

**MULTIMEDIA TRAINING MANUAL IN ENGLISH FOR SYNTACTIC SKILLS IN  
4-6-YEAR-OLD CHILDREN**

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ALL INDIA INSTITUTE OF SPEECH AND HEARING

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SEPTEMBER 2021

## **CERTIFICATE**

This is to certify that this dissertation entitled "**Multimedia training manual in English for Syntactic Skills in 4-6-year-old children**" is a bonafide work submitted in part fulfillment for the degree of Masters in Science (Speech-Language Pathology) of the student Registration Number: 19SLP012. This has been carried out under the guidance of the faculty of this institute and has not been submitted earlier to any other University for the award of any other Diploma or Degree.

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This is to certify that this dissertation entitled "**Multimedia training manual in English for Syntactic Skills in 4-6-year-old children**" has been prepared under my supervision and guidance. It is also certified that this dissertation has not been submitted earlier to any other University for the award of any other Diploma or Degree.

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## DECLARATION

This is to certify that this dissertation entitled "**Multimedia training manual in English for Syntactic Skills in 4-6-year-old children**" is the result of my own study under the guidance of Dr. Jayashree C. Shanbal, Associate Professor in Language Pathology, Department of Speech-Language Pathology, All India Institute of Speech and Hearing, Mysuru, and has not been submitted earlier to any other University for the award of any other Diploma or Degree.

Mysuru

September, 2021

Registration number: 19SLP012

**Dedicated to the one and only  
Lord, my God, my Heavenly  
Father, the Blessed Spirit.**

***“The fear of the Lord us the beginning  
of Wisdom,  
and the knowledge of the Holy One  
is insight.” (Proverbs 9:10)***

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## **Chapter 1**

### **INTRODUCTION**

Our language provides us a medium to communicate with each other. It could be either verbally, or through writing. This ability was not present in us since birth but it gradually developed, through a series of changes in the communication between the infant and caregiver.

According to the American Speech and Hearing Association, Communication involves understanding as well as expression, and is defined as the active process of exchanging information and ideas in the form of gestures, speech, vocalizations, movements, or Alternative Augmentative Communication (AAC). "Language can be defined as a socially shared code or conventional system for representing concepts through the use of arbitrary symbols and rule-governed combinations of those symbols" (Owens, 2005). Language differs from speech in the fact that, language refers to how we use signs, vocalizations, or words to share or get the needed information and the meaning of it, whereas speech refers to how we produce the words we say. Hence, language is a system of rules and principles, and speech refers to the concrete act of speaking.

Bloom and Lahey (1978) defined language in terms of three distinct parts which are: Form, Content (semantics), and Use (pragmatics). Form refers to the rules by which linguistic units (sounds, words) are formed and combined and consists of phonology, morphology, and syntax; in which, morphology is the study of the word structure of a

language and syntax is the study of the relationships between words and the rules governing the combination of words to form sentences in a language.

Language delay or deviance, in many cases, is the initial sign of a developmental disability in toddlers (Kaiser & Roberts, 2011). Morphological or Syntactic development is found to be delayed in conditions such as Intellectual Disability, Hearing Loss and Specific Language Impairment, and deviant in Autism Spectrum Disorder (Condouris et al. 2003; Rapin & Dunn, 2003; Kjelgaard & Tager-Flusberg, 2001; Schirmer, 1985; Wolff, 2011). There is also a period called Extended Optional Infinitive (EOI) stage in children with SLI where the period of making verb errors (such as, using the infinite forms of verbs instead of the finite forms) is found to be extended and greater in them (Rice et al., 1995).

Some of the Western language tests that are specifically used to assess syntax, or the tests that have syntax as a subsection in them are: Carrow elicited language inventory (Carrow-Woolfolk,1974) used to assess grammar for children from 3-16 years, Bankson Language Screening Test (Bankson,1977) to assess the syntax, semantics and morphology for children from 3 to 7 years and Clinical Evaluation of Language Fundamentals- Preschool (Wiig et al., 2006) to assess syntax, semantics, pragmatics and memory for children aged 3 to 6.11 years.

Some of the tests that have been developed in the Indian context to test for the syntactical skills are: Linguistic Profile Test developed in Bengali, Gujarati, Hindi, Kannada, Marathi, Oriya, Telugu, Malayalam and Tamil that assesses syntax, semantics and phonology for children from 6 to 15+ ages; Kannada language test (KLT) (Kathyayini, 1984) and Malayalam language test (MLT) (Rukmini, 1994) that assess syntax and semantics, and

‘Screening Test for the Acquisition of Syntax in Kannada’ (STAS-K) (Vijayalakshmi,1981); and, STAS-H (Basavaraj, Goswami & Priyadarshini, 2010), STAS-M (Preethi, Basavaraj & Goswami, 2012), STAS-T (Pebbili, Basavaraj & Goswami, 2012), Syntax Screening Test in Tamil (Murthy, 1981) that assess purely the syntactical skills in 2 to 5 year old children. Recently, English language test for Indian children (Bhuvaneshwari, 2010) was developed to assess semantic knowledge, morphological rules and syntactic rules for children between 4 to 6 years, and Clinical Evaluation of Language Fundamentals - Preschool (2<sup>nd</sup> Edition) was developed by Priya (2016) for Kannada-speaking English language learners between 3 to 6 years to assess for their syntax, semantics, pragmatics and memory.

However, only one intervention manual was found to be developed as a dissertation, through the work of Sorubini (2006) called as the “Therapy manual for treating syntactic errors in Tamil speaking children with language disorders”, where pronouns, adjectives, adverbs, tenses, case markers and postposition were elicited in subjects from age range of 2.6 to 5.6 years using the tasks of choosing the correct answer, judgment, description and imitation. However, only 3 stimuli per grammatical marker was developed and it could be used only to teach children learning the Tamil language.

### **Need for the Study**

India is a flourishing country in terms of its development and technology and has a dense population of 1.34 billion, out of which 2.13 percent are disabled (According to the Census report, 2011). Rao and Yashaswini (2018) reported that, approximately 4 percent of the Indian population is affected with communication disorders and the ratio of speech language pathologists to the number of patients in demand is only 1:32000. Hence tele

therapy services could be the only viable solution to cater to the needs of the increasing number of clients seeking speech pathology services across the country.

However technical issue is one of the major barriers for tele therapy in the Indian setup (Rao & Yashaswini, 2018). Nevertheless, tele-mode of therapy is still preferred by both patients and therapists due to many reasons, and it is clear from the existing research that amount of improvement documented after face-to-face sessions and tele-mode sessions are found to be comparably similar (Donovan, 2017; Woolf et al., 2016)

The basis of developing a computerized resource manual are grounded on many different causes. The caregivers of children coming for face-to-face speech therapy have to invest so much time and money to arrange a vehicle and travel in spite of the weather condition also causing hindrance to the caregivers' jobs whereas, tele-therapy helps in providing frequent sessions, at a time that is flexible for the parents, delivering therapy in a hassle-free manner. Another benefit of tele-therapy is the possibility for parents to avail therapies from experts all over the world with the bonus of having therapies from multiple disciplines under one roof, thus saving travel expenses and time (Speech- Language and Audiology Canada, 2015).

Many materials are available for free in the internet for targeting small portions of grammar like plurals or prepositions, however not many free resources are available for targeting one whole domain like the syntax. Also, most of the available resources target the Western population and contains limited number of free stimuli for practice. The usefulness of teaching syntax cannot be understated as children will be able to understand and speak a

language easily only if they know how to combine different structures in a word or sentence, also other people judge them based on their grammar in speech (Richard & Renandya, 2002).

Children will be able to use grammar effectively only if the rules are taught with lots of illustrations in a step-by-step graded manner, moving from easy to most difficult concepts. Therefore, the need of the hour is to develop an Indianized version of an all-in-one therapy resource material for use in tele-therapy. There is a need to create a material that covers the whole domain of syntax for a particular age range, with tasks taught in an explicit manner, following a developmental acquisition that is research-based, made freely available for parents and professionals. Hence, the current study aims to fulfil this research gap by providing an evidence-based method of intervention to teach syntax for children from ages 4 to 6 years.

**Aim of the study:** To develop a Multimedia training manual in English for Syntactic Skills in 4-6 –year-old children.

## Chapter 2

### REVIEW OF LITERATURE

**“What sets man apart from the rest of the animal kingdom is his ability to speak; ... ‘*homo loquens*’... other creatures can make meaningful sounds, the link between sound and meaning is for them of a far more primitive kind than it is for man ... link for man is grammar. Man is not merely *homo loquens*; he is ‘*homo Grammaticus*’.” (Palmar, 1971, p.8)**

Human language is quite complex since we have the ability to form infinite number of sentences. Each time we use a different sentence to express the same idea yet, we still are able to understand each other. These unique sentence construction mechanisms differ from one language to other and they are the relations that link sound (or written form) with the meaning of what needs to be conveyed. Grammar is hence defined as, ‘a device that specifies the infinite set of well-formed sentences and assigns to each of them one or more structural descriptions’. What it means is that, grammar helps us form infinite number of sentences and provides the descriptions of them.

