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## MLS of Tamil Children with Hearing and Hearing Impairment

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### **Abstract:**

*Language is the only source for equipping our knowledge. For children with hearing impairment, representing ideas is through gestures and written language. So, prime aim of our education is developing verbal communication, sign language and written language skills for children with hearing impairment. To date, there has been little research on the development of language skills by Tamil children with hearing impairment, although many fail to pass the public examinations at the end of their school education. For the intellectual capacity of written language the person has to be proficient in vocabulary and grammar comprises morphology and syntax. The Mean Length of Sentence (MLS) is the one which represent the proficiency of written language in any human. The present study focuses on the MLS in Tamil language that counts all morphemes such as prefix, root words, and suffixes. In this study, the written language was investigated by analyzing 50 children's (with hearing and non-hearing) written responses through Picture Test and creative story writing for story charts. The data were analyzed MLS was calculated for both group. The data showed clearly that children with hearing impairment were delayed in language relative to their hearing peers for information and grammar in written Tamil.*

**Keywords:** Mean length of sentence, hearing impairment, picture test and creative story writing.

### **1. Introduction**

Communication will be meaning full only if the language structure is appropriate. Meaning full sentences are formed by the morphological units of language. Language structure is called grammar. Every human unconsciously acquires these rules of language in due course of his/her development. But for children with hearing impairment, it is different. Their language acquisition in early years is gestures and later for academics is written language. So, they represent their ideas through gestures and written language. Also, the prime aim of our education is developing verbal communication, sign language and written language skills for children with hearing impairment. An individual's literacy is dependent on his or her development of language. How could one expect a person who does not have a full understanding of his or her own language to write a comprehensible piece? Children with more interaction and a better understanding of their language tend to transit that into writing easier than others Mayer (2006). Many hearing impaired children has no experience with proper sign language, has difficulties with their spoken language, have little understanding of any language and will have great trouble with writing. No matter the age level or degree of hearing loss, hearing impaired individuals are "mapping a written system onto a reduced set of understandings of the language" Marschark and Spencer (2003). The understanding of language sets is a major precedent for the development of writing. Hearing impairment affects a person's writing in various areas. Research has identified some of these areas, such as grammar errors, syntax, writing strategies, and others Antia, Reed, and Kreimeyer (2005); Marschark and Spencer (2003); Mayer (2006); Paul (2010); Yashinago-Itano, Snyder, and Mayberry (1996). Even though researchers may stress different points, this is not to say that some areas are more important than others. Researchers have studied different areas of writing in hearing impaired students of a specific age or span of age levels, but there has not been research on the consistency of the problem areas over a length of time. To date, there has been little research on the development of language skills by Tamil children with hearing impairment, although many fail to pass the public examinations at the end of their school education. For the intellectual capacity of written language the person has to be proficient in vocabulary and grammar comprises morphology and syntax.

### **2. Aim of the Study**

Children with hearing impairment can exhibit their competency only through written mode. Many children with hearing impairment never learn to write more than very basic sentences, adding prefix, and suffixes such as tenses to verb, case markers to nouns, using connectors, etc. The Mean Length of Sentence (MLS) is the one which represent the proficiency of written language in any human. So

the aim of this study is to find the MLS in Tamil language by counting the morphemes in the sentence of hearing and hearing impaired children.

### 3. Methodology

In this study, the written language was investigated by analyzing written samples of 100 children at age level 8-9, 9-10, 10-11, 11-12 and 12-13 years (with hearing (50) and hearing impairment (50)). Written responses were collected through Picture Test and creative story writing for story charts. The data were analyzed and the MLS was calculated for both groups. This study is about efficiency of the morph syntactic production of Children with hearing and hearing impairment.

