



## **Brown's morphological skills in typical trilinguals**

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### **Abstract**

Language is the core of an effective communicative process. The appearance and mastery of the 14 grammatical morphemes in relation to the stages of development was found in the Brown's research. Morphemes generally convey meanings that could only be implied through the simple word orders and mastered at various stages. Numerous studies concern the acquisition of grammatical morphemes, no paper to the knowledge of the authors has explored the accuracy order and acquisition of English grammatical morphemes in Indian population.

India with its history of exposure to English language and current demand for English medium Education joins global trend of multilingualism. Speech Language Pathologist need to understand typical English language acquisition and how it differs from monolinguals in order to accurately assess and effectively identify potential language disorders.

The aim of the study is to determine the order of acquisition of English morphological structures produced by typical trilingual children in the age range of 7-10 years, with the objective of comparing the acquisition of morphemes across the age groups and task selected.

Thirty typical school going children who had been learning English as second language (ESL) for an average of 3.5 years participated in the study. The children's accuracy and the production of Brown's 14 English grammatical morphemes (1973) were examined in general conversation, monologue and picture description task. The samples were then analysed for the presence of the grammatical morphemes for each child.

The results were, in general conversation and picture description task children does not use all of the 14 grammatical morphemes, while in monologue they acquire an adult like pattern by the age of 9-10 years which are in agreement studies done by Bland- Stewart and Fitzgerald (2001).

Hence trilinguals follow a different pattern of grammatical development compared to monolinguals.

**Keywords** Morphological Skills, Trilingual speakers. Malayalam language, Brown's grammatical morphemes, monolinguals

### **1. Introduction**

In Communication is usually visual, auditory, or biochemical while human communication is unique for its extensive use of language. Language is referred as system of communication using sounds or symbols that enables us to express our feelings, thoughts, ideas, and experiences (Thompson, 2008). It refers to a rule based system of symbolic communication involving

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a set of small unit (syllables or words) that can be combined to yield an infinite number of larger language forms (Hoff & Naigles, 2002).

Morphology is the aspect of language concerned with the rules governing change in the word meaning. A morpheme is the word or part of the word that carries meaning. This entails grammar and using words that form sentences. Many words can be broken down into smaller units that can be used to convey meanings. Grammatical morphemes such as 'in', 'on', 'a', the, which can stay alone and modify another word without attaching to that word, are called "free" morphemes. On the other hand grammatical morphemes such as the present progressive '-ing', the regular past '-ed', and the plural '-s', are described as "bound" in that they function as markers or tags that are used to change the meaning of the word when attached to it.

Children use word order combinations to convey meanings rather than the use of grammatical morphemes in their early childhood. When the mean length of utterances (MLU) approaches 2.5 words, morphemes such as 'in' and 'on' begins to appear. At approximately 18 months of age toddlers begin to combine words into two -word phrases. Between 2-5 years, the ability to use basic grammatical sentence types and advanced grammatical constructions in a mature adult like form gradually emerge in preschoolers.

Malayalam is one of the four major languages of the Dravidian family spoken across the Kerala and also by linguistic minorities in the neighbouring states. Over half of the global population speaks more than one language. The scenario remains even in India adhering to the hallmark of multilingualism and most of the children tend to learn multiple languages during the school years sequentially.

In India, 255 million people speak at least two languages and 87.5 million speak three or more languages. According to 2001 census done in India around 12.18% of the total population speaks English.

[https://en.wikipedia.org/wiki/Multilingualism\\_in\\_India](https://en.wikipedia.org/wiki/Multilingualism_in_India)

### 1.1. Grammatical development

According to Brown, there are five stages which depict the development in children's language. They are characterized as following

Stage 1: individual words and semantic roles combined in linear simple sentences.

Stage 2: modulation of meanings (specifically the grammatical morphemes) emerges.

Stage 3: simple sentences are rearranged into different sentence modalities such as questions, imperatives and negatives.

Stage 4: begins to embed the elements of one sentence within another

Stage 5: utterances are coordinated, combining, the content of two sentences into one.

### 1.2. Brown's 14 grammatical morphemes

The appearance and mastery of the 14 grammatical morphemes in relation to the stages of development was focused in brown's research. Each of the morphemes appears in stage 2. These morphemes generally convey meanings that could only be implied through the simple word orders



exhibited in stage 1. they were then mastered at various stages as the child's language developed.

Table 1  
*Brown's ranked order of mastery of grammatical morphemes*

Rank	Mastery months	Morpheme	Example
1	19-28	Present progressive inflection	She <b>going</b>
2	27-30	Preposition in	Ball <b>in</b> box
3	27-30	Preposition on	<b>on</b> bed
4	27-33	Regular plural inflection	My cars <b>s</b>
5	25-46	Past irregular	Me <b>fell</b> down
6	26-40	Possessive inflection	Daddy's <b>'s</b> book
7	27-39	Uncontractible copula	<b>Is it</b> Jain? yes <b>it is</b>
8	28-46	Articles	<b>A</b> man in <b>the</b> car
9	26-48	Regular past tense	She jumped <b>d</b>
10	26-46	Regular third person singular	She <b>likes</b> cakes
11	28-50	Irregular third person singular	He <b>has</b> chocolate, she <b>does</b> too
12	29-48	Uncontractible auxiliary	<b>Are they</b> swimming? <b>She was</b> laughing
13	29-49	Contractible copula	<b>She's</b> ready. <b>They're</b> here.
14	30-50	Contractible auxiliary	<b>They're</b> coming. <b>He's</b> going.

