam?</li> </ol>

<b>Phonological awareness / phonics</b>		
<p>letter 'd'</p>	<p><b>d dog duck dice</b></p>  <p>The teacher will show the flash cards to the students that have written the letters 'd' and some words start with the letter 'd' (dog, duck, dice).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'd'. For example-doll, dam, dug. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rice, while verbalizing the letter name and sound (/d/).They feel the rice moving to form the letter'd'. <b>(Tactile)</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter'd'?</li> <li>2. What is the first sound in doll, deer?</li> <li>3. What is the middle sound in madam, hydro, medal?</li> </ol>



After that the students will be given worksheet and asked to colour the letter 'd' in the worksheet  
**(Kinesthetic).**



Teacher will explain that some words have same middle sound. For example the words badly, audio, aider have same middle sound i.e. /d/.

Now teacher will say some more words having same middle sound and ask students to repeat these words and identify the middle sound in these words such as under, badly godly.

#### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the fourth part of story "Turning Point". In this story he explained an incident happened during his school days. It was a turning point of his life. Now answer the following question:-

- i. Who became a rocket engineer, technologist?
- ii. Who encouraged Abdul Kalam to ask questions?
- iii. What was the name of teacher who inspired Abdul Kalam?
- iv. Write the Abdul Kalam's college's name?

#### **Homework**

1. Write the name of ten persons starts with the letter 'd'.
2. Write the name of five things in your home starts with the letter 'd'.
3. Write the brief note on character sketch of Siva Subramanian Iyer and A.P.J. Abdul Kalam.

## MULTI-SENSORY INSTRUCTIONAL PLAN-5

Name of the Teacher -  
 Subject- English  
 Topic-Dinner by Moonlight-1

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioural Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'e'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

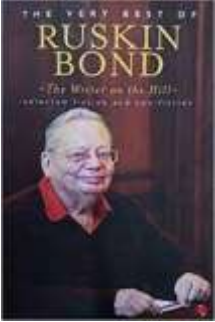

- ✓ Animated Video showing the story “Dinner by Moonlight”
- ✓ Flash cards showing the difficult words, the letter ' e', words start with the letter 'e'
- ✓ Picture of Ruskin Bond
- ✓ Worksheet of letter 'e'

**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-** The students might have some knowledge of Ruskin bond. The students are familiar with the alphabet 'e'.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency &amp; Vocabulary Development</b>		
<b>Teaching Point</b>	<b>Teaching Learning Activities</b>	<b>Evaluation</b>
1.Introduction	<p>The teacher will show a picture of Ruskin Bond to the students and ask to tell something about him. Students will try to answer that he is the writer of the book 'Rusty and the Magic Mountain'. <b>(Visual)</b></p> <div style="display: flex; justify-content: center; align-items: center; gap: 20px;">   </div> <p>Teachers will further refine their answer that Ruskin Bond was born on 19 May 1934, He has written over 500 short stories, essays and novels and more than 50 books for children. He received the Sahitya Academy Award in 1992.</p>	<p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. Who is the author of the book 'Rusty and the Magic Mountain'?</li> <li>2. When was he awarded the Padma Shree Award?</li> </ol>

	<p>He was awarded the Padma Shree in 1999 and Padma Bhushan in 2014. and today we are going to read a passage from the lesson “Dinner by Moonlight” an edited extract from “Rusty and Magic Mountain” written by Rusting Bond.  <b>(Auditory)</b></p> <p>3. The teacher will play an audio recording of passage -1 of ‘Dinner by Moonlight’.  <b>(Auditory)</b></p> <p>Well students! Today we are going to know about Dinner by Moonlight.</p>	
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Teaching Point	Teaching Learning Activities	Evaluation
<p>Three.....  .....fire to his beard.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully.  <b>(Visual)</b>  <a href="https://youtu.be/Xb25AJmfy8o">https://youtu.be/Xb25AJmfy8o</a></p>  <p>Now Teacher will read the passage <b>(Auditory)</b> and ask the students to underline difficult words and circle the words with letter ‘e’.  <b>(Kinesthetic)</b></p> 	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. Tell the names of three friends?</li> <li>2. Where were the three of them travelling?</li> </ol>
<p>Exposition of difficult words –</p> <ol style="list-style-type: none"> <li>1. Demonic-A demon.</li> <li>2. Countenance-Face expression</li> <li>3. Flickering-Shine</li> </ol>	<p><b>Vocabulary Development</b>  <b>“Clay and Play”</b></p> <p>Teacher will divide the students into two teams i.e. Team A and Team B. The clay will be provided to all the participants. Now the member of team A will come and write a word with clay from the words i.e. demonic, countenance, Flickering.</p> <p>The teacher will explain the meaning of these words to the students. Now a member of team B will come and he/she will be blind folded. He will touch the words and has to identify it. <b>(Tactile)</b>. After identifying the word, he has to express the word to team B only through the body gestures <b>(Kinesthetic)</b>. Members of team B has to identify word by seeing expressions and guess right word. Now if they make a sentence by using that word, then the team will</p>	



<p>Repeated Reading</p>	<p>get marks. <b>(Visual &amp; Auditory)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p>	
<p>Explanation</p>	<p>Rusty, Pitamber and Popat were three friends who were trekking to witch mountain, a peak in the kumaon hills close to Chakrata .They were spending the night at the forest rest house being attendant by the caretaker, Kaalee Topee or black hat. Kaalee Topee was a one eyed man and he lit a bonfire that night. The bonfire was made by fallen oak leaves, pine cones and branches that had fallen during heavy winter snow making a crackling fire, the flames casted an orange glow on the face of the boys. Black Hat’s scary appearance was given an even more devil like trace on his face due to the fire that was unsteadily burning. Black hat wanted to keep the fire going eagerly and in doing so, he almost set his beard on fire.</p> <p style="text-align: center;"><b>(Auditory)</b></p>	

Teacher will ask the following questions:-

1. Where did they stay during night?
2. What was the name of the caretaker?
3. Who set up the wonderful Bonfire that night?
4. On Whom face the orange flash Of light was falling?

<b>Phonological awareness / phonics</b>		
<p>letter ‘e’</p>	<div style="text-align: center;">  </div> <p>The teacher will show the flash cards to the students that have written the letters ‘e’ and some words start with the letter ‘e’ (eye, ear, eraser).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with ‘e’. For example-egg, end, easy. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/e/).They feel the colours moving to form the letter ‘e’. <b>(Tactile)</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter ‘e’?</li> <li>2. What is the first sound in the words eat and ear?</li> <li>3. What word does these sounds make-/e//n//d/?</li> </ol>



Teacher will explain that words made up of small sounds and we can blend sounds to make words. For example the sounds /e/ /n//d/ makes the word end.

After that the students will be given worksheet and asked to colour the letter 'e' in the worksheet (**Kinesthetic**).



#### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the first part of story "Dinner by Moonlight". In this story three friends were camping at a peak of mountain. Now answer the following question:-

1. Who is the writer of "Dinner by Moonlight"?
2. Who was known as Black Hat?
- 3 What was the bonfire made up of?
4. Where were they trekking?

#### **Homework**

1. Write the name of ten persons starts with the letter 'e'.
2. Write the name of five things in your home starts with the letter 'e'.
3. Write the importance of forests?
4. Fill in the blanks by using suitable words given in bracket.

(pine, oak, fire. winter)

Fallen .....leaves, pine....., and branches that had fallen during the heavy .....snow- all combined to make a crackling.....

## MULTI-SENSORY INSTRUCTIONAL PLAN-6

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic-Dinner by Moonlight-2

Duration-40 Minutes

**Behavioural Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'f'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**


- ✓ Animated Video showing the story "Dinner by Moonlight"
- ✓ Flash cards showing the difficult words and the letter 'f' and words start with the letter 'f'
- ✓ Picture of tiger and forest
- ✓ Worksheet of letter 'f'



**Motivational Act-**

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-** The students might have some knowledge of forests and wild animals and they can recognize tigers easily. The students familiar with the alphabets



**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency & Vocabulary Development		
Teaching Point	Teaching Learning Activities	Evaluation
1.Introduction	<p>1. The Teacher will play an audio clip of sound of roaring of tiger and ask the students to identify the voice. Students will listen and tell that this voice is of Tiger's roaring. <b>(Auditory)</b></p> <p>2. Then the teacher will show a picture of Tiger and forests to the students and ask to tell something about tigers and forests. Students will try to answer that tigers are "King of Forests". <b>(Visual)</b></p>  <p>3. Teachers will further refine their answer that tigers are king of forests and they eat other animals and today we are going to read a passage from the lesson "Dinner by Moonlight" an edited extract from "Rusty and Magic Mountain" written by Rusting Bond. <b>(Auditory)</b> Well students! Today we are going to know about Dinner by</p>	<p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1.What is the meaning of Dinner by moonlight?</li> <li>2. Do you know the importance of tigers in Forests?</li> <li>3. Who are known as king of Forests?</li> </ol>

<p>Why don't you remove ..... .....pitamber</p> <p>Loud Reading</p>	<p>Moonlight.</p> <p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b> <a href="https://youtu.be/qkgYBhApVh8">https://youtu.be/qkgYBhApVh8</a></p> <p>Now teacher will read this and then ask the students this passage one by one. <b>(Auditory)</b></p>  <p>passage to read</p>  <p>Teachers will ask the students to underline difficult words and circle the words with letter 'f'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally</p>
<p>Exposition of difficult words-</p> <ol style="list-style-type: none"> <li>1. Distinction- difference</li> <li>2. Loyalty- faithful</li> <li>3. Beneath- under</li> </ol>	<p><b>Vocabulary development:-</b> <b>“Clay and Play”</b></p> <p>Teacher will divide the students into two teams i.e. Team A and Team B. The clay will be provided to all the participants. Now the member of team A will come and write a word with clay from the words i.e. Distinction, Loyalty, beneath. The teacher will explain the meaning of these words to the students. Now a member of team B will come and he/she will be blind folded. He will touch the words and has to identify it. <b>(Tactile)</b>. After identifying the word, he has to express the word to team B only through the body gestures <b>(Kinesthetic)</b>. Members of team B has to identify word by seeing expressions and guess right word. Now if they make a sentence by using that word, then the team will get marks. <b>(Visual &amp; Auditory)</b></p>	<p>Teacher will ask the students to answer the following questions:-</p>
<p>Repeated Reading</p> <p>Explanation</p>	<p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.</p> <p>Rusty asks black hat to remove his hat. Black hat was not willing to remove the hat as he said it feel safe upon his head and he himself feel safe beneath it. Whatever the weather may be, rainy or snowy, outdoors or in bed the hat remains in his head. The boys clapped as they were impressed by black hat loyalty towards his hat. They also had to admit that it seemed to suit him adding uniqueness to looks which contained his scar and one eye. Popat asked his name black hat said that his name is kaalee Topee. He also says that he needs no further claim to fame because of his name. Rusty</p>	<ol style="list-style-type: none"> <li>1. What did Popat question black hat?</li> <li>2. What was black hat's name?</li> <li>3. What did rusty decide to call black hat?</li> <li>4. How long has kaalee Topee been</li> </ol>

	says that they would call his Topee for short and further ask that how long he has been wearing it. Kaalee Topee replies that he has been wearing that hat for 30 years about half of his life. Pitamber observed that hat and says that it has lasted well.	wearing hat? 5. What did Rusty ask black hat to do so with his hat?
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**Phonological awareness and phonics**

letter 'f'	<p align="center"><b>F fan fish foot</b></p>  <p>The teacher will show the flash cards to the students that have written the letters 'f' and some words start with the letter 'f' (fan, foot, fish). <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'f'. For example-fat, fall, full. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/f/). They feel the rangoli colours moving to form the letter 'f'. <b>(Tactile)</b></p>  <p>Teacher will explain that as you know the words made up of individual sounds and we can break a word into individual sounds. For example the word fan is made up of three sound i.e. /f/ /æ/ /n/ and the word fat is also made up of three sound i.e. /f/ /æ/ /t/.</p> <p>After that the students will be given worksheet and asked to colour the letter 'f' in the worksheet <b>(Kinesthetic)</b>.</p> <p align="center"><b>Ff</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'f'?</li> <li>2. What is the first sound in the words fat, fan and fall?</li> <li>3. What word does these sounds make- /f/ /æ/ /n/?</li> </ol>
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**Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the second part of story "Dinner by Moonlight". In this story three friends were camping at a peak of mountain. Now answer the following question:-

1. How long Black hat was wearing that hat?
2. Who asked Black hat that "Why don't you remove your hat"?
3. Who asked him "tell us how long you have been wearing it"?

### **Homework**

1. Write the name of ten persons starts with the letter 'f'.
2. Write the name of five things in your home starts with the letter 'f'.
3. Write down the summary of the passage?
4. Fill in the blanks by using suitable words given in bracket.

(admire, admit, scar, clapped)

The boys .....They had to.....their host's loyalty to his hat. And they had to ....., it seemed to suit him. Adding distinction to his .....and one eye.

# MULTI-SENSORY INSTRUCTIONAL PLAN-7

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic-Dinner by Moonlight-3

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'g'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Dinner by Moonlight"
- ✓ Flash cards showing the difficult words and the letter 'g' and words start with the letter 'g'
- ✓ Picture of Dinner by Moonlight
- ✓ Worksheet of letter 'g'



**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**



The students might have some knowledge of 'Dinner by moonlight'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency & Vocabulary Development		
Teaching Point	Teaching Learning Activities	Evaluation
<p>1.Introduction</p> <p>Made in London. It was..... What about you?</p> <p>Loud Reading</p>	<p>1. The teacher will show a picture of the lesson 'Dinner by moonlight' ask students to tell something about it. <b>(Visual)</b></p>  <p>The teacher will play an audio clip of the seventh passage of 'Dinner by moonlight'. <b>(Auditory)</b> Well Students! Today we shall learn about the "Dinner by moonlight".</p> <p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b></p> <p><a href="https://youtu.be/6pilPuI-K6g">https://youtu.be/6pilPuI-K6g</a></p> <p>The teacher will read this passage <b>(Auditory)</b> and ask the students to underline difficult words and circle the words with letter 'g'.</p> 	<p>1. Who was the boys 'host'?</p> <p>2.. Why did the boys feel their host was loyal to his hat?</p> <p>4. How long has kaalee Topee been wearing that hat?</p> <p>5. What did Rusty ask black hat to do so with his hat?</p> <p>Teacher will ask students to share their observations orally</p>

<p>Exposition of difficult words-</p> <ol style="list-style-type: none"> <li>1. Magistrate- Judge</li> <li>2. Assistant- A person who help somebody.</li> <li>3. Pounced- To attack some body</li> </ol> <p>Repeated Reading</p> <p>Explanation</p>	<p><b>(Kinesthetic)</b></p>  <p>Teachers will ask the students to underline difficult words and circle the words with letter 'g'.</p> <p><b>(Kinesthetic)</b></p> <p><b>Vocabulary development:-</b>  <b>“Clay and Play”</b></p> <p>Teacher will divide the students into two teams i.e. Team A and Team B. The clay will be provided to all the participants. Now the member of team A will come and write a word with clay from the words i.e. Magistrate, Assistant, Pounced. The teacher will explain the meaning of these words to the students. Now a member of team B will come and he/she will be blind folded. He will touch the words and has to identify it.(<b>Tactile</b>). After identifying the word, he has to express the word to team B only through the body gestures (<b>Kinesthetic</b>). Members of team B has to identify word by seeing expressions and guess right word. Now if they make a sentence by using that word, then the team will get marks. (<b>Visual &amp; Auditory</b>)</p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.</p> <p>Teacher will explain that Kalee Topee tells the boys that his hat has lasted well for a long time, because it was made in London. He tells that it was earlier worn by a British magistrate, when he was a young forest guard. The magistrate was killed and eaten by a tiger, but the hat was left behind. The boys asked Kalee Topee whether he was present there on the spot, when it happened. kalee Topee replied that yes he was there and it happened very quickly. The magistrate, his assistant and two forest guards, out of whom he was one were walking down to Hanol. Suddenly a tiger came out of the bushes, very fast and silently and jumped upon the magistrate and took him away. The boy asked what happened to kale Topee during that incident.</p>	<p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. Where was the Hat made in?</li> <li>2. Who was the real owner of the hat?</li> </ol> <p>Teacher will ask the following questions:-</p> <ol style="list-style-type: none"> <li>1. Who were going on foot in Forest?</li> <li>2. Who came very silently out of Bushes?</li> <li>3. Was Kalee Topee present at the site when the magistrate got killed</li> </ol>
<b>Phonological awareness / phonics</b>		
<p>letter 'g'</p>	 <p>The teacher will show the flash cards to the students that have written the letters 'g' and some words start with the letter 'g' (girl, glass, grapes).(Visual)</p>	



	<p>The teacher will ask the students to recognize the letter and the words written on the flash cards. The students will read the letter and words. The teacher calls out some words start with 'g'. For example-gun, great, god. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/g/).They feel the sand moving to form the letter 'g'. <b>(Tactile)</b></p>  <p>Teacher will explain that as you know the words made up of individual sounds and we can break a word into individual sounds. For example the word god is made up of three sounds i.e. /g/ /v/ /d/. After that the students will be given worksheet and asked to colour the letter 'g' in the worksheet <b>(Kinesthetic)</b>.</p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'g'?</li> <li>2. What is the first sound in the words gun, get, grow?</li> <li>3. How many sounds can you hear in the word run?</li> </ol>
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### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the third part of story "Dinner by Moonlight". In this story three friends were camping at a peak of mountain. Now answer the following question:-

1. Who was killed by tiger?
2. How did Kalee Topee get the magistrate's hat?
3. How did the tiger kill the officer?

### Homework

1. Write the name of ten persons starts with the letter 'g'.
2. Write the name of five things in your home starts with the letter 'g'.
3. Fill in the blanks by using suitable words given in bracket.  
(magistrate, hat, young, London)

Made in ..... It was worn by angrezi.....when I was a .....forest guard. He was killed by a tiger. The tiger ate him but left the .....

