

An Observational Report on the Impact of Natural Approach and Modelling in Teaching Children with Learning Disability

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Abstract:

Susan, a 23 year old adolescent girl, diagnosed with mental retardation was under remedial teaching at Vijay Human Services, Royapettah, Chennai. Upon remedial teaching for a period of three months, the teacher observed implementing the teaching methodologies (1) Natural teaching, which is a traditional method that focuses on highlighting the importance of emotion and listening in learning especially language acquisition; (2) Modelling, an outwardly way of expressing the art of teaching by targeting the observational skills of the students in the areas of Reading, Writing and Comprehension and Arithmetic. For the assessment of identifying the academic area that requires remedial teaching, Madras Developmental Programming System (MDPS) (Jeyachandran.P & Vimala.V, 2005) was used to frame the Individualised Education Program (IEP). This was followed by remedial teaching and observational study. The observational study carried out for a period of three months at Vijay Human Services, Royapettah, Chennai was performed to identify the best strategy of teaching methodologies that best suits the subject. It was observed that the subject preferred to express her learning orally by imitating the teacher and with due practice on her own. The results were assessed after administering a small test to the subject and it was observed that Natural Teaching was effective in terms of language acquisition and product-based learning whereas Modelling was effective with respect to process based learning. The study needs more empirical evidences to conclude the observations and to identify which optimal mental age necessitates natural teaching and modelling.

Keywords: Natural Approach, Modeling, Learning Disability

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I. INTRODUCTION

“சித்திரம் கை பழக்கம் செந்தமிழ் நாப்பழக்கம்.”

which can be translated as “By practising the hand you learn how to draw pictures, by practising the tongue you learn to speak classical Tamil” we can summarize that “All things are difficult before they are easy. The quote rightly explains the way naturalistic teaching, one of the traditional methods, can be effective when practised well.

Natural teaching is one of the traditional teaching methodology in embarking the right learning platform for effective methodology amidst the many teaching methodology available. It has been identified that natural approach in teaching has its root with the theory of language acquisition (Krashen & Terrell, 1983). In this method based on language acquisition theory, the teaching method is carried out in a naturalistic way with minimal repetition of the words, error-correction and memorization or any sort of structural alignment of the grammatical aspect of the language (Stevie, 2019). According to Terrell, the syllabus of naturalistic approach focuses on the subconscious way of acquiring language (Natural Approach, 2019). The goal of naturalistic approach reflects the ability of the child to spell while writing can be attained without instruction and that the development is informal while reading and learning are the primary source for spelling (Graham, 2000).

But when it comes to learning through performance modelling approach is considered to be best for learning (Salisu & Ransom, 2014). Modelling approach in teaching

plays a prominent role with respect to performance based learning (Haston, 2007). When it comes to shifting teaching strategies from product to process, modelling is a helpful tool (Harris, 1983).

When we try to explain product based learning from process based learning, the former is more goal oriented and the later is considered as a journey in the learning realm (Toth, 2018). Process based learning was effective when it comes to problem solving and planning ability (F.Ashman & Conway, 1993).

II. OBSERVATION - CASE HISTORY

Susan is a 23 year old early adult. She was born in the year 1994. She is cheerful and caring. She chats with her friends and helps them when they need. Her dresses and accessories grooms her modestly and neatly. Her family members are affectionate and caring towards her. They take care of her health and studies. She is supported with her decisions, monitored over her chores and taken care for her needs. She has a healthy bond with her sibling. When Susan was 2 year old, she developed seizure. Since the diagnosis and treatment for seizure was not continued due to various reasons, her academic performance began to decline thereafter. Her developmental stage onset was not hampered, although it was slow. During her early developmental stages, i.e primary schooling, her speech and motor development were present and normal.

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III. ANALYSIS AND SYNTHESIS

Her verbal skills and language skills are on par with her age at informal settings i.e while chatting with friends, teachers and her family members. When she is with her friends or a known person, she is at ease and expresses her needs. With stranger, she restricts her way of approach, both verbally and academically. She is identified to be special and challenging as her cognition, memory and comprehending skills are demanding.