### 1.3. Western Studies

Barrot and Leon (2014) investigated the accuracy order of 14 English grammatical morphemes of Filipino preschool pupils. Specifically, this paper sought to determine the grammatical morphemes which have the highest and lowest accuracy level by Filipino preschool pupils. It also attempted to identify whether there is a relationship between the order of grammatical morpheme acquisition of Filipino preschool pupils compared to the order of grammatical morpheme wherein English is the first language and English is the second language. The participants involved in this study were 18 preschool pupils whose age ranges from three to five years old. These participants were divided into two clusters based on their linguistic and geographical background. The findings revealed that plurality and progressive verbs posted the highest accuracy level while prepositions and past irregular verbs had the lowest level of accuracy. As regards the

relationship between the order of acquisition, the results revealed that the present study posted a different order compared to Dulay and Burt's (1973) and Brown's (1973) studies

Baron (2013) in their thesis defined the norms for grammatical morpheme development in Spanish for Spanish – English bilingual children ages 4; 0-7; 6 relative to their use of Spanish this study uses secondary data analysis based on two existing data sets. Participants included 334 Spanish – English bilingual children that were recruited from school districts in Texas, Utah and Pennsylvania. Grammatical morpheme accuracy was determined by performance on the BESA (Bilingual English Spanish assessment). Percentage of current use of Spanish was estimated based on a parental interview in which parents estimated children language input and output. The average percent accuracy of grammatical morphemes was calculated and analysed as a function of current use of Spanish and of chronological age. Results show that the percentage of accurately produced morphemes has a general upward trend as Spanish use and age increases. These findings will help define expectations for bilingual children that in turn inform the development of intervention goals.

Davison and Hammer (2012) studied the development of 14 grammatical morphemes in Spanish English preschoolers. The goals were to determine (a) whether there are differences in children's productions of English grammatical morphemes based on timing of English exposure and (b) which morphological structures met mastery, emerging and early emerging levels of production by bilingual children. Comparisons were made between English speaking children who were exposed to English at home from birth (home English communication (HEC)) and Spanish speaking children who were not expected to communicate in English until their entry into head start (school English communication (SEC)). Results indicate that children in HEC group mastered more morphemes earlier than the children in the SEC group; however, by the end of children's second year in head start both groups had mastered a similar number of morphemes. Additionally the children in both groups differed in which morphemes were mastered at the end of head start when compared to monolingual English speaking children.

Mayo & Olaizola (2011) examined the third language (L3) developing morphology of 78 Basque- Spanish bilinguals following a Content And Language Integrated Learning (CLIL) program and a mainstream English as a foreign language (non - CLIL) program. The analysis of cross sectional and longitudinal oral data shows that (1) the omission of inflection in the L3 English interlanguage of these groups of learners is due to problems with the realization of surface morphology,(2) there is a disassociation infrequency of suppliance between suppletive inflection (copula and Auxillary be) and affixal inflection (the third person morpheme –s and the past tense morpheme –ed ) already attested in L2 data, and (3) no significant difference were found between the two groups tested as far as the development of suppletive and affixal tense and agreement morphemes. The overall findings seem to support full – UG explanations for the variable use of morphology in the acquisition of nonnative systems.

Nicholls, Eadie & Reilly(2011) investigated the expressive morphological abilities of multilingual children acquiring English, compared with



monolingual children, at 3 years of age. Participants were 148 children (74 multilingual children; 74 matched monolingual children; mean age of 3 years and 4 months) already participating in a larger prospective longitudinal cohort study of language development in Melbourne, Australia. Thirty one languages in addition to English were represented within the embedded cohort. All participants completed a direct language assessment to measure their expressive abilities across the range of English morphemes. The parents of multilingual participants completed an interview regarding the children's language backgrounds and experiences. The multilingual group typically performed below the monolingual group in terms of their accurate use and mastery of English morphemes at 3 years of age., although variable expressive abilities were indicated within each group. The same morphemes were shown to be mastered by relatively higher proportions of each group. Likewise the same forms were mastered by relatively lower proportions of each group. The results indicated similarities between the children's acquisition of English morphology, regardless of whether they were acquiring English only or in combinations with other language(s) at 3 years of age.

Bloom (2010) investigated the language development of 2- to 3-year-old Turkish—Dutch bilingual children with different amounts of input quantity. Developmental patterns in spontaneous speech data of the bilingual children are compared to those of monolingual children of the same age. It is found that low input quantity leads to slower grammatical development, but only if input is clearly reduced. The observation that not only mean length of utterance but also the development of finiteness can show pronounced delays in bilingual language acquisition contradicts maturational views of grammatical development. However, such overall delays are expected given input-based theories of grammatical acquisition. All four bilingual children show difficulties in establishing the relation between finiteness and expression of grammatical subjects in Dutch. It is argued that cross-linguistic influence, driven by surface overlap between Turkish and Dutch, may account for this observation.

Montanari (2009) studied the multi – word combinations and the emergence of differentiated ordering patterns in early trilingual development. This study examined word order differentiation in early trilingual development through an analysis of the combinations produced by a tagalong- Spanish- English trilingual child with an MLU of less than 1.5. same and mixed language combinations were tracked down from diary data and weekly recordings to assess (1) whether word order significantly varied across linguistically and (2) whether mixed utterances originated from vocabulary gaps rather than from an undifferentiated syntax. The results indicated that (a) argument/ predicate sequences were differentially ordered depending on their language and following input- dependent preferences, (b) mixed utterances were generally caused by vocabulary gaps and (c) they displayed the same order as those single- language combinations produced by in the same language context. Findings suggest that evidence for early word order differentiation can be found before the appearance of inflectional morphology and even when three- rather than two -languages are been acquired, indicating that trilingual exposure does not slow down the process of differentiation.

Khan and James (2008) studied the order and rate of acquisition of browns (1973) 14 grammatical morphemes were investigated in three children with language disorders periodic spontaneous speech samples were analyzed for correct and incorrect use of the morphemes in obligatory contexts. Results indicated that the groups order of acquisition was similar to that reported by brown (1973) and De Villiers and De Villiers (1973) for normal children but that there were individual variations in the children's acquisition orders. Also the language disordered children demonstrated a much slower rate of acquisition than that reported for normally developing children.