The word ‘grammar’ is derived from a Greek word which means ‘to write’. This does not mean in any way that grammar is present only in the written language. Grammar is also a significant aspect of spoken language. We develop spoken language much before the written script. Intonation, which is majorly expressed using spoken language also depends on grammar. Because of the wide variations between the grammar of languages, Wilhelm von Humboldt (1822) classified the world’s languages into three types: inflectional, agglutinative

and isolating. Latin, French and Arabic are examples for inflectional languages where the grammatical inflections (also called morphemes) cannot be separated; Swahili and most of Indian languages are agglutinative where the inflections can be separated; and, Chinese is an isolating language which has no morphology or inflections.

‘Structural’ linguistics originated in the nineteenth century with the works of Saussure, Bloomfield and few others in the field of linguistics. Their main aim was to give a structure or regularity to language which ultimately led them to the concept of phonemes and morphemes. Later on, the term ‘allomorphs’ was put forward, which came to be known as allomorphs. For e.g., /s/, /z/ and /iz/ are different forms of the plural marker (or allomorphs) in the words books, pens and glasses, respectively. Bloomfield (1933) termed this structural way of analyzing a sentence as ‘Immediate Constituent Analysis (ICA)’, where words are considered as constituents of a sentence that can be broken down further in a top-down manner. Following that, Chomsky (1957) gave specific grammatical category labels to each constituents, which came to be known as ‘Phrase Structure Grammar(PSG)’.

In the year 1957, with Chomsky’s new book ‘Syntactic structures’, the term ‘Transformational- Generative Grammar’ was introduced. As the name suggests, it features that grammar has both a ‘transformational’ (for e.g. transformation from active to passive sentence, or vice versa) and ‘generative’ function. The term ‘generative’ means that the grammar of a language should be able to predict all the possible sentences in that language and specify them precisely. According to this theory, phrase structure is the base, and transformational rules are applied on it. Had there only been PSG, it would not have accounted for the complex sentence transformations such as passive sentences, which helps in forming sentences economically.



The term 'grammar' is a combination of syntax and morphology, hence together they are known as morpho-syntax. Chomsky (1957) said that grammar includes syntax, semantics and phonology. The syntax helps in generating infinite number of sentences which is later connected to the sound and meaning through phonology and semantics, respectively. A language's syntax is majorly associated with the word order in sentences. There are two main classes of words, viz. nouns and verbs. The order in which they appear denotes if the sentence is an active sentence or passive sentence. There are few words which also serve as both a noun and a verb, e.g. love, work.

## **2.1 The Development of Morphology and Syntax**

The syntactical and morphological development is described by Owens (2012) where it typically starts from the one-word stage (ages 12 to 18 months) where children use single words to express a whole concept hence also called as the holophrastic stage. By 18 to 24 months, begins to combine words to form short sentences (such as, "mamma go", "cat sleep") and also start asking questions ("what doing?", "where go?"). Syntactic knowledge can be used by pre-schoolers to learn about a wide range of words, including nouns, verbs, and adjectives. Syntactic bootstrapping is the process by which children utilise the syntax in which a word appears to narrow or confine its meaning. According to research on the development of syntactic bootstrapping, the use of syntax to acquire new words is fragile between the ages of 18 and 24, and is fully operational by 24 months (Hoff & Shatz, 2009).

Between 2 to 2.5 years, children produce 3-word utterances (such as, "The doggy is big", "Where is pond?"), use the present progressive -ing and plural -s. By 3 years, child starts using regular past tense verbs consistently (jumped), plurals, possessives, articles and

pronouns. Also, by the age of 3 years, child will be able to associate the meaning of a novel verb to form conclusions about a situation., through syntactic bootstrapping (Gleitman, 1990; Gleitman et al., 2005).

By 4 years, child begins to ask when, how and why questions, use irregular plurals (feet), reflexive pronouns (myself), negative sentences (I can't do it) and other pronouns (your, yours, he, she) becomes more consistent (Owens, 2005; Brown & Bellugi, 1964; Brown,1973). By 5 years, child starts producing irregular plurals in a more consistent manner and uses comparatives, future tense rightly (Chapman et al., 1981).

By 6 years, the child consistently uses irregular plurals, possessives, negatives and all forms of pronouns correctly. Also child's usage of the negative past tense of verbs improves by this age (would'nt). By 7 years, child uses gerunds (fish-ing) and irregular comparatives (e.g. good, better, best) often (Anlin, 1993; Nagy et al., 1991). Following 7 years, grammar seems to be accurate in conversation however complex syntactical structures still continues to develop following this period. Table 2.1 summarizes the acquisition of grammatical morphemes, as given by Brown (1973).

**Table 2.1***Brown's 14 Grammatical Morphemes: Order of Acquisition (Brown,1973)*

<b>Morpheme</b>	<b>Example</b>	<b>Stage</b>
Present progressive <i>-ing</i> (no auxiliary verb)	Daddy sleeping	I-II
In/on	Doggie on table	II
Regular plural <i>-s</i>	Me have two shoes	I-III
Irregular past	Drank, came, fell, broke, ate	I-IV
Possessive's	Daddy's chair	I-IV
Uncontractible copula (used as main verb)	This is hot.	II-IV
Article ( <i>a/the</i> )	Open the door.	II-V
Regular past <i>-ed</i>	Mommy walked the dog.	I-Post V
Regular third person <i>-s</i>	Mommy works.	I-V
Irregular third person	Does, has	II-Post V
Uncontractible auxiliary	The doggie was running.	II-Post V
Contractible copula	He is tall.	II-Post V
Contractible auxiliary	Daddy is coming home.	II-Post V

*Note.* Reprinted from Treatment Resource Manual for Speech-Language Pathology (6 ed., p 172-173) by F.P. Roth and C.K. Worthington, 2021, Plural Publishing. Copyright 2021 by Froma P. Roth and Colleen K. Worthington

The literature indicated in the Table 2.1 is the result of the longitudinal study carried out by Brown (1973) on three children, Adam, Eve and Sarah. The approximate age of the stages are as follows: Stage I (18-24months), Stage II (2-2.5 years), Stage III (2.5- 3 years), Stage IV (3-3.5 years) and Stage V (3.5-4 years). It can be seen that most of the grammatical

morphemes emerge by the end of stage I and occurs throughout stage II. Present progressive forms are mastered early; mastery of irregular third-person verbs, contractible and uncontractible copula and auxiliary verb forms happens by stage III. Some children master them by stage V or even later (Hulit et al., 2015). Further in his study, Brown observed that the development of the 14 grammatical morphemes happened at different rates in the three children, however it followed the same order (i.e, present progressive, in, on, plural [+s], past irregular, possessive [+s'] Uncontractible copula [*am, is, are, was, were*], articles [*a, the*], past regular [+d], third person regular [+s], third person irregular [for example, *does, has*], uncontractible auxiliary [*am, is, are, has have*], contractible copula [*'m, 's, 're*], contractible auxiliary [*'m, 's, 're* when combined with *+ing*; *'ve, 's* when combined with a past participle such as *has been*]) (Hoff, 2005).

## **2.2.1 Major domains of morpho-syntax**

### **2.2.1 Pronouns**

Pronouns are “a class of words used to refer to participants in discourse that are interpreted by recognizing their reference to earlier noun phrases or their referents in social context” (Chung & Pennebaker, 2007). “In addition to communication efficiency, pronouns define and clarify relationships in dialogue and denote meanings in social interactions” (Zimmerman et al., 2013). For example, first person, second person and third person pronouns. Table 2.2 summarizes the different types of pronouns that are used in English language.

