

# Developing Language and Early Literacy Skills of a Preschool Child with Global Developmental Delay

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## 1 INTRODUCTION

Early childhood is an important phase of growth and development of any individual's life. This phase of development provides important opportunities for all children, including children with special educational needs, to build a foundation for learning and participation. The experiences an individual gets during this critical stage has an impact on his/ her total development. According to Conti Ramsden and Durkin (2012) most young children make significant progress in language learning during the first 4 years of life. Delays or differences in patterns of language acquisition are sensitive indicators of developmental problems. Simultaneously, this would have consequences throughout an individual's life. Children with Global Developmental Delay (GDD) may face challenges in participating in preschool activities because they show significant delays in one or more developmental milestones. It is important to intervene as early as possible to cater to their needs in order to maximize the benefits to the child through early intervention. Even though, language learning can be a lifelong journey, the majority of that journey takes place in the first five years of life. Language and early literacy skills are fundamental and essential skills that a child needs in order to engage in the learning process effectively. Further, the improvement of the overall communication skills by developing language and early literacy

skills for a child with GDD will enhance the self confidence and self-esteem of the child. Finally, the child will also be able to improve the quality of his/ her life. Therefore, this study focused on developing language and early literacy skills of a child with GDD.

The objectives were as follows,

- To find out the present level of language and early literacy skills of a child diagnosed with GDD
- To develop and implement a plan to improve the language and early literacy skills of the child
- To assess the progress achieved by the child and the effectiveness of the action plan.

## 2 METHODOLOGY

### 2.1 Research Design

Action Research and case study designs were applied in the study. Action research presents a more user-friendly, practical approach for conducting research. The present study was conducted for one main purpose: to improve the language and early literacy skills of the child with GDD. Mettetal (2001) stated that three major research designs could be used for action research projects: pre-test/ post-test designs, comparisons of similar classes, and case studies. In this study a



combination of both pre-test/ post-test and case study designs were used. Pre-test/ post-test designs were applied to measure the language development and the case study method used to observe what took place.

## 2.2 The Subject

The subject for the study was a preschool child with GDD. He was born on 20.05.2011. He was 4 years and 4 months old at the time of referral. He had been diagnosed with GDD. His hearing and vision had been tested. He has normal hearing within the limits and normal vision too. In order to maintain anonymity of the child, he was given a fictitious name, Hasitha. He has two siblings in the family and both parents are working.

According to the mother, all the milestones had been delayed for Hasitha. When considering gross motor skills, he had started to walk independently at the age of 2 years and 6 months. Hasitha's fine motor skills had not been established even at the age of 4 years and 4 months. He had started to use his first words at the age of 1 year and 6 months. Hasitha used both verbal and non-verbal communication skills for functional communication with limited words without using sentences.

## 2.3 Study Setting

The "Support Centre" of the Department of Special Needs Education and the "*Supipi Pre-School*" of the Open University of Sri Lanka were utilized as the settings of this study.

## 2.4 Data Collection Methods

Informal assessments and Formal assessments were used to collect data. The data were collected informally by interviewing parents, teachers and by observing the child in the "Support Centre" and in the "*Supipi Pre-school*". The Observation checklist developed by the Department was used as one of the

data collection instruments. In addition, play based assessments were also carried out as an informal assessment method. The Derbyshire Language Scheme was administered at the end of each two months block to assess development of language and early literacy skills for each cohort as the formal assessment.

## 2.5 Data Analysis

Data were analyzed descriptively and statistically using simple percentages and graphs. In this report presented only the simple percentages and graphs of data driven by administered Derbyshire Language Scheme focused on language comprehension and expression.

## 2.6 Procedure

1<sup>st</sup> Phase- Assessed the status of Hasitha's language and early literacy skills.

2<sup>nd</sup> Phase- Developed and implemented an intervention plan to improve Hasitha's language and early literacy skills. He received individual sessions on Speech and Language Therapy at the "Support Centre" of the Department of Special Needs Education once a week. Each individual session ran for one hour. He received individual direct therapy at the "Support Centre" and indirect therapy at home. The parental training was done in the unit after each session and a home program was given to them so that they could implement it at home. In addition, information was provided to teachers at the "*Supipi Pre-school*" to facilitate the improvement of Hasitha's language and early literacy skills.

3<sup>rd</sup> Phase- Assessed Hasitha's progress and the effectiveness of the action plan.