## MULTI-SENSORY INSTRUCTIONAL PLAN-8

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Dinner by Moonlight-4

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'h'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Dinner by Moonlight"
- ✓ Flash cards showing the difficult words and the letter 'h' and words start with the letter 'h'
- ✓ Picture of 'Tiger'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"
- ✓ Worksheet of letter 'h'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of 'Dinner by moonlight. The students are familiar with the alphabets.




**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the first part of 'The curious robot' ask to tell something about it.(Visual)</p>  <p>The teacher will play an audio clip of the eighth part of 'The dinner by moonlight'. (Auditory)</p> <p>Well Students! Today we shall learn about the 'The dinner by moonlight'.</p>	<p>Teacher will ask the students to answer the following question-</p> <ol style="list-style-type: none"> <li>1. Who was the real owner of the hat?</li> <li>2. Who were going on foot in Forest?</li> <li>3. Who came very silently out of Bushes?</li> <li>4. Was Kalee Topee present at the site when the magistrate got killed</li> </ol>
Teaching Points	Teaching-learning activities	Evaluation
Oh, I was up a----		

<p>-----of the tiger’s claws.</p> <p>Model reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully.  <b>(Visual)</b>  <a href="https://youtu.be/CVbqhINIEEU">https://youtu.be/CVbqhINIEEU</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one.  <b>(Auditory)</b></p> <p>Teacher will ask the students to underline difficult words and circle the words start with the letter ‘h’.<b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p>
<p>Exposition of difficult words-</p> <p>1. Scratch- To Rub.  2. Man-eater- Eat a human being.</p> <p>Repeated Reading</p> <p>Explanation by the teacher</p>	<p><b>Vocabulary Development</b>  <b>Read it, build it, write it Exercise -</b></p> <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (Scratch, Man-eater, Attacked) already written. <b>(Visual)</b> The teacher will ask the students to touch the plastic letters and identify the shape of different letters.  <b>(Tactile)</b></p>  <p>The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.  With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box.<b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that the meaning of scratch is to rub. E.g. The boy came in with a huge scratch on his face. The meaning of the word Man eater is Eat a human being. E.g. Everyone knows that Cynthia is a man-eater.  <b>(Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error – free.</p> <p>Kalee Topee says that he has hastily climbed up a tree but not before the tiger took out one of eyes with its claw. It happened when he was trying to rescue the Magistrate from the tiger. All of them present there had</p>	<p>Teacher will ask the students to answer the following questions-</p>

	<p>no guns and neither did they had to courage to chase an angry tiger with just a walking stick. They had no option but to wait until it was safe for them, after a while they want for help. The next day they found the magistrate dead body and nothing much was left of him. kalee Topee further tells that it was bound to happen as the tiger was a man-eater present in those parts of jungle. There were cubs to which they grew up to be man-eater in that forest. Rusty then asks that whether the magistrate still wearing the hat when he was dead. Kalee topee replies that no, it was lying near the bushes, where he had been attacked. He goes on to show a scratch on the hat made by one of the tiger's claw.</p>	<ol style="list-style-type: none"> <li>1. How did kaalee Topee rescue himself when the tiger came?</li> <li>2. How did kaalee Topee loose his one eye?</li> <li>3. What did they do after when the tiger took the officer away?</li> <li>4. Was the Magistrate still bearing the hat when dead?</li> <li>5. What did kaalee Topee show on the hat to the boys?</li> </ol>
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**Phonological awareness / phonics**

<p>letter 'h'</p>	<p><b>H</b> hat hen horse</p>  <p>The teacher will show the flash cards to the students that have written the letters 'h' and some words start with the letter 'h' (hat, hen, horse).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'h'. For example- hut, hall, hair. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rice, while verbalizing the letter name and sound (/h/).They feel the rice moving to form the letter 'h'. <b>(Tactile)</b></p>  <p>Teacher will explain that as you know the words made up of individual sounds and we can break a word into individual sounds. For example the word hen is made up of three sounds i.e. /h/ /e/ /n/. After that the students will be given worksheet and asked to colour the letter 'h' in the worksheet <b>(Kinesthetic)</b>.</p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'h'?</li> <li>2. What is the first sound of the words hat, hen, here?</li> <li>3. How many sounds do you hear in words men and ten?</li> <li>4. What sounds do you hear in hen?</li> </ol>
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### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the fourth part of the story "Dinner by moonlight". In this story three friends were camping at a peak of mountain. Now answer the following questions-

1. How did kaalee Topee rescue himself when the tiger came?
2. How did kaalee Topee lose his one eye?
3. Was the Magistrate still bearing the hat when dead?
4. What did kaalee Topee show on the hat to the boys?

### **Home Work**

1. Write the name of ten persons starts with the letter 'h'.
2. Write the name of five things in your home starts with the letter 'h'
3. Fill in the blanks by using suitable words given in bracket.

(scratch, bushes, attacked)

'No, it was lying near the..... where he had been .....Look, there's still a big ..... on it, made by one of the tiger's claws'.

## MULTI-SENSORY INSTRUCTIONAL PLAN-9

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Dinner by Moonlight-5

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'i'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Dinner by Moonlight"
- ✓ Flash cards showing the difficult words and the letter ' i ' and words start with the letter ' i '
- ✓ Picture of 'Dinner by Moonlight'
- ✓ Worksheet of letter ' i '


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the 'Dinner by moonlight. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the lesson 'Dinner by moonlight' ask to tell something about it. <b>(Visual)</b></p>  <p>The teacher will play an audio clip of the ninth part of 'Dinner by moonlight'. <b>(Auditory)</b> Well Students! Today we shall learn about the 'Dinner by</p>	<p>Teacher will ask the students to answer the following question-</p> <ol style="list-style-type: none"> <li>1. How did kaalee Topee rescue himself when the tiger came?</li> <li>2. How did kaalee Topee loose his one eye?</li> <li>3. What did they do after when the tiger took the officer away?</li> <li>4. Was the Magistrate still bearing the hat when dead?</li> <li>5. What did kaalee Topee</li> </ol>

	moonlight’.	show on the hat to the boys?
<b>Teaching Points</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>
The boys came closer----- -afraid of Black Hat.  Loud reading	Teacher will show a video to the students and ask them to watch it carefully.( <b>Visual</b> ) <a href="https://youtu.be/3URnc6hQDQA">https://youtu.be/3URnc6hQDQA</a>  Now Teacher will read the passage and ask some students to read aloud the passage one by one. ( <b>Auditory</b> )  Teacher will ask the students to underline difficult words and circle the words start with the letter ‘i’.( <b>Kinesthetic</b> )	Teacher will ask students to share their observations orally.  Teacher will ask the students to answer the following questions- 1. What were the boys eagerly examining? 2. What exactly did the boys found on the hat?
Exposition of difficult words- 1. Intention-Plan or purpose. 2. Dent- A thing which has been hit or damaged but not broken. 3. Tall story- A story i.e. very difficult to believe.	<b>Vocabulary Development</b> “Clay and Play” Teacher will divide the students into two teams i.e. Team A and Team B. The clay will be provided to all the participants. Now the member of team A will come and write a word with clay from the words i.e. Intension, Dent, Tall story. The teacher will explain the meaning of these words to the students. Now a member of team B will come and he/she will be blind folded. He will touch the words and has to identify it.( <b>Tactile</b> ). After identifying the word, he has to express the word to team B only through the body gestures ( <b>Kinesthetic</b> ). Members of team B has to identify word by seeing expressions and guess right word. Now if they make a sentence by using that word, then the team will get marks. ( <b>Visual &amp; Auditory</b> )	
Repeated Reading	The students will be asked to read the same passage over and over until their reading is smooth and error –free.	
Explanation by the teacher	The boys took a closer look at kaalee Topee’s hat. The latter had no intention of removing it from his head, so the boys had to stand around him to examine it. They saw a big hollow mark on one side of the hat which could have been made by any sharp object. The boys found black hats story hard to believe, but they ended up accepting it. Black hat was unique	Teacher will ask the students to answer the following questions- 1. Why did the boys accept the story about the hat at the end?

	and mysterious person, so any one could believe any strange said about him. While having their dinner, various hungry animals gathered around them in the dark but they didn't go close to them. The animals were afraid of the fire and the human especially the black hat.	2. What were the animals afraid of? 3. Who gathered around the boys when they were having their dinner?
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**Phonological awareness and phonics**

letter 'i'	<div> <p>iron igloo insect</p> </div> <div> </div> <div> <p>The teacher will show the flash cards to the students that have written the letters 'i' and some words start with the letter 'i' iron, igloo, insect).<b>(Visual)</b></p> </div> <div> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> </div> <div> <p>The students will read the letter and words. The teacher calls out some words start with 'i'. For example- ill, ice, idea. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/i/).They feel the sand moving to form the letter 'i'. <b>(Tactile)</b></p> </div> <div> </div> <div> <p>Teacher will explain that we can create a new word by adding a new phoneme to an existing word. For example when we add /k/ before the word <i>ill</i>, we get the new word i.e. <i>kill</i>.</p> </div> <div> <p>After that the students will be given worksheet and asked to colour the letter 'i' in the worksheet <b>(Kinesthetic)</b>.</p> </div> <div> </div>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'i'?</li> <li>2. What is the first sound in the words ice, ink, ill?</li> <li>3. What word do you get when you add /s/ before the word <i>ink</i>?</li> </ol>
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**Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the fifth part of the story "Dinner by moonlight". In this story three friends were camping at a peak of mountain. Now answer the following questions-

1. What were the boys eagerly examining?
2. What exactly did the boys found on the hat?
3. Why did the boys accept the story about the hat at the end?
4. What were the animals afraid of?
5. Who gathered around the boys when they were having their dinner?

**Home Work**

1. Write the name of ten persons starts with the letter 'i'.
2. Write the name of five things in your home starts with the letter 'i'.
3. Fill in the blanks by using suitable words given in bracket.  
(hat, examine, intention, boys)

The .....came closer to look at the ..... Its wearer had no .....of removing it, so they had to stand around him to..... it.



## MULTI-SENSORY INSTRUCTIONAL PLAN-10

Name of the Teacher -  
 Subject- English  
 Topic-Dinner by Moonlight- 6

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioural Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'j'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Dinner by Moonlight"
- ✓ Flash cards showing the difficult words and the letter 'j' and words start with the letter 'j'
- ✓ Picture of Dinner by Moonlight
- ✓ Worksheet of letter 'j'


**Motivational Act-**

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the 'Dinner by moonlight. The students are familiar with the alphabets



**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency &amp; Vocabulary Development</b>		
<b>Teaching Point</b>	<b>Teaching Learning Activities</b>	<b>Evaluation</b>
<p>1.Introduction</p> <p>Every now and then Black----- look for it?</p>	<p>1. The teacher will show a picture of the lesson 'Dinner by moonlight' ask to tell something about it. <b>(Visual)</b>                      The teacher will play an audio clip of the tenth part of 'Dinner by moonlight'. <b>(Auditory)</b></p> <p>Well Students! Today we shall learn about the 'Dinner by moonlight'.</p> <p>Teacher will show a video to the students and ask them to watch it carefully.</p> <p><b>(Visual)</b>  <a href="https://youtu.be/TzvKfRN2_1A">https://youtu.be/TzvKfRN2_1A</a></p> 	<p>Teacher will ask the students to answer the following questions:-</p> <p>What were the boys eagerly examining?</p> <p>2. What exactly did the boys found on the hat?</p> <p>3. Why did the boys accept the story about the hat at the end?</p> <p>4. What were the animals afraid of?</p> <p>5. Who gathered around the boys when they were having their dinner?</p>

<p>Loud reading</p>	 <p>Now teacher will read this passage and then ask the students to read this passage. <b>(Auditory)</b></p>  <p>Teachers will ask the students to underline difficult words and circle the words with letter 'j'. <b>(Kinesthetic)</b></p> <p><b>Vocabulary Development</b> <b>“Clay and Play”</b></p> <p>Teacher will divide the students into two teams i.e. Team A and Team B. The clay will be provided to all the participants. Now the member of team A will come and write a word with clay from the words i.e. tit bit, treasure, emerald.</p> <p>The teacher will explain the meaning of these words to the students. Now a member of team B will come and he/she will be blind folded. He will touch the words and has to identify it. <b>(Tactile)</b>. After identifying the word, he has to express the word to team B only through the body gestures <b>(Kinesthetic)</b>. Members of team B has to identify word by seeing expressions and guess right word. Now if they make a sentence by using that word, then the team will get marks. <b>(Visual &amp; Auditory)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. What did the black hat do for the animals?</li> <li>2. What was hyena provided by the black hat?</li> </ol>
<p>Exposition of difficult words</p> <ol style="list-style-type: none"> <li>1. Tit bit- a small but very nice piece of food.</li> <li>2. Treasure- Valuable object</li> <li>3. Emerald- Green precious stone.</li> </ol>	<p>Repeated reading</p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.</p>	

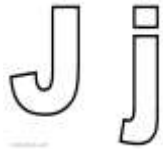
Explanation	<p>The black hat would now and then throw a chapatti or bone into the dark and dogs would fight over it. The jackals waited behind their turn. The hyena was given a meaty bone of mutton indicating its special relationship with black hat. It also waited patiently, laughing in between now and then, confident that some piece of food would definitely be provided by the humans. Once the meal was over the jackals would come after for the left over the food. The cat stayed out of the site. The black hat continued and entertained the boys with his tales of treasure, Witch craft and strange happenings on Witch Mountain. He tells that there is magic stone hidden up the mountain. He further tells that the stone is a rare jade an emerald bought from Tibetan china by an early traveller. If they manage to find it, they would have enough money to leave well for the rest of their life. Rusty and his friend hadn't come on a treasure hunt but they thought that they should give a chance to look for it.</p>	<p>Teacher will ask the following questions:-</p> <ol style="list-style-type: none"> <li>1. Which animal had special relation with the black hat?</li> <li>2. How did the black hat entertain the boys?</li> <li>3. What did black hat tell in detail about the stone?</li> </ol>
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**Phonological awareness / phonics**

letter 'j'	<p><b>J jug jam jelly</b></p>  <p>The teacher will show the flash cards to the students that have written the letters 'j' and some words start with the letter 'j' (jug, jam, jelly). <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'j'. For example- jet, jel, joy. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/j/). They feel the rangoli colours moving to form the letter 'j'. <b>(Tactile)</b></p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'j'?</li> <li>2. What is the first sound in the words jug, jet, joy?</li> <li>3. What word do you get when you add /j/ before the word <i>ink</i>?</li> </ol>
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Teacher will explain that we can create a new word by adding a new sound to an existing word. For example when we add /j/ before the word “am”, we get the new word “jam”.

After that the students will be given worksheet and asked to colour the letter ‘j’ in the worksheet (**Kinesthetic**).



### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the sixth part of story “Dinner by Moonlight”. In this story three friends were camping at a peak of mountain. Now answer the following question:-

1. What did the black hat do for the animals?
2. What was hyena provided by the black hat?
3. Which animal had special relation with the black hat?
4. How did the black hat entertain the boys?
5. What did black hat tell in detail about the stone?

### **Homework**

1. Write the name of ten persons starts with the letter ‘j’.
2. Write the name of five things in your home starts with the letter ‘j’.
3. Write down the summary of the passage?

# MULTI-SENSORY INSTRUCTIONAL PLAN-11

Name of the Teacher -  
 Subject- English  
 Topic- Conquering Mount Everest-1

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'k'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “Conquering Mount Everest”
- ✓ Flash cards showing the difficult words and the letter 'k' and words start with the letter 'k'
- ✓ Picture of Mount Everest
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'k'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of Mount Everest and they can recognize him. The students are familiar with the alphabets.


**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**


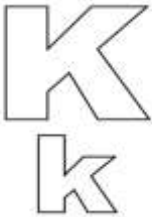
Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1. Introduction of the lesson	1. The teacher will show pictures of mountains and adventure sports and ask to tell something about them. Students will try to answer about mountains and adventure sports in their own way. <b>(Visual)</b>    Teacher will further refine their answer Mount Everest is the highest peak of the world and people who climb Mount Everest for the first time ever they were two people Edmund Hillary and other was	Teacher will ask the students to answer the following questions: - 1. What do you mean by adventure sports? 2. Name two adventure sports? 3. Who climb the Mount Everest for the first time?

	<p>Tenzin Nongay and in this lesson, we are going to study about Tenzing Norgay from the lesson conquering Mount Everest. <b>(Auditory)</b></p> <p>The teacher will play an audio clip of the first passage of ‘Conquering Mount Everest’. <b>(Auditory)</b></p> <p>Well Students! Today we shall learn about the ‘Conquering Mount Everest’</p>	
<b>Teaching Points</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>
<p>Aditya was excited.....Norgay’s picture.</p> <p>Model reading and choral reading</p>	<p>Teacher will show a video to students and ask to students and ask them to watch it carefully. <b>(Visual)</b></p> <p><a href="https://youtu.be/DCCe2wBEk38">https://youtu.be/DCCe2wBEk38</a></p>  <p>Now teacher will read the passage teacher will ask the students to underline difficult words and circle the word start with the letter ‘k’.</p> <p><b>(Kinesthetic)</b></p> <p>Teacher will read the passage and then ask the students to read aloud the passage in unison <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter ‘k’.</p> <p><b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally. <b>(Auditory)</b></p> <p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. Who got the project?</li> <li>2. Who are the Sherpas?</li> <li>3. Where is Mount Everest located?</li> </ol>

<p>Exposition of difficult words- Peak. research</p>	<p><b>Vocabulary development</b> <b>Read it, build it, write it Exercise -</b></p> 	
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<p>Repeated Reading</p>	<p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (peak, research) already written. <b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.</p> <p>With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box.<b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that peak is the pointed top of a mountain. E.g. The mountain peak loomed through the fog. Research is a systematic investigation. E.g. He has spent the last five years researching her people’s history. <b>Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.</p>	
<p>Explanation by the teacher</p>	<p>Teacher will explain that adventure sports are those in which there is thrill and risk in these sports like bungee jumping, rafting, rock climbing etc. the story begun as one of the boy Aditya and he get a project and he did his homework very excitedly and very eager to share his research with his classmates because he had collected very interesting things and he wanted to ask questions to his classmates.</p> <p>Now Aditya asked Selwyn that who was the first man to be photographed on Everest? Selwyn’s quick response was ‘Edmund Hillary (Auditory) so we all know that Edmund Hillary and Ten zing Norgay the first men to reach the Mount Everest. C Aditya told him “No, you lose one point because it was Ten zing Norgay who’s picture was taken for the first time on Mount Everest because Norgay didn’t know how to use the earner a on 29 may, 1953 at 11:30 Ten zing Norgay t Edmund reach the peak of Mount Everest.</p>	<p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. On which day they peak of Mount Everest?</li> <li>2. Who was the first man to be photographed?</li> <li>3. Who was Ten zing Norgay?</li> </ol>

Phonological awareness / phonics		
<p>letter ‘k’</p>	 <p>The teacher will show the flash cards to the students that have written the letters ‘k’ and some words start with the letter ‘k’ ( key, kite, kids).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p>	

	<p>The students will read the letter and words. The teacher calls out some words start with 'k'. For example-keep, king. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/k/).They feel the sand moving to form the letter 'k'. <b>(Tactile)</b></p>  <p>Teacher will explain that we can create a new word by deleting a sound from an existing word. For example when we delete /k/ sound of the word <i>kill</i>, we get the new word i.e. <i>ill</i>.</p> <p>After that the students will be given worksheet and asked to colour the letter 'k' in the worksheet <b>(Kinesthetic)</b>.</p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'k'?</li> <li>2. What is the first sound in the words <i>king, kite</i>?</li> <li>3. What word do we have if we say <i>kin</i> without the /k/ sound?</li> </ol>
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### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the story of student Aditya, who got the project on Mount Everest. In this story writer explained an story about mountaineers. Now answer the following questions: -

- 1.) Who get the project of Mount Everest?
- 2.) Who was the first man to be graphed on Mount Everest?
- 3.) On which day Ten zing Norgay and Edmund Hillary reach the peak of Mount Everest?

### Home Work

- 1.) Write the name of the persons start with letter 'k'?
- 2.) Write the names of the things in your home that start with 'k'?
- 3.) Who were the first men to reach the mount Everest?
- 4.) Who gets the project?



## MULTI-SENSORY INSTRUCTIONAL PLAN-12

Name of the Teacher -  
 Subject- English  
 Topic- Conquering Mount Everest -2

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'l'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “Conquering Mount Everest”
- ✓ Flash cards showing the difficult words and the letter 'l' and words start with the letter 'l'
- ✓ Picture of mountains
- ✓ Worksheet of letter 'l'


**Motivational Act-**




Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**


The students might have some Knowledge of Sherpas and mountaineers. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show pictures of some mountaineers and Sherpas and ask to tell something about them. Students will try to answer that sherpas are the one that guide and helpers to mountaineers.</p> <div style="text-align: center;">  </div> <p>Today we are going to read a passage from the lesson ‘Conquering Mount Everest’. In this lesson we will read about the people who climb the mount Everest for the first time ever, the one was Hilary and other was Ten zing Norgay.</p> <p>The teacher will play an audio clip of the second part of ‘Conquering Mount Everest’. <b>(Auditory)</b></p> <p>Well Students! Today we shall learn about the ‘Conquering Mount Everest’.</p>	<p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. Who were the first person who reach the top of Mount Everest?</li> <li>2. Who are the Sherpas?</li> </ol>

Teaching Points	Teaching-learning activities	Evaluation
<p>On 29 May ..... ..... Many years.</p> <p>Model reading and choral reading</p>	<p>Teacher will show a video to students and ask them to watch it carefully. <a href="https://youtu.be/KIU4R2KEw5I">https://youtu.be/KIU4R2KEw5I</a></p>  <p>Now teacher will read the passage and will ask the students to underline difficult words and circle the words start with the letter 'l'.</p> <p>Now Teacher will read the passage and ask students to read aloud the passage in unison. <b>(Auditory)</b></p>   <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'l'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally. <b>(Auditory)</b></p> <p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. Which is the highest Mountain peak in the word?</li> <li>2. What did Ten zing Norgay do?</li> </ol>

<b>Vocabulary Development</b>		
<p>Exposition of difficult words- Summit, Sherpa</p>	<p>The teacher will show the flash cards showing the picture of summit and Sherpa <b>(Visual)</b> and explain the meaning of the words that summit is the highest peak. E.g. They climbed up the mountain reached the summit. Sherpa is a member of a Himalayan people living on the borders of Nepal and Tibet, renowned for their skill in mountaineering. <b>(Auditory)</b> Now teacher will write some words in the black board i.e. pick, paek, peek. Peak and serpa, sharpa, sherpe, cerpa <b>(visual)</b> and ask student to identify the correct word for each picture and circle it <b>(kinesthetic)</b>.</p>	

<p>Repeated reading</p> <p>Explanation by the teacher</p>	 <p>The students will be asked to read the same passage over and over until their reading is smooth and error – free. (<b>Auditory</b>)</p> <p>Teacher will explain the story Hillary and Ten zing Norgay were the first one to reach the peak of the Mount Everest. Ten zing Norgay was born in 1914 is Debt Sherpas are the guide and the helpers to maintainers. The Sherpas who had need from Tibet to Nepal hundreds of years ago, have lived in mountains for many years.</p>	<p>Teacher will ask the students to answer the following questions:-</p> <ol style="list-style-type: none"> <li>1. Who was first Hillary or Tenzing?</li> <li>2. Why are Sherpas so good at climbing?</li> <li>3. Who are mountaineers?</li> </ol>
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Phonological awareness and phonics		
<p>letter 'l'</p>	 <p>The teacher will show the flash cards to the students that have written the letters 'l' and some words start with the letter 'l' (lion, lock, leaf).(<b>Visual</b>)</p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'l'. For example-log,luck. The student repeats it. (<b>Auditory</b>) and then uses their fingers to write the word on rice, while verbalizing the letter name and sound (/l/).They feel the rice moving to form the letter 'l'. (<b>Tactile</b>)</p>  <p>Teacher will explain that we can create a new word by deleting a sound from an existing word. For example when we delete /l/ sound of the word <i>lit</i> we get the new word i.e. <i>it</i>.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'l'?</li> <li>2. What is the first sound of the words of <i>lock, lady</i>?</li> <li>3. What words do we have if we say <i>late, lam</i> without the /l/ sound?</li> </ol>

	After that the students will be given worksheet and asked to colour the letter 'l' in the worksheet ( <b>Kinesthetic</b> ).	
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### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the story of two mountaineers named 'Conquering Mount Everest'. In this story the writer explained about the life of Ten zing Norgay. Now answer the following questions:-

- 1.) Who was the first man to be photographed on Everest?
- 2.) When Ten zing Norgay was born?
- 3.) Who are the mountaineers?

### **Home Work**

1. Write the name of ten persons starts with the letter 'l'.
2. Write the name of five things in your home starts with the letter 'l'.
3. How do sherpas help mountaineers?

## MULTI-SENSORY INSTRUCTIONAL PLAN-13

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Conquering Mount Everest-3

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'm'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “Conquering Mount Everest”
- ✓ Flash cards showing the difficult words and the letter 'm' and words start with the letter 'm'
- ✓ Picture of Mountains
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'm'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**




The students might have some knowledge of Edmund Hillary and Tenzing Norgay. The students are familiar with the alphabets.



**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show pictures of Hillary and Tenzing Norgay <b>(Visual)</b></p>  <p>Students will try to answer that Tenzing Norgay was the Sherpa, who helped the Edmund Hillary.</p> <p>2. Teacher will further refine their answer that mount Everest lays between Nepal and Tibet border. Today we are going to read a passage from the lesson ‘Conquering Mount Everest’. In this lesson we will read about the life of the Sherpa named Ten zing Norgay.<b>(Auditory)</b></p> <p>The teacher will play an audio clip of the third part of “Conquering Mount Everest”.<b>(Auditory)</b></p>	<p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. How do Sherpas help mountaineers?</li> <li>2. Who was the Ten zing Norgay?</li> <li>3. Who was Edmund Hillary?</li> </ol>

	Well Students! Today we shall learn about the ‘Conquering Mount Everest’.	
<b>Teaching Points</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>
Not far from..... ..... .....other climbers	Teacher will show a video to students and ask them to watch it carefully. <a href="https://youtu.be/YeLaEkXUBrY">https://youtu.be/YeLaEkXUBrY</a> 	Teacher will ask students to share their observations orally.
Model reading and Choral reading	Now Teacher will read the passage and ask students to read aloud the passage in unison. <b>(Auditory)</b>  Teacher will ask the students to underline difficult words and circle the words start with the letter ‘m’. <b>(Kinesthetic)</b>	Teacher will ask the students to answer the following questions: - 1. Where does the Himalayan range lay? 2. Who are the Sherpas?

Exposition of sight words- must, made, many, much, myself	<b>Vocabulary Development</b> The teacher will show the flash cards to the students that have written some sight words (must, made, many, much, myself). <b>(Visual)</b> The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> . The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(kinesthetic)</b>	
Repeated Reading	The students will be asked to read the same passage over and over until their reading is smooth and error –free.	
Explanation by the teacher	Teacher will explain the story- It’s a story of Ten zing who lived on the border between Nepal and Tibet. He Sherpas, mountaineers on climbing expeditions (journey for purpose) hire Sherpas to carry supplies and to guide them. Tenzing stated his career as a porter accompanying expedition teams to Himalayas. He accompanied many mountaineers to Everest. In his journey he learned many journeys he learned many languages which helped him to communicate with people.	Teacher will ask the students to answer the following questions: - 1. Where ten zing lived? 2. How the Ten zing started his career?

<b>Phonological awareness and phonics</b>		
letter ‘m’	<b>M</b> man moon mango   	Teacher will ask the students to answer the following questions- 1. Which name of a fruit starts with the letter ‘m’? 2. What is the first sound of the words man and

	<p>The teacher will show the flash cards to the students that have written the letters 'm' and some words start with the letter 'm' (man, moot, mango).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'm'. For example- Map, Mad, Mug. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colour, while verbalizing the letter name and sound (/m/).They feel the rangoli colour moving to form the letter 'm'. <b>(Tactile)</b></p>  <p>After that the students will be given worksheet and asked to colour the letter 'm' in the worksheet <b>(Kinesthetic)</b>.</p>  <p>Teacher will explain that we can create a new word by changing one of the sounds of an existing word. For example when we change the /m/ sound to /t/ sound in the word mop, we get the new word i.e. top.</p>	<p>make?</p> <p>3. What word do we get when we change the /m/ sound to /t/ sound in the word <i>make</i>?</p>
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#### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the story of Ten zing Norgay in 'Conquering Mount Everest'. In this story the writer explained about the life following questions: -

- 1.) How did Tenzing's move to Darjeeling benefit him?
- 2.) How did Tenzing get to learn so many languages?
- 3.) How do Sherpas help Mountaineers?

#### Home Work

1. Write the name of ten persons starts with the letter 'm'.
2. Write the name of five things in your home starts with the letter 'm'.
3. Write the meaning of these words: -
  - Adopted
  - Expeditions
  - Inspired
  - Porter
  - Fortune

## MULTI-SENSORY INSTRUCTIONAL PLAN-14

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Conquering Mount Everest -4

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'n'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “Conquering Mount Everest”
- ✓ Flash cards showing the difficult words and the letter 'n' and words start with the letter 'n'
- ✓ Picture of Mountains
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'n'


**Motivational Act-**

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.


**Assumed Previous Knowledge-**


The students might have some knowledge of mountaineers and Tenzing Norgay and they can recognize him. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	1. The teacher will show pictures of mountains and adventure sports and ask to tell something about them. Students will try to answer about mountains and adventure sports in their own way. <b>(Visual)</b>  The teacher will play an audio clip of the fourth passage of 'Conquering Mount Everest'. <b>(Auditory)</b> Well Students! Today we shall learn about the 'Conquering Mount Everest'.	Teacher will ask the students to answer the following questions: - 1. Who was the first man to be photographed on Everest? 2. How do Sherpas help mountaineers?
<b>Teaching Points</b> Working ----- -----him the ans?	<b>Teaching-learning activities</b> Teacher will show a video to students and ask them to watch it carefully.  <a href="https://youtu.be/uGBsrPrLGo8">https://youtu.be/uGBsrPrLGo8</a>	Teacher will ask students to share their observations orally. <b>(Auditory)</b>  Teacher will ask the students



	 <p>Teacher will ask students to share their observation in oral form. Now, teacher will read the passage and will ask the students to underline the difficult words start with letters 'n'.</p>	<p>to answer the following question: -</p> <ol style="list-style-type: none"> <li>1. Who are Sherpas?</li> <li>2. Where ten zing lived?</li> <li>3. At what age, ten zing moved to Darjeeling?</li> </ol>
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<p>Model reading and Choral reading</p>	<p>Now Teacher will read the passage and ask students to read aloud the passage in unison. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'n'. <b>(Kinesthetic)</b></p>	
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<p>Exposition of sight words- nest, never, night, new, nine</p> <p>Repeated Reading</p> <p>Explanation by the teacher</p>	<p>The teacher will show the flash cards to the students that have written some sight words (nest, never, night, new, nine). <b>(Visual)</b> The teacher will read out the words written on the flash cards.<b>(Auditory)</b> The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b>. The students will be asked to spells out the letters, and then reads the words again while writing the words in the air in front of the flash cards.<b>(kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.</p> <p>Teacher will explain the story in this story, the text accounts the details of first man to scale Mount Everest Ten zing Norgay. In his journey he learned seven languages which helped him to communicate with people. Mountaineers came from different parts of the world, so Ten zing learnt many things from them like teamwork, being patient, resourcefulness, helping others are few among those. In 1953 he and Edmund Hillary were the first to climb the Mount Everest. He was honored by Government of Nepal with the title star Of Nepal.</p>	<p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. Why was Hillary fortunate have the calm Ten zing by his side while climbing Everest?</li> <li>2. How have Ten zing’s courage and heroism been honored?</li> <li>3. How did Ten zing get to learn so many languages?</li> </ol>
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## Phonological awareness and phonics

letter 'n'

**N** nail net nest



The teacher will show the flash cards to the students that have written the letters 'n' and some words start with the letter 'n' (nail, net, nest). **(Visual)**

The teacher will ask the students to recognize the letter and the words written on the flash cards.