**Table 2.2***The different types of pronouns in English*

<b>Types of pronouns</b>	<b>Definition</b>	<b>Example</b>
Personal pronouns	Substitutes a person's name or object.	Subject pronouns: <i>I, you, he, she, it, we, they.</i>  Object pronouns: <i>me, you, her, him, it, us, them.</i>
Possessive pronouns	Shows possession or belonging.	<i>My, our, your, his, her, its, and their.</i>  Independent possessive pronouns: <i>mine, ours, yours, his, hers, its, and theirs.</i>
Demonstrative pronouns	Replace a noun that is mentioned earlier. They can also function as adjectives.	Singular: <i>this, that, such, none, neither.</i>  Plural: <i>these, those.</i>
Indefinite pronouns	Does not substitute a noun directly.	Singular: <i>anybody, anyone, anything, each, everybody, everyone, everything, little, much, nobody, no one, nothing, one, somebody, someone, something.</i>  Plural: <i>both, few, many, several.</i>  Both: <i>all, any, more, most, none, some, such.</i>
Relative pronouns	Helps in joining a noun or a pronoun to a clause or a phrase.	<i>who, whom, which, whose, that</i>  Indefinite relative pronouns: <i>whoever, whomever, whichever, whatever.</i>

**Table 2.2** (*continued*)

<b>Types of pronouns</b>	<b>Definition</b>	<b>Example</b>
Interrogative pronouns	Helps in asking a question by substituting for a noun.	<i>who, whom, which, what, whose; whoever, whomever, whichever, whatever.</i>
Reflexive pronouns	Replaces the object.	<i>myself, yourself, himself, herself, itself, themselves, theirselves.</i>
Intensive pronouns	Only function is to intensify the noun.	<i>myself, yourself, himself, herself, itself, themselves, theirselves.</i>  Plural: <i>yourselves, ourselves, themselves</i>  e.g. I myself will go to town.
Reciprocal pronouns	Used to show when two or more persons perform (reciprocate) the same action.	For two nouns: <i>each other</i> For more than three nouns: <i>one another</i>

*Note.* Adapted from <https://grammar.yourdictionary.com/parts-of-speech/pronouns/types-of-pronouns.html>. Copyright 2021 by LoveToKnowMedia

**Atypical acquisition of pronouns.** Pronoun reversals and difficulty in the usage of pronouns has been an identification marker of autism. In a recent study, Finnegan et al. (2021) performed a systematic review and meta-analysis to know which kinds of pronouns are majorly affected in individuals with autism. They reported no significant difference in personal and possessive pronoun usage between individuals with autism and those who were typically developing. However, individuals who had autism tended to have fewer overall

pronouns in speech with less usage of reflexive and clitic pronouns; instead, they used more of ambiguous pronouns in their speech.

In a different study, Perovic et al. (2013) attempted to find if the difficulties in interpretation of personal and reflexive pronouns was due to a syntactic or pragmatic deficit. They found that individuals with autism had difficulties in personal pronoun usage, but only to the same extent as the typically developing age- matched children. However, major issues were found with the reflexive pronoun usage, suggesting that the pronominal errors in autism was more syntactic in nature than pragmatic.

### **2.2.2 Tenses**

Tenses are used to explain a verb in relation to the time it has occurred, or might occur. Three stages for the acquisition of grammar has been put forward are (Bishop, 2014; Edelman & Waterfall, 2007; Tomasello, 2003):

Stage I- Child learns through rote-learning. For example, “give appa the plate”, “amma is eating an apple”

Stage II- Child learns to group the similar structures as frames. E.g. Frame ‘give AB’ (A= appa, B= the plate), frame ‘CVD’ (C= amma, V= is eating, D= an apple).

Stage III- Child learns to group larger units such as, phrases and clauses; forms syntactic, phonologic, semantic connections; and, learning becomes more abstract. For example, child learns that a verb has a root and an inflection. This knowledge helps in efficient lexical storage, as now the child only needs to store the root word in

his or her lexicon, and the inflections can be joined whenever required based on the rules.

**Atypical Acquisition of Tenses.** In a study by Bishop (2014), it was reported that the difficulties in tenses in case of Specific Language Impairment could be because of a difficulty in finer auditory perception (the surface hypotheses), impaired phonological segmentation (the phonological deficit hypotheses) or deficits in recognizing similar inputs. Bishop concluded that the tense errors in children with SLI could be because of the lack of knowledge of *when* to use the inflections rather than *how*.

**Intervention for Tenses:** A combination of the shape coding approach, a metalinguistic treatment method (first reported by Ebbels, 2007) and grammar facilitation techniques were used by Kulkarni et al. (2014) to teach regular past tense markers to two children who had language disorders. They found that both the participants exhibited significant improvements in their targets and generalization was observed to varying degrees in both participants. Several other approaches (e.g. ‘Context Optimization’ therapy by Motsch & Riehemann, 2008, ‘MetaTaal’ by Zwitserlood et al., 2014 etc.) have been reported that helps in teaching grammar effectively to students. The present manual also follows an explicit method of teaching syntax using a combination of visual coding strategies, metalinguistic, and cognitive strategies. This is because children will be able to understand, remember and recall better if visual codes are represented along with the pictures or auditory input (Bishop, 2006).



### 2.2.3 *Plurals*

Based on number, they are classified as singular and plural nouns. According to Quirk et al. (1985), three major types of plurals in English based on the nouns are:

- i) Singular invariable nouns: Non-count (e.g., water, music) and Proper (e.g., John) nouns
- ii) Plural invariable nouns: (e.g., cars, soaps)
- iii) Variable nouns: Regular (e.g., hen-hens) and Irregular (e.g., teeth-tooth) noun classes.

Allomorphs of the plural forms are as follows:

- If the final consonant of the noun is **voiceless**: use **-s** marker
- If the final consonant of the noun are **sibilants or affricates**: use **-az** marker
- If the final consonant is anything **other** than that which is specified above: use **-z** marker

According to Quirk et al. (1985), there are at least five classes for irregular plurals which are as follows:

- |                           |                                 |
|---------------------------|---------------------------------|
| a. Voicing plus -s plural | calf/calves                     |
| b. Mutation plural        | foot/feet                       |
| c. -en plural             | child/children                  |
| d. Zero plural            | sheep/sheep                     |
| e. Foreign plural         | thesis/theses, stimulus/stimuli |

The first regular plural suffix is correctly produced from less than 24 months (Leopold, 1949; Cazden, 1968; Mervis & Johnson, 1991). The mastery of plurals suffixes occurs between 24 to 34 months (Brown, 1973).

**Intervention for Plurals.** Seven activities to teach irregular plurals were compiled by Martins and Silva (2012) to teach English language learners: Noughts and Crosses (Rinvoluceri, 1984), Grammar Tennis (Rinvoluceri, 1984), Back-Writing (Rinvoluceri, 1984), The Odd One Out, Word Search, Irregular plurals in movement (Rinvoluceri, 2002) and, Irregular Battleships (Almarza, 2000).

#### ***2.2.4 Comparatives and Superlatives***

In a group of 100 typically developing children, Layton and Stick (1979) found that the acquisition of comparative and superlative forms occurred approximately at the same time, with the comparatives acquiring slightly before the superlative forms. The children attained 90% mastery of both forms by 4.6 years. The comparatives were produced correctly by the younger group and superlatives by the older group that was studied. The authors reported that this could be because the production of comparatives required comparison only in one dimension, whereas superlatives required a two- dimensional comparison. Though the children acquired their comprehension at a very early stage, the production was not mastered until 4.6 years. In Layton's study, 11 adjective and adverb forms were studied and they found that, *big* and *little* were the most frequently used in the children's speech.

**Intervention.** In a recent study by Aran (2018), she reported her experience of teaching a student with autism while all the other students in her class were typically developing. The child with autism did not understand the concepts when it was taught in the

same way as taught to others in class. Therefore, the teacher used Marvel cards, where the child had to move the word cards. Then, the child successfully picked up the concept. This shows that children with language disorders need concepts to be taught in a more explicit manner, with the use of 3-D figures, characters of interest, or with colourful pictures. An older study by Klein (1994) also reported second language learners in college who learnt to form comparative- superlative sentences using 3-D objects (seashells) where the teacher explained the concepts using similar and contrasting pairs of real objects (long and short pencils, 2 empty jars etc.).

### ***2.2.5 Subject Verb agreement***

Earlier studies have reported that comprehension of subject-verb agreement is acquired later than its expression (Johnson et al., 2005). Hence, a recent study by Legendre et al. (2014) was carried out to check this hypothesis. Children speaking French, English and Spanish were taken for the study. The procedure used for testing (i.e. eye gaze and pointing) was kept constant. They found that the comprehension of at least one form of the agreement occurred at 30 months for children speaking French, but it failed to occur in English-speaking children. This negated the previous hypothesis and hence confirmed that, late comprehension is not a universal feature; but is due to the differences between languages.

### ***2.2.6 Negation***

Negation is the ability of humans to say 'no'. The table 2.3 below summarizes children's negative sentence forms, in order of development (Klima & Bellugi, 1967).

**Table 2.3**

*Children's negative sentence forms, in order of development (Klima & Bellugi, 1967)*

---

1. *Sentences with external negative marker*

No...wipe finger

No the sun shining

No mitten

Wear mitten no

2. *Constructions with internal negative marker but with no auxiliaries*

I can't see you

I don't like you

I no want envelope

3. *Construction with auxiliaries*

I didn't like it

Donna won't let go

No, it isn't

---

*Note.* Reprinted from *Language Development* (3 ed., p 259) by E. Hoff, 2005, Wadsworth.