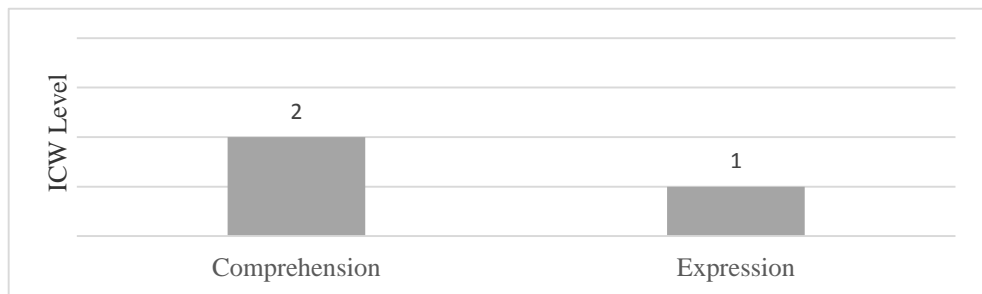
After every two months, the same assessment was used to re-assess the level at which Hasitha's language skills were functioning. The study was carried out for six months

### 3 RESULTS AND DISCUSSION

#### 3.1 Hasitha's present level of language and early literacy skills

**Table 1:** Vocabulary at the beginning of intervention

Nouns	Verbs
/amma:/, /tha:ththa:/, /ayya:/, /malli/, /akka/ ,/ma:ma:/, /nanda:/, /baba:/, /bo:le/, /bat/, /cup/, / bath/, /wathura/, /apple/, /kesel/, /ala/, /ke;k/,/pa:n/,/te:/,/balla:/,/hawa:/ /haraka/,/naya:/,/maluwa:/, /aliya/, /mala/, /gaha/ , /car/, /atha/,/kata/,/kana/, /bada/, /kakula/, /cap/, /bag/, /chu/,/kakka:/,/teddy/, /t.v/, /ge:/,	/epa/,/oni/,/giya/,/kanawa/,/ bonawa/,/nidi/,/yamu/,/bye/ , /watuna:/, /na/,



**Figure 1:** Language Comprehension and Expression at the beginning of intervention

According to Table 1, he had a vocabulary of 50 words at the beginning of the intervention. His vocabulary mainly consisted of high frequency nouns and few verbs. According to Loraine,(2008) a typical 4-year-old child will have about a 1,500–1,600-word vocabulary. There was a significant delay in the vocabulary of Hasitha at the beginning of intervention. His vocabulary was comparable to a child who was around 1 - 1½ years old.

Hasitha's language skills were assessed using the "Derbyshire Language Scheme" which is a picture-based formal assessment. According to graph 1, he was functioning at 2 ICW level (Information Carrying Word Level) in language

comprehension (for example: he could show the correct pictures for "babage atha" and "ballage oluwa" when he was given the verbal command) and 1 ICW in language expression. He could name the pictures using single words. ("bo:le", "baba").

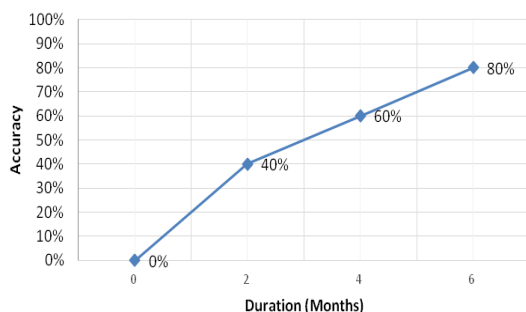
At the beginning of the intervention his language comprehension level was similar to a 2-year old child and language expression level was similar to a child around 1½ years old even though his chronological age was 4years and 4 months. Hasitha was 2 years behind in language comprehension and 2½ years behind in language expression when compared with his chronological age.