The students will read the letter and words. The teacher calls out some words start with 'n'. For example-no, net, not. The student repeats it. **(Auditory)** and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/n/). They feel the colours moving to form the letter 'n'. **(Tactile)**



After that the students will be given worksheet and asked to colour the letter 'n' in the worksheet **(Kinesthetic)**.



Teacher will explain that some sounds are same in different words. For example /n/ sound is same in the words not, net, nail.

Teacher will ask the students to answer the following questions-

1. Which name of a fruit starts with the letter 'n'?
2. What is the sound that is the same in nose and net?

### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the story of 'Ten zing Norgay'. In 'Conquering Mount Everest'. In this story of Ten zing Norgay the writer explained about his life. Now answer the following questions:-

- 1.) How did Sherpas help mountaineers?
- 2.) What is the answer to the question asked by Aditya towards to passage? You may use the internet.
- 3.) Who are first Hillary or Ten zing?

### Home Work

1. Write the name of ten persons starts with the letter 'n'.
2. Write the name of five things in your home starts with the letter 'n'.
3. What do you think are the challenges faced by the mountaineers?
4. Write the meaning of following words: Scale, Fortune, Adopted, Inspired. Summit

## MULTI-SENSORY INSTRUCTIONAL PLAN-15

Name of the Teacher -  
 Subject- English  
 Topic- Just before the recess- 1

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'o'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “Just before the Recess-1”
- ✓ Flash cards showing the difficult words and the letter 'o' and words start with the letter 'o'
- ✓ Picture of science fiction books
- ✓ Worksheet of letter 'o'


**Motivational Act-**

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**


The student might have some knowledge of science fiction. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show pictures of science fiction books and ask the students to tell something about them. Student will ask try to answer that science fiction is an imagination that include science.(<b>Visual</b>)</p> <div style="text-align: center;">  </div> <p>2. Teacher will further refine their answer that science fiction aims to show how science and technology can affect the lives of human beings in the future. Today we are going to read a passage from the lesson “just before Recess” an edited extract written by James van Pelt. It is a story about a boy who finds a small sun inside his school desk.(<b>Auditory</b>)</p>	<p>The Teacher will ask the students to choose the correct answer of the following questions.</p> <p>1.science fiction may contain all of the following except:</p> <ol style="list-style-type: none"> <li>a. Robots</li> <li>b. Aliens</li> <li>c. Wizards</li> <li>d. Advanced technology.</li> </ol> <p>2. Science fiction can sometimes include time travel.</p> <ol style="list-style-type: none"> <li>a. True</li> <li>b. False</li> </ol> <p>3. Genre that may contain advanced technologies like human like robots.</p> <ol style="list-style-type: none"> <li>a. Adventure</li> <li>b. Science fiction</li> <li>c. Fantasy</li> </ol>

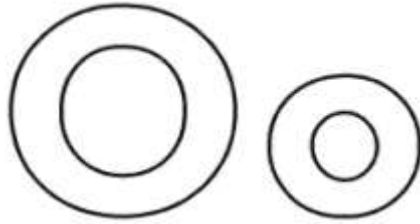
Teaching Points	Teaching-learning activities	d. Realistic fiction Evaluation
<p>Parker ----- ----- light.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <a href="https://youtu.be/W3u22Jvwrij">https://youtu.be/W3u22Jvwrij</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'o'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. Where was the sun kept by the parker?</li> <li>2. What was Mr. Earl doing in the class?</li> </ol>
<p>Exposition of synonyms-</p>	<p>The teacher will show the flash cards to the students that have written some words and their synonyms (Start-begin; Pretty-</p>	

<p>Paired reading</p> <p>Explanation by the teacher</p>	<p>lovely; Sick-ill). <b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have similar meaning and they are called synonyms. Synonyms are two words that are different but have a similar meaning. <b>(Auditory)</b>The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(Kinesthetic)</b></p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed.<b>(Auditory)</b></p> <p>Teacher will explain that it's a fictional story; in the story Parker is a boy in the school. He is in the third class and Mr. Earl is his teacher, he is marking their papers. Parker finds a sun in his desk one day. Parker would quickly shift his gaze down to his textbook so Mr. Earl would not give him the glare, a sure sign that Parker's name would soon go up on the board with the other kids who had lost their lunch privileges for the day. He could feel Mr. Earl's attention pass over him like a search light.<b>(Auditory)</b></p>	<p>Teacher will ask the students to answer the following question: -</p> <ol style="list-style-type: none"> <li>1. What Parker feed to sun?</li> <li>2. Why would Mr. Earl glance up once in a while? What did his glare mean?</li> </ol>
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Phonological awareness / phonics		
<p>letter 'o'</p>	<p><b>O</b> owl orange onion</p>  <p>The teacher will show the flash cards to the students that have written the letters 'o' and some words start with the letter 'o' ( owl, orange. onion .<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'o'. For example-on, oil. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/o/).They feel the sand moving to form the letter 'o'. <b>(Tactile)</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'o'?</li> <li>2. What are the rhyming words of owl, on?</li> </ol>



After that the students will be given worksheet and asked to colour the letter 'o' in the worksheet (**Kinesthetic**).



Teacher will explain that some words end in the same sound. These words are called rhyming words. For example the rhyming words of oil are coil, boil, spoil, foil. Then the teacher will ask students to repeat these words.

### Recapitulation

At the end of the lesson, pupil teacher will say that today, we have learnt about the story of a boy named parker in 'just Before Recess'. It is a science fictional story. In this story parker imagined that he kept the sun in the desk. Now answer the following questions:-

1. Where was the sun kept by the parker?
2. What was Mr. Earl doing in the class?
3. What did Parker feed to sun?
4. Why would Mr. Earl glance up once in a while? What did his glare mean?

### Home Work

1. Write the name of ten persons starts with the letter 'o'.
2. Write the name of five things in your home starts with the letter 'o'.
3. Write the meaning of these words:-
  - Gravel
  - Flavor
  - Toasty
4. Fill in the blanks (gavel, Sun, twigs, grading)
  - Mr. Earl was ----- papers at the front of the class.
  - Parker kept a -----in his desk.
  - He fed it -----and-----.



## MULTI-SENSORY INSTRUCTIONAL PLAN-16

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Just before the recess-2

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'p'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Just before the recess -2 "
- ✓ Flash cards showing the difficult words and the letter 'p' and words start with the letter 'p'
- ✓ Picture of 'Just before recess'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"
- ✓ Worksheet of letter 'p'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.


**Assumed Previous Knowledge-**

The students might have some knowledge of the first part of 'Just before recess'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of 'Just before recess' ask to tell something about it. <b>(Visual)</b></p> <div style="text-align: center;">  </div> <p>The teacher will play an audio clip of the first part of 'Just Before Recess'. <b>(Auditory)</b> Well Students! Today we shall learn about the 'Just Before Recess-2'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Who was Mr. Earl?</li> <li>2. Where was the sun kept by the parker?</li> <li>3. What was Mr. Earl doing in the class?</li> <li>4. What did Parker feed to sun?</li> <li>5. Why would Mr. Earl glance up once in a while? What did his glare mean?</li> </ol>


Teaching Points	Teaching-learning activities	
Slipping ..... ..... ..... process	Teacher will show a video to the students and ask them to watch it carefully. <a href="https://youtu.be/JQ1VT66Ue-Q">https://youtu.be/JQ1VT66Ue-Q</a> 	Teacher will ask students to share their observations orally.  Teacher will ask the students to answer the following questions: - 1. Have you ever played with pebbles? 2. Why did the Parker make the desk lean away from himself?
Loud reading	Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b>   <p>Two days ago, he had opened his desk to put his lunch in, but instead of the pencil box, ruler box, and books he expected to see, a cloud swirled in the space. At its centre was a dull, pulsing red glow. He shut the desk and looked around to see if anyone else had noticed. An hour later, the dusty swirl in his desk had contracted to a bright spot in the middle. He cautiously moved his hand towards it. At first he felt only the heat, but when he got within a few inches, the skin on his palm began to sting, like the flesh was pulling away. He snatched his hand back and then tried a pencil. When the point moved close enough, the pencil tugged towards the sun. It then snapped out of his fingers into the tiny light.</p> Teacher will ask the students to underline difficult words and circle the words start with the letter 'p'. <b>(Kinesthetic)</b>	



Exposition of difficult words- Swirled, pulsing, contracted	<b>Read it, build it, write it Exercise -</b>    In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled "Read It", "Build	
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<p>Paired Reading</p> <p>Explanation by the teacher</p>	<p>It”, and “Write It”. On “Read it” box some difficult words (Swirled, pulsing, contracted) already written. <b>(Visual)</b>  The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b>  The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.  With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box.<b>(Kinesthetic)</b>  The teacher will explain the meaning of the words by saying that swirled means moved around with a spinning motion. E.g. He swirled the ice cubes around in his glass. Pulsing means blinking. E.g. There were sharp pains pulsing behind his eyeballs. Contracted means shrank, become smaller. E.g. He contracted his brows and swallowed medicine down. <b>(Auditory)</b>  The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed.<b>(Auditory)</b></p> <p>Teacher will explain the story -It’s a fictional story, in this story parker is a boy in the school. He is in this story parker is a boy in the school. He is in third class. Parker finds a sun in his desk. Now he is giving him some pebbles, twigs and he is even giving him chewing gun to eat and day-by-day he growing up and shining brightly growing up. All the books and tiffin box, stationery items like pencil, tissue box everything has been swallowed by that sun.</p>	<p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. What slips out of Parker’s Pocket?</li> <li>2. What did Parker see when he opened his desk to put in his lunch box?</li> <li>3. What made Parker’s desktop warm and the bottom of the desk toasty?</li> <li>4. Why did Parker snatch his hand back out of the desk?</li> <li>5. Can you keep sun in the desk?</li> </ol>
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**Phonological awareness / phonics**

<p>letter ‘p’</p>	<p><b>P</b> pig pear pen</p>  <p>The teacher will show the flash cards to the students that have written the letters ‘b’ and some words start with the letter ‘p’ (pig, pear, pen).<b>(Visual)</b></p>	<p>Teacher will ask the</p>
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	<p>The teacher will ask the students to recognize the letter and the words written on the flash cards.  The students will read the letter and words. The teacher calls out some words start with 'p'. For example-pen, pot. The student repeats it. (<b>Auditory</b>) and then uses their fingers to write the word on rice, while verbalizing the letter name and sound (/p/).They feel the rice moving to form the letter 'p'. (<b>Tactile</b>)</p>  <p>After that the students will be given worksheet and asked to colour the letter 'p' in the worksheet (<b>Kinesthetic</b>).</p>  <p>Identify the rhyming words-The teacher will explain that rhyming words are the words that end in the same sound. Then teacher will say some words and ask students to identify the rhyming words.</p> <ol style="list-style-type: none"> <li>1. pen, men, top, mop</li> <li>2. peer, beer, deer, den</li> <li>3. pair, pain, fair, chair</li> <li>4. pain, china, gain, brain</li> </ol>	<p>students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'p'?</li> <li>2. What are the rhyming words of pen, pot?</li> </ol>
<p><b>Recapitulation</b></p> <p>At the end of the lesson, pupil teacher will say that today, we have learnt about the story of boy named 'Parker' in 'just Before Recess'. In this story, parker who studied in third grade ,found a sun in his desk. This is a fictional story. Now answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. What are the things swallowed by sun?</li> <li>2. Why did the Parker lean the desk away?</li> <li>3. What slips out of Parker's Pocket?</li> <li>4. What did Parker see when he opened his desk to put in his lunch box?</li> <li>5. What made Parker's desktop warm and the bottom of the desk toasty?</li> </ol>		
<p><b>Home Work</b></p> <ol style="list-style-type: none"> <li>1. Write the name of ten persons starts with the letter 'p'.</li> <li>2. Write the name of five things in your home starts with the letter 'p'.</li> <li>3. Write the meaning of these words: - <ul style="list-style-type: none"> <li>▪ Vanished</li> <li>▪ Pulsing</li> <li>▪ Contracted</li> </ul> </li> <li>4. Fill in the blanks: <ul style="list-style-type: none"> <li>• Slipping a -----out of his pocket.</li> <li>• He -----the desk and looked around.</li> <li>• He leaned the -----away from him.</li> </ul> </li> </ol>		

## MULTI-SENSORY INSTRUCTIONAL PLAN-17

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Just before the recess

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'q'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “Just before the recess ”
- ✓ Flash cards showing the difficult words and the letter 'q' and words start with the letter 'q'
- ✓ Picture of 'Just before recess'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'q'


**Motivational Act-**


Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the second part of 'Just before recess'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of 'Just before recess' ask to tell something about it. <b>(Visual)</b></p> <div style="text-align: center;">  </div> <p>The teacher will play an audio clip of the second part of 'Just Before Recess'. <b>(Auditory)</b> Well Students! Today we shall learn about the 'Just before recess-3'.</p>	<p>Teacher will ask the students to answer following questions-</p> <ol style="list-style-type: none"> <li>1. Have you ever played with pebbles?</li> <li>2. Can you keep sun in the desk?</li> <li>3. Where was the sun kept by the parker?</li> <li>4. What Parker feed to sun?</li> <li>5. Why did the Parker lean the desk away?</li> <li>6. What slips out of Parker's Pocket?</li> </ol>

Teaching Points	Teaching-learning activities	Evaluation
<p>Now ..... ..... ..... book.</p> <p>Loud reading</p>	<p>Teacher will show a video to students and ask them to watch it carefully. <a href="https://youtu.be/NVwWMrf7DKk">https://youtu.be/NVwWMrf7DKk</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p> <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'q'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer following questions-</p> <ol style="list-style-type: none"> <li>1. Where do you think the sun in the desk was getting its energy from?</li> <li>2. How the sun was as large as a golf ball?</li> </ol>

<p>Exposition of synonyms-</p> <p>Repeated reading</p> <p>Explanation by the teacher</p>	<p><b>Vocabulary Development</b></p> <p>The teacher will show the flash cards to the students that have written some words and their synonyms (quickly-fast; good-fine; large-big). <b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have similar meaning and they are called synonyms. Synonyms are two words that are different but have a similar meaning. <b>(Auditory)</b>The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.<b>(Auditory)</b></p> <p>Teacher will explain the story – It’s a fictional story. In the story a boy named Parker finds a sun in his desk. The sun swallowed stationery items, tiffin box. Mr. Earl who was grading their papers, he had given them a task of reading the text book instead of reading the book Parker was just looking at that seen. So, Mr. Earl called up his name and told him to go at the end of the class and sit with the three more students who were already there and take his text book with him.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. What was the task given by the Mr. Earl to Parker?</li> <li>2. Who is waiting Parker in the back of the class?</li> <li>3. Why Mr. Earl called Parker?</li> </ol>
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**Phonological awareness / phonics**

letter 'q'

Q **queen** **quiz** quail



The teacher will show the flash cards to the students that have written the letters 'q' and some words start with the letter 'q' (queen, quiz, quail). **(Visual)**

The teacher will ask the students to recognize the letter and the words written on the flash cards.

The students will read the letter and words. The teacher calls out some words start with 'q'. For example-quick, quilt. The student repeats it. **(Auditory)** and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/q/). They feel the colours moving to form the letter 'q'. **(Tactile)**



After that the students will be given worksheet and asked to colour the letter 'q' in the worksheet **(Kinesthetic)**.