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From Table 2.3, it can be inferred that the simplest way for children learning English to convey negation is to add a negative marker (usually *no* or *not*) to the beginning or end of the phrase. Non-linguistically, some children signal negation by shaking their heads while uttering a positive phrase. Following these sentence-external methods of negation marking, children create utterances with the negative marker present internally (for example, "I don't want to go in there"), but the sentences are still not adult-like because auxiliaries are not

used. Finally, when children gain auxiliaries, their negative expressions mature and become more adult-like (Hoff, 2005).

In contrast to the above study, Vaidyanathan (1991) reported the acquisition of negations in Tamil children assessed during interactions with the adult and found that, forms of negations acquired in the following order: free forms *naanaa* ('No, I don't want) to reject, followed by bound forms, and lastly *illa* ('no') to deny. The functions of negation arose in the following order: Rejection, followed by Non-existence, Prohibition and Denial.

It becomes difficult to convince another person without negation, we cannot have public or private debates without negation, and we just cannot think about the past or the future without negation since we do not have an alternative reasoning. Rejection or refusal, the simplest negative form is also present in animals. To reject something does not require complex representations in the mind. The second function to arise is non-existence. It requires the child to convey the lack or disappearance of an expected referent in the context of speech, as well as something that goes against their expectations based on previous experience (for example, malfunctioning toys). In its most advanced form- denial, children learn to mind-read their partners, hence the role of pragmatics cannot be understated, along with the situational context (Cuccio, 2011). "To deny the truth of another person's statement entails the understanding that the other person may hold different beliefs, or that language is itself a representation of reality, not reality itself" (Tager-flusberg, 1999). Denial is frequently learned by the time a child is two and a half years to three years old.

**Atypical acquisition of negation.** In a study by Shapiro and Kapit (1978), 3 and 5-year old subjects with autism and who were typically developing were required to follow an

experimenter's instructions in order to understand, produce, or imitate negative words. The children with autism outperformed controls in the imitation task but had much lower scores overall in the production. In terms of comprehension, all groups performed well. Even still, autistic children's comprehension scores were lower than the 5-year-olds, and even lower than one of the two 3-year-old groups controls who were normally developing. The reason for the autistic participants producing fewer and more rigid negations while also copying effectively could imply competent registration and response, but inadequate linguistic form integrative processing for social and communicative use.

In a study done by Tager-Flusberg et al. (1990), it was found that children with autism and Down syndrome had no difference in the order of acquisition of the negation markers. However, the children with Down syndrome acquired all major three functions (rejection, non-existence and denial) but children with autism failed to produce denial in their speech, suggesting theory of mind impairments in them.

**Intervention.** “Reading and understanding negative sentences do not always come naturally to children. Various structures and teaching methods can help students reason through negatives” (Mathewson, 1984).

He went to describe some techniques to teach negation:

- An Identification Activity can be carried out in which a randomly mixed list of negative and affirmative sentences are presented and the children are asked to point to the negative sentences.
- A Composition Activity in which they asked to Convert affirmative sentences to several forms of negatively phrased statements.

- A Context Activity in which, for example: the clinician might give a sentence, and the child has to choose which sentence is best suited as its continuing sentence out of the two options given (negative and affirmative sentence).

### ***2.2.7 Sentence Repetition***

In a study to explore the sentence repetition abilities in children, Polisenka et al. (2015) took 100 children who were, typically developing and native speakers of English and Czech. The linguistic structures between the two languages were different. A span task was used to see the length of sentences that could be repeated by them in seven different conditions (e.g. prosodic variations, semantic violations, non-words etc.). They found that prosodic effects and placement of content words and function words in the appropriate positions, facilitated the repetition. Less scores were obtained for ambiguous and non-words. This suggested that the task of sentence repetition was not just used to measure short term memory but also, language processing. They also stated that by 4 to 5 years, children were able to develop a relation between language and short term memory.

Another study by Gerken et al. (1990) reported that, prosodic changes influenced function word repetition in 2- year olds. English-speaking 7 boys and 9 girls with a mean age of 26 months, were taken for the study. They were presented with sentences following which, they were asked to repeat a ‘Verb-inflection-article-Noun’ string. In the string, the noun and the verb remained the same as the sentence they just heard, but the function words (i.e., the inflection and the article) were either in English or non-sense syllables with a weak stress. They found that the children omitted the English and non-word function words (weakly-stressed) but were able to produce content words (strongly-stressed). They suggested after a

series of three experiments, that children were able to perceive the function words but could not produce it. The function words also played a role in *segmentation*, thereby helping them to identify the noun and verb correctly.

### **2.2.8 *Judgement of correctness***

Young children, aged two to three years, make early judgments of acceptability based on their capacity to comprehend. As a result, if the sentence is understandable it is deemed appropriate. Later on, around the ages of four to five, judgments are made on the basis of truth value or whether the child "approves" of what has been said. Finally, by the age of six or seven, the youngster is able to distinguish between form and content, allowing him or her to make a judgement based on the linguistic form (Tunmer & Grieve, 1984).

Linguistic processing and working memory are inextricably linked. In a study done by Magimairaj & Montgomery (2012) examined the relationship between verbal working memory and sentence comprehension in children. For this, they took 65 typically developing children between the ages of 6 to 12 years. The task used was a 'Working Memory Span Task' where they had to listen to a block of sentences and judge its truth; and also, recall the words in the sentence-final position. The researchers found that the working memory was related to the judgement of the sentence in case of short sentences. As the sentences became longer, working memory's prediction of sentence comprehension decreased. This could be because of increased demands in memory and time, in the latter.

Another study by Balladares et al. (2016) was carried out to examine the performance of 5-6-year-old children in sentence repetition and non- word repetition tasks, across different socio-economic classes. In this study, 65 children were from lower socio-economic



class and 61 children from a higher socio-economic class. They found that children from higher socio-economic background scored significantly better than those from lower socio-economic backgrounds. But, this was observed only for sentence repetition. There was no significant difference found in case of non-word repetition.

**Atypical acquisition of Judgement of correctness.** A study was carried out by Fujiki et al. (1987) to investigate how well a grammatical judgement screening test might distinguish between linguistically normal and language impaired first (6.6-7.6 years), second (7.6-8.6 years), and third (8.6-9.6 years) grade learners. Whenever the sentence seemed ungrammatical, child was asked to tell its correct form. Results revealed that there was a significant difference in the judgement abilities between the typically developing and language impaired first and second grade learners.

Hence, grammar (form) is separate from the meaning (content). A child's critical discovery regarding the position of words and phrases in sentences is the key to syntactic development. Though there exists plenty of materials to assess syntactic skills, we still lack materials for intervention. Developing Indianized materials to work systematically on syntax is one of our present concern. Therefore, considering the above points, the present study aimed to develop a multimedia training manual in English for syntactic skills in 4-6 –year-old children.

## **Chapter 3**

### **METHOD**

The present manual was developed as a tele-therapy resource manual for training syntactic skills in 4 to 6-year-old children. Literature regarding morphologic skills, syntactic skills and its intervention were reviewed from books, journals, previous dissertations done at AIISH and other internet sources.

The study was carried out in two phases:

**Phase I:** Development of the Multimedia syntactic manual in English

**Phase II:** Validation of the developed manual by Speech-Language Pathologists (SLPs)

#### **3.1 Phase I: Development of the Multimedia syntactic manual in English**

##### **3.1.1 *Material***

Syntactic domains from English Language Test for Indian Children (ELTIC) developed by Bhuvaneshwari and Shanbal (2010) was adapted for developing the domains.

ELTIC was the adapted version of the Bankson Language Screening Test (BLST; Bankson, 1977) which was developed in order to screen the language functions in Indian children in the age group of 4 to 6 years. The present manual also targets the same age range (i.e., ages 4 to 6 years) in English, and can be also used for older age groups. The domains of syntax and morphology that was taken from ELTIC are, as follows:

- Morphological rules, and
- Syntactic rules

### *Morphological rules*

Domain I: Pronouns

Domain II: Verb tenses

Domain III: Plurals

Domain IV: Comparatives

Domain V: Superlatives.

### *Syntactic skills*

Domain VI: Subject- verb agreement

Domain VII: Negation

Domain VIII: Sentence repetition

Domain IX: Judgement of correctness.

The stimuli for comparative and superlative domain was clubbed together.