IV. ASSESSMENT

Susan was assessed using Madras Developmental Programming System (MDPS) to frame an Individualized Educational Plan (IEP). Madras Developmental Programming System (MDPS) is a sequential process through which decisions are made to design a programme for persons with mental retardation (Jeyachandran.P & Vimala.V, 2005).

The behaviour profile clearly indicated that Susan needs help in the areas of Reading, Time and Money from the academic part (Table I).

Table 1 shows the Behaviour Profile of Susan assessed using MDPS

Domains	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gross Motor Activities																				
Fine Motor Activities																				
Meal Time Activities																				
Dressing																				
Grooming																				
Toileting																				
Receptive Language																				
Expressive Language																				
Social Interaction																				
Reading																				
Writing																				
Numbers																				
Time																				
Money																				
Domestic Activities																				
Community Orientation																				
Recreation - Leisure Time																				
Vocational Activities																				

For the remedial teaching, she was assisted with learning to read and comprehension, write, basic money calculations. Her goals were set based on her current level of functioning.

Before carrying out with remedial teaching, Susan's potential in reading, writing and other cognitive skills were taken into consideration. The below mentioned paragraphs highlights her potential, the remedial provided as a means of teaching.

V. READING POTENTIAL

Academically, Susan is capable of early reading. She has developed phonological awareness for identifying CVC words. Her ability to decode the combination of Consonant-Vowel- Consonant words are appreciable. This evidently shows that her memory has the capacity to store familiar words in the form of sight words. The next level of advancement in reading was to : (1) improve grapheme and phonemes relationship to enhance sight reading (2) Presenting new words repeatedly and sequentially to formulate the sight word to memory (3) New words were presented by techniques such as say-aloud and write error-free (4) Along with error-correction, think-aloud was emphasised.

VI. LISTENING POTENTIAL

Susan's listening skills ranges from monosyllable to disyllable words. Her attention gets motivated with a high pitched stress on words. Her concentration towards attentive listening gets distracted easily. The split in the pattern of listening forms the barrier in connecting the phonoeme with grapheme. Hence, the process of decoding the words to their syllables becomes difficult, affecting poor reading. Besides the difficulty with discriminative listening, listening comprehension is also affected. Among the interrogative questions such as What, Why, Where, How etc, Susan will be able to respond to "What" questions relating to tangible substances.

VII. ARITHMETIC POTENTIAL

Upon presenting a worksheet with single digit addition of two numbers, Susan is able to do upto three line - single digit addition. The task of addition is carried out by representing the given single digit number figuratively. The iconic representation of numbers are then counted to arrive at the solution. Similarly, subtraction of single digit - two line numbers is also performed with the help of concrete, tangible substances.

During training, Susan was taught to split a two digit number to its unit digits and tens digits. The rate of progress was slow initially but later improved until the task of splitting the number to its digit position could be done independently.

VIII. WRITING POTENTIAL

Although, Susan has mastered the skill of representing the English alphabets in its lower case with gaps inbetween, her calculation of indent and spacing between each word is poor. She is capable of copying the sentence with few corrections required relating to indent and spacing.

She was trained to match two column of words – column A and column B for the appropriate word – pair. The words in column A and column B were introduced sequentially by reading aloud. This enabled her to identify the correct word-pair within column A and B. Initially, there were few attempts towards progress. After few trials, she was able to match the words in column A with the correct pair in column B.

When the evaluation procedure of selecting the correct answer from four options was conducted, Susan was able to interpret the procedure of performing choosing the correct answer out of the four options. The strategy included prompting especially verbal prompting.

Drawing and Coloring Potential

When provided a coloring sheet of A4 size with simple objects, Susan is capable of coloring within the boundary. The coloring pattern is also evenly distributed with no white spaces, when the coloring page has simple object or shapes. On observing her drawing, it can be noted that the lines are skewed and images are asymmetrical.

IX. COMPREHENSION SKILL

When given a passage to listen or to read, Susan is capable of literal comprehension and lexical comprehension, to some extent. When a story is told or read, the questions like What, Where and When are comprehensible by Susan. Common nouns and action verbs (physical verbs like run, eat, sleep etc).