A longitudinal study conducted by Jia and Fuse (2007) investigated the acquisition of 6 English grammatical morphemes (i.e., regular and irregular past tense, 3rd person singular, progressive aspect -ing, copula BE, and auxiliary DO) by 10 native Mandarin-speaking children and adolescents in the United States (arrived in the United States between 5 and 16 years of age). The goals were to chart and compare the acquisition trajectories and levels of mastery across the morphemes, identify when age-related differences emerged and which forms they took. Results indicate that the acquisition of some grammatical morphemes by school-aged immigrants takes several years to complete. As second language learners exhibit some error types and difficulties similar to monolingual children with specific language impairment, caution needs to be taken when interpreting and using morphological errors as indicators of speech/language learning problems in this population.

Balason and Dollaghan (2002) studied the grammatical morpheme production in 15-minute spontaneous language samples from 4-year-old children. Substantial variability was observed in both the frequency of obligatory contexts (OCs) and in the percentage of correct usage of GMs. For only one morpheme did all 100 samples contain the minimum number of 3 OCs; for only 7 of the 14 GMs was an adequate number of OCs found in at least half of the 100 samples. Results from the present investigation indicate a need for caution in interpreting information on GM production derived from samples of this nature from children at this age; the validity of using such data to identify deficits in inflectional morphology for either clinical or research purposes appears questionable.

Bland Stewart and Fitzgerald (2001) investigated Standard American English (SAE) morphological development for 15 bilingual Hispanic preschoolers who were attending a bilingual day care center. Thirty minute spontaneous language samples were obtained yielding 100 utterances for mean length of utterance (MLU) and morphological analysis according to Millers (1981) criteria. Analysis of the data revealed emergent use of browns (1973) 14 grammatical morphemes, although mastery generally was not seen at the same ages as those expected for SAE speakers.

#### 1.4. *Indian Studies*

Indian studies on language development are limited. Most of the studies mainly include masters dissertation with a few doctoral and post doctoral research studies (Vijayalakshmi 1981, Karanth,1984, Subharao,1995).

Dsouza & Kumaraswamy (2015) studied on browns morphological skills in Konkani -English- Kannada trilinguals on 6-9 year old children. Forty five



school going typically developing children were selected for the study. General conversation and picture description task were used to collect the language samples. The results revealed that out of 14 morphemes only 6 and 8 morphemes were present in picture description and general conversation in 6 -7 years children, 8 and 8 morphemes were present in picture task and general conversation in 7-8 years children, 9 and 10 morphemes were present in picture task and general conversation in 8-9 years children respectively. They concluded that trilingual children followed a different morphological pattern compared to typically developing monolingual children.

Similar study done by Varghese & Kumaraswamy (2013) studied Browns Morphological Skills in Kannada – English typically developing bilinguals in the age range of 5-7 years children. 30 school going normal children were selected for the study. Picture description task was used as language sample. The results of their study show that no all of the grammatical morphemes were present in the children..

Varghese, Thomas, Nebu, Sunny, & Kumaraswamy (2014) studied Browns Morphological Skills in Malayalam- English bilinguals on 5-7 years children's. 30 normal school going children were selected for the study. Picture description task and general conversation were used as a language sample. The results showed that the presence of 6 morphemes in picture discrimination task and presence of 8 morphemes in general conversation task.

### *1.5. The need for the study*

The language acquisition in bi/ multilingual children is understood based on the studies conducted in the west. The findings of these studies cannot be generalized for Indian population which offers cultural and linguistic diversities. Though it provides abundance of research opportunities to explore the acquisition of language in bi/multilingual environment, the literature review reveals a scarcity of investigations in Indian context. In India English is learnt as a second language from the age of 3-4 years in schools through formal education irrespective of their native language most of the parents prefer to send their children in English medium of instructions. In this context sometimes children may found to be over identified with language impairment because speech language pathologists do not have appropriate developmental expectations. Thus it is essential to understand typical language acquisition and how it differs from monolingual English in order to accurately assess and effectively identify potential language disorders as early as possible. Thus the current study attempts to study the English morphological development in Malayalam – English – Hindi trilinguals.

## **2. Methodology**

The aim of the study was to determine the order of acquisition of English morphological structures produced by typical trilingual (Malayalam – English – Hindi) children and which morphological structures mastered by 7-10 years with the following objectives.

- a. To assess the acquisition of English grammatical morphemes across different tasks for 7-8, 8-9 and 9-10 years.
- b. To assess the acquisition of English grammatical morphemes within tasks for 7-8, 8-9 and 9-10 years.
- c. To compare the acquisition of English morphological structures across the group 7-10 years.

### 1.1. *Participants*

Thirty typically developing children attending regular schools with English as a medium of instruction participated in the study. Based on the chronological age, the children were further divided into Group 1 (G1), 7-7.11 years (6 boys and 4 girls), Group 2 (G2), 8-8.11 years (5 boys and 5 girls) and Group 3 (G3) 9-10 years (6 boys and 4 girls).

As the inclusion criteria, Malayalam as native language, English as a second and Hindi as the third language, teachers' input, school records and attending to an English medium school since kinder garden were used.

History of speech, language, and hearing problems, history of middle ear infections, and major health and neurological problems were used as the exclusion criteria.

### 1.2. *Stimuli*

Based on 5 experienced SLP's view, eight color picture cards depicting the activities of day to day life, school, playground, occasions and nature chosen from the children's textbook and from other resources were used for picture description task. Monologue samples were taken by giving simple topics including favorite place, my country and family. Connected speech sample was also elicited from each child.