Each of the domain was trained using the principle suggested by Venkatesan (2004) in the development of the 'Activity Checklist for Preschool Children with Developmental Disabilities' (ACPC-DD), and the following tasks were used:

- Sorting task

- Matching task
- Identification task
- Treatment (or, Production) task
- Probe (or, Generalization) task

The first two tasks (Sorting and Matching) will help in the development of cognitive-linguistic skills, whereas the final three tasks (Identification, Expression and Generalization) will help in targeting the linguistic or language skill. It is necessary to develop the various cognitive-linguistic skills such as sorting, matching before teaching the actual language to the child as it will facilitate greater understanding and generalization to everyday settings. All the 5 tasks were not included in each domain.

The manual was created in a Microsoft Power Point version 2016 with white background. A general instruction page was included for clinicians and parents at the beginning of the manual. Each domain had a cover page with a short note on the goal targeted. The manual was constructed in a hierarchical order, starting with simple tasks with 2 target pictures in a slide and gradually moving to more complexity. Images and animations was used for making the tasks interesting to the child. The stimuli of 'sentence repetition' domain has audio recording, done by the author.

The vocabulary was developmentally appropriate for 4 to 6-year-old children to comprehend. The words were supplemented with pictures and audio recording as not all children learn to read by 4 years. The pictures were coloured drawings that are culturally relevant for Indian population. For ease of learning, symbols were associated for each grammatical category as many of the children are visual learners. This would make sorting

and identification of the pictures easier. Pictures for the manual were drawn by a professional artist.

### ***3.1.2 About the Manual***

The training manual seeks to address the following domains:

- i) Pronouns: Pronouns are words that stand for nouns. Personal pronouns are considered for training in this manual. “Personal pronouns are a large collection of independent target responses. They include: He, she, it, I, me, we, us, my, mine, our, ours, you, your, yours, its, him, his, her, hers, they, them, their, and theirs” (Hegde, 2006).
- ii) Verb Tenses: Tense markers are based on the time- based relationship between events. In this manual, we will consider the simple past, present and future tense markers.
- iii) Plurals: The word plural means “more than one”. Plural morphemes are divided into the regular (e.g., boys) and irregular (e.g., children) forms. The regular plural has 3 allophonic variations viz, “s”, “z” and “es”, but the “s” plural marker is considered for training in this manual since it is considered to be the most commonly used plural marker in English-speaking Indian children.
- iv) Comparatives: Comparatives are inflections used to show the quality, quantity or degree with respect to another comparator.
- v) Superlatives: Superlatives are inflections used to show the greatest quality, quantity or degree- relative to all other comparators.
- vi) Subject- verb agreement: Subject-verb agreement is the consensus that a subject must have with its verb, with respect to its number, i.e., singular or plural.

- vii) Negation: In literature, there are three types of negative sentences (Gleason, 2001): sentences that inform of nonexistence of a thing or person (e.g., no Daddy); sentences that express rejection (e.g., no eat veggie); sentence that deny statements (e.g., not Daddy). This manual covers stimulus to teach the function of nonexistence.
- viii) Sentence repetition: Sentence repetition measures the ability of the child to repeat sentences after the adult. There are 2 views: some say it is an indication of the language ability whereas, some say that it reflects the working memory capacity.
- ix) Judgement of correctness: Judging sentences is a metalinguistic ability which involves, 'one's ability to reflect upon one's language, appreciate and even talk about it'. This is a higher-order skill more than comprehending or speaking. "One must take a prior cognitive process (linguistic performance) as the object of a yet higher order cognitive process (reflection about language performance, or metalinguistic performance) which may have properties of its own" (Gleitman and Gleitman, 1979).

The tasks/ activities included for each domain were made using the principle suggested by Venkatesan (2004) in the development of the 'Activity Checklist for Preschool Children with Developmental Disabilities' (ACPC-DD) and these were, as follows:

- Sorting Task: In this task, child will be asked to point to which category the picture belongs to, based on what has been taught to him or her in prior. For example, for the subdomain of tenses, child has to point to whether the picture belongs to the past or present or future tense.
- Matching Task: In this task, the child will be asked to correctly match the similar syntactic features. For example, from a group of 4 pictures, child has to match the 2 pictures showing signifying present tense.

- Identification Task: To target this task, the game of “I spy” will be played. In this game, the clinician or caregiver will say “I spy the boy running” and the child has to point to the appropriate picture.
- Treatment (or Production) Task: In this task, the clinician or caregiver will show the picture and child has to say what is shown in the picture using the appropriate grammatical feature targeted. For example, if the picture of a boy playing is shown, child has to say that the boy is playing (in the present tense).
- Probe (or Generalization) Task: This task will be carried out at home in natural situations of the child, with slightly varied form of the already taught stimuli (pictures, or real objects). The stimuli for the same is not included as part of this manual.

Scoring was not defined for the Sorting, Matching and Identification tasks as it was only meant to strengthen the concept/idea of each domain addressed in this manual.

### ***3.1.3 Treatment Procedures and Sequence***

The manual includes Baseline assessment, Treatment (production) and Probe (generalization) procedures researched and described by Hegde (Hegde et al., 1979; Hegde, 1980; Hegde & McConn, 1981; Hegde, 2006), and were adapted with permission from the author.

The manual (See Appendix II) include the following:

- A Baseline recording sheet
- A Treatment recording sheet
- A Probe recording sheet

A detailed assessment is necessary for instituting client-specific intervention. A set of 10-12 exemplars are used for base rating each domain. A single example of the target skill is called an exemplar. Since the base rating as well as the treatment phase includes the same set of exemplars, the clinician can make effective conclusions regarding the progress of the child.

- i) ***Determining the Baseline:*** Baseline evaluation is the first step of treatment. It aids in determining the need for treatment and serve as an objective and quantitative basis for assessing the child's treatment progress. The manual contains a Baseline Recording Sheet.

There are two kinds of baseline evaluation trials: evoked and modelled.

Evoked trial: No modelling is given.

Modelled trial: The clinician will ask a question and answers it immediately.

During baseline evaluation, the clinician should not give any feedback for the child's correct, incorrect, or no response. The procedure to carry out the evoked and the modelled baseline trials is explained below in Table 3.1 and Table 3.2.



**Table 3.1***Procedure for evoked baseline trial*

<b>Steps for Evoked Baseline Trial</b>		<b>Note</b>
Clinician	[Presents the picture stimulus] Asks a question.	No modelling
Child	Saying incorrect answer	Incorrect response
Clinician	Records the incorrect response in the scoresheet.	No corrective feedback

**Table 3.2***Procedure for modelled baseline trial*

<b>Steps for Modelled Baseline Trial</b>		<b>Note</b>
Clinician	[Presents the picture stimulus] Asks a question. “Say, (answer).”	Modelling
Child	Saying incorrect answer	Incorrect response
Clinician	Records the incorrect response in the scoresheet.	<i>No corrective feedback</i>

- ii) ***Executing the treatment:*** After the baseline assessment, the clinician will instrument the treatment. The Baseline and Treatment trials have a common design. But, unlike baseline trials, Treatment trials encompasses verbal praises and corrective feedbacks.

Contrary to the baseline evaluation described above, A Treatment Trial begins with modelling, and is gradually faded to introduce an evoked trial. The procedure to carry out the evoked and the modelled treatment trials is explained below in Table 3.3 and Table 3.4.

**Table 3.3**

*Procedure for modelled treatment trial*

<b>Steps for Modelled Treatment Trials</b>		<b>Note</b>
Clinician	[Presents the picture stimulus] Asks a question. “Say, (answer).”	Modelling
Child	Saying incorrect answer	Incorrect response
Clinician	Records the incorrect response in the scoresheet.	<i>Corrective feedback/ Verbal praise</i>

**Table 3.4**

*Procedure for evoked treatment trial*

<b>Steps for Evoked Treatment Trials</b>		<b>Note</b>
Clinician	[Presents the picture stimulus] Asks a question.	No modelling
Child	Saying incorrect answer	Incorrect response
Clinician	Records the incorrect response in the scoresheet.	<i>Corrective feedback/ Verbal praise</i>

Partial modelling (“Say, these are...”) and hinting (“Did you forget something” or “Don’t forget the...”) are two standard techniques used to fade modelled trials into evoked trials.

*Progression Criteria:* After 5 successive correct imitated responses, evoked trials can be introduced fading the modelled ones, for an exemplar. After 10 consecutive correct evoked responses, clinician can move onto next exemplar. Once 6 to 8 exemplars achieve 10 consecutive correct responses, clinician can move into generalization.

**iii) Probe (Generalisation):** A probe is an untrained stimulus that is used to check whether the child is able to perform similarly as the exemplars trained previously. One can use objects or different pictures of the same exemplar and check the response of the child. The procedure to carry out the probe trial is explained below in Table 3.5.

