

Teaching English Vocabulary As A Second Language To Dyslexic Students:

WITH SPECIAL REFERENECE TO MULTI- SENSORY PEDAGOGY

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Abstract- The purpose of this study is to investigate the effect of using the Multi-Sensory Approach for teaching a foreign language (English) for students with Dyslexia. To achieve the purpose of the study, a pre/post-test will be constructed to measure students' achievement in English vocabulary. The test consists of twenty words in English language. It is said that the students with Dyslexia should be offered individualized learning-teaching strategies but all the students with learning disabilities are put together in the special needs unit that the researcher selected, thus even a mild improvement can be hardly seen. Through the research, the researcher intends to administer Multi-Sensory teaching pedagogy to see whether there is an improvement with the students. The sample of the study will be selected using Purposive technique. A pre-test will be administered for the students with Dyslexia and the results will be analysed. Using another set of words which belong to the same word families will be used to teach during a period of eight weeks using Multi Sensory teaching pedagogy. After that a Post-test will be administered using the same set of words used for pre – test and the results will be analysed. Several findings could be gathered after the data analysis part, an individualized teaching pedagogy should be used and Multi- Sensory teaching pedagogy proved an effective practice to teach students with Dyslexia. Activities should be created which involve two or more senses and the effectiveness of the created activities were tested.

Index Terms- Dyslexia, Multi- Sensory teaching pedagogy, foreign language, English language vocabulary

I. INTRODUCTION

International Dyslexia Association defines Dyslexia as, “Dyslexia is a language-based learning disability. Dyslexia refers to a cluster of symptoms, which result in people having difficulties with specific language skills, particularly reading. Students with dyslexia usually experience difficulties with other language skills such as spelling, writing, and pronouncing words. Dyslexia affects individuals throughout their lives; however, its impact can change at different stages in a person's life. It is referred to as a learning disability because dyslexia can make it very difficult for a student to succeed academically in the typical instructional environment,

and in its more severe forms, will qualify a student for special education, special accommodations, or extra support services”. (12th November 2002)

The research is carried out to teach English, specifically vocabulary for students with Dyslexia. This exercise will be achieved with the help of Multi-Sensory teaching practice. As Dr.Jithangi Wanigasinghe, senior Lecturer in Paediatrics, Faculty of Medicine, Colombo says that there is no medical treatment for Dyslexia, but it can be managed with early recognition and appropriate interventions. Through this research, the researcher aims to deviate from a normal way of teaching a language and to use Multi-sensory teaching practise.

Multi- sensory teaching practise is the idea that learning experienced through all the senses is helpful in reinforcing memory has a long history in pedagogy. The Department for Education and Skills (DfES) (2004) United Kingdom defines multi-sensory as: ‘using visual, auditory and kinesthetic modalities, sometimes at the same time’. Kinesthetic refers to perceiving through touch and an awareness of body movements.” Activities in Multisensory approach harness all the senses which is an excellent way to include learners with disabilities.

Thus a group of students with Dyslexia will be selected and will teach English vocabulary for a certain period of time using Multi-Sensory teaching practise and finally the effectiveness of this method will be assessed.

Furthermore through this research the Multisensory teaching practices will be used which are taught by Dr.Vincent Goetry and Dr Jenny Thomson in their course, “Supporting children with difficulties in reading and writing-University of London, UCL Institute of Education, Dyslexia International.

II. RESEARCH BACKGROUND

First of all students with mild dyslexia will be identified in the selected school. Their clinical reports will be studied in order to verify that these students have mild dyslexia. These children show variety of characteristics and they are listed below.

- 1.Children may become withdrawn and appear to be depressed.
- 2.They may begin to act out, drawing attention away from their learning difficulty.

3.Problems with self-esteem can arise, and peer and sibling interactions can become strained.

4.These children may lose their interest in school-related activities and appear to be unmotivated or lazy.

5.The emotional symptoms and signs are just as important as the academic and require equal attention.

The research will be carried out with a group of students who have Dyslexia, specifically 10 students, who receive education in a school in Central province, Sri Lanka. The students were diagnosed having Mild Dyslexia who are also suffering from

III. PROBLEM STATEMENT

Learning a second language can be a frustrating and discouraging process for any learner, and it can be especially difficult for students with disabilities. The students who are having mild dyslexia are in the special needs unit, moreover all the students are taught the same activity and the students with mild Dyslexia do not show much improvement.

Moreover the teacher is not aware of a peculiar method to teach English language to students with Dyslexia and she agreed that she had so many difficulties while teaching English vocabulary to these group of students.

Thus there are two questions here

1.How to teach English vocabulary to the students with Dyslexia?

2.What are the effective ways of teaching English vocabulary for the students with Dyslexia?

To answer those two questions, the researcher will be introducing then Multi-Sensory teaching practice and the effectiveness of the practice will be assessed.