### 1.3. *Environment*

Test was administered in a quiet room with adequate illumination. At one time one child was taken for the recording. The subject was seated in a chair next to the examiner one foot distance in front of the standard notebook with an inbuilt microphone.

### 1.4. *Procedure*

The instruction by the clinician was given in English for the tasks individually to every child as "Now I am going to show picture cards of places, natures, occasions etc. You have to describe the activities that had happened in the picture in full and meaningful sentence", and also asked to describe on the topic given. Instruction was repeated if the child did not follow in the first attempt also an example was provided if required. If the participants were not able to say in complete sentence, semantic cues were given. The audio recorded samples were transcribed using International Phonetic Alphabet (IPA) -5 and analyzed for morphological structures. A score of one for presence of morphemes and zero for absence were given. The obtained data was further statistically analysed for significant difference using Fishers exact p test. The identified morphemes were compared with browns 14 stages and checked for order of acquisition and its relevance in Malayalam-English-Hindi trilinguals.



### 3. Findings

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Table 2

*The present percentage of Brown’s morphemes for general conversation task across three age groups*

Parameter: General conversation

	Age	Yes		p value to compare pairwise- testing equality of proportion test		
		Count	%	7-8yrs VS 8-9yrs	7-8yrs VS 9-10 years	8-9yrs VS 9-10 years
present progressive inflection	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
proposition in	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
proposition on	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
regular plural inflection	7-8 years	8	80.0%	.068 NS	.068 NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
past irregular	7-8 years	5	50.0%	.005 HS	.005 HS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
possessive inflection	7-8 years	1	10.0%	.025 sig	.000 HS	.005
	8-9 years	5	50.0%			
	9-10 years	10	100.0%			
uncontractible copula	7-8 years	6	60.0%	.165 NS	.061 NS	.266 NS
	8-9 years	8	80.0%			
	9-10 years	9	90.0%			
articles	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
regular past tense	7-8 years	0	.0%	.002 HS	.000 HS	.013
	8-9 years	6	60.0%			
	9-10 years	10	100.0%			
regular third person singular	7-8 years	7	70.0%	sig .030	sig .030	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
irregular third person singular	7-8 years	2	20.0%	sig .012	.004 HS	.303 NS
	8-9 years	7	70.0%			
	9-10 years	8	80.0%			
uncontractible auxillary	7-8 years	5	50.0%	.181 NS	.005 HS	.030
	8-9 years	7	70.0%			
	9-10 years	10	100.0%			
contractible copula	7-8 years	0	.0%	sig .030	.002 HS	.089 NS
	8-9 years	3	30.0%			
	9-10 years	6	60.0%			
contractible auxillary	7-8 years	8	80.0%	.266 NS	.068 NS	.152 NS
	8-9 years	9	90.0%			
	9-10 years	10	100.0%			

7-8 vs 8-9 years – no significant difference ( $p > 0.05$ ) was seen for present progressive inflection, prepositional markers, regular plural inflection, Uncontractible copula, articles, Uncontractible auxiliary, and contractible auxiliary. Significant difference was sighted for possessive inflection ( $p = 0.025$ ), regular third person singular ( $p= 0.030$ ), irregular third person singular ( $p=0.012$ ) and contractible copula ( $p=0.030$ ).

Highly significant difference present for past irregular ( $p = 0.005$ ) and regular past tense ( $p=0.002$ ). 7-8 vs 9-10 years - no significant difference ( $p > 0.05$ ) was observed for present progressive inflection, prepositional markers,

regular plural inflection, Uncontractible copula, articles, and contractible auxiliary. Significant difference was seen for regular third person singular ( $p = 0.03$ ). Highly significant difference seen for past irregular ( $p = 0.005$ ), possessive inflection ( $p = 0.000$ ), regular past tense ( $p=0.000$ ), irregular third person singular ( $p= 0.004$ ), Uncontractible auxiliary ( $p=0.005$ ) and contractible copula ( $p=0.002$ ). 8-9 vs 9-10 years - no significant difference ( $p > 0.05$ ) was noticed for present progressive inflection, prepositional markers, regular plural inflection, past irregular, Uncontractible copula, articles, regular third person singular, irregular third person singular, contractible copula and contractible auxiliary. Significant difference was observed for regular past tense ( $p = 0.013$ ) and Uncontractible auxiliary ( $p = 0.03$ ). Highly significant difference was noted for possessive inflection ( $p = 0.005$ ).

Parameter: Monologue

	Age	Yes		p value to compare pairwise- testing equality of proportion test		
		Count	%	7-8yrs VS 8-9yrs	7-8yrs VS 9-10 years	8-9yrs VS 9-10 years
present progressive inflection	7-8 y ears	10	100.0%	NS	NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
proposition in	7-8 y ears	10	100.0%	NS	NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
proposition on	7-8 y ears	10	100.0%	NS	NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
regular plural inflection	7-8 y ears	10	100.0%	NS	NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
past irregular	7-8 y ears	9	90.0%	.152 NS	.152 NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
possessive inflection	7-8 y ears	3	30.0%	.089 NS	.001 HS	.013
	8-9 y ears	6	60.0%			
	9-10 y ears	10	100.0%			
uncontractible copula	7-8 y ears	6	60.0%	.165 NS	.013	.068 NS
	8-9 y ears	8	80.0%			
	9-10 y ears	10	100.0%			
articles	7-8 y ears	10	100.0%	NS	NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
regular past tense	7-8 y ears	5	50.0%	.181 NS	.005 HS	.030
	8-9 y ears	7	70.0%			
	9-10 y ears	10	100.0%			
regular third person singular	7-8 y ears	7	70.0%	sig .030	sig .030	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			
irregular third person singular	7-8 y ears	4	40.0%	.089 NS	sig .010	.132 NS
	8-9 y ears	7	70.0%			
	9-10 y ears	9	90.0%			
uncontractible auxiliary	7-8 y ears	5	50.0%	.327 NS	.005 HS	.013
	8-9 y ears	6	60.0%			
	9-10 y ears	10	100.0%			
contractible copula	7-8 y ears	0	.0%	sig .013	.000 HS	.034
	8-9 y ears	4	40.0%			
	9-10 y ears	8	80.0%			
contractible auxiliary	7-8 y ears	8	80.0%	.068 NS	.068 NS	NS
	8-9 y ears	10	100.0%			
	9-10 y ears	10	100.0%			