X. OBSERVATIONAL DIAGNOSIS

Cognitive Skill

As discussed previously, the cognitive development in Susan has been delayed due to various reasons and the prior being an episode of seizure during her childhood days. Due to delayed cognitive development, the processes of cognition including attention, auditory processing, visual processing, retention capacity of memory and processing speed in encoding and retrieving are slow.

Memory

Having discussed the difficulties encountered by Susan like regressed syllable grasping capacity, delayed recalling of information supplemented and the necessity to practice repeated rehearsal to sustain learning, conveys the complex disturbance in the sequence of memory formation, causing an imbalance in the process of memory stages.

Learning Style

By analysing the areas of difficulty experienced by Susan, it is vividly noticeable that there is a possibility of complication pertaining to serial position effect. Further analysis could lead to the detection of learning difficulty due to complexity in primacy effect. The learning pattern or style could be delayed due to the complexity in primacy effect. That is, the teaching –learning pattern, perhaps, requires more focus to enhance the primacy effect and reduce the distortions causing the delay in learning and memory formation.

Remedial Teaching

The remedial teaching focused on supplementing Susan with the following strategies pertaining to her academic requirements.

Reading

Concept: Story

Method : Natural Teaching

Materials : Story card with sight words, noun and basic action words.

Procedure:

1. Susan was given a card with simple sentence. She was asked to learn the basic sight words like 'the', 'was', 'are' etc by following writing and practising method.
2. For syllables, rather than teaching syllabification pattern, natural teaching method, a direct method in which the learning happens by reflecting the teacher.
3. The syllables were mirror taught along with actions and expressions.
4. After few attempts, Susan gained confidence to read it by herself with few prompting.
5. She was assessed with similar pattern of words in a different context and she was able to do with little prompting.

Listening

Concept: Rhyme

Method : Natural Approach (Teaching)

Materials: Rhyme song

Procedure:

1. The teacher prepared Susan to move to the rhyme song along with the actions taught.
2. With few wrong pairings of words and action, upon practice, Susan was able to pay attention to the instruction and repeat the movements. Along with the movements, she was able to tune-in to the rhythm and beat of the song.
3. Though the words were little difficult to memorize and repeat, she was able to repeat the first line of the song with proper intonation.

Arithmetic

Concept: Digit Numbers

Method: Modeling and Role Playing

Materials: Plastic coin pegs (1s, 10s and 100s) and Writing tools

Procedure:

1. The teacher showed the plastic coins of 1s, 10s and 100s.
2. Demonstration of counting was explained, which enabled Susan to observe and analyse the tangible coins.
3. The learning was transferred to paper-pencil format.
4. Initially, the teacher explained counting of digits using grid system, which helped Susan to figure out the process of calculating (Fig.1).
5. The learning was transferred to role playing exchange of money, pertaining to digits in the range 10 -100 with multiples of 10. This is to facilitate confidence in performing the calculations.

Figure 1: Shows the grid system used in teaching digit number system.