The core of the problem is that the students are not taught using individualized learning-teaching strategies. There are students who are suffering from Autism, Dysgraphia, Dyslexia, ADHD (Attention Deficit Hyperactivity Disorder) and Dyscalculia at the very Special Needs Unit but they are taught the same activity during their stay at the Unit. So through this research it is aimed to teach English vocabulary using Multi-Sensory teaching pedagogy.

IV. LITERATURE REVIEW

A. DYSLEXIA

Many have defined what Dyslexia is and there are many arguments going on regarding the lack of commonly accepted definition of the disability and there are many theories regarding the origin, causes and symptoms of Dyslexia.

The following one is recommended by the World Federation of Neurology in 1968:

“Specific developmental dyslexia is a disorder manifested by difficulty in learning to read and write despite conventional instruction, adequate intelligence, and socio-cultural opportunity. It depends on fundamental cognitive disabilities

conditions like Mental retardation, Dysgraphia, Autism and ADHD. The students are following medical treatments at Peradeniya Hospital and Kandy Hospital.

The selected group of students are in the age group of 7-9, 10-12, 13-15. They are given speech therapy at the Special Needs Unit. Moreover the students are being assessed on and often to check their improvements by the teacher of the Special Needs Unit.

The parents of these students encourage the students and give maximum support to carry out the speech therapy.

that are frequently constitutional in origin”. (¹Nijakowska, 2010:6)

Dyslexia has a Greek etymology which means faulty or impaired (dys-) speech (lexis, from legein). The word was first used by ophthalmologist Berlin in 1872(²Guardiola, 2001; ³Wagner, 1973), who used this term referring to reading disorders that are brought about by cerebral dysfunctions, which is known as acquired dyslexia.

As Medicine Net says “Dyslexia can go undetected in the early grades of schooling. Children can become frustrated by the difficulty in learning to read. It is important to note that other problems can disguise dyslexia such as a child may: (1996-2018 ⁴MedicineNet)

- Show signs of depression and low self-esteem
- Have behavior problems at home, as well as at school that often manifest
- Become unmotivated and develop a dislike for school, and their success may be jeopardized if the problem remains untreated

“When talking about dyslexia it is right to stress this distinction: disorders can be acquired or developmental. Acquired disorders stem from brain injury or disease and refer to a total or partial loss of reading and spelling abilities that a given person already possessed. (Nijakowska, 2010; Zappaterra, 2010).”

“On the contrary, developmental disorders are diagnosed in individuals who have not yet learnt to read: indeed, they entail difficulties in written language acquisition process. These disorders are not caused by brain injury.

Among developmental disorders, dyslexia is one of the most studied issues; however, unfortunately, there is no unanimous agreement as to the understanding of the phenomenon and its symptoms, as well as a widely accepted definition. The terms dyslexia, dysgraphia or dysorthography can vary their meanings due to criteria, scholars and states.”

B. SYMPTOMS OF DYSLEXIA

Dr.Jithangi Wanigasinghe, Senior Lecturer in Paediatrics, Faculty of Medicine, Colombo speaking to Daily Mirror (15/12/2017) said that “There are no studies in Sri Lanka estimating the burden created by the disease. However she further explained that there is no medical treatment for Dyslexia,

but it can be managed with early recognition and appropriate interventions” The management of the condition includes evaluation and working out individualized teaching –learning strategies for the child with the help of teacher.

International Dyslexia Association states that the earlier a child is evaluated, the sooner he or she can obtain the appropriate instruction and accommodations he or she needs to succeed in school.

“General problems experienced by people with dyslexia include the following:

- 1.Learning to speak
- 2.Learning letters and their sounds
- 3.Organizing written and spoken language
- 4.Memorizing number facts
- 5.Reading quickly enough to comprehend
- 6.Keeping up with and comprehending longer reading assignments
- 7.Spelling
- 8.Learning a foreign language
- 9.Correctly doing math operations
- 10.Difficulty with remembering simple sequences such as counting to 20, naming the days of the week, or reciting the alphabet

“An individual can have more than one learning or behavioural disability. For example, in various studies as many as 30% of those diagnosed with a learning difference have also been diagnosed with ADHD.”

Auditory problems in dyslexia encompass a variety of functions.

- Commonly, a child may have difficulty remembering or understanding what he hears.
- Recalling sequences of things or more than one command at a time can be difficult.
- Parts of words or parts of whole sentences may be missed, and words can come out sounding funny.
- The wrong word or a similar word may be used instead.
- Children struggling with this problem may know what they want to say but have trouble finding the actual words to express their thoughts.

Many subtle signs can be observed in children with dyslexia.

C. HOW DYSLEXIA IMPACTS LEARNING A SECOND LANGUAGE

“The 2000 study by Simon also discusses at length the specific challenges encountered by the author as a student with Dyslexia while studying French as a second language, while providing specific examples (pp.169-179). This highlights ample instances where dyslexia has complicated learning and where the instructor should take special care to teach.”