Table 3  
*The present percentage of Brown's morphemes for monologue across three age groups*

7-8 vs 8-9 years – no significant difference ( $p > 0.05$ ) was seen for present progressive inflection, prepositional markers, regular plural inflection, past irregular, possessive inflection, Uncontractible copula, articles, regular past tense, irregular third person singular, Uncontractible auxiliary, and contractible auxiliary.

Significant difference noticed for regular third person singular ( $p= 0.030$ ) and contractible copula ( $p=0.013$ ).

7-8 vs 9-10 years - no significant difference ( $p > 0.05$ ) spotted for present progressive inflection, prepositional markers, regular plural inflection, past irregular, articles and contractible auxiliary.



Significant difference was seen for Uncontractible copula ( $p=0.013$ , )regular third person singular ( $p = 0.03$ ), irregular third person singular ( $p = 0.010$ ). Highly significant difference was viewed for possessive inflection ( $p = 0.001$ ) and regular past tense ( $p=0.005$ ).

8-9 vs 9-10 years - no significant difference ( $p > 0.05$ ) was observed for present progressive inflection, prepositional markers, regular plural inflection, past irregular, Uncontractible copula, articles, regular third person singular, irregular third person singular and contractible auxiliary.

Significant difference was seen for possessive inflection ( $p= 0.013$ ), regular past tense ( $p = 0.030$ ), Uncontractible auxiliary ( $p= 0.005$ ) and contractible copula ( $p = 0.034$ ).

Parameter: Picture description

	Age	Yes		p value to compare pairwise- testing equality of proportion test		
		Count	%	7-8yrs VS 8-9yrs	7-8yrs VS 9-10 years	8-9yrs VS 9-10 years
present progressive inflection	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
proposition in	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
proposition on	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
regular plural inflection	7-8 years	9	90.0%	.152	.152	NS
	8-9 years	10	100.0%	NS		
	9-10 years	10	100.0%			
past irregular	7-8 years	5	50.0%	.005	.005	NS
	8-9 years	10	100.0%	HS		
	9-10 years	10	100.0%			
possessive inflection	7-8 years	2	20.0%	.080	sig	.181
	8-9 years	5	50.0%	NS		
	9-10 years	7	70.0%			
uncontractible copula	7-8 years	0	.0%	.000	.000	NS
	8-9 years	10	100.0%	HS		
	9-10 years	10	100.0%			
articles	7-8 years	10	100.0%	NS	NS	NS
	8-9 years	10	100.0%			
	9-10 years	10	100.0%			
regular past tense	7-8 years	1	10.0%	.061	.003	.089
	8-9 years	4	40.0%	NS		
	9-10 years	7	70.0%			
regular third person singular	7-8 years	7	70.0%	.030	.132	.152
	8-9 years	10	100.0%	sig		
	9-10 years	9	90.0%			
irregular third person singular	7-8 years	2	20.0%	.012	.004	.303
	8-9 years	7	70.0%	sig		
	9-10 years	8	80.0%			
uncontractible auxiliary	7-8 years	1	10.0%	.010	.000	.013
	8-9 years	6	60.0%	sig		
	9-10 years	10	100.0%			
contractible copula	7-8 years	1	10.0%	.132	.003	.037
	8-9 years	3	30.0%	NS		
	9-10 years	7	70.0%			
contractible auxiliary	7-8 years	9	90.0%	.152	.152	NS
	8-9 years	10	100.0%	NS		
	9-10 years	10	100.0%			

Table 4  
*The present percentage of Brown’s morphemes for picture description across three age groups*

7-8 vs 8-9 years – no significant difference ( $p > 0.05$ ) viewed for present progressive inflection, prepositional markers, regular plural inflection, possessive inflection, regular past tense, Uncontractible copula, articles, regular past tense, irregular third person singular, contractible copula, and contractible auxiliary.

Significant difference was seen for regular third person singular ( $p= 0.030$ ), irregular third person singular, ( $p=0.012$ ) and Uncontractible auxiliary ( $p=0.010$ ).

Highly significant difference observed for past irregular ( $p = 0.005$ ) and Uncontractible copula ( $p = 0.000$ )

7-8 vs 9-10 years - no significant difference ( $p > 0.05$ ) was seen for present progressive inflection, prepositional markers, regular plural inflection, articles, regular third person singular and contractible auxiliary.

Significant difference was seen for possessive inflection ( $p = 0.012$ ).

Highly significant difference was observed for past irregular ( $p = 0.005$ ), Uncontractible copula ( $p = 0.00$ ), regular past tense ( $p = 0.003$ ), irregular third person singular ( $p = 0.004$ ), Uncontractible auxiliary ( $p = 0.000$ ), contractible copula ( $p = 0.003$ ).

8-9 vs 9-10 years - no significant difference ( $p > 0.05$ ) was discovered for present progressive inflection, prepositional markers, regular plural inflection, past irregular, possessive inflection, Uncontractible copula, articles, regular past tense, regular third person singular, irregular third person singular and contractible auxiliary.

Significant difference was seen for Uncontractible auxiliary ( $p = 0.013$ ) and contractible copula ( $p = 0.037$ ).