**Table 3.5**

*Procedure for probe trial*

<b>Steps for Probed Trials</b>		<b>Note</b>
Clinician	[A variation of the trained stimulus is presented] Asks a question.	No modelling or prompts
Child	Saying correct answer	A correct probe response
Clinician	[Clinician does not respond to the child’s response] Records the correct response in the scoresheet.	<i>In case of an incorrect or no response, the clinician it as incorrect without providing any feedback.</i>

*Probe Criteria: 90% correct probe responses*

- If the child cannot meet 90%, additional exemplars from baseline assessment sheet which has not been taken for treatment, must be used.
- If the child meets 90%, the next target skill can be introduced or clinician can move onto phrase and sentence level.

*If the child is able to use the target skill in all other communication contexts/natural settings (home, school etc.), the skill is considered to be mastered.*

An example of the illustration of the currently developed manual is given in Appendix I.

### **3.2 Phase 2: Validation of the manual**

The manual was content validated by three Speech-Language Pathologists (SLPs) who had a minimum experience of five years in dealing with children having communication disorders. A set of ten questions were framed regarding the type of pictures, alignment, applicability to the Indian context etc., referring to the Manual of Adult Non-Fluent Aphasia Therapy in Kannada (Goswami & Shanbal, 2010) and the SLPs were asked to rate the answers in a 5-point rating scale as Very Poor, Poor, Fair, Good and Excellent. The modifications suggested was incorporated for further refining the manual.

**Table 3.6***Validation Questionnaire*

<b>SL. NO</b>	<b>PARAMETERS</b>	<b>VERY POOR</b>	<b>POOR</b>	<b>FAIR</b>	<b>GOOD</b>	<b>EXCELLENT</b>
1.	Is the language used in the manual simple?					
2.	Are the picture stimuli of appropriate size?					
3.	Are the pictures stimuli used in the manual appropriate in terms of color and dimensions?					
4.	Are the pictures culturally and ethically acceptable?					
5.	Do the pictures adequately represent the text written below?					
6.	Are the texts written recognizable, and have adequate font size?					
7.	Are the picture stimuli within the visual field of an individual?					
8.	Is the manual covering the important morpho-syntactic domains?					
9.	Does the manual contain appropriate number of stimuli in each section?					
10.	Overall, is the manual user friendly?					

### 3.2.1 Findings of Validation

Three SLPs rated the manual in a 5-point rating scale. The results of the validation are as displayed below:

**Table 3.7**

*Responses of judges*

Sl. No	Parameters	Very poor	Poor	Fair	Good	Excellent
1.	Is the language used in the manual simple?				✓✓✓	
2.	Are the picture stimuli of appropriate size?				✓✓	✓
3.	Are the pictures stimuli used in the manual appropriate in terms of color and dimensions?				✓✓	✓
4.	Are the pictures culturally and ethically acceptable?				✓✓	✓
5.	Do the pictures adequately represent the text written below?				✓✓	
6.	Are the texts written recognizable, and have adequate font size?				✓✓✓	
7.	Are the picture stimuli within the visual field of an individual?				✓✓	✓
8.	Is the manual covering the important morpho-syntactic domains?				✓✓✓	
9.	Does the manual contain appropriate number of stimuli in each section?				✓✓✓	
10.	Overall, is the manual user friendly?				✓✓✓	

Overall, the judges rated the manual between good to excellent. In terms of size, colour, dimensions, cultural, ethical acceptability and position of the pictures within the visual field, one out of three judges rated the manual as “excellent”.

A rating of “good” was given by all three judges for the simple language used, pictures correctly representing the text, recognizable font and size, number of stimuli, user-friendliness and, whether the manual covered the important morpho-syntactic domains. Two out of the three judges rated the manual as ‘good’ for the position of the pictures within the visual field, cultural -ethical acceptability, colour, dimensions and size of the pictures used.

In conclusion, all judges gave the manual a rating of excellent and good. Therefore, the manual can be used to teach children syntactic language skills.

## Chapter 4

### SUMMARY AND CONCLUSION

The primary aim of the current study was to develop a Multimedia training manual in English for Syntactic Skills in 4-6 –year-old children. The spread of Covid-19 has impacted the lives of many families, of not being able to access routine therapies and treatments. Hence, tele-therapy has played a crucial role in helping them to continue these services according to their convenience. Secondly, the ratio of SLPs to cater to the population in need is relatively less. Lastly, materials available for the assessment and treatment of syntax is still in its infancy. When comparing with the Western scenario, there is a huge dearth of ready-to-implement training manuals in India. Hence, it catalysed the need to develop an Indianized tele-therapy resource material targeting syntactic skills.

The development of the manual was carried out in two phases. Initially, literature regarding morphologic skills, syntactic skills and its intervention were reviewed from books, journals, previous dissertations done at AIISH and other internet sources. In the first phase, the domains of the manual, along with the scoring and interpretation was framed. Syntactic domains from English Language Test for Indian Children (ELTIC) developed by Bhuvaneshwari and Shanbal (2010) was adapted for developing the domains. The domains included were, Pronouns, Tenses, Plurals, Comparatives, Superlatives, Subject-verb agreement, Negations, Sentence repetition and Judgement of correctness. Each domain was trained using the principle suggested by Venkatesan (2004). These domains included a sorting, matching, identification, production and generalization task.



The entire manual was created as a PowerPoint presentation with coloured pictures digitally made by a professional artist. The baseline, treatment and probe protocols was taken from ‘Treatment Protocols for Language Disorders in Children, Volume I: Essential Morphologic Skills’ (Hegde, 2006), with permission. In Phase II, the developed manual was content validated by three SLPs for the language used, domains targeted, picture stimuli and its ethical acceptability, visibility of text and overall user-friendliness. All the three judges gave the manual a rating of excellent and good.

To conclude, the current manual will help to fill the void existing in the treatment of syntactic skills. It is a go-to resource material for SLPs and caregivers, because of its no preparation time, age appropriate stimuli and illustrations.

### **Implications and Future directions**

- i) The current manual can be field-tested on various populations such as autism, Intellectual Disability, Learning Disability etc., and its effectiveness and efficacy can be determined. It is only then that it becomes an evidence-based resource material for practice.
- ii) The manual can be used not just for the disordered population, but can be used to teach grammatical concepts to typically developing school-going children. Many of the Indian children have English as their second-language in schools, and face difficulty in understanding and applying the grammatical concepts taught to them. This manual will prove to be a valuable resource for those children as most of the concepts are taught explicitly in a multimodal context.

- iii) This manual would serve as a much needed tele-therapy resource during the pandemic. The manual being developed as PowerPoint presentation, with colourful pictures, animations and some audio stimulus would serve its purpose as a multimedia resource. If necessary, a printed copy of the manual can be used for direct face-to-face therapy.
- iv) Presently, the manual has been developed in English. But further on, researchers can try to adapt the manual to different Indian languages, so that children across the country may benefit from it.
- v) Though nine different syntactic domains that were age-appropriate for 4 to 6 year olds have been targeted in the manual, there are several other areas of syntax which could have been included as part of targeting children in a wider age range. These include case markers, conjunctions, conditional clauses, transitives, intransitives, causatives and participial constructions.

### **Limitations**

- i) The developed manual was not field tested.
- ii) The pictures used in the manual were clip arts and not real pictures.
- iii) All the domains pertaining to syntax, were not included in the manual.

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Illustrations:

Domain I: Pronouns

# PRONOUNS

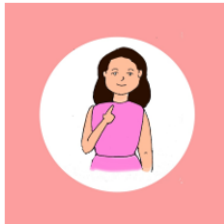
A pronoun replaces a noun. It prevents the repetition of the name of the person, animal or object again and again.

The pronouns are subdivided into:

- 1) First person pronouns (e.g. I, we)
- 2) Second person pronouns (e.g. You)
- 3) Third person pronouns (e.g. He, she, it, they)

- Activities to carry out for the first and second person pronouns are mentioned briefly in the beginning.
- Activities for the third person pronouns are mentioned elaborately with pictures, along with a detailed scoring.

Activities to teach children – First and Second person pronouns



I



You

Activities to teach children – First and Second person pronouns



We

### Activities to teach children – First and Second person pronouns

#### For “I” and “You” :

- i. Show the symbols and make the child point to his/her body for “I” and, make the child point to your body for “You”.

Practice it several times until the child is able to do it independently when you show the symbol.

- ii. Hold an object (e.g. eraser) in your hand and ask the child “who is holding the eraser?”. Immediately say, “you are holding the eraser” and make the child point to your body.

Next give the eraser to the child. Ask the same question “who is holding the eraser?”. Immediately say, “I am holding the eraser” and make the child point to his or her own body.