Sit down and stand up-The teacher will say that rhyming words are the words that end in the same sound. Then teacher will say some pairs of words one by one and ask the students to stand up if the words rhyme, and sit down if the words don't rhyme.

1. Quick, tick, 2. Quack, crack 3. Quilt, built 4. Queen, king.

Teacher will ask the students to answer the following questions-

1. Which name of a fruit starts with the letter 'q'?
2. What are the rhyming words of quick, quilt?

**Recapitulation**

At the end of the lesson, Pupil teacher will say that today we have learnt about the story of a boy named Parker in 'Just Before Recess'. He finds a small sun inside his school desk. It is a fictional story.

Now answer the following questions: -

1. What was the task given by the Mr. Earl to Parker?
2. Where do you think the sun in the desk was getting energy from?
3. How the sun was as large as a golf ball?
4. Who were waiting Parker in the back of the class?

**Home Work**

1. Write the name of ten persons starts with the letter 'q'.

2. Write the name of five things in your home starts with the letter 'q'.

3. Write the meaning of these words: -

- Shrugged
- Rolled
- Responsible

4. Fill in the blanks: -

- You need to be-----responsible.
- The sun was as large as a -----ball.
- Your reading group is -----for you.

## MULTI-SENSORY INSTRUCTIONAL PLAN-18

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- Just before Recess

Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'r'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Just before Recess"
- ✓ Flash cards showing the difficult words and the letter 'r' and words start with the letter 'r'
- ✓ Picture of 'Just before recess'
- ✓ Worksheet of letter 'r'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

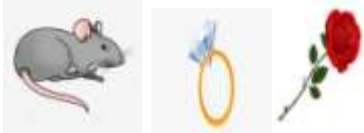
The students might have some knowledge of the first part of 'Just before Recess'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**




<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1. Introduction of the lesson	1. The teacher will show a picture of 'Just before recess' ask to tell something about it. <b>(Visual)</b>  The teacher will play an audio clip of the third part of 'Just Before Recess'. <b>(Auditory)</b> Well Students! Today we shall learn about the 'Just before recess-4'.	Teacher will ask the students to answer the following questions: 1. What was the task given by the Mr. Earl to Parker? 2. Where do you think the sun in the desk was getting energy from? 3. How the sun was as large as a golf ball? 4. Who were waiting Parker in the back of the class?
Teaching Points	Teaching-learning activities	Evaluation
The other students----- belongs? Loud reading	Teacher will show a video to the students and ask them to watch it carefully. <a href="https://youtu.be/zXO40csBkYQ">https://youtu.be/zXO40csBkYQ</a>	Teacher will ask students to share their observations orally. Teacher will ask the students to answer the following questions: -

	 <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'r'.<b>(Kinesthetic)</b></p>	<p>1. What will you see if you have chance to go back in past? 2. Why did Parker not have his book?</p>
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<p>Exposition of sight words- Right, round, rain, ran, read</p> <p>Repeated reading</p> <p>Explanation by the teacher</p>	<p>The teacher will show the flash cards to the students that have written some sight words (Right, round, rain, ran, read). <b>(Visual)</b> The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b>. The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm.<b>(kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free.<b>(Auditory)</b></p> <p>Teacher will explain the story- It's a story written by James van pelt. It's a science fiction. In the story Parker is the boy in the school and Mr. Earl is his teacher, he is marking their papers. Parker finds sun in his desktop one day. Mr. Earl called up his name and told him to go at the end of the class sit with three more students, so when parker said that he did not have his book so Mr. Earl got angry and he had to stand up from his chair because it was on very rare occasions Mr. Earl left his seat.</p>	<p>Teacher will ask the students to answer the following questions: -</p> <ol style="list-style-type: none"> <li>1. Why Mr. Earl left his chair?</li> <li>2. Why did the other students feel relieved?</li> <li>3. Why would Mr. Earl glance up once in a while? What did his glare mean?</li> <li>4. What did Parker see when he opened his desk to put in his lunch box</li> </ol>
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Phonological awareness / phonics		
<p>letter 'r'</p>	<p><b>r</b> rat <b>r</b>ing <b>r</b>ose</p>  <p>The teacher will show the flash cards to the students that have written the letters 'r' and some words start with the letter 'r' (rat, ring, rose).<b>(Visual)</b> The teacher will ask the students to recognize the letter</p>	



	<p>and the words written on the flash cards. The students will read the letter and words. The teacher calls out some words start with 'r'. For example-rice, rat, rate. The student repeats it. (<b>Auditory</b>) and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/r/).They feel the colours moving to form the letter 'r'. (<b>Tactile</b>)</p>  <p>After that the students will be given worksheet and asked to colour the letter 'r' in the worksheet (<b>Kinesthetic</b>).</p>  <p>Thumbs up and down-The teacher will say some pairs of words one by one and ask the students to repeat the words and use a thumbs up to show him when the words rhyme, and a thumbs down to show him when they do not rhyme. i.e. 1. Rat, cat 2. Rice, rock 3. Rose, nose 4. Red, rack.</p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'r'?</li> <li>2. What are the rhyming words of rat, red?</li> </ol>
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### Recapitulation

At the end of the lesson, Pupil teacher will say that today we have learnt about the story of a boy named Parker in 'Just Before Recess'. He finds a small sun inside his school desk. It is a fictional story.

Now, answer the following questions: -

1. Why Parker did not have his book?
2. Why Mr. Earl left his chair?
3. Why did the other students feel relieved?
4. Why would Mr. Earl glance up once in a while? What did his glare mean?
5. What did Parker see when he opened his desk to put in his lunch box?

### Home Work

1. Write the name of ten persons starts with the letter 'r'.
2. Write the name of five things in your home starts with the letter 'r'.
3. Write the meaning of the words:
  - Cringed
  - Infraction
  - Clenched
4. Fill in the blanks: -
  - Students came-----him.
  - He looked-----each of his students.
  - The other students looked -----relieved and not on them.

## MULTI-SENSORY INSTRUCTIONAL PLAN-19

Name of the Teacher -  
 Subject- English  
 Topic- Just before recess

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 's'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "Just before recess"
- ✓ Flash cards showing the difficult words and the letter 's' and words start with the letter 's'
- ✓ Picture of 'Just before recess'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"
- ✓ Worksheet of letter 's'


**Motivational Act-**


Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.



**Assumed Previous Knowledge-**


The students might have some knowledge of the first part of 'Just before Recess'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**



Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	1. The teacher will show a picture of 'Just before recess' ask to tell something about it. <b>(Visual)</b>  The teacher will play an audio clip of the fourth part of 'Just Before Recess'. <b>(Auditory)</b> Well Students! Today we shall learn about the 'Just before recess-5	Teacher will ask the student to answer the following question: - 1. Why Parker did not have his book? 2. Why Mr. Earl left his chair? 3. Why the other students felt relieved? 4. Why would Mr. Earl glance up once in a while? What did his glare mean? 5. What did Parker see when he opened his desk to put in his lunch box?
<b>Teaching Points</b>	<b>Teaching-learning activities</b> Teacher will show a video to the students and ask them to watch it carefully. <a href="https://youtu.be/VPK4aXkL62U">https://youtu.be/VPK4aXkL62U</a>	<b>Evaluation</b> Teacher will ask students to share their observations orally.

		<p>Teacher will ask the student to answer the following question: -</p> <ol style="list-style-type: none"> <li>1. Who was responsible according to Mr. Earl?</li> <li>2. Why do you think Parker would not speak about what was going on inside his desk?</li> </ol>
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<p>Loud reading</p>	<p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>   <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 's'. <b>(Kinesthetic)</b></p>	
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<p>Exposition of difficult words- cringed, infraction</p>	<p><b>Vocabulary Development</b></p> <p><b>Read it, build it, write it Exercise -</b></p>  <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (cringed, infraction) already written. <b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.</p> <p>With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in</p>	
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<p>Repeated reading</p> <p>Explanation by the teacher</p>	<p>the “Write It” box.(<b>Kinesthetic</b>)</p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.(<b>Kinesthetic</b>)</p> <p>The teacher will explain the meaning of the words by saying that cringed means moved back in fear. E.g. It made me cringe at its over-the-top violence. Infraction means breaking of a rule. E.g. My mother became angry when my sister refused to apologize for her infraction (<b>Auditory</b>) The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.(<b>Kinesthetic</b>)</p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error – free.(<b>Auditory</b>)</p> <p>Teacher will explain the story- It’s a story written by, “James Van Pelt’ It’s a Science fictional story. In the story, Parker is the boy in the school and Mr. Earl is his teacher, he is marking their papers. Parker finds sun in his desktop one day. Mr. Earl called up his name and told him to read, so when he said that he did not have his book so Mr. Earl get angry. Mr. Earl Left his chair because until on unless the crime was not terrible he did not leave his place. Mr. Earl said everything should be in his desk where it belonged.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Why did Mr. Earl throw open Parker’s desk?</li> <li>2. What did Mr. Earl stare at in the desk?</li> <li>3. How did the sun inside Parker’s desk get him into trouble?</li> <li>4. What happened as Mr. Earl reached towards the brightness?</li> </ol>
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Phonological awareness / phonics		
<p>letter ‘s’</p>	<p></p> <p>The teacher will show the flash cards to the students that have written the letters ‘s’ and some words start with the letter ‘s’ (sun, sheep, six).(Visual)</p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with‘s’. For example-sit, see, sad. The student repeats it. (<b>Auditory</b>) and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/s/).They feel the sand moving to form the letter‘s’. (<b>Tactile</b>)</p> <p></p> <p>After that the students will be given worksheet and asked to colour the letter‘s’ in the worksheet (<b>Kinesthetic</b>).</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter‘s’?</li> <li>2. What are the rhyming words of sad, sun, sit?</li> </ol>



Clap and jump- The teacher will say some pairs of words one by one and ask the students to repeat the words and clap and jump if they hear the rhyming words.

1. sit, wit 2.sip, dip 3. Saw, seen 4.sad, mad 5. Six, seven

### Recapitulation

At the end of the lesson, Pupil teacher will say that today we have learnt about the story of a boy named Parker in 'Just Before Recess'. He finds a small sun inside his school desk. It is a fictional story.

Now answer the following questions: -

1. Why do you think Parker would not speak about what was going on inside his desk?
2. Why did Mr. Earl throw open Parker's desk?
3. What did Mr. Earl stare at in the desk?
4. How did the sun inside Parker's desk get him into trouble?
5. What happened as Mr. Earl reached towards the brightness?

### Home Work

1. Write the name of ten persons starts with the letter's'.
2. Write the name of five things in your home starts with the letter's'.
3. Write the meaning of these words: -
  - o Accusation
  - o Stared
  - o Swirling
4. Write synonyms of these words: -
  - o Pinpoint
  - o Glance

## MULTI-SENSORY INSTRUCTIONAL PLAN-20

Name of the Teacher -  
 Subject- English  
 Topic- Just before recess

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 't'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “ Just before recess”
- ✓ Flash cards showing the difficult words and the letter ‘t’ and words start with the letter ‘t’
- ✓ Picture of ‘Just before recess’
- ✓ Worksheet of letter ‘t’


**Motivational Act-**


Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the first part of ‘Just before Recess’. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	1. The teacher will show a picture of ‘Just before recess’ ask to tell something about it.( <b>Visual</b> )  The teacher will play an audio clip of the fifth part of ‘Just before Recess’. ( <b>Auditory</b> )  Well Students! Today we shall learn about the ‘Just before recess-6’.	Teacher will ask the students to answer the following questions 1. Why did Mr. Earl throw open Parker’s desk? 2. What did Mr. Earl stare at in the desk? 3. How did the sun inside Parker’s desk get him into trouble? 4. What happened as Mr. Earl reached towards the brightness?
<b>Teaching Points</b> Careful..... ..... .....	<b>Teaching-learning activities</b> Teacher will show a video to the students and ask them to watch it carefully. <a href="https://youtu.be/dda3-ZVYTAo">https://youtu.be/dda3-ZVYTAo</a>	Teacher will ask students to share their observations orally. Teacher will ask the students to answer the following questions: -

<p>..... ..... To play.</p>		<p>1. 'Careful, Mr. Earl,' said Parker. What did Parker want to warn Mr. Earl? 2. Who swallowed Mr. Earl?</p>
<p>Loud reading</p>	<p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p> <p>Parker needed. But my book isn't mine, Mr. Earl! The teacher took his long pencil and smiled. Inside Parker's desk, before the top came down, the ball threw the string down. For a moment, he stayed there in a circle glow reflected off the top. What is that? The ball, as the recessed towards the brightness.</p> <p>'Careful, Mr. Earl,' Parker started to say, but it was too late. The teacher scratched before looking across the desk. He went down quickly, his feet scuffing at the desk top.</p> <p>A long silence filled the room. Parker stood up and walked back to his desk. The sun within had grown, its heat backing like a tiny oven. He closed the top, which snapped down hard on its own at the last moment.</p> <p>The other students hadn't moved. Parker looked at them. They looked at him. Over the intercom, a bell softly chimed.</p> <p>'Recess,' said Parker, and they all ran outside to play.</p> <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 't'. <b>(Kinesthetic)</b></p>	
<p>Exposition of synonyms-  Repeated reading  Explanation by the teacher</p>	<p>The teacher will show the flash cards to the students that have written some words and their synonyms (Loyal- faithful; ability-skill; lazy-idle; old-aged) <b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have similar meaning and they are called synonyms. Synonyms are two words that are different but have a similar meaning. <b>(Auditory)</b>The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error-free. <b>(Auditory)</b></p> <p>Mr. Earl gave Parker the task of reading. Parker did not have his book so Mr. Earl got angry. Since Mr. Earl had opened the desk and when he saw the sun inside the desk, he asked what is this and before he could say, he could do anything else, the sun had swallowed him. A long silence filled the rooms. Parker stood up and walked back to his desk. The sun within had grown, its heat backing like a tiny oven. He closed the top, which snapped down hard on its own at the last moment. The other student had not moved. Parker looked at them. They looked at him. Over the intercom, a bell softly chimed. 'Recess' said Parker, and they all ran outside to play.</p>	<p>Teacher will ask the students to answer the following question: - 1. Why did a long silence fill the room? 2. What do you think the children's feelings were at that moment?</p>

## Phonological awareness / phonics

letter 't'

T teddy tree train



The teacher will show the flash cards to the students that have written the letters 't' and some words start with the letter 't' (teddy, tree, train). **(Visual)**

The teacher will ask the students to recognize the letter and the words written on the flash cards.

The students will read the letter and words. The teacher calls out some words start with 't'. For example-tall, ten, tin. The student repeats it.

**(Auditory)** and then uses their fingers to write the word on rice, while verbalizing the letter name and sound (/t). They feel the rice moving to form the letter 't'. **(Tactile)**



After that the students will be given worksheet and asked to colour the letter 't' in the worksheet **(Kinesthetic)**.



Identify the rhyming words- The teacher will say some words and ask the students to identify the rhyming words.

1. Tall, fall, fail, ball
2. Tin, bin, chin, hen
3. Ten, den, him, pen
4. Toy, boy, can, annoy
5. Tap, clap, can, lap

Teacher will ask the students to answer the following questions-

1. Which name of a fruit starts with the letter 't'?
2. What are the rhyming words of tall, tin, tall?

## Recapitulation

At the end of the lesson, pupil teacher will say that, today we have wanted about the story of a boy named Parker in 'Just Before 'Recess'. It's a science fictional story. Now answer the following questions: -



1. 'Careful, Mr. Earl,' said Parker. What did Parker want to warn Mr. Earl?
2. Who swallowed Mr. Earl?
3. Why did a long silence fill the room?
4. What do you think the children's feelings were at that moment?