There are many complexities that a child will encounter when s/he attempts to learn a foreign language. “ Simon (2000) lists the following, : Difficulty making sound/symbol connections, remembering and applying spelling and grammar rules, and drawing on phonological working memory to repeat words and phrase (p.168).” she further mentioned that the students cannot simultaneously listen for key words to help with comprehension while also analysing language structure.

Dyslexia is a difficult disorder to diagnose. There are many factors the psychologist or other health professional reviews to

diagnose the disability. The testing determines the child's functional reading level and compares it to reading potential, which is evaluated by an intelligence test.

The testing further assesses how a child takes in and processes information and what the child does with the information. The tests determine whether a child learns better by

- hearing information (auditory),
- looking at information (visual), or
- doing something (kinesthetic).

There are various skill areas that may be affected when a learning disability is present. A student with a learning disability may experience difficulty in one or more of the areas outlined in Figure 4.1. When a dyslexic student is learning a foreign language the teacher should concern or should pay attention to these skill areas and s/he should treat the areas.

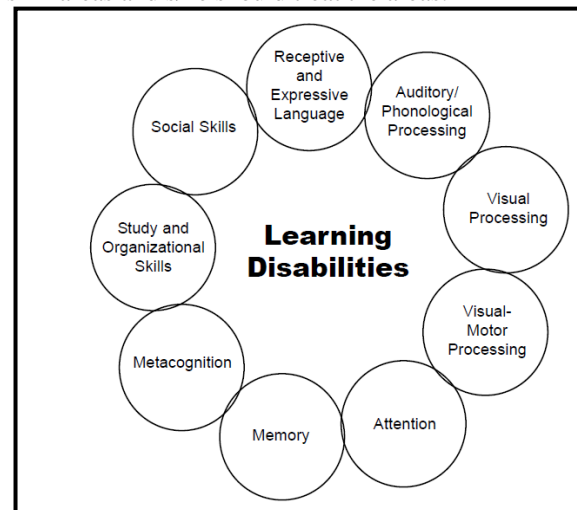


Figure 4:1 Impact of Dyslexia

Source: Teaching students with reading difficulties and disabilities

D. TEACHER STRATEGIES TO SUPPORT STUDENTS WITH DYSLEXIA

- Multi-Sensory Teaching Pedagogy

Orton-Gillingham method: a multisensory, structured language approach teaches phonology directly and explicitly. “The OG (Orton Gillingham) method is a highly structured step by-step approach that endorses teaching small morsels of material at a time and presenting that material in a Multi-sensory format (p.106). The “multisensory” approach translates into having the student’s auditory, visual, and kinaesthetic –AVK – (Auditory, visual and kinaesthetic) pathways engaged simultaneously; thus, the student is hearing, seeing, and manipulating the language at the same time. In this way, the AVK method is providing additional forms of input, allowing the student to compensate for deficiencies (p.107).”

This can be further explained through an example this method can be utilised to teach the Dyslexic students because the students are offered the materials visually, kinaesthetically and auditory information at the same time.

Researches have proved that students under normal condition can follow any one of the three distinctive learning styles. They are auditory, visual and tactile. Each individual is unique and each can follow a learning style which suits his or her learning

capabilities. This can be largely depend on the learning style preference one choose while learning something. "Research has also shown that elementary school children learn best in a tactile/kinesthetic style. When students can manipulate and experience conceptual information through activities, only then, will they learn and retain information more readily. Although this type of learning style is used throughout life, it becomes less dominant as the visual and auditory modalities develop." Although normal children choose one learning style it will not be the same with the Dyslexic students since they are encountering difficulties making sound/symbol connections, remembering and applying spelling and grammar rules, and drawing on phonological working memory to repeat words and phrase.

Thus Multi-sensory teaching practice supports this study. A recent research about the effectiveness of Multi-Sensory teaching practice was done by Dev, Doyle, and Valente (2002). They used the Orton-Gillingham technique (Institute for Multi-sensory education, 2000), which involves visual, auditory, and kinesthetic modalities, with first grade children at the special education level. These children improved enough in their reading abilities to advance them out of the special education level. The maintenance of the gains that they achieved with the use of the multi-sensory approach was evaluated after a two year period. None of the children had returned to special education classes (Dev et al., 2002).

From the earliest teaching guides, educators have embraced a range of multi-sensory techniques in order to make learning richer and more motivating for learners. The term is used to refer to any learning activity that combines two or more sensory strategies to take in or express information. "Multi-sensory approaches have been particularly valuable in literacy and language learning, for example, in relationships between sound and symbol, word recognition, and the use of tactile methods such as tracing on rough or soft surfaces.

V. RESEARCH METHODOLOGY

The researcher hopes to utilize quantitative and qualitative research methodology to conduct this research.

This will be done using Kinesthetic, visual, auditory and taste activities.

Simply put, multi-sensory teaching is teaching that is done in such a manner that it appeals to the five senses. Instead of just telling someone about an avocado, we let them touch it, smell it, taste it, etc. The concept was borne out of Dr. Samuel Orton and Dr. Anna Gillingham's work with special needs students in the 1930's. This teaching method is now known as the Orton-Gillingham method or multi-sensory teaching.