### Activities to teach children – First and Second person pronouns

#### For “We” :

- i. In this activity, take two similar objects (e.g. two erasers). Give one of it to the child, and the adult must hold one.
- ii. Ask the child, “who is holding the eraser?”
- iii. Immediately say, “we are holding the erasers” and, show the gesture of hugging the child (as shown in the symbol).

### Activities to teach children – Third person pronouns

- Singular third person pronouns: “He”, “She”, “It”.
- Plural third person pronouns: “They”.

#### BASELINE ASSESSMENT (Third person pronouns)

No.	Exemplars of pronouns	Modeled trials	Evoked trials
1.	It is barking.		
2.	It is thirsty.		
3.	It is falling.		
4.	He is jumping		
5.	He is holding a box		
6.	She is sweeping		
7.	She is jumping.		
8.	They are jumping.		
9.	They are eating.		
10.	They are praying.		
11.	They are playing.		
12.	They are fishing.		

1. Sorting Task

'Sort it into the correct basket'

TRIAL



he



he



they



it

2. Matching Task

Match those showing 'he'



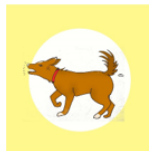
TRIAL



3. Identification Task

TRIAL

- 'I spy with my little eye, 'he''



4. Production Task

- What do you see?





## Domain II: Tenses

### TENSES

Tenses are words that help classify verbs with respect to time.

The 3 commonly used tenses are:-

- Simple past tense- used to signify a situation that has already taken place
- Present continuous tense- used to signify a situation that is happening now
- Simple future tense- used to signify a situation that may happen later

#### BASELINE ASSESSMENT

No.	Exemplars of tenses	Modeled trials	Evoked trials
1.	Will cook, cooking, cooked.		
2.	Will open, opening, opened.		
3.	Will paint, painting, painted.		
4.	Will cycle, cycling, cycled.		
5.	Will comb, combing, combed.		
6.	Will fold, folding, folded.		
7.	Will climb, climbing, climbed.		
8.	Will climb, climbing, climbed.		
9.	Will wash, washing, washed.		
10.	Will watch, watching, watched.		
11.	Will fish, fishing, fished.		

#### 1. Sorting Task

'Sort them into the correct baskets'

TRIAL



Future- "WILL \_"



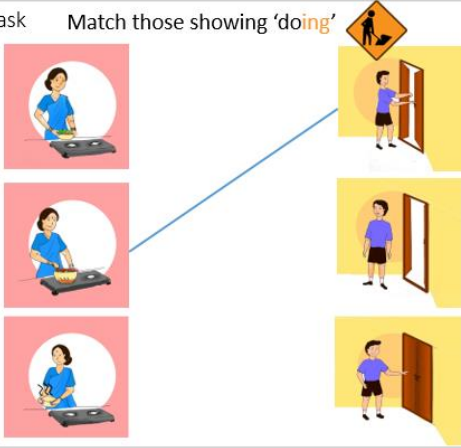
Present- "\_ing"



Past- "-\_ed"

2. Matching Task Match those showing 'doing'

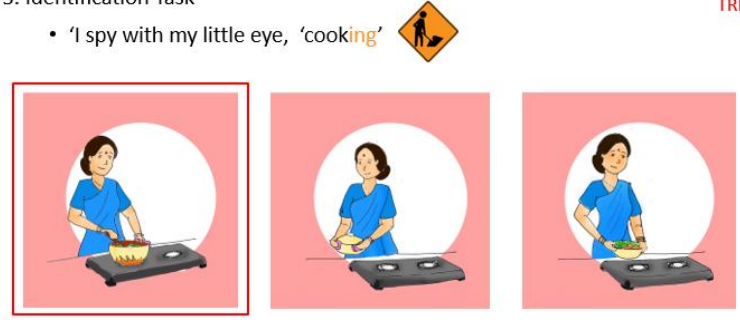
TRIAL



3. Identification Task

TRIAL

- 'I spy with my little eye, 'cooking'



4. Production Task

TRIAL

- What do you see?



## Domain III: Plurals

# PLURALS

'Plural' means more than one

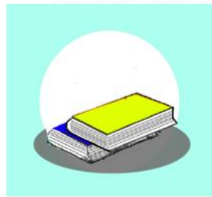
### BASELINE ASSESSMENT

No.	Exemplars of plurals	Modeled trials	Evoked trials
1.	Two boys.		
2.	Two rats.		
3.	Two girls.		
4.	Two eggs.		
5.	Two eyes.		
6.	Two shoes.		
7.	Two dogs.		
8.	Two books.		
9.	Two caps.		
10.	Two chairs.		
11.	Two cars.		
12.	Two balloons.		

### 1. Sorting Task

'Sort them into the correct baskets'

TRIAL



One

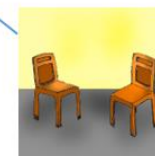
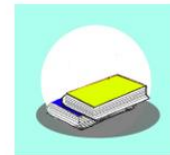


Two


### 2. Matching Task

Match those showing 'two'

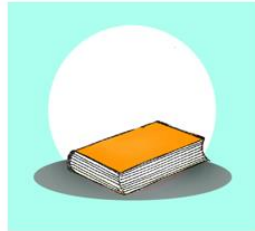
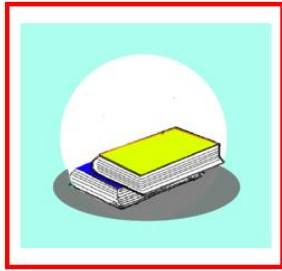
TRIAL



### 3. Identification Task

- I spy with my little eye **two books** 

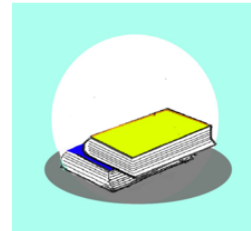
TRIAL



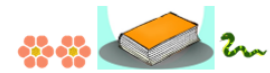
### 4. Production Task

- What do you see?

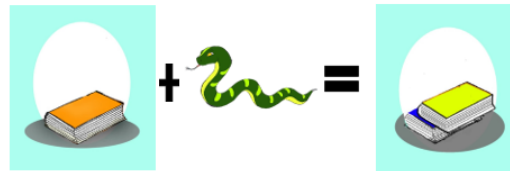
TRIAL



Expected answer: Two books



Incase the child still has difficulty expressing, move onto the next slide..  
You can use the next slide for re-emphasizing the concept further..



Book

+ ...

Books

## Domain IV and V: Comparatives and Superlatives

# COMPARATIVES & SUPERLATIVES

Comparatives and superlatives are adjectives (words that describe a noun), whose main purpose is to compare between 2 or more nouns.

- Between 2 nouns= comparatives
- Between more than 2 nouns= superlatives

BASELINE ASSESSMENT		No.	Exemplars of comparatives & superlatives	Modeled trials	Evoked trials
LEVEL 1 (easy)	1.	Big, bigger, biggest apple.			
	2.	Long, longer, longest pencil.			
	3.	Tall, taller, tallest boy.			
	4.	Fat, fatter, fattest boy.			
	5.	Dirty, dirtier, dirtiest shirt.			
LEVEL 2 (hard)	6.	Happy, happier, happiest boy.			
	7.	Sad, sadder, saddest girl.			
	8.	Strong, stronger, strongest boy.			
	9.	Heavy, heavier, heaviest box.			
LEVEL 3 (hardest)	10.	She is feeling cold, colder, coldest.			
	11.	Old, older, oldest man.			
	12.	Fast, faster, fastest vehicle.			

Activate Windows

1. Sorting Task 'Sort them into the correct baskets' TRIAL

The task consists of three baskets and three apples. The baskets are labeled with 'ER' and 'EST'.

- Small basket: ER
- Medium basket: ER
- Large basket: EST

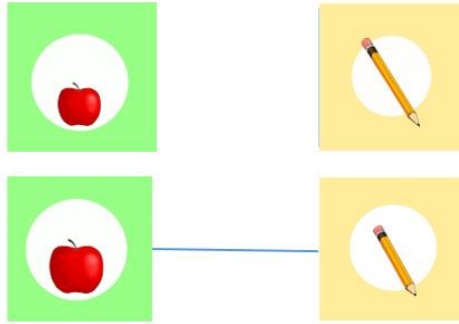
The apples are of three sizes: small, medium, and large.

2. Matching Task

Match those showing 'bigger and longer'



TRIAL

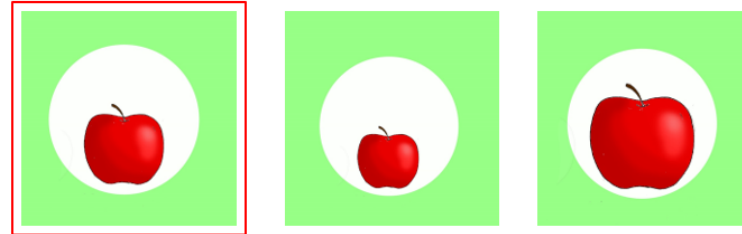


3. Identification Task

• I spy with my little eye, 'bigger apple'



TRIAL



4. Identification Task

• What do you see?