**Home Work**

1. Write the name of ten persons starts with the letter't'.
2. Write the name of five things in your home starts with the letter't'.
3. Write the antonyms of these words: -
  - Pulsing
  - Gravel
  - Varnished
  - Toasty
  - Privileges

# MULTI-SENSORY INSTRUCTIONAL PLAN-21

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-1

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'u'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The curious robot-1”
- ✓ Flash cards showing the difficult words and the letter 'u' and words start with the letter 'u'
- ✓ Picture of robot
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'u'


**Motivational Act-**




Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**




The students might have some knowledge of Robots. The students familiar with the alphabets

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	1. The teacher will show a picture of Robots and ask to tell something about it student will try to answer some features of Robot. <b>(Visual)</b>  2. Teacher will further refine their answer that Robots are machines created by Human beings. Today we are going to read a passage from the lesson “The Curious Robot” an edited extract from written by Jim Westergren . The teacher will play an audio clip of the first part of ‘The curious robot’. <b>(Auditory)</b>  Well Students! Today we shall learn about the ‘The curious robot-1’.	Teacher will ask the students to answer the following questions-  1. What is this? 2. Tell me some characteristics of robots. 3. What is the meaning of curious Robot?
<b>Teaching</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>

Points		
<p>In the far distant ----- said T59</p> <p>Loud reading</p>	<p>The Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b> <a href="https://youtu.be/4!5i6aaRJXw">https://youtu.be/4!5i6aaRJXw</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words that have the letter 'u'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the student following questions-</p> <ol style="list-style-type: none"> <li>1. Who is R-62?</li> <li>2. How many categories of robots are there?</li> </ol>
<p>Exposition of difficult words- Inhabited, welding, escorted</p>	<p><b>Vocabulary Development</b></p> <p><b>Read it, build it, write it Exercise -</b></p>  <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (inhabited, welding, escorted) already written. <b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.</p> <p>With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box. <b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of these words by saying that inhabited means to live in a place. E.g. The</p>	

<p>Paired reading</p> <p>Explanation by the teacher</p>	<p>neighbourhood is inhabited by rich people.  Welding means to join pieces of metal together by heating and pressing. E.g. All the welding had been done from inside the car.  Escorted means to go with somebody as an escort. E.g. She escorted him to wash his hands, talking all the while. <b>(Auditory)</b>  The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed. <b>(Auditory)</b></p> <p>Teacher will explain that in future, earth is inhabited by robots and the quality of human race is less a thousand. There are three categories of robots – construction, transport and repair robots. This story is about a small, new, yellow and curious repair robot(R-62). The blue transport robot called T-59 is requesting R-62 that he wants that car operational in the next half an hour. As per your request replied R-62 – welding together two metal plates. This is a big city where a lot of vehicles traffic and R-62 used to look a bit at the car that would pass by him. Suddenly, a fancy car arrived along with special blue robots on motorbikes. R-62 with a strong interest looked at that car and asked T-59 what is this? The car stopped in a special way and the four robots gathered at the opening of the vehicles.</p>	<p>Teacher will ask the student to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. T-59 and R-62 were which type of robots?</li> <li>2. How many robots escorted the fancy car?</li> <li>3. What was the work being done by the robots?</li> </ol>
<b>Phonological awareness / phonics</b>		

<p>letter 'u'</p>	<p><b>U</b>ncle utensils umbrella</p>  <p>The teacher will show the flash cards to the students that have written the letters 'u' and some words start with the letter 'u'(uncle, utensils, umbrella).<b>(Visual)</b> The teacher will ask the students to recognize the letter and the words written on the flash cards. The students will read the letter and words. The teacher calls out some words start with 'u'. For example-under, ugly, up. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/u/).They feel the colours moving to form the letter 'u'. <b>(Tactile)</b></p>  <p>After that the students will be given worksheet and asked to colour the letter 'u' in the worksheet <b>(Kinesthetic)</b>.</p>  <p>Sit down and stand up-The teacher will say that rhyming words are the words that end in the same sound. Then teacher will say some pairs of words one by one and ask the students to stand up if the words rhyme, and sit down if the words don't rhyme.</p> <ol style="list-style-type: none"> <li>1.Urban, turban</li> <li>2. Up, cup</li> <li>3. Ugly, until</li> <li>4. Under, blunder</li> <li>5. Us, we</li> </ol>	<ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'u'?</li> <li>2. What are the rhyming words of up, urban?</li> </ol>
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### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the first part of story "The curious robot".Teacher will ask the student to answer the following questions-

1. Who is R-62?
2. How many categories of robots are there?
3. T-59 and R-62 were which type of robots?
4. How many robots escorted the fancy car?

5. What was the work being done by the robots?

**Home Work**

1. Write the name of ten persons starts with the letter 'u'.
2. Write the name of five things in your home starts with the letter 'u'.
3. Fill in the blanks-  
I want this ..... Operational in the next .....said the .....transport robot called ..... to the small yellow .....robot, R-62.

## MULTI-SENSORY INSTRUCTIONAL PLAN-22

Name of the Teacher -  
Subject- English  
Topic- The curious robot-2

Class- VI  
Date-  
Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'v'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The curious robot”
- ✓ Flash cards showing the difficult words and the letter 'v' and words start with the letter 'v'
- ✓ Flash cards showing the words and their antonyms
- ✓ Picture of 'The curious robot'
- ✓ Worksheet of letter 'v'


**Motivational Act-**


Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

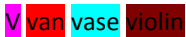
The students might have some knowledge of the first part of 'The curious robot'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the first part of 'The curious robot' ask to tell something about it.(<b>Visual</b>)</p>  <p>The teacher will play an audio clip of the second part of 'The curious robot'. (<b>Auditory</b>)</p> <p>Well Students! Today we shall learn about the 'The curious robot'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. "I want this car operational in the next half an hour."               <ol style="list-style-type: none"> <li>a. Who is the speaker of the above references?</li> <li>b. The speaker is requesting to whom?</li> <li>c. R-62 is interested in which thing?</li> </ol> </li> <li>2. Name the two robots in the story?</li> <li>3. Who gathered at the opening of that fancy car?</li> <li>4. Who looked at the car with strong interest?</li> </ol>
<b>Teaching Points</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>
This is neither a---- -----impression.	Teacher will show a video to the students and ask them to watch it carefully.	Teacher will ask students to share their observations orally.

<p>Loud reading</p>	<p><b>(Visual)</b>  <a href="https://youtu.be/9qiMBtAzfes">https://youtu.be/9qiMBtAzfes</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p> <p>Teacher will ask the students to underline difficult words and circle that have the letter 'v'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask the student to answer the following questions-</p> <p>Q1. Was the passenger a construction robot or a transport robot or a repair robot? If no, then who was he?</p> <p>Q2. Who said, "I have never seen one?"</p>
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<p>Exposition of antonyms-</p> <p>Paired reading</p> <p>Explanation by the teacher</p>	<p><b>Vocabulary Development</b></p> <p>The teacher will show the flash cards to the students that have written some words and their antonyms (accept-refuse; absence-presence; admit-deny; agree-disagree, bitter-sweet).</p> <p><b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have opposite meaning to each other and they are called antonym. An antonym is a word that has the opposite meaning of another word. For example, the word small means of limited size, while big means of large size.</p> <p><b>(Auditory)</b> The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(Kinesthetic)</b></p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed. <b>(Auditory)</b></p> <p>Teacher will explain that in the first paragraph R-62 asked T-59 about the passenger of that fancy car. T-59 replied that the passenger was neither a construction robot nor a transport robot or a repair robot, neither a droid nor an android- that was a human. R-62 was surprised and said wow! I have never seen a human. Then the human stepped out of the car and four escort robots surrounded him. R-62 said, "What a wimp?"- After getting his first impression.</p>	<p>Teacher will ask the student following question-</p> <ol style="list-style-type: none"> <li>1. Who was surrounded by the escort robot?</li> <li>2. What has been asked by R-62 to T-59?</li> <li>3. Why R-62 was surprised to see human?</li> </ol>
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<b>Phonological awareness / phonics</b>		
<p>letter 'v'</p>		<p>Teacher will ask the students to answer the</p>





The teacher will show the flash cards to the students that have written the letters 'v' and some words start with the letter 'v' (van, vase, violin).**(Visual)**  
The teacher will ask the students to recognize the letter and the words written on the flash cards.  
The students will read the letter and words. The teacher calls out some words start with 'v'. For example-veg, vein. The student repeats it. **(Auditory)** and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/v/).They feel the rangoli colours moving to form the letter 'v'. **(Tactile)**



After that the students will be given worksheet and asked to colour the letter 'v' in the worksheet **(Kinesthetic)**.  
Thumbs up and down-The teacher will say some pairs of words one by one and ask the students to repeat the words and use a thumbs up to show him when the words rhyme, and a thumbs down to show him when they do not rhyme.

1. van, fan
2. vote, note
3. vase, case
4. vase, rice
5. van, ban



following questions-

1. Which name of a fruit starts with the letter 'V'?
2. What are the rhyming words of Van and vote?

### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the second part of story "The curious robot". Teacher will ask the student to answer the following question-

1. Was the passenger a construction robot or a transport robot or a repair robot? If no, then who was he?
2. Who said, "I have never seen one?"
3. Who was surrounded by the escort robot?
4. What has been asked by R-62 to T-59?
5. Why R-62 was surprised to see human?

### Home Work

1. Write the name of ten persons starts with the letter 'v'.
2. Write the name of five things in your home starts with the letter 'v'.
3. Fill in the blanks-

The ..... stepped out of the ..... and was surrounded by the .....escort ..... He looked a bit ..... in comparisons to the robots.

## MULTI-SENSORY INSTRUCTIONAL PLAN-23

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-3

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'w'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "The curious robot-3"
- ✓ Flash cards showing the difficult words and the letter 'w' and words start with the letter 'w'
- ✓ Flash cards showing the words and their antonyms
- ✓ Picture of 'The curious robot'
- ✓ Worksheet of letter 'w'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**




The students might have some knowledge of the second part of 'The curious robot'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the second part of 'The curious robot' ask to tell something about it.(Visual)</p>  <p>The teacher will play an audio clip of the third part of 'The curious robot'. (Auditory)</p> <p>Well Students! Today we shall learn about the third part of 'The curious robot'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Who said, "What a wimp?"</li> <li>2. Who stepped out of the car?</li> <li>3. Who has surrounded the human?</li> <li>4. Was the human looked smaller than the robots?</li> <li>5. Who said, "This is neither a construction robot nor a transport robot or a repair robot; neither a droid nor an android...It is a human?"</li> </ol>

Teaching Points	Teaching-learning activities	Evaluation
<p>Don't underestimate --- ----- said T-59.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b> <a href="https://youtu.be/1uOHv6uarIk">https://youtu.be/1uOHv6uarIk</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'w'.<b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally. Teacher will ask the students to answer the following questions- Q1. Who said, "What a dangerous thing?" Q2. Why R-62 said human a wimp?</p>
<p>Exposition of antonyms-</p> <p>Paired reading</p> <p>Explanation by the teacher</p>	<p><b>Vocabulary Development</b></p> <p>The teacher will show the flash cards to the students that have written some words and their antonyms (alive- dead; hard-easy; warm-cool; early-late; clever-stupid). <b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have opposite meaning to each other and they are called antonym. An antonym is a word that has the opposite meaning of another word. For example, the word small means of limited size, while big means of large size. <b>(Auditory)</b>The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>Kinesthetic)</b></p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed. <b>(Auditory)</b></p> <p>Teacher will explain that in the previous paragraph R-62 said, "What a wimp?" On listening him T-59 whispered – don't underestimate humans. They are superior to robots. They can perform any action they want to even those which robot cannot perform. Such as giving orders to robots, destroying and constructing new ones. They are</p>	<p>Teacher will ask the students following questions- 1. Who give orders to robots?</p>

	<p>even able to harm another human being or organize mass destruction, which they have been doing a lot in history. Also, they do not even have to follow order if they do not want to. On listening this R-62 said, "What a dangerous thing?" I can only repair cars. Then T-59 said if you try to harm humans or give orders to them your circuits will blow up.</p>	<p>2. Who can destroy and construct new ones? 3. Why human is a dangerous thing?</p>
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Phonological awareness and phonics		
<p>letter 'w'</p>	<p><b>w</b> watch <b>w</b>hale <b>w</b>ood</p>  <p>The teacher will show the flash cards to the students that have written the letters 'w' and some words start with the letter 'w' (watch, whale, wood) <b>Visual</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'w'. For example-walk, wet, white. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/w/). They feel the sand moving to form the letter 'w'. <b>(Tactile)</b></p>  <p>After that the students will be given worksheet and asked to colour the letter 'w' in the worksheet <b>(Kinesthetic)</b>.</p>  <p>Clap and jump- The teacher will say some pairs of words one by one and ask the students to repeat the words and clap and jump if they hear the rhyming words.</p> <ol style="list-style-type: none"> <li>1. white, kite</li> <li>2. walk, run</li> <li>3. why, fly</li> <li>4. when, then</li> <li>5. walk, talk</li> </ol>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'w'?</li> <li>2. What are the rhyming words of wet?</li> </ol>

### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the third part of story “The curious robot”. Teacher will ask the students to answer the following questions-

- Q1. Who said, “What a dangerous thing?”
- Q2. Why R-62 said human a wimp?
- Q3. Who give orders to robots?
- Q4. Who can destroy and construct new ones?
- Q5. Why human is dangerous thing?

### **Home Work**

- 1. Write the name of ten persons starts with the letter ‘w’.
- 2. Write the name of five things in your home starts with the letter ‘w’.
- 3. Fill in the blanks-  
Don’t underestimate the ..... They are .....to us robots. They are able to any action they want to do. ‘What a .....thing! I can only repair cars’. Said R-62.

## MULTI-SENSORY INSTRUCTIONAL PLAN-24

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-4

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'x'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The curious robot-4”
- ✓ Flash cards showing the difficult words and the letter 'x' and words start with the letter 'x'
- ✓ Flash cards showing words and their antonyms
- ✓ Picture of 'The curious robot'
- ✓ Worksheet of letter 'x'


**Motivational Act-**


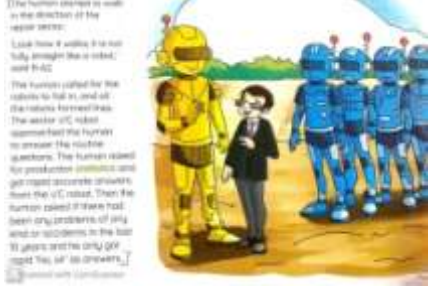
Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the first part of 'The curious robot'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**




<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
1. Introduction of the lesson	1. The teacher will show a picture of the third part of 'The curious robot' ask to tell something about it. <b>(Visual)</b>  The teacher will play an audio clip of the fourth part of 'The curious robot'. <b>(Auditory)</b>  Well Students! Today we shall learn about the 'The curious robot-4'.	Teacher will ask the students to answer the following questions- <ol style="list-style-type: none"> <li>1. Who are more superior to robots?</li> <li>2. Why circuit of R-62 will blow?</li> <li>3. Who said, "I can only repair cars"?</li> <li>4. T-59 whispered to whom?</li> <li>5. What can human do?</li> </ol>
Teaching Points	Teaching-learning activities	Evaluation
The human started-----as	Teacher will show a video to the students and ask them to	

<p>answers.</p> <p>Loud reading</p>	<p>watch it carefully.  <b>(Visual)</b>  <a href="https://youtu.be/IJQVX1nmKIg">https://youtu.be/IJQVX1nmKIg</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'x'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the student to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. In which direction the human was walking?</li> <li>2. Was the human walking straight like a robot?</li> </ol>
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<p>Exposition of antonyms-</p> <p>Paired reading</p> <p>Explanation by the teacher</p>	<p><b>Vocabulary Development</b></p> <p>The teacher will show the flash cards to the students that have written some words and their antonyms (beautiful-ugly; despair-hope; demand-supply; end-beginning). <b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have opposite meaning to each other and they are called antonym.</p> <p>An antonym is a word that has the opposite meaning of another word. For example, the word small means of limited size, while big means of large size.</p> <p><b>(Auditory)</b>The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(Kinesthetic)</b></p> <p>The teacher will divide the students into pairs and ask them to begin reading in pairs. The first reader will read first while the second reader will listen and follows along. The second reader will pick up where the first reader stops. While reading the partners will be allowed to help each other with words or understanding as needed. <b>(Auditory)</b></p> <p>Teacher will explain that human started walking in the direction of repair sector. On watching him R-62 said look how it walks, it is not fully straight like a robot. After this human called the robots to fall in and</p>	<p>Teacher will ask the student to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. To whom the human said to fall in?</li> <li>2. What question did the human asked when the I/C robot answered – no sir ?</li> <li>3. When the human got rapid accurate answer from the I/C robot?</li> </ol>
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	<p>all the robots formed a line. The sector I/C robot came to the human and answered the routine questions. Then the human asked for production statics and got rapid accurate answer from the I/C robot. Then the human asked if there had been problem of any kind or accident in the last 10 years. Then the I/C robot give a rapid answer – no sir.</p>	
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**Phonological awareness / phonics**

<p>letter 'x'</p>	<p>X x'mas tree x-ray xylophone</p>  <p>The teacher will show the flash cards to the students that have written the letters 'x' and some words start with the letter 'x' (x-ray, xerox, x'mas ).<b>(Visual)</b>  The teacher will ask the students to recognize the letter and the words written on the flash cards.  The students will read the letter and words. The teacher calls out some words start with 'x'. For example-xenon, xerox. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rice, while verbalizing the letter name and sound (/x/).They feel the rice moving to form the letter 'x'. <b>(Tactile)</b></p>  <p>After that the students will be given worksheet and asked to colour the letter 'x' in the worksheet <b>(Kinesthetic)</b>.</p>  <p>Identify the rhyming words- The teacher will say some words and ask the students to identify the rhyming words.</p> <ol style="list-style-type: none"> <li>1. Xerox, ball, fall, tall</li> <li>2. Xat, cat, fun, fat</li> </ol>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a festival starts with the letter 'x'?</li> <li>2. Which name of a musical instrument starts with the letter 'x'?</li> </ol>
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	3. Right, height, kite, kind 4.Goat,boat, ban, float	
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### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the fourth part of story "The curious robot".Teacher will ask the student to answer the following questions-

1. In which direction the human was walking?
2. Was the human walking straight like a robot?
3. To whom the human said to fall in?
4. What question did the human asked when the I/C robot answered – no sir?
5. When the human got rapid accurate answer from the I/C robot?