"The benefits of involving more than one sense during instruction is not limited to those with pronounced learning disabilities. Multi-sensory teaching is effective for all learners."

Four types of activities will be used and they are illustrated below.

5.1 Kinesthetic activities

Kinesthetic {also known as tactile} is a way to get your child moving and doing; using his body in some form or fashion as he learns to read.

5.1.1 Sandpaper letters

The student will be provided with a sheet with a letter printed on it . As an example if the word is "CAT" the student will be provided three sheets with the letters "C" , "A" and "T" printed on them. The student will be provided with rose petals and a glue so that the student can stick the petals on the letters and later on s/he can combine the letters and make the word "CAT" as in figure 5.2.



Figure 5.2 Sandpaper letters

5.2 Auditory activities

Auditory perception refers to the ability of the brain to interpret and create a clear impression of sounds. Good auditory skills enable children to distinguish between different pitches, volumes, rhythms and sources of sounds and words, which has amongst others, significant benefits for learning reading.

5.2.1 Picture game

Four pictures will be placed as in figure 5.3 and the trainer will read out the names of the pictures so that the student will have to use his or her finger to point the picture. While reading out the words the trainer will have to emphasize the beginning sounds like this: /b/-/b/ banana, /b/-/b/ bed, /b/-/b/ ball, /kw/-/kw/ quilt.



Figure 5.3 Picture game

5.3 Visual activities

Students with a visual learning style learn best by seeing – for example, they are likely to understand something best when it is explained using a diagram, film, picture or chart.

Alternatively, if there isn't something physical to view, then visualizing the information in their mind helps them to remember it.

5.3.1 Label your house

The trainer can ask the students to draw a house with a cat, bat, dog, hat, pot and a sun in the upper corner or else the student will be provided with a picture as in figure 5.4 . Then the trainer will give labels indicating “dog”, “cat”, “house” to the student. The student will be asked to stick the labels beside the pictures.



Figure 5.4 Label your house

5.4 Tasty and smelly activities/ olfactory activities

Our sense of smell may be the most undervalued of our five basic senses. Nonetheless, the ability to smell is important, as it is closely linked to our ability to taste. Smells can also evoke particularly memories, and smells can calm or to excite us.

5.4.1 Eat your word

The student will be provided biscuits and on each biscuit the letters will be drawn by butter icing and chocolate icing .The student will be asked to arrange the letters and to make a word as in figure 5.5. The same set of words used in above activities will be used for this activity so that the student will keep on remembering the set of words. Once they make a word by joining letters, they can eat their word.



Figure 5.5 Eat your word

VI. POPULATION,SAMPLE AND SAMPLING

The research will be carried out to assess the use of Multi-Sensory teaching pedagogy in teaching a foreign language (English) for Dyslexic students. Thus the target audience consist of 10 Dyslexic students.

Purposive technique will be used to select 10 Dyslexic students because the researcher has to select only the students with Dyslexia among the other students with different learning disabilities. Since the research is based on Dyslexic students,

only the students with Dyslexia will be selected.

VII. DATA PRESENTATIONA AND ANALYSIS

A. Gender of the students

The question No: 01 was asked in order to get a general idea about the gender of the participants. Since the group of students consists of male and female students, the pie chart below will illustrate the percentage accurately.

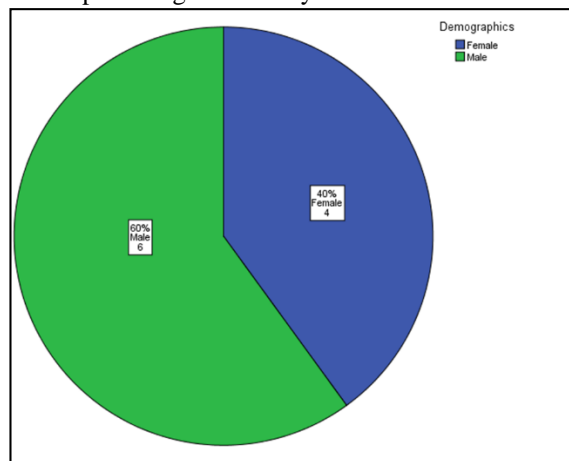


Figure 7:1 Gender of the students

B. Age of the students

The question No:2 was asked in order to get a clear idea about the age range of the dyslexic students so that it is easy to understand the level of the students as well as it is easy to create activities which will suit for their age. If there is a vast range between the ends then the same activity will not be suitable for the set of students.