Table 5

*The present percentage of Brown's morphemes for 7-8 years across tasks*

Age: 7-8 years		Yes		p value to compare pairwise- testing equality of proportion test		
Parameter		Count	%	General conversation VS Monologue	General conversation VS Picture description	Monologuen VS Picture description
present progressive inflection	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
proposition in	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
proposition on	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
regular plural inflection	General conversation	8	80.0%	.068	.266	.152
	Monologue	10	100.0%			
	Picture description	9	90.0%			
past irregular	General conversation	5	50.0%	sig	NS	sig
	Monologue	9	90.0%			
	Picture description	5	50.0%			
possessive inflection	General conversation	1	10.0%	.132	.266	.303
	Monologue	3	30.0%			
	Picture description	2	20.0%			
uncontractible copula	General conversation	6	60.0%	NS	HS	.002
	Monologue	6	60.0%			
	Picture description	0	.0%			
articles	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
regular past tense	General conversation	0	.0%	HS	.005	.152
	Monologue	5	50.0%			
	Picture description	1	10.0%			
regular third person singular	General conversation	7	70.0%	NS	NS	NS
	Monologue	7	70.0%			
	Picture description	7	70.0%			
irregular third person singular	General conversation	2	20.0%	.165	NS	.165
	Monologue	4	40.0%			
	Picture description	2	20.0%			
uncontractible auxillary	General conversation	5	50.0%	NS	sig	.025
	Monologue	5	50.0%			
	Picture description	1	10.0%			
contractible copula	General conversation	0	.0%	NS	.152	.152
	Monologue	0	.0%			
	Picture description	1	10.0%			
contractible auxillary	General conversation	8	80.0%	NS	.266	.266
	Monologue	8	80.0%			
	Picture description	9	90.0%			



General conversation vs Monologue – no significant difference ( $p > 0.05$ ) for present progressive inflection, prepositional markers, regular plural inflection, , possessive inflection, Uncontractible copula, articles, regular past tense, regular third person singular, irregular third person singular, Uncontractible auxiliary, contractible copula, and contractible auxiliary.

Significant difference was seen for past irregular ( $p= 0.025$ ) and Highly significant difference seen for regular past tense ( $p = 0.005$ ).

General conversation vs Picture description - no significant difference ( $p > 0.05$ ) was seen for present progressive inflection, prepositional markers, past irregular, regular plural inflection, possessive inflection, articles, regular past tense, regular third person singular, irregular third person singular, contractible copula and contractible auxiliary.

Significant difference was seen for Uncontractible auxiliary ( $p = 0.025$ ).

Highly significant difference seen for Uncontractible copula ( $p=0.002$ ).

Monologue vs Picture description - no significant difference ( $p > 0.05$ ) was noted for present progressive inflection, prepositional markers, regular plural inflection, possessive inflection, articles, , regular third person singular, irregular third person singular, contractible copula and contractible auxiliary.

Significant difference ( $p= 0.025$ ) was seen for past irregular, Uncontractible auxiliary, regular past tense and Highly significant difference was notice for Uncontractible copula ( $p = 0.002$ ).

Table 6

*The present percentage of Brown’s morphemes for 8-9 years across tasks*

Age: 8-9 years

Parameter	Yes		p value to compare pairwise- testing equality of proportion test			
	Count	%	General conversation VS Monologue	General conversation VS Picture description	Monologuen VS Picture description	
present progressive inflection	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
proposition in	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
proposition on	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
regular plural inflection	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
past irregular	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
possessive inflection	General conversation	5	50.0%	.327	NS	.327
	Monologue	6	60.0%			
	Picture description	5	50.0%			
uncontractible copula	General conversation	8	80.0%	NS	.068	.068
	Monologue	8	80.0%			
	Picture description	10	100.0%			
articles	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
regular past tense	General conversation	6	60.0%	.320	.186	.089
	Monologue	7	70.0%			
	Picture description	4	40.0%			
regular third person singular	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			

irregular third person singular	General conversation	7	70.0%	NS	NS	NS
	Monologue	7	70.0%			
	Picture description	7	70.0%			
uncontractible auxillary	General conversation	7	70.0%	.320	.320	NS
	Monologue	6	60.0%	NS	NS	
	Picture description	6	60.0%			
contractible copula	General conversation	3	30.0%	.320		.320
	Monologue	4	40.0%	NS	NS	NS
	Picture description	3	30.0%			
contractible auxillary	General conversation	9	90.0%	.152	.152	
	Monologue	10	100.0%	NS	NS	NS
	Picture description	10	100.0%			

General conversation vs Monologue – no significant difference ( $p > 0.05$ ) was noticed for all parameters

General conversation vs Picture description - no significant difference ( $p > 0.05$ ) was seen for all parameters

Monologue vs Picture description - no significant difference ( $p > 0.05$ ) found for all parameters

Table 7

*The present percentage of Brown's morphemes for 9-10 years across tasks*

Age: 9-10 years

Parameter	Yes		p value to compare pairwise- testing equality of proportion test			
	Count	%	General conversation VS Monologue	General conversation VS Picture description	Monologuen VS Picture description	
present progressive inflection	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
proposition in	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
proposition on	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
regular plural inflection	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
past irregular	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
possessive inflection	General conversation	10	100.0%	NS	.030	.030
	Monologue	10	100.0%		sig	sig
	Picture description	7	70.0%			
uncontractible copula	General conversation	9	90.0%	.152	.152	
	Monologue	10	100.0%	NS	NS	NS
	Picture description	10	100.0%			
articles	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
regular past tense	General conversation	10	100.0%	NS	.030	.030
	Monologue	10	100.0%		sig	sig
	Picture description	7	70.0%			
regular third person singular	General conversation	10	100.0%		.152	.152
	Monologue	10	100.0%	NS	NS	NS
	Picture description	9	90.0%			
irregular third person singular	General conversation	8	80.0%	.266		.266
	Monologue	9	90.0%	NS	NS	NS
	Picture description	8	80.0%			
uncontractible auxillary	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			
contractible copula	General conversation	6	60.0%	.165	.320	.303
	Monologue	8	80.0%	NS	NS	NS
	Picture description	7	70.0%			
contractible auxillary	General conversation	10	100.0%	NS	NS	NS
	Monologue	10	100.0%			
	Picture description	10	100.0%			



General conversation vs Monologue – no significant difference ( $p > 0.05$ ) was observed for all parameters

General conversation vs Picture description - no significant difference ( $p > 0.05$ ) viewed for present progressive inflection, prepositional markers, past irregular, regular plural inflection, articles, , regular third person singular, Uncontractible auxiliary, irregular third person singular, Uncontractible copula, contractible copula and contractible auxiliary.