### **Home Work**

1. Write the name of ten persons starts with the letter 'x'.
2. Write the name of five things in your home starts with the letter 'x'.
3. Fill in the blanks-  
The human called for the ..... to fall in, and all the .....formed lines. The ..... approached the human to answer the routine questions.

## MULTI-SENSORY INSTRUCTIONAL PLAN-25

Name of the Teacher -  
 Subject- English  
 Topic-The curious robot-5  
 Minutes

Class- VI  
 Date-  
 Duration- 40

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'y'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The curious robot-5”
- ✓ Flash cards showing the difficult words and the letter 'y' and words start with the letter 'y'
- ✓ Flash cards showing the words and their antonyms
- ✓ Picture of The curious robot
- ✓ Worksheet of letter 'y'


**Motivational Act-**


Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the fourth part of 'The curious robot'. The students are familiar with the alphabets.




**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the fourth part of 'The curious robot' ask to tell something about it. <b>(Visual)</b></p>  <p>The teacher will play an audio clip of the fifth part of 'The curious robot'. <b>(Auditory)</b></p> <p>Well Students! Today we shall learn about the 'The curious robot-6'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Who was walking towards the repair sector?</li> <li>2. Who was answering the question asked by the human?</li> <li>3. Who said, "look how he walks, it is not fully straight like a robot?"</li> <li>4. What did the robot do after the human</li> </ol>

		said to fall in? 5. Who answered the human- no sir?
<b>Teaching Points</b>	<b>Teaching-learning activities</b>	<b>Evaluation</b>
<p>Meanwhile----- ---than robots.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b></p> <p><a href="https://youtu.be/8b0G9A5xl-4">https://youtu.be/8b0G9A5xl-4</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p> <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'y'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. List two points which prove that humans are inefficient as compared to robots?</li> <li>2. Who is more prone to fatal accidents?</li> </ol>

<p>Exposition of antonyms-</p> <p>Repeated reading</p> <p>Explanation by the teacher</p>	<p><b>Vocabulary Development</b></p> <p>The teacher will show the flash cards to the students that have written some words and their antonyms (Foolish-wise; friend-enemy; healthy-unhealthy; inferior-superior; brave-cowardly). <b>(Visual)</b> The teacher will explain the meaning of these words by saying that these words have opposite meaning to each other and they are called antonym. <b>(Auditory)</b>The students will see the words on the flash cards and says the words while underlining it with her finger. <b>(Tactile)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p> <p>Teacher will explain that T-59 told R-62 that humans are inefficient as compared to robots. They are more prone to accidents, irreparable when broken and make fatal mistakes. They operate only for half day and their construction breaks after 100 years. They have low capacity memory and a machinery with no real physical force and no radio communication. They don't perform routine actions for a long time and need to learn things which takes a long time and thus they are less effective</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. What is the opinion of T-59 about human machinery?</li> <li>2. Who is more effective- robot or human?</li> <li>3. Who is not able to</li> </ol>
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	than robots.	perform routine action for a long time?
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Phonological awareness / phonics		
letter 'y'	<p>y yak yarn yogurt</p>  <p>The teacher will show the flash cards to the students that have written the letters 'y' and some words start with the letter 'y' (yak, yarn, yogurt). <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'y'. For example-yellow, young. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/y/). They feel the sand moving to form the letter 'y'. <b>(Tactile)</b></p>  <p>After that the students will be given worksheet and asked to colour the letter 'y' in the worksheet <b>(Kinesthetic)</b>.</p>  <p>Sit down and stand up-The teacher will say that rhyming words are the words that end in the same sound. Then teacher will say some pairs of words one by one and ask the students to stand up if the words rhyme, and sit down if the words don't rhyme.</p> <ol style="list-style-type: none"> <li>1. yet, jet</li> <li>2. year, near</li> <li>3. you, flu</li> <li>4. year, yards</li> <li>5. yell, year</li> </ol>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a colour starts with the letter 'y'?</li> <li>2. What are the rhyming words of you?</li> </ol>

<p><b>Recapitulation</b></p> <p>At the end of the lesson, pupil teacher will say that today we have learnt about the fifth part of story "The</p>
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curious robot". Teacher will ask the students to answer the following questions-

1. List two points which prove that humans are inefficient as compared to robots?
2. Who is more prone to fatal accidents?
3. What is the opinion of T-59 about human machinery?
4. Who is more effective- robot or human?
5. Who is not able to perform routine action for a long time?

### **Home Work**

1. Write the name of ten persons starts with the letter 'y'.
2. Write the name of five things in your home starts with the letter 'y'.
3. Fill in the blanks-  
Actually humans often have .....and cannot be ..... when they get....., and they can make ....mistakes.

## MULTI-SENSORY INSTRUCTIONAL PLAN-26

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-6

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'z'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “The curious robot”
- ✓ Flash cards showing the difficult words and the letter 'z' and words start with the letter 'z'
- ✓ Picture of ‘The curious robot’
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'z'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.


**Assumed Previous Knowledge-**

The students might have some knowledge of the fifth part of ‘The curious robot’. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the fifth part of ‘The curious robot’ ask to tell something about it.(Visual)</p>  <p>The teacher will play an audio clip of the sixth part of ‘The curious robot’. (Auditory)</p> <p>Well Students! Today we shall learn about the ‘The curious robot’.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. T-59 was whispering to whom?</li> <li>2. What are T-59 and R-62 talking about?</li> <li>3. What two things are T-59 and R-62 contrasting between?</li> <li>4. After how many years does human construction break?</li> <li>5. What did T-59 says about the human memory bank?</li> </ol>

Teaching Points	Teaching-learning activities	Evaluation
<p>Then suddenly--- -----away quickly.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b></p> <p><a href="https://youtu.be/ulWqQ3dBO6I">https://youtu.be/ulWqQ3dBO6I</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'z'.<b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally. Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Why was the human annoyed for not being called 'sir'?</li> <li>2. What do robot exist for?</li> </ol>

<p>Exposition of difficult words-</p> <p>Mandatory, Annoyed Constructed</p>	<p><b>Vocabulary Development</b> <b>Read it, build it, write it Exercise –</b></p>  <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled "Read It", "Build It", and "Write It". On "Read it" box some difficult words (Mandatory, Annoyed, Constructed) already written. <b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the "Read It" box. <b>(Auditory)</b>.</p> <p>With the teacher's help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the "Build It" box. Once they have successfully built the word, the student writes it in the "Write It" box.<b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that mandatory means that you must do, obey</p>	
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<p>Repeated reading</p> <p>Explanation by the teacher</p>	<p>etc. E.g. Helmets are mandatory for motorcyclists. Annoyed means feeling angry. E.g. The man looked annoyed.</p> <p>Constructed means to build or make something. E.g. A railroad was constructed in this town.</p> <p><b>(Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p> <p>Teacher will explain that R-62 curiously asked some question to human. The human agreed but annoyed for not being called sir. R-62 asked human that every robot is constructed, programmed and exists for a specific purposes but for what purpose do human exist? It was followed by silence as the humans was unable to answer it and the human told that he is not obliged to answer robot’s questions. He left in his car and quickly went away.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. About which two specific things was R-62 asking question to humans?</li> <li>2. Why was the question by R-62 followed by silence?</li> <li>3. What did the human say after being asked the question?</li> </ol>
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Phonological awareness / phonics		
<p>letter ‘z’</p>	<div> </div> <p>The teacher will show the flash cards to the students that have written the letters ‘z’ and some words start with the letter ‘z’ (zip, zoo, zebra).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with ‘z’. For example-zero, zoom, zone. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/z).They feel the sand moving to form the letter ‘z’. <b>(Tactile)</b></p> <div> </div> <p>After that the students will be given worksheet and asked to colour the letter ‘z’</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of an animal starts with the letter ‘z’?</li> <li>2. What are the rhyming words of zoom and zip?</li> </ol>





**Thumbs up and down-**The teacher will say some pairs of words one by one and ask the students to repeat the words (**Auditory**)and use a thumbs up to show him when the words rhyme, and a thumbs down to show him when the words do not rhyme

**(Kinesthetic)**

1. Zero, hero
2. Zip, dip
3. zoom, zebra
4. Zoo, zebra
5. Zit, sit



### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the sixth part of the story “The curious robot”.Teacher will ask the students to answer the following questions-

1. Why was the human annoyed for not being called ‘sir’?
2. What do robot exist for?
3. About which two specific things was R-62 asking question to humans?
4. Why was the question by R-62 followed by silence?
5. What did the human say after being asked the question?

### Home Work

1. Write the name of ten persons starts with the letter ‘z’.
2. Write the name of five things in your home starts with the letter ‘z’.
3. Fill in the blanks-

Then suddenly, ..... after the questions from the .....were answered, .....said loudly: ‘I have some questions for you, .....’.

## MULTI-SENSORY INSTRUCTIONAL PLAN-27

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-7  
 Minutes

Class- VI  
 Date-  
 Duration- 40

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letters 'b' and 'd'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "The curious robot"
- ✓ Flash cards showing the difficult words and the letters 'b' and 'd' and words start with the letter 'b' and 'd'
- ✓ Picture of 'The curious robot'
- ✓ Worksheet of letter 'b' and 'd'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**

The students might have some knowledge of the sixth part of 'The curious robot'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1. Introduction of the lesson	1. The teacher will show a picture of the sixth part of 'The curious robot' ask to tell something about it. <b>(Visual)</b>  The teacher will play an audio clip of the seventh part of 'The curious robot'. <b>(Auditory)</b>  Well Students! Today we shall learn about the 'The curious robot'.	Teacher will ask the students to answer the following questions- 1. To whom was R-62 asking question? 2. Why was the human annoyed? 3. What was the question that R-62 asked to humans? 4. What was followed by the question?
Teaching Points	Teaching-learning activities	Evaluation
You see, it----- --answered R-62	Teacher will show a video to the students and ask them to watch it carefully.	

<p>promptly.</p> <p>Loud reading</p>	<p><b>(Visual)</b></p> <p><a href="https://youtu.be/P2pd8eoEFqE">https://youtu.be/P2pd8eoEFqE</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one.</p> <p><b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'b' and 'd'. <b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Who was not able to answer R-62 question?</li> <li>2. Which species is R-62 calling dangerous?</li> </ol>
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<p>Exposition of synonyms-</p> <p>Repeated reading</p>	<p><b>Vocabulary Development</b></p> <p>The teacher will conduct the quiz on synonyms. The students will be asked to select only the right answer from the given options.</p> <ol style="list-style-type: none"> <li>1. What is the synonym for fire? a. water b. flame c. Blaze</li> <li>2. What is the synonym for start? a. end b. begin c. after</li> <li>3. What is the synonym for pretty? a. lovely b. ugly c. bad</li> <li>4. What is the synonym for loyal? a. royal b. faithful c. good</li> <li>5. What is the synonym for lazy? a. idle b. ideal c. idea</li> </ol> <p>The teacher will ask students repeat these words and their synonyms to write the words and their synonym with different marker in their notebook. <b>(visual)</b> The students will be asked to spells out the letters, and then reads the words again while tapping them on his arm. <b>(kinesthetic)</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Why did R-62 feel that humans were not superior to them?</li> <li>2. Why did R-62 think</li> </ol>
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Explanation by the teacher	<p>The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p> <p>Teacher will explain that R-62 told T-59 that it is stupid to think that human are superior to them. He just proved it being the case i.e. that human was not able to answer his only question for the purpose of its existence. R-62 told that human species is dangerous that can't be controlled. The earth would be much safer without them. Then T-59 asked that for which reason would you exist without humans . R-62 was surprised and asked 'to repair cars'. T-59 asked that for whom will he do that .R-62 told that for the transport robots to drive them.</p>	<p>the condition of the earth would be if there was no human?</p> <p>3. What did T-59 question R-62? When he told that they will repair car?</p>
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Phonological awareness and phonics		
letter 'b' and 'd'	<div> </div> <div> </div> <p>The teacher will show the flash cards to the students that have written the letters 'b' and 'd' and some words start with the letter 'b' (bat, boy, bag) and 'd' (dog, duck, deer). <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'b' and 'd'. For example-bag, ball, doll, dam. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on sand, while verbalizing the letter name and sound (/b/) (/d/). They feel the sand moving to form the letter 'b' and 'd'. <b>(Tactile)</b></p> <div> </div> <p>After that the students will be given worksheet and asked to colour the letter 'b' and 'd' in the worksheet <b>(Kinesthetic)</b>.</p> <div> </div> <p>Identify the rhyming words- The teacher will say some words and ask the students to identify the rhyming words.</p> <p>1. big, dig</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'b' and 'd'?</li> <li>2. What are the rhyming words of bat, boy, doll dear?</li> </ol>

	2.doll,ball 3.dam,bus 4. deer, dug 5.bad, dad	
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### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the seventh part of the story “The curious robot”. Teacher will ask the students to answer the following questions-

1. Who was not able to answer R-62 question?
2. Which species is R-62 calling dangerous?
3. Why did R-62 feel that humans were not superior to them?
4. Why did R-62 think the condition of the earth would be if there was no human?
5. What did T-59 question R-62? When he told that they will repair car?

### **Home Work**

1. Write the name of ten persons starts with the letter ‘b’ and ‘d’.
2. Write the name of five things in your home starts with the letter ‘b’ and ‘d’.
3. Fill in the blanks-  
‘You see, it is ..... I think you are..... They cannot possibly be ..... to us..... I have just proved it being the case.

## MULTI-SENSORY INSTRUCTIONAL PLAN-28

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-8

Class- VI  
 Date-  
 Duration- 40 Minutes

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'p' and 'q'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story “ The curious robot”
- ✓ Flash cards showing the difficult words and the letter 'p' and 'q' and words start with the letter 'p' and 'q'
- ✓ Picture of 'The curious robot'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. “Read it”, “Build it” and “Write it”
- ✓ Worksheet of letter 'p' and 'q'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.