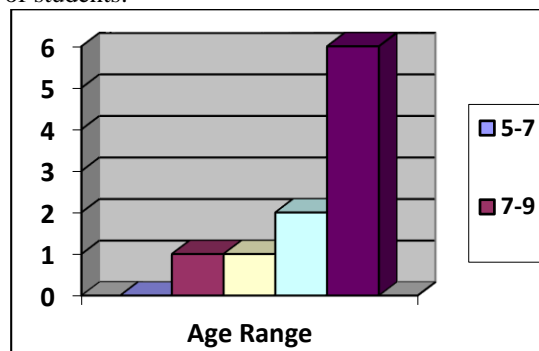


Chart 7-1 Age of the students

C. Multi-sensory Teaching pedagogy

Question numbers 3 and 4 were asked from section C to test Multi- sensory teaching pedagogy in the classroom.

- 1) How often do you use these type of language during the classroom? (Time- 3 Hours)
 - I. Verbal language
 - II. Visual language
 - III. Motor language
 - IV. Gesture language
- 2) How often do you use the following accommodations when teaching the second language to Dyslexic learners?

(Time – 01 Hour)

- I. Kinaesthetic activities
- II. Tactile activities
- III. Images
- IV. Multimedia

Using verbal, visual, motor and gesture language during classes

The question No: 3 was asked from the teacher in order to see whether the teacher uses verbal, visual, motor and gesture language when teaching to Dyslexic students. It is said that unlike normal students, the Dyslexic students easily get distracted from what they learn and learning a language is bit of a burden so using the above mentioned languages will ease the burden.

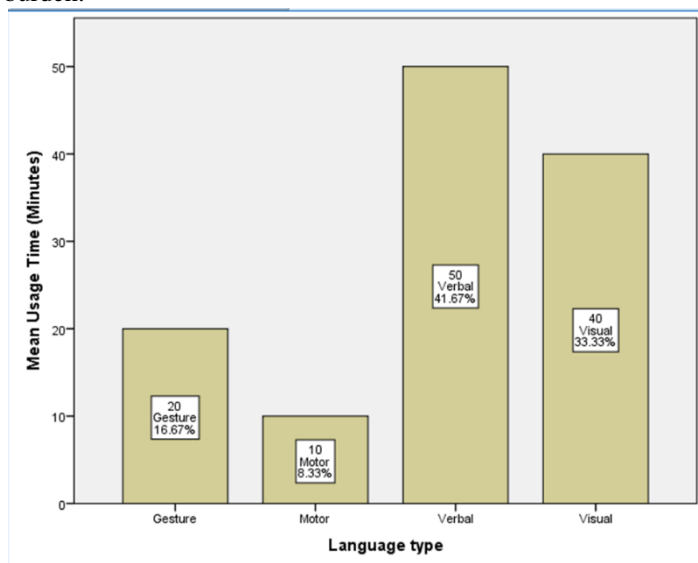


Chart 7. 2 Types of language used in the class room

Quantitative analysis

As Chart 7.2 indicates, the teacher has used gestures in the class room when teaching the dyslexic students but it is a 16.67% of the total and a very little percentage of motor language has used. Only a 8.3% was used as motor language during teaching. Nevertheless the teacher has used verbal language most of the time and it represents a 41.67% of the total. Visual language were also used while teaching to the dyslexic students and it counts as 33.33% of the total which is also a fair amount.

Qualitative analysis

The sole aim of having Multi- Sensory teaching practice is to ease the hurdles of English language vocabulary acquisition. It is expected that these practices can make acquisition process easy for the dyslexic learner. But it is clear that the teacher has used verbal language most of the time while teaching and seldom used gestures and motor language. Pictures and banners could be used while teaching but only 40 minutes were assigned for visual language while teaching for Dyslexic students.

Using accommodations when teaching a foreign language to Dyslexic students

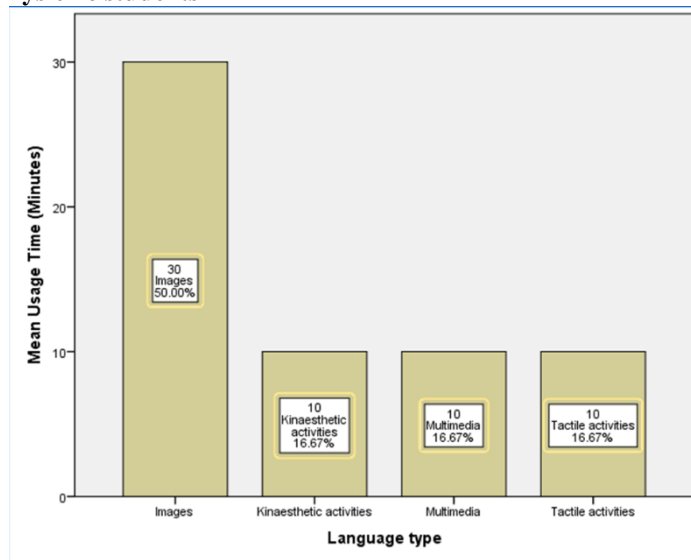


Chart 7-2 Activities used while teaching to the dyslexic students

Quantitative analysis

Chart 7.3 indicates that when teaching for the dyslexic students, the teacher has used images or given activities related to images and it is a 50% of the total. Duration of the teaching is 3 hours per day. Kinaesthetic activities were used and it is only a 16% of the total. Multimedia was also used in the classroom and it is also counted as 16% and a same amount of tactile activities were used in the class room.