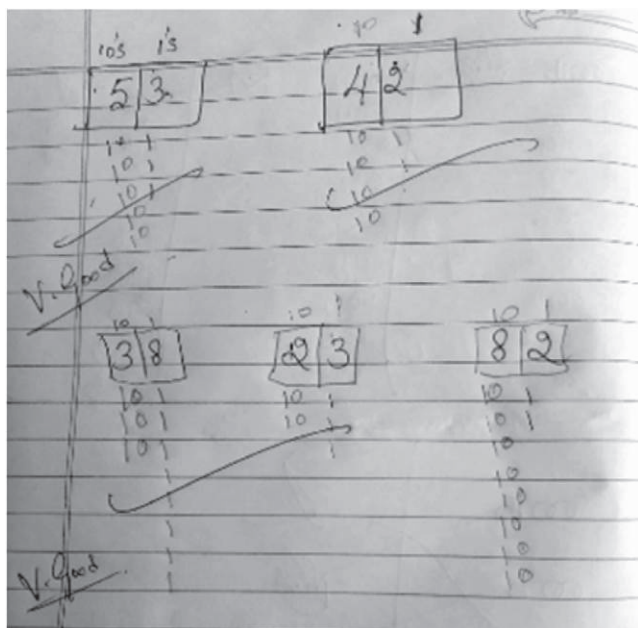
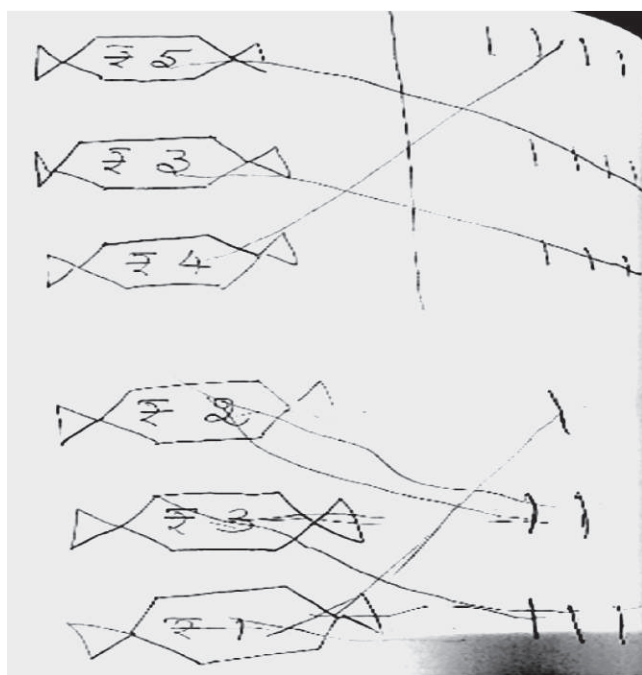


Figure 2 : Shows the pairing of the numbers with its concrete units.



Writing

Concept: Words with suffix

Method: Suffix writing method

Materials: Writing Materials

Procedure:

1. Susan was given one suffix word.
2. She was asked to make more words with the same suffix.
3. Then, the words written are dictated for her to write with no mistakes.

Comprehension

Concept: Questioning

Method: Five W's

Materials: Comprehension passage

Procedure:

1. Susan listened to a passage of primary level 2
2. As the teacher was reading, she was asked with questions related to 5 W's - What, Where, Why, When and Who.
3. This helped her to answer the questions and relate the passage with its meaning.

XI. RESULTS OF THE REMEDIAL TEACHING:

After Remedial Teaching, Susan was given a small test in the domains of Reading, Writing, Arithmetic and Comprehension.

Test in reading and comprehension included the same material (i.e story) that was used for training. It was observed that Susan was able to read the sight words in the sentence (eg. The lion and the mouse go and went for hunting) and she was able read and complete the story with few errors. The observational level of reading was marked 80%.

Test in writing included the dictation of words with the same material as used for reading. The test was successful in giving the correct answer with a percent of 90. Here again the sight words with the suffix method of learning was marked 80%.

Arithmetic test after modelling was on par with reading and writing skill test but mastery level was lower than the reading and writing ability for Susan.

The score 80% was arrived by conducting successive assessments in reading, comprehension writing and arithmetic by answering to the questions prepared by the teacher as a worksheet. There were five questions and out of which 4 were answered correctly except in arithmetic, where 3 answers were correct. The number of correct responses were noted and marked. The scores were converted to percentage.

XII. CONCLUSION

In a study by Vilaseca and Del Rio (2004) it was found that with the remedial of naturalistic approach, the children with special needs showed better improvement in language and communication skills.

Similarly the observational study through remedial teaching for Susan was satisfactory to teach product based teaching than process based teaching. Thus, it can be suggested that Modelling, which is a process based learning, is less facilitating than Natural Teaching. Natural teaching, a product based teaching which is facilitated by emotional process (The Natural Approach) is more effective when compared to Modelling especially in case of Susan. The observational report lacks empirical evidence and it is purely based on observational assessment and remedial teaching. Although the remedial was successful, the study needs further time and improvement in the areas of teaching and learning. With due practice and training, the success can be attained.

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