**Assumed Previous Knowledge-**

The students might have some knowledge of the seventh part of 'The curious robot'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

<b>Text Comprehension, Fluency and Vocabulary Development</b>		
Teaching points	Teaching-learning activities	Evaluation
<p>1.Introduction of the lesson</p>	<p>1. The teacher will show a picture of the first part of 'The curious robot' ask to tell something about it. <b>(Visual)</b></p>  <p>The teacher will play an audio clip of the eight part of 'The curious robot'. <b>(Auditory)</b></p> <p>Well Students! Today we shall learn about the 'The curious robot'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Who was of the opinion that human are not superior to humans?</li> <li>2. About which case R-62 is talking about?</li> <li>3. 'For which reason would you exist without the human' who said these words to whom?</li> <li>4. What was the answer given by R-62 to the question by T-59?</li> <li>5. What was R-62 answer to T-59 question about the repairing of cars?</li> </ol>

Teaching Points	Teaching-learning activities	Evaluation
<p>For what----- said T-59.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully.  <b>(Visual)</b>  <a href="https://youtu.be/O1TzzetggGo">https://youtu.be/O1TzzetggGo</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one.  <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'm' and 'p' and 'q'.<b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.  Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. 'For what purpose will transport robot drive good for'? Who asked this question to whom?</li> <li>2. Why was R-62 surprised at his own words?</li> </ol>

<p>Exposition of difficult words- Contracting, Established, Destroying</p>	<p><b>Vocabulary Development</b>  <b>Read it, build it, write it Exercise -</b></p>  <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled “Read It”, “Build It”, and “Write It”. On “Read it” box some difficult words (Contracting, Established, Destroying) already written. <b>(Visual)</b>  The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b>  The students and the teacher will read the word that is in the “Read It” box. <b>(Auditory)</b>.  With the teacher’s help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the “Build It” box. Once they have successfully built the word, the student writes it in the “Write It” box.<b>(Kinesthetic)</b>  The teacher will explain the meaning of the words by saying that Contracting means to make something smaller. E.g. The muscles in her legs were contracting</p>	
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<p>Repeated Reading</p> <p>Explanation by the teacher</p>	<p>painfully</p> <p>Established means to start or create. E.g. Facts can be established by observation and experiment.</p> <p>Destroying means damage something. E.g. He was serious about destroying the mortal world. <b>(Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p> <p>Teacher will explain that t-59 asked r-62 for what purpose will transport robot drive cars. R-62 replied that they will transport good for the buildings. T-59 immediately asked for what will they transport goods to. R-62 answered that the transport robots will deliver to the humans. Thus, he got surprised at his own answer in the end. T-59 explained to r-62 that the robot exist because of the human, as they created them and control them with their order. He further told that robot exist to support humans so that they can expand, survive and multiply. Thus, they are more superior and robots can't perform action like them. T-59 said that there are less than 1000 humans on the planet and they are still decreasing in numbers as they are destroying themselves for reason unknown to robots. At the end t-59 says that before the robots were established, there were more humans than there are robots now i.e. more than 20 billions of them.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Why are humans decreasing in numbers?</li> <li>2. Why do robots serve humans?</li> <li>3. Who said that robots can't perform all actions like humans?</li> </ol>
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Phonological awareness / phonics		
<p>letter 'p' and 'q'</p>	<p><b>p pen pot pig</b></p> <p><b>q queen quack quilt</b></p> <p>The teacher will show the flash cards to the students that have written the letters 'p' and 'q' and some words start with the letter 'p' (pot, pen, pig) and the letter 'q' (queen, quack, quilt).<b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with 'p' and 'q'. For example- pen, pot, quick, quilt. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colour, while verbalizing the letter name and sound (/p/) and (/q/).They feel the rangoli colour moving to form the letter 'p'and 'q'. <b>(Tactile)</b></p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'p' and 'q'?</li> <li>2. What are the rhyming words of pen, pot, quick, quilt?</li> </ol>





After that the students will be given worksheet and asked to colour the letter 'p' and 'q' in the worksheet (**Kinesthetic**).



Sit down and stand up- Then teacher will say some pairs of words one by one and ask the students to stand up if the words rhyme, and sit down if the words don't rhyme.

1. Quick, tick
2. Quack, crack
3. Quilt, build
4. Queen, king
5. Pen, mop
6. Peer, beer
7. Pair, pain
8. Pain, gain

#### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the eighth part of the story "The curious robot". Teacher will ask the students to answer the following questions-

1. 'For what purpose will transport robot drive good for'? Who asked this question to whom?
2. Why was R-62 surprised at his own words?
3. Why are humans decreasing in numbers?
4. Why do robots serve humans?
5. Who said that robots can't perform all actions like humans?

#### **Home Work**

1. Write the name of ten persons starts with the letters 'p' and 'q'.
2. Write the name of five things in your home starts with the letters 'p' and 'q'.
3. Fill in the blank-  
The robots exist because of the ....., as they created us, and .....cannot control us with their orders.  
We exist to .....the ..... so that they can expand, ....., and be more.

## MULTI-SENSORY INSTRUCTIONAL PLAN-29

Name of the Teacher -

Class- VI

Subject- English

Date-

Topic- The curious robot -9  
Minutes

Duration- 40

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'm' and 'w'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "The curious robot"
- ✓ Flash cards showing the difficult words and the letter 'm' 'w' and words start with the letter 'm' and 'w'
- ✓ Picture of 'The curious robot'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"
- ✓ Worksheet of letter 'm' and 'w'


**Motivational Act-**

Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.

**Assumed Previous Knowledge-**


The students might have some knowledge of the eighth part of 'The curious robot'. The students are familiar with the alphabets.

**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the eighth part of 'The curious robot' ask to tell something about it.(Visual)</p>  <p>The teacher will play an audio clip of the ninth part of 'The curious robot'. (Auditory)</p> <p>Well Students! Today we shall learn about the 'The curious robot'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. What was t-59 asked to r-62?</li> <li>2. What did r-62 think that why transport robots drive cars?</li> <li>3. Who created robots and order them?</li> <li>4. What purpose do robot exists?</li> <li>5. What was the final answer given by r-62 in</li> </ol>



<p>Repeated reading</p> <p>Explanation by the teacher</p>	<p>have successfully built the word, the student writes it in the “Write It” box. <b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that Supposed means think or pretend. E.g. They are supposed to arrive tomorrow. Expand means to make something bigger. E.g. A deer will not expend energy for any purpose. Replace means Exchange. E.g. No one will replace me. <b>(Auditory)</b></p> <p>The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words. <b>(Kinesthetic)</b></p> <p>The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p> <p>Teacher will explain that R-62 asked- ‘why did they restart to replace themselves with robots?’ Then T-59 answered, ‘because they thought robots were superior to humans and they did not need so many humans.’ R-62 said- so stupid! The solution is to take away the robots or at least make them stop doing work which humans are supposed to do. The human find it necessary to expand in numbers and don’t die out.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. What was the solution given by R-62?</li> <li>2. Who was replacing robots on the planet?</li> <li>3. Why did human replace robots?</li> <li>4. What was much better in opinions of R-62?</li> </ol>
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Phonological awareness / phonics		
<p>letter ‘m’ and ‘w’</p>	<p><b>m</b> mug <b>mat</b> moon</p> <p><b>W</b> wet <b>white</b> <b>walk</b></p> <p>The teacher will show the flash cards to the students that have written the letters ‘m’ and ‘w’ and some words start with the letter ‘m’ (mug, mat, moon) and the letter ‘w’ (wet, white, walk). <b>(Visual)</b></p> <p>The teacher will ask the students to recognize the letter and the words written on the flash cards.</p> <p>The students will read the letter and words. The teacher calls out some words start with ‘m’ and ‘w’. For example- Map, Mad, what, why. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colour, while verbalizing the letter name and sound (/m/) and (/w/). They feel the rangoli colour moving to form the letter ‘m’ and ‘w’. <b>(Tactile)</b></p> <div>  </div> <p>After that the students will be given worksheet and asked</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter ‘m’ and ‘w’?</li> <li>2. What are the rhyming words of man , make and wet?</li> </ol>

to colour the letter 'm' and 'w' in the worksheet  
**(Kinesthetic).**



Clap and jump- The teacher will say some pairs of words one by one. Then the teacher will ask the students to repeat the words and clap and jump if they hear the rhyming words.

1. white, kite
2. walk, run
3. walk, talk
4. Mad, man
5. mug, map

#### **Recapitulation**

At the end of the lesson, pupil teacher will say that today we have learnt about the ninth part of the story "The curious robot". Teacher will ask the students to answer the following questions-

1. What did T-59 answer to the first question asked by R-62?
2. What did R-62 find stupid in humans?
3. What was the solution given by R-62?
4. Who was replacing robots on the planet?
5. Why did humans replace robots?
6. What was much better in opinions of R-62?

#### **Home Work**

1. Write the name of ten persons that start with the letter 'm' and 'w'.
2. Write the name of five things in your home that start with the letter 'm' and 'w'.
3. Fill in the blanks-  
'But that was much better! Why did they then start to ..... themselves with .....?' asked.....  
'Because they thought ..... were robots were superior to ..... and that they did not need so many .....,'  
answered T-59.

## MULTI-SENSORY INSTRUCTIONAL PLAN-30

Name of the Teacher -  
 Subject- English  
 Topic- The curious robot-10

Class- VI  
 Date-  
 Duration- 40 Minutes.

**Behavioral Objectives-** After the completion of the lesson, the students will be able to-

1. Read the prose with proper pronunciation and voice modulation.
2. Recall the main character of the story.
3. Understand the meaning of difficult words.
4. Explain the meaning of the passage.
5. Identify the letter 'n' and 'u'.
6. Form sentences using difficult words from the passage.
7. Build the words with the help of plastic letters.

**Required Teaching -Learning Material-**

- ✓ Animated Video showing the story "The curious robot"
- ✓ Flash cards showing the difficult words and the letter 'n' and 'u' and words start with the letter 'n' and 'u'
- ✓ Picture of 'The curious robot'
- ✓ Sand trays, Plastic letters, Paper sheets with three boxes labeled on it i.e. "Read it", "Build it" and "Write it"
- ✓ Worksheet of letter 'n' and 'u'


**Motivational Act-**



Brain gym exercise (Deep Breathing) - The Students will scrunch their toes and cross their ankles. Reach the arms forward with palms pressed together. Bring the hands to the chest. Take five deep breaths, holding that pose for about 30 seconds.


**Assumed Previous Knowledge-**

The students might have some knowledge of the first part of 'The curious robot'. The students are familiar with the alphabets.


**Presentation by using VAKT (Visual, Auditory, Kinesthetic, Tactile)**

Text Comprehension, Fluency and Vocabulary Development		
Teaching points	Teaching-learning activities	Evaluation
1.Introduction of the lesson	<p>1. The teacher will show a picture of the ninth part of 'The curious robot' ask to tell something about it.(Visual)</p>  <p>The teacher will play an audio clip of the tenth part of 'The curious robot'. (Auditory)</p> <p>Well Students! Today we shall learn about the 'The curious robot'.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. 'Why did they replace themselves with robots?' who are they?</li> <li>2. Who did robot replace on the planet?</li> <li>3. What are R-62 and T-59 talking about?</li> <li>4. 'Because they thought robots were superior to humans and they did not need so many humans?' Who said these words to whom?</li> <li>5. Who said, "why did they start to replace themselves?"</li> </ol>

Teaching Points	Teaching-learning activities	Evaluation
<p>Yes, we actually- ----up the circuits.</p> <p>Loud reading</p>	<p>Teacher will show a video to the students and ask them to watch it carefully. <b>(Visual)</b> <a href="https://youtu.be/DU9xww5oZx8">https://youtu.be/DU9xww5oZx8</a></p>  <p>Now Teacher will read the passage and ask some students to read aloud the passage one by one. <b>(Auditory)</b></p>  <p>Teacher will ask the students to underline difficult words and circle the words start with the letter 'n' 'u'.<b>(Kinesthetic)</b></p>	<p>Teacher will ask students to share their observations orally.</p> <p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Who is the new design?</li> <li>2. What are the only humans able to do?</li> <li>3. What was the robots work now?</li> </ol>

<p>Exposition of difficult words-</p> <p>Illegal, Curious Dangerous</p>	<p><b>Vocabulary Development</b></p> <p><b>Read it, build it, write it Exercise -</b></p>  <p>In this activity, students are given some plastic letters and a sheet of paper with three boxes on it, labelled "Read It", "Build It", and "Write It". On "Read it" box some difficult words (Illegal, Curious Dangerous) already written. <b>(Visual)</b></p> <p>The teacher will ask the students to touch the plastic letters and identify the shape of different letters. <b>(Tactile)</b></p> <p>The students and the teacher will read the word that is in the "Read It" box. <b>(Auditory)</b>.</p> <p>With the teacher's help, students can identify the word. From there, the students will use plastic letters to build the word they just read in the "Build It" box. Once they have successfully built the word, the student writes it in the "Write It" box.<b>(Kinesthetic)</b></p> <p>The teacher will explain the meaning of the words by saying that Illegal means not allowed by law. E.g. It is illegal to sell tobacco to someone under 16. Curious</p>	
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<p>Repeated reading</p> <p>Explanation by the teacher</p>	<p>means wanting to know. E.g. I am curious to know more about her. Dangerous means Cause injury or damage. E.g. Lightning can be dangerous.</p> <p><b>(Auditory)</b> The teacher will invite some students to write the difficult words on the blackboard and some other students to write the meaning of these words.<b>(Kinesthetic)</b> The students will be asked to read the same passage over and over until their reading is smooth and error –free. <b>(Auditory)</b></p> <p>Teacher will explain that t-59 told r-62 that they already know everything except him as he is a new design. He told that the thing is that it is part of the illegal action which only humans are able to do. They haven't done those things in the last 1000 years. R-62 said that humans are stupid. T-59 replied that – yes, they are stupid they cannot do anything about it and just follow human orders. Now their working is to repair a car. Thus, they should continue. After some hours R-62 thought that the earth would be much better without stupid humans. Perhaps this was in the mind of every existing robot for the last 1000 years but to voice something like that would definitely blow up the circuits.</p>	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Whom did the robots call stupid?</li> <li>2. What was in the mind of every existing robot?</li> <li>3. What would be better without humans?</li> <li>4. What would happen when robot start voicing their opinions?</li> </ol>
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<b>Phonological awareness and phonics</b>		
<p>letter 'n' and 'u'</p>	<p><b>n</b> net <b>nose</b> <b>nal</b></p> <p><b>u</b> us <b>up</b> <b>use</b></p> <p>The teacher will show the flash cards to the students that have written the letters 'n' and 'u' and some words start with the letter 'n' and 'u' (net, nose, us, up).<b>(Visual)</b> The teacher will ask the students to recognize the letter and the words written on the flash cards. The students will read the letter and words. The teacher calls out some words start with 'n' and 'u'. For example-no, net, under, ugly. The student repeats it. <b>(Auditory)</b> and then uses their fingers to write the word on rangoli colours, while verbalizing the letter name and sound (/n/) and (/u/).They feel the colours moving to form the letter 'n' and 'u'. <b>(Tactile)</b></p> 	<p>Teacher will ask the students to answer the following questions-</p> <ol style="list-style-type: none"> <li>1. Which name of a fruit starts with the letter 'n' and 'u'?</li> <li>2. What are the rhyming words of not, net and up?</li> </ol>





After that the students will be given worksheet and asked to colour the letter 'n' and 'u' in the worksheet **(Kinesthetic).**



Thumbs up and down-The teacher will say some pairs of words one by one and ask the students to repeat the words and use a thumbs up to show him when the words rhyme, and a thumbs down to show him when they do not rhyme.

1. up, cup
2. under, below
3. Urban, turban
4. Up, cup
5. Ugly, until



### Recapitulation

At the end of the lesson, pupil teacher will say that today we have learnt about the tenth part of the story "The curious robot". Teacher will ask the students to answer the following questions-

1. What was the robots work now?
2. Whom did the robots call stupid?
3. What was in the mind of every existing robot?
4. What would be better without humans?
5. What would happen when robot start voicing their opinions?

### Home Work

1. Write the name of ten persons starts with the letters 'n' and 'u'.
2. Write the name of five things in your home starts with the letters 'n' and 'u'.
3. Fill in the blanks-

After some hours, the curious ..... thought that planet earth would be much better without these dangerous stupid..... Perhaps this was in his mind of every existing ..... for the last ..... years.

<b>List of Publication</b>				
S.No.	Type of Paper (Journal Paper/Conference proceeding/Book Chapter)/Indexing/ Impact Factor/SJR	Name of the Journal/Conference/Book /published date/link	Title of the Paper	ISSN/ISBN Number/ Volume & Issue Number
1.	Journal Paper/ Scopus/ Impact factor-2.96	International Journal of Health Sciences/ 27/05/2022 <a href="https://www.scopus.com/sourceid/21101052764">https://www.scopus.com/sourceid/21101052764</a>	Mathematical modeling of school teacher's knowledge and beliefs about dyslexia	2550-6978 E-ISSN: 2550-696X 6(Special issue2
2.	International Conference Paper	ICRAIMMSTEL2021 JIMS,Engineering,management Technical campus, Greater Noida	The role of multisensory instructional approach in dealing with differences	998-81-952751-0-6 184-189
3.	National Conference paper	Emerging Trends in Teaching and learning with ICT" held at SD College Hoshiarpur PB 2020	The use of ICT to support dyslexic students	89673-70-8 8-12
4.	International Conference Paper	Futures of Education : Learning to Become 2021	Inclusive Education: A step towards realizing the dream of "Education for All"	ISBN: 978-93-82112-74-7 180