Qualitative analysis

It can be seen that the teacher gives activities related to images most of the time and very little time was assigned to give activities like kinesthetic and tactile. Moreover the teacher rarely use multimedia and it shows that the student has got a heap of activities which are only related to images. However, some of them are used very seldom, although they are extremely simple to put in practice and require very little effort from the teacher. Thus it shows that the teacher has only stuck in to images visuals and all the other senses are left though which the student may tend to feel bored with a heap of pictures.

D. PRE- TEST RESULTS

The Dyslexic students were asked to read out ten English words and they were recorded as follows. The words are,

- | | |
|----------|-----------|
| I. BAT | II. BIN |
| III. CAT | IV. DOG |
| V. HAT | VI. MUG |
| VII. PEN | VIII. POT |
| IX. SUN | X. VAN |

Accordingly, the students spelled the words and they were recorded and analysed as mentioned below. There are only ten words and they are basic words and also they are in general usage. This was given as the Pre- Test for the Dyslexic Students.

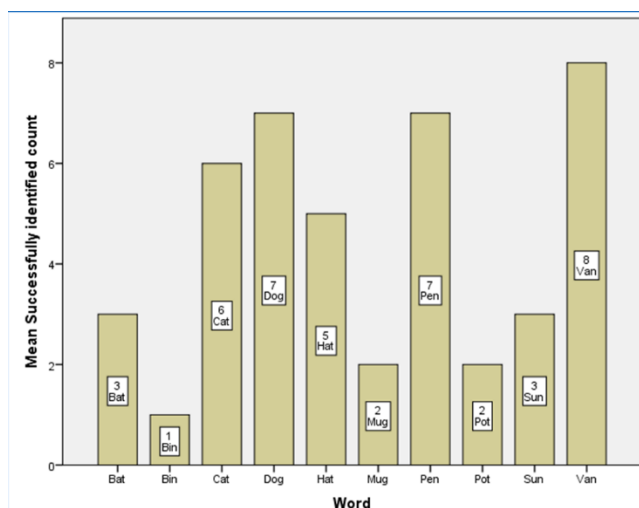


Chart 7-3 Pre- test results

Quantitative analysis

At the beginning a pre -test was conducted to see their knowledge of the words. 10 words of English vocabulary were selected and every student were given to read out the words and the result was recorded and it was analysed thus. All the words consisted of 3 letters and all of them are commonly used words. They are “Bat, Bin, Cat, Dog, Hat, Mug, Pen, Pot, Sun and Van” 8 students were able to read out the word “van” successfully, 7 read out the words “pen and Dog”, 6 read out the word “cat”, 5 read out the word “Hat”, 3 read out the words ‘sun and Bat”, 2 read out the words “Mug and Pot” and only one got successful in reading out the word “ Bin”.

Qualitative analysis

Since the phonological short-term memory of students with dyslexia is less efficient in terms of “storage capacity” than that of students without dyslexia, dyslexic pupils struggle to learn vocabulary items (e.g Kormos & Smith, 2012; Nijakowska, 2010).

It is again clear that the student has not enjoyed learning vocabulary so far. A set of words with a set of pictures which goes with the words were not capable in making the student interested in learning vocabulary. Moreover the Dyslexic student was not able to distinguish a word from another.

E. POST –TEST RESULTS

Post-Test was administered after eight weeks of teaching and activities. The same set of words were given for the Dyslexic students to read and they were recorded and analysed as mentioned below.

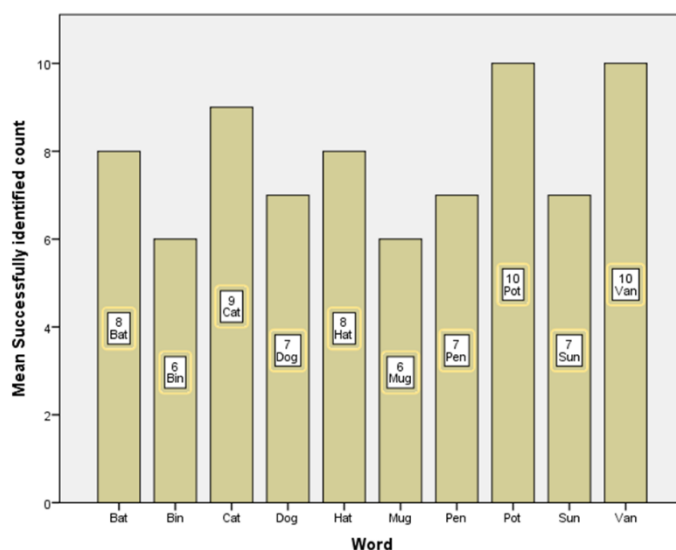


Chart 7-5 Post- Test Results

Quantitative analysis

After 8 weeks of teaching the same set of words using the Multi-sensory teaching pedagogy, the above results came as the post – test results. On the 9th week the same test was administered for the students and they were asked to read out the words and results were recorded at the same time.