Significant difference was seen for possessive inflection and regular past tense ( $p = 0.030$ ).

Monologue vs Picture description - no significant difference ( $p > 0.05$ ) was examined for present progressive inflection, prepositional markers, past irregular, regular plural inflection, articles, , regular third person singular, Uncontractible auxiliary, irregular third person singular, Uncontractible copula, contractible copula and contractible auxiliary. Significant difference was seen for possessive inflection and regular past tense ( $p = 0.030$ ).

Table 8

*The overall acquisition of English morphological structures across the tasks*

		Fishers exact test p
General conversation	present progressive inflection	.
	proposition in	.
	proposition on	.
	regular plural inflection	0.117
	past irregular	0.002
	possessive inflection	0.000
	uncontractible copula	0.271
	Articles	.
	regular past tense	0.000
	regular third person singular	0.036
	irregular third person singular	0.015
	uncontractible auxillary	0.039
	contractible copula	0.014
	contractible auxillary	0.329
Monologue	present progressive inflection	.
	proposition in	.
	proposition on	.
	regular plural inflection	.

	past irregular	0.355
	possessive inflection	0.005
	uncontractible copula	0.082
	Articles	.
	regular past tense	0.039
	regular third person singular	0.036
	irregular third person singular	0.058
	uncontractible auxillary	0.036
	contractible copula	0.001
	contractible auxillary	0.117
Picture description	present progressive inflection	.
	proposition in	.
	proposition on	.
	regular plural inflection	0.355
	past irregular	0.002
	possessive inflection	0.079
	uncontractible copula	0.000
	Articles	.
	regular past tense	0.024
	regular third person singular	0.133
	irregular third person singular	0.015
	uncontractible auxillary	0.000
	contractible copula	0.018
	contractible auxillary	0.355

General conversation: No significant difference noted for present progressive inflection, prepositional markers, regular plural inflection, Uncontractible copula, articles and contractible auxiliary. Significant difference ( $p < 0.05$ ) was seen for past irregular, possessive inflection, regular past tense, regular third person singular, irregular third person singular, Uncontractible auxiliary and contractible copula.

Monologue: No significant difference identified for present progressive inflection, prepositional markers, regular plural inflection, past irregular, Uncontractible copula, articles and contractible auxiliary. Significant difference ( $p < 0.05$ ) was seen for possessive inflection, regular past tense, regular third person singular, irregular third person singular, Uncontractible auxiliary and contractible copula

Picture description: No significant difference was present for present progressive inflection, prepositional markers, regular plural inflection, past irregular, Uncontractible copula, articles and contractible auxiliary. Significant difference ( $p < 0.05$ ) was obtained for possessive inflection,



regular past tense, regular third person singular, irregular third person singular, Uncontractible auxiliary and contractible copula.

Table 9  
*The overall acquisition of English morphological structures across the groups*

	Fishers exact test p
7-8 years	
present progressive inflection	.
proposition in	.
proposition on	.
regular plural inflection	0.329
past irregular	0.101
possessive inflection	0.535
uncontractible copula	0.007
Articles	.
regular past tense	0.013
regular third person singular	1.000
irregular third person singular	0.506
uncontractible auxillary	0.101
contractible copula	0.355
contractible auxillary	0.787
8-9 years	
present progressive inflection	.
proposition in	.
proposition on	.
regular plural inflection	.
past irregular	.
possessive inflection	0.875
uncontractible copula	0.315
Articles	.
regular past tense	0.387
regular third person singular	.
irregular third person singular	1.000
uncontractible auxillary	0.866
contractible copula	0.861
contractible auxillary	0.355

9-10 years	present progressive inflection	.
	proposition in	.
	proposition on	.
	regular plural inflection	.
	past irregular	.
	possessive inflection	0.036
	uncontractible copula	0.355
	Articles	.
	regular past tense	0.036
	regular third person singular	0.355
	irregular third person singular	0.787
	uncontractible auxillary	.
	contractible copula	0.621
	contractible auxillary	.

7-8years: No significant difference was seen for present progressive inflection, prepositional markers, past irregular, regular plural inflection, possessive inflection, regular third person singular, irregular third person singular, articles, Uncontractible auxiliary, contractible copula. and contractible auxiliary. Significant difference ( $p < 0.05$ ) was detected for Uncontractible copula and regular past tense.

8-9years: No significant difference ( $p > 0.05$ ) was seen for all parameters.

9-10years: No significant difference was spotted for present progressive inflection, prepositional markers, regular plural inflection, past irregular, Uncontractible copula, articles regular third person singular, irregular third person singular, Uncontractible auxiliary, contractible copula and contractible auxiliary. Significant difference ( $p < 0.05$ ) was obtained for possessive inflection, regular past tense.