### 3.2 Hasitha's level of language and early literacy skills after six months

**Table 2:** Vocabulary after six months

Nouns	Verbs
/amma:/, /tha:ththa:/, /ayya:/, /malli/, /akka/, /ma:ma:/, /nanda:/, /baba:/, /aththa:/, /nangi/, /yaluwa/bo:le/, /bat/, /cup/, pig ana/handa/, /pihiya/, /panawa/, /mese/, /putuwa/, /panawa/enda/ /bath/, /wathura/, /biththara/, /piti/, /te/, /banis/bathala/, /aappa/se eni/, /yoghurt/, /hodi/apple/, /kesel/, /midi/, /dodam/amba/ala/ /hodi/, /ke;k/, /pa:n/, /te:/, /balla:/, /hawa:/pu:sa/, /ibba/, /kaputa/, /ku kula/, /aliya/, /huuna/, /walaha/haraka/, /naya:/, /maluwa:/, /aliya/ /mala/, /gaha/, /kola/, /thanakola /balun/, /bubble/atha/, /kata/, /kana/, /bada/, /kakula/, /cap/ /bag/, /chu/, /kakka:/, /teddy/, /t.v/, /ge:/, /oluwa/, /nahaya/, /esa/ /dath/, /car/, /diwa/, /bus/ /van/, /plane/, /boat/, /bike/, /hello/, /pata/, /pansala/, /kathura/geda ra/kaday/beth/pettiya/, /tap/, /iskole/dora/, /light/carrot/, /gow a/, /omlat/, /kiri/, /biscuit/, /bothale/, /sapaththu/, /potha/, /thoppi/m aalaya/, /loku/, /podu/, /hodai/, /sadu/, /teacher/rathu/, /nil/, /kotuwa/	/epa/, /oni/, /giya/, /kana wa/, /bonawa/, /nidi/, / yamu/, /bye/, /watuna:/, / na/, /rasai/, /danawa/, /g annawa/, /enawa/, /duw anawa/, /genawa/, /gath tha/dennna/, /ethi/, /un u/, /balanawa/, /keduna/ /hodanawa/, /kapanaw a/, /adanawa/, /uayanaw a/, /nanawa/, /hadanaw a/, /ethule/, /eliye/, /uda/ /yata/, /kiyanawa/, /dan na/, /ganna/

**Language Comprehension 3 ICW**

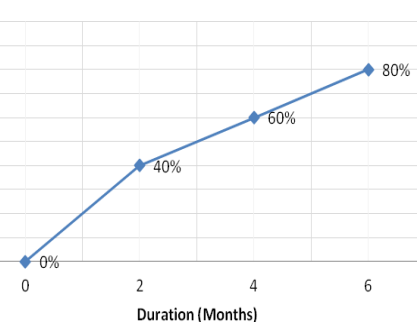


**Figure 2:** The development of the accuracy of 3 ICW language comprehension

According to Table 2, Hasitha's vocabulary has expanded from 50 words to 150 words after the intervention. The nouns have increased by 75 words while verbs have increased by 25 words.

According to Figure 2, after the first two months, Hasitha was able to comprehend 3 ICW level sentences (example- "puusa: bath kanawa", "bolle putuwa uda") using pictures in the therapy setting by making

**Language Expression 2 ICW**



**Figure 3:** The development of the accuracy of 2 ICW language expression

4/10 given opportunities with 40% accuracy as measured through a language assessment. The intervention continued and after four months' time Hasitha was able to comprehend 3 ICW level sentences, using pictures in the therapy setting, by making 6/10 given opportunities with 60% accuracy. Finally, after the entire duration of six months, Hasitha was able to comprehend 3 ICW level sentences using pictures in the

therapy setting by making 8/10 given opportunities with 80% accuracy.

At the beginning of the intervention Hasitha had a verbal language comprehension of 2 ICW level. However, after six months he had achieved the target since his level of comprehension had increased up to 3 ICW level with 80% accuracy.

According to Figure 3, in language expression he was able to express 2 ICW level sentences (noun + verb combinations, for example: *amma kanawa, ayya nidi, baba nanawa*), using pictures in the therapy setting, by making 4/10 given opportunities with 40% accuracy. After four months he was able to express 2 ICW level sentences, using pictures in the therapy setting, by making 6/10 given opportunities with 60% accuracy. Finally, after six months he was able to express 2 ICW level sentences with minimum picture cues in the therapy setting by making 8/10 given opportunities with 80% accuracy as measured through the language assessment.

At the beginning of the intervention Hasitha had a verbal language expression of single words. After six months he had achieved the target since his level of expression had increased up to 2ICW level with 80% accuracy.

## 4 CONCLUSIONS

- Before the intervention the subject's language comprehension skills were delayed by 2 years and language expressive skills were delayed by 2 ½ years.
- Hasitha was able to progress through the intervention plan as he developed his language comprehension and expressive skills. He was able to reduce the gap of the delay by one year in each area. The targets were met and the intervention plan was successful.

## 5 RECOMMENDATIONS

- Early identification and early intervention for children with GDD is essential to improve their quality of life.
- Collaborative work among parents, teachers, and other professionals is essential to develop a child with GDD.
- Include a component on early intervention into the curriculums of Early Childhood Development programs.

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