All the students were able to read out the words “van and pot”, 9 students were able to read out the word “cat”, 8 were able to read out the words “bat, and hat”. 7 were able to read out the words “dog, pen and sun” and 6 were able to read out the words “Bin and Mug”.

Qualitative analysis

After making the dyslexic students engage in activities which cater to all of their senses they showed some interest in learning vocabulary and some of the students said “ chocolate cat, blue flowers, sand and so on” when they were asked to read the words for the Post-Test. It shows that the chocolate flavour has touched his or her olfactory sense, the colour blue has touched his visual sense and he or she remembers the activity of touching sand and making words using sand. Since these activities have touched their senses, when they were asked to read out the words, they first remember the activity and then they remember the word clearly and they no longer get confused with the other words because each one of the words were taught using their own senses . They were capable in memorising the words and they could retrieve the word easily.

F. COMPARISON OF PRE-TEST AND POST-TEST RESULTS

Pre-Test results and Post-Test results were compared in order to see whether there is an improvement with regard to the Multi-Sensory Teaching pedagogy. Even though the same test was administered, the students will not remember the words because there is an interval of eight weeks between the two tests. Throughout the eight weeks of period the students were taught many English words and there were so many lessons for the

same set of words as one lesson is not sufficient for the Dyslexic students for word storage in long-term memory.

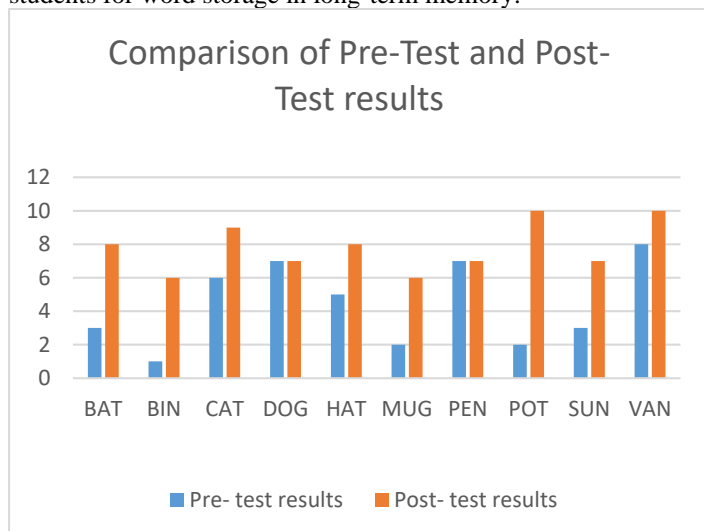


Chart 7.6 Comparison of Pre-Test and Post-Test results

Quantitative analysis

According to the chart 7.6, both the results are compared and there is a visibly clear improvement. The words like “Bin, Mug, pot and Sun” show a lower count in the pre-Test results but there is a visibly clear improvement in Post-Test results chart. The words “Dog and Pen” do not show any improvement but they are counted as 7 which again is a good count. The words like “sun, pot, bin and bat” show a drastic improvement which itself is an indication of the effectiveness of the teaching pedagogy

Qualitative analysis

As the chart 7.6 indicates, there is a visibly clear improvement in the post-test results. Almost all the words have improvements and even the words which are not used generally were also remembered by the students of dyslexia. Thus it shows that the activities which were meant to improve the vocabulary of Dyslexic students have helped the students and it shows that Multi-Sensory pedagogy is an effective method or a practice which can be used to improve the English vocabulary of students of Dyslexia.

VIII. FINDINGS

Research Questions

The aim of this research was to discover ways the Multi-Sensory teaching can be used in teaching English vocabulary to dyslexic students and to help teachers of the effective ways to teach reading to students with dyslexia. Thus three questions were brought out

- How to teach English vocabulary to the students with Dyslexia?
- What are the effective ways of teaching English vocabulary for the students with Dyslexia?
- Whether the Multi-Sensory teaching pedagogy is effective or not in teaching English vocabulary to Dyslexic students.

Thus the components of this overarching research questions will be discussed throughout this chapter by looking at how the findings of this study connect with the current literature, as well as through discussing implications/recommendations for practice from the findings and areas of further study in the future.

i. How to teach English vocabulary to the students with Dyslexia?

The question arose at the beginning of the research when the teacher of the selected school taught a whole set of a new words without using much teaching aids and the lesson was done verbally without an interval. Moreover students having different learning disabilities were put in to the same classroom and did a lesson for everyone which resulted as ineffective. This can be seen in the pre-Test results when the test was administered for the students.

Thus as an answer to the question “how to teach English vocabulary to the students with dyslexia?” the following can be elaborated.