#### 4. Discussion

##### 4.1. Acquisition of English grammatical morphemes across different tasks for 7-8, 8-9 and 9-10 years

The results revealed the presence of 8, 9 and 7 grammatical morphemes was present in majority of 7-8 year population for general conversation, monologue and picture description. For 8-9 years group 12, 13 and 11 morphemes were used for general conversation, monologue and picture description respectively. By the age of 9-10 years all morphemes get acquired in majority of children the findings can be supported by the study of Guo (2009) that young children use tense and agreement morphemes variably because adult like speech is not learned by the time and use frequent / lexically specific constructions instead. Language input, and overgeneralization of the morphemes is one the explanation for the occurrence of difference across the tasks. Monologue tasks elicited greater



number of morphemes compared to other task as it provides a child with appropriate number of opportunities to produce the morpheme.

4.2. *S Acquisition of English grammatical morphemes within tasks for 7-8, 8-9 and 9-10 years*

In contrast to Brown's (1973) study, contractible copula, possessive inflection, regular past tense, past irregular, irregular third person singular, Uncontractible auxiliary was mastered later when compared to monolingual development. A larger percentage of children mastered these features by the end of 10 years. The difference seen across the age groups can be explained based on the salience and the frequency with which the grammatical structures occur in each language (Bedore, 1999; Bedore & Pena, 2008). Forms that are similar across languages occurs at a higher level of productions. Furthermore the language environment in the classroom may have underscored the importance of communicating in English and hence the use of the structures. Maturation factor and parent child interaction can be factors that influence the difference across age groups.

4.3. *Comparison of the overall acquisition of English morphological structures across the tasks (general conversation, monologue and picture description) and across the group (7-10 years)*

In contrasts to Brown's (1973) study, contractible copula, possessive inflection and regular past tense mastered later when compared to monolingual English speakers also Monologue task elicited more number of morphemes in all the age groups. All the morphemes get mastered only by 10 years of age in Indian trilingual population, which can be explained based on Tomasello (2003) usage based theory. Bedore and Peña (2008) suggested that differences in language-specific morpho-syntactic rules may yield differences in the mastery of specific grammatical structures. This difference may be due to the timing of language exposure for each trilingual child. These findings suggest that bilingual children look to use the knowledge of both of their languages to express syntactic complexity (Tomasello, 2003). It appears that children are basing their knowledge on the frequency and type of input from each language, and because there are differences in the type and frequency of input, differences are observed in children's productions (Tomasello, 2003). These differences may include the use of unexpected or unusual forms within either language when compared to monolingual norms. Such forms include using past progressive constructions instead of regular past tense. The differences in the language production of bilingual children are indicative of their degree of knowledge of each language and are not necessarily indicative of a deviance from typical language development. Bedore and Peña (2008) also suggested that not only will differences in the syntactic features of each language yield differences in morphemes mastered, but may also yield differences in the rate of development of grammatical structures. Variation in productions of each morpheme was noticed in a period of 2 years and the mastery of morphemes overlapped within the population which is similar to the studies done by Brown's (1973). He stated that none of the grammatical morphemes get acquired completely or suddenly rather a period of present and absent obligatory contexts of each

grammatical morpheme were observed. Usage of morphemes is more in the productive domain and the generalizability progress as age improves (Mervis and Johnson, 1991). The study is in accordance of Bland – Stewart and Fitzgerald (2001) which revealed emergent use of Browns (1973) 14 grammatical morpheme, although mastery generally was not seen as those expected for SAE speakers.

### **5. Summary and Conclusion**

Language is a complex and dynamic system of conventional symbols that is used in various modes for thought and communication (ASHA 1982). Recent researchers have focused on language behaviors and their acquisition in children. These provide a basic data for normal language acquisition in different language groups.

A high demand of globalization made individuals to expose to more than one language to be an efficient communicator in the society. Thus bilingualism or multilingualism is common in this scenario. According to the assumption of usage based theory of language acquisition (Tomasello, 2003) children's morphological development is dependable to factors like language input and age. The exploration of English morphological skills in these populations is little and need to be focused to assess how it differs from monolingual English in order to identify potential language disorders as early as possible. Barrot and Leon (2014) investigated the accuracy order of 14 English grammatical morphemes of Filipino preschool pupils and posted a different order compared to Dulay and Burt's (1973) and Brown's (1973) developmental pattern. The current study was carried out with the aim to determine the order of acquisition of English morphological structures produced by 7-10 year old typical Malayalam – English – Hindi trilingual's.

Thirty typical children, further divided into 3 groups of 10 each in the age range of 7-7.11, 8-8.11, 9-10 years participated in the study. Participants being native speakers of Malayalam and using English as second and Hindi as third language since kindergarten. General conversation, monologue, and picture description was used to collect speech sample. Based on their responses, the presence or absence of various morphemes was studied across the development tabulated by Brown (1973).

The results revealed that out of 14 grammatical morphemes only present progressive inflection, prepositional markers, regular plural inflection, articles, regular third person singular and contractible auxiliary was used consistently across general conversation, monologue and picture description in 7-8years, while regular past tense, Uncontractible copula, irregular third person singular, past irregular was used along with other morphemes in 8-9 years and all 14 morphemes were present across tasks for 9-10 years, which are in accordance with Bland- Stewart and Fitzgerald (2001). He hypothesized that English morphological structure produced by Bilingual children followed a different developmental pattern when compared to the order of acquisition of typical monolinguals.

### **6. Clinical implications further suggestions**

The obtained data is useful for Speech- Language pathologists to understand typical English second language acquisition and how it differs from



monolinguals in order to assess and effectively identify potential language disorders as early as possible. Also the results can be used to compare with language disordered group.

As further suggestions, the study can be carried out across various Indian languages and in language impaired population. Comparison can be done across gender to find the difference and including various influencing factors. The study can be carried out in a large population. The frequency of occurrence of each morpheme in the given group can be studied. Comparison across monolinguals and bilinguals in acquisition of English morphemes can be studied

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Note to readers:

For the pictures used to collect data, please contact the corresponding author.