### 4. Analysis

Morphology is the aspect of language concerned with the rules governing the change in word meaning by adding affixes. Usually in child language research morphological development is analyzed by computing a child's Mean Length of Utterance (MLU). Each word a child produces is broken down into morphemes. A morpheme is the smallest, indivisible unit of meaning. For example, the word "walk" is one morpheme, while "walked" is two morphemes: "Walk" carries its own meaning and "ed" signifies past tense. Young children often combine words to convey one meaning or idea. Consequently, words such as "gonna" count as one morpheme. As adults, we understand that "gonna" really consists of both "going" and "to", each having meaning. After counting the morphemes for each of the child's utterances, they are totaled and divided by the total number of utterances. The formula is as follows:

Mean Length of Utterance (MLU) = Total number of morphemes / Total number of utterances

A child's MLU typically corresponds closely to their age. Roger Brown (1973) described five stages of language development based on MLU. The present study follows the Brown's method for calculating the mean length of sentence as the study was on written samples. MLS (Mean Length of Sentence) level for the each children with hearing and hearing impaired is given below

#### 4.1. Example Sentence of Children with Hearing Is Given Below

1./kaviṭa<sup>1</sup>+in<sup>2</sup> caṭṭai<sup>3</sup> ka:rru<sup>4</sup>+il<sup>5</sup> para<sup>6</sup>+ṇ(i)<sup>7</sup>+aṭu<sup>8</sup>/

1.Noun 2.Ablative Case 3.Noun 4. Noun 5.Ablative Case 6.V<sub>st</sub> 7.pa.Tns 8.III<sub>plu</sub>

2. /oruṇa:<sup>1</sup> pa:<sup>2</sup>ṭṭi<sup>3</sup> vaṭai<sup>4</sup>+cuttu<sup>5</sup>+vaiṭṭiru<sup>6</sup>+ṇ(i)<sup>7</sup>+a:<sup>8</sup>// appo:<sup>9</sup>ṭu<sup>10</sup> ka:kam<sup>11</sup> oru<sup>12</sup> vaṭai<sup>13</sup>+ai<sup>14</sup> eṭu<sup>15</sup>+ṭṭi<sup>16</sup>+u<sup>17</sup> koṇṭu<sup>18</sup>+aṭu<sup>19</sup> // ka:kam<sup>20</sup> vaṭai<sup>21</sup>+ai<sup>22</sup> eṭuttu<sup>23</sup>+koṇṭu<sup>24</sup>+po:<sup>25</sup>+j<sup>26</sup> maram<sup>27</sup>+attu<sup>28</sup>+in<sup>29</sup> kiṭai<sup>30</sup>+il<sup>31</sup> urka:r<sup>32</sup>+ṇ(i)<sup>33</sup>+aṭu<sup>34</sup> // appo:<sup>35</sup>ṭu<sup>36</sup> ṇari<sup>37</sup> va:<sup>38</sup>+ṇ(i)<sup>39</sup>+aṭu<sup>40</sup> // ka:kam<sup>41</sup>+attu<sup>42</sup>+ai<sup>43</sup> pa:r<sup>44</sup>+ṭṭi<sup>45</sup>+a<sup>46</sup>+uṭan<sup>47</sup>+e:<sup>48</sup> ṇari<sup>49</sup> ṇinai<sup>50</sup>+ṭṭi<sup>51</sup>+atu<sup>52</sup> ka:kam<sup>53</sup>+attu<sup>54</sup>+ai<sup>55</sup> pa:ṭa<sup>56</sup> col<sup>57</sup>+i<sup>58</sup>+vittu<sup>59</sup> vaṭai<sup>60</sup>+ai<sup>61</sup> ṇampa<sup>62</sup> eṭuttu<sup>63</sup>+kkum<sup>64</sup> // ṇari<sup>65</sup> ka:kam<sup>66</sup>+attu<sup>67</sup>+iṭam<sup>68</sup> pa:ṭua<sup>69</sup> col<sup>70</sup>+i<sup>71</sup>+vittu<sup>72</sup>+aṭu<sup>73</sup> // vaṭai<sup>74</sup>+ai<sup>75</sup> ka:l<sup>76</sup>+il<sup>77</sup> vai<sup>78</sup>+ṭṭi<sup>79</sup>+u<sup>80</sup>+vittu<sup>81</sup>+u<sup>82</sup> pa:ṭu<sup>83</sup>+i<sup>84</sup>+aṭu<sup>85</sup> // ṇari<sup>86</sup> ja:ma:r<sup>87</sup>+ṇ(i)<sup>88</sup>+u<sup>89</sup> cel<sup>90</sup>+n<sup>91</sup>+aṭu<sup>92</sup>/.

8 utterances are there in the above story narration that has 89 morphemes.

So MLS is  $89/8 = 11.13$ .