The literature found for this field of study concluded that, “It is advisable to teach a few new words per lesson and practice them a lot and in different context. Kormos and Smith (2012) highlight that unintentional learning that is learning new words thanks to reading and listening tasks, is difficult for student with learning disability. Therefore, vocabulary acquisition should be conducted thanks to explicit teaching.”

One lesson will not be sufficient for the dyslexic student to learn a new set of words, so the teacher should keep on repeating the same set of words through many lessons.

Kornos and Smith 2012 suggest some ideas to incorporate with teaching so that vocabulary acquisition would not be a hard task for the dyslexic student. Interesting tools that help memorization are: sound clues colour-coded cards, word-image associations, acronyms. Vocabulary notebooks, in which ways to remember, examples and images of words are stored, are also useful (Kormos & Smith, 2012; Schneider & Crombie, 2003).

As Kornos and Smith says, using color coded cards, word image associations led to use Multi-Sensory teaching pedagogy. This allows the student to use multiple senses while doing activities and this enables the student to engage in active learning or active acquisition of English vocabulary.

ii. What are the effective ways of teaching English vocabulary for the students with Dyslexia?

When questioned what are the effective ways of teaching English vocabulary for the students with Dyslexia, lot of researchers have come up with lot of methods. Some can be used to acquire vocabulary and some can be used to acquire grammar and sentence pattern and so on.

Tánczos, Mónis and Wiwczarowski (2010) suggest certain strategies to be used when teaching to Dyslexic students, these

strategies are incorporated with Multi-Sensory teaching pedagogy. Moreover they bring out some suggestions as well.

Role-play in language teaching; role plays involve students' emotions, what leads to better, deeper and longer lasting fixing of information, mimics, gestures and movements in a playful way. Cards for the acquisition of words and grammatical items as these provide learners with a large amount of tactile-kinaesthetic input; other object can be used for the same purpose, such as wood boxes of different sizes, toys, buttons, letters made of wood or plastic, etc.

After reading lot of previous researches and literature the multi-sensory teaching pedagogy seemed to be effective, thus below mentioned activities were created based on the course of Multi-Sensory teaching practise by Dr. Jenny Thomson and Dr. Vincent Goeetry which was offered by University of London.

- I. Sandpaper letters
- II. Picture game
- III. Label your house
- IV. Eat your word

The above mentioned activities help teaching Dyslexic students that engages more than one senses at a time. This is a way to actively involve the students and their senses in classroom activities. This helped to utilize various senses in the classroom setting which enabled optimal learning for every dyslexic student.

In the formal setting the teacher used to teach the dyslexic students using minimal aids and most of the time verbal language was used in the classroom. As Chart 7.2 indicates, the teacher has used gestures in the class room when teaching the dyslexic students but it is a 16.67% of the total and a very little percentage of motor language has used. Only a 8.3% was used a s motor language during teaching. The teacher has to play a vital role here because these students cannot acquire second language vocabulary under normal setting, so that an effort should be put on. Thus it is clear that the students have shown some improvement after doing activities for eight weeks of a study period. Moreover the improvement can be seen under the title "Comparison of Pre-Test and Post-Test results". Thus these activities prove that they are effective in teaching English vocabulary for the Dyslexic students.

iii. Whether the Multi-Sensory teaching pedagogy is effective or not in teaching English vocabulary to Dyslexic students

A recent research about the effectiveness of Multi-Sensory teaching practice was done by Dev, Doyle, and Valente (2002). They used the Orton-Gillingham technique (Institute for Multi-sensory education, 2000), which involves visual, auditory, and kinesthetic modalities, with first grade children at the special education level. These children improved enough in their reading abilities to advance them out of the special education level. The maintenance of the gains that they achieved with the use of the multi-sensory approach was evaluated after a two year period.

None of the children had returned to special education classes (Dev et al., 2002).

Thus with the proven literature, the findings of this research should be compared in order to see whether the Multi-Sensory teaching pedagogy is effective or not in teaching English vocabulary to Dyslexic students.

Under the title "Comparison of Pre-Test and Post-Test results", the effectiveness of Multi-sensory teaching pedagogy can be assessed. Both the results are compared and there is a visibly clear improvement. The words like "Bin, Mug, pot and Sun" show a lower count in the pre-Test results but there is a visibly clear improvement in Post-Test results chart. The words like "sun, pot, bin and bat" show a drastic improvement which itself is an indication of the effectiveness of the teaching pedagogy. The Post-Test was administered after eight weeks of study and activities. Finally the improvement can be seen through the post-test results.

IX. RECOMMENDATIONS

Few things can be recommended according to the findings. The teacher can use lot of images when s/he teaches English vocabulary to dyslexic students. It is necessary to provide different kinds of activities that will ease the acquisition process. The teacher can use kinaesthetic, motor, tactile, and multimedia. The teacher should go back and review learning using new activities rather than following the same set of activities. The teacher can slow down giving instructions on how to do the activities so that it is easy for the student to grasp vocabulary. Moreover the teacher can take learning styles of students in to consideration and s/he can create lessons which will cater to the learning styles.

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