TRIAL



## Domain VI: Subject-Verb Agreement

### SUBJECT-VERB AGREEMENT

It is the rule where subjects and verbs must AGREE with one another in number.

#### BASELINE ASSESSMENT

No.	Exemplars of pronouns	Modeled trials	Evoked trials
1.	Deer eats.		
2.	Deers eat.		
3.	Boy jumps.		
4.	Girl jumps.		
5.	They jump.		
6.	Boy cries.		
7.	Girl cries.		
8.	They cry.		
9.	Boy sings.		
10.	Girl sings.		
11.	They sing.		

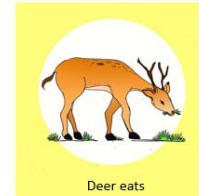
#### BASELINE ASSESSMENT

No.	Exemplars of pronouns	Modeled trials	Evoked trials
12.	Boy reads.		
13.	Girl reads.		
14.	They read.		
15.	Boy sleeps.		
16.	Girl sleeps.		
17.	They sleep.		

#### 1. Sorting Task

'Sort it into the correct basket'

TRIAL



*Singular subject- eats*

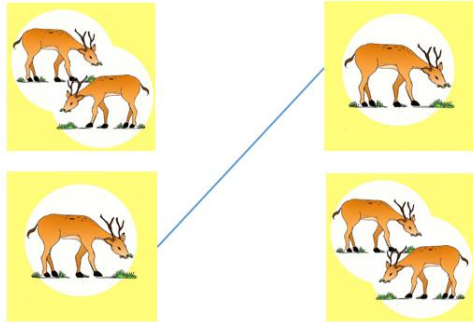


*Plural subject- eat*

2. Matching Task

Match the pair: 'What eats?'

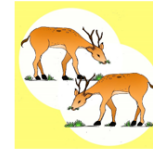
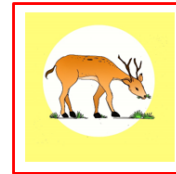
TRIAL



3. Identification Task

- I spy with my little eye, 'deer eats'

TRIAL



If it is a single deer, then the verb is plural- therefore 's' is added.

3. Production Task

- What do you see?

TRIAL



Remind the child:  
"If it is a singular subject, the verb has 's'."

Subject



Verb





## Domain VII: Negation

### NEGATIONS

'Negations' helps to form the opposite meaning.  
It helps the child to reject, non-affirm, protest etc. during conversation.

#### BASELINE ASSESSMENT

No.	Exemplars of plurals	Modeled trials	Evoked trials
1.	No shirt.		
2.	No spectacle.		
3.	No baby.		
4.	No food.		
5.	No roof.		
6.	No water.		
7.	No dirt.		
8.	No balloons.		
9.	No shoes.		
10.	No bangles.		
11.	No apples.		

#### 1. Sorting Task

'Sort them into the correct baskets'

TRIAL



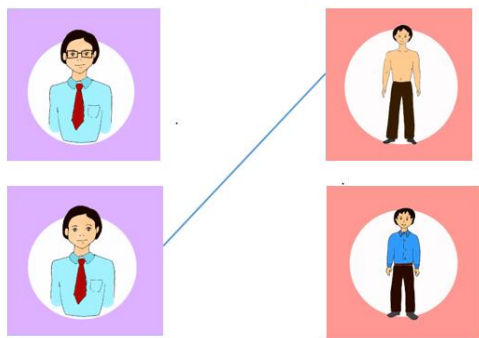
Yes



No

## 2. Matching Task

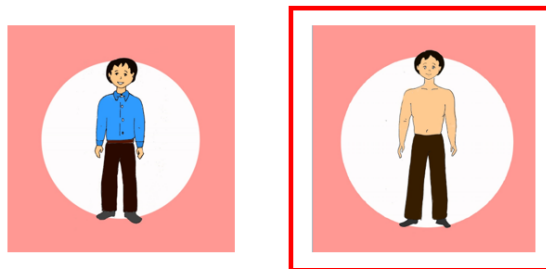
Match those showing 'no' ❌



TRIAL

## 3. Identification Task

• I spy with my little eye 'no shirt' ❌

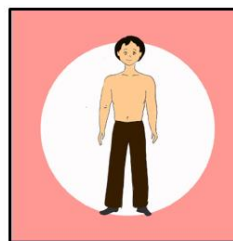


TRIAL

## 3. Production Task

• 'What is not there?'

TRIAL



Expected answer: No shirt

Incase the child has difficulty expressing, show the first picture ask 'what is there?'.  
Later, show the second picture and ask 'what is not there?'.  
The adult can make use of the symbols in the right-bottom corner to help the child produce the target correctly.

## Domain VIII: Sentence Repetition

### SENTENCE REPETITION

It is the verbal imitation of sentences, after you.

It helps in identifying the morpho-syntactic domain that the child has difficulty in understanding, sound processing skills and short term memory ability of the child.

#### Instructions for carrying out Baseline assessment:

- Baseline assessment for modeled trials should be carried in the way that is specified in the instructions portion of the beginning of the manual.
- The adult can click on the audio symbol attached in each slide, to provide an audio input of the sentence.
- Evoked trial need not be administered as the child does not need to give any answer for the adult's question.

#### BASELINE ASSESSMENT

No.	Exemplars of sentences	Modeled trials
1.	She is eating rice.	
2.	Hello, how are you?	
3.	How was your school today?	
4.	The boy is doing homework.	
5.	They played badminton all day.	
6.	Who is the tallest among them?	
7.	Birds do not swim in water.	
8.	The teacher is teaching the students.	
9.	He will go to the doctor tomorrow.	
10.	An elephant is bigger than the ant.	
11.	The mango is the king of all fruits.	
12.	Manu cannot go to school because he has fever	

1. Production Task

'Repeat after me'

**1**



- In case the child is facing difficulty,
- The adult can explain the meaning of the sentence using the pictures attached



## Domain IX: Judgement of Correctness

### JUDGEMENT OF CORRECTNESS

It is the ability to evaluate if a sentence heard is correct or wrong.  
 It comes under the metalinguistic skill, which is a higher order skill (i.e. an ability to judge one's language)

#### Specific instructions for assessing the baseline level:

**i) For modeled trials:**

Clinician/ caregiver needs to speak the sentence, ask the child if it is 'correct' or 'incorrect', **immediately provide the right answer**. The answers to the incorrect sentences are provided in brackets next to the sentences in the exemplars list.

**ii) For evoked trials:**

Clinician/ caregiver should speak the sentence, ask the child if it is 'correct' or 'incorrect' and ask 'why is it correct/incorrect'. No correction of any kind is provided for any form of response from the child.

The reason for the 'correct' or 'incorrect' responses is asked so that the adult will be able to understand if the child is guessing the responses.

BASELINE ASSESSMENT	No.	Exemplars of sentences	Modeled	Evoked
	1.	She eat rice. (Answer: She eats rice)		
	2.	The boy is the fat among all. (Answer: The boy is the fattest among all)		
	3.	There are two glasses.		
	4.	The boy will go to school yesterday. (Answer: The boy will go to school tomorrow)		
	5.	She cooked <u>poori</u> tomorrow. (Answer: She cooked <u>poori</u> yesterday)		
	6.	He barks. (Answer: It barks)		
	7.	Deer eat. (Answer: Deers eat)		
	8.	Orange is not blue.		
	9.	Who is happier: Anu or Meena?		
	10.	Apple is red in <u>colour</u> .		
	11.	Dog eats.		
	12.	They are eating yesterday. (Answer: They are eating today)		

1. Judgement Task 'Tell me if the sentence correct or wrong'

TRIAL

She eat rice

**BASELINE RECORDING SHEET**

Name:	Date:	File #
DOB/ Age:	Clinician:	
Disorder:	Target Behaviour:	
Goal		
<b>Target Responses</b>	<b>Trials</b>	
	<b>Evoked</b>	<b>Modeled</b>
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		



## PROBE RECORDING SHEET

Name:	Date:            File #:
DOB/ Age:	Clinician:
Disorder	Target Behaviour
Goal	

<b>Untrained Stimuli (UT)</b>	<b>Score</b>
1.	
2.	
3.	
4.	
5.	
6.	
7.	
<b>Percent correct probe (Criterion: 90%)</b>	

Scoring:    + Correct    - Incorrect -or No Response