The children with hearing wrote sentences in full length where as the children with hearing impairment wrote sentences in single word.

#### 4.2. Children with Hearing Impaired Data

1. /caṭṭai/, /pul/, /kajiru/, /ka:rru/
2. /ciṅkam/, /pacu/, /maram/, /pul/, /kaṭal/

Table 1 shows the MLS (Mean Length of Sentence) for each child with hearing and hearing impairment

S. No	Age	Children with Hearing		Children with Hearing Impairment	
		MLS of Boys	MLS of Girls	MLS of Boys	MLS of Girls
S1	8-9	6.09	6.30	1	1
S2		5.39	4.02	1	1
S3		5.02	5.43	1	1
S4		2.84	2.05	1	1
S5		3.00	5.20	1	1
S1	9-10	6.88	9.01	1	1
S2		3.09	6.30	1	1
S3		8.67	4.00	1	1
S4		6.22	6.05	1	1
S5		4.43	5.16	1	1
S1	10-11	8.07	10.01	1	1
S2		8.90	7.02	1	1
S3		8.47	11	1	1
S4		7.86	12.20	1	1
S5		7.95	9.18	1	1
S1	11-12	8.25	11.06	1	1
S2		8.88	11.89	1	1
S3		10.59	9.39	1	1
S4		9.53	13.63	1	1
S5		10.80	12.19	1	1
S1	12-13	8.85	9.22	1	1
S2		7.00	12.09	1	1
S3		8.20	10.85	1	1
S4		9.74	11.02	1	1
S5		9.12	12.20	1	1

Table 1

Table 2 shows Average MLS for the age 8-9, 9 -10, 10 -11, 11-12 and 12-13 years for the children with hearing and hearing impairment

Age	Children with Hearing		Children with Hearing Impairment	
	Boys	Girls	Boys	Girls
8-9	4.46	4.6	1	1
9-10	5.85	6.10	1	1
10-11	8.25	9.882	1	1
11-12	9.61	11.632	1	1
12-13	8.61	11.076	1	1

Table 2

Figure 1 shows the graphical representation of the average MLS for the age 8-9, 9 -10, 10 -11, 11-12 and 12-13 years for the children with hearing and hearing impairment

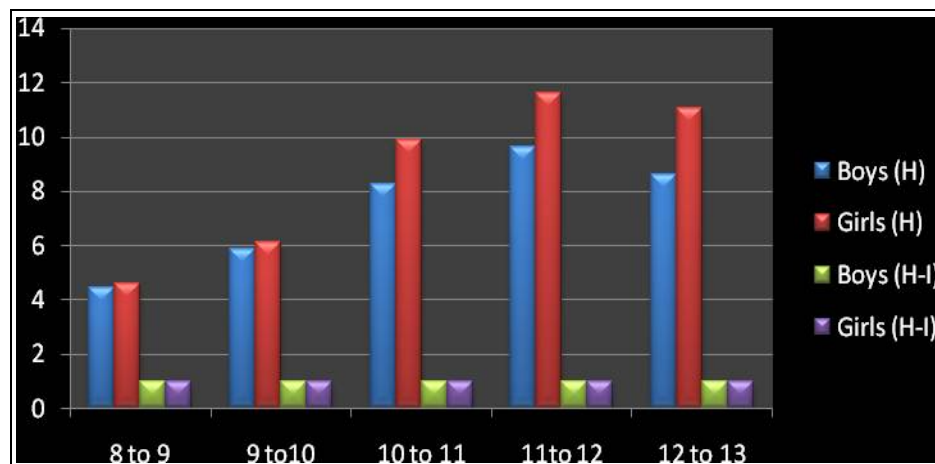


Figure 1

From the Table 1 & 2 and Figure 1 it is inferred that on comparing Mean Length of Sentence (MLS) of children with hearing and hearing impairment, the children with hearing were found to have MLS 4 to 11 but children with hearing impairment have only 1. The age level variation even does not show any increase in MLS. Also high score is seen in girls when compared with boys.

### 5. Conclusion

Language is important for every human to communicate. Children with hearing impairment have notable problem in learning and understanding language due to their disability. The data showed clearly that children with hearing impairment were delayed in language relative to their hearing peers for information and grammar in written Tamil. So this shows where the special educator should concentrate for giving remedial to these children.

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