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**Department of English and Humanities**

**BRAC University**

**December 2017**

**Development of Productive Tense Inflections in Bangla Speaking Pre-School Children**

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Development of Productive Tense Inflections in Bangla Speaking Pre-School Children

A thesis submitted to the

Department of English and Humanities

of

BRAC University

by

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In partial fulfillment of the requirement for the degree of

Bachelor of Arts in English

December 2017

### **Declaration**

I hereby declare that this dissertation paper is my original work. I have acknowledged other people's contribution in this paper. Thereby, there is no information from others which do not include valid references. In addition, this paper has not been submitted, either in a whole or in a part, for a degree or award in this or any other institution.

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## **Dedication**

I would like to dedicate my dissertation paper to my parents.

Without their immense support and guidance, I would not have become what I am today.

## **Acknowledgement**

Firstly, I want to thank the Creator, who has made it possible for me to conduct this study. With the Almighty's guidance, I have been successful to finish my work on time.

Also, I am truly grateful to my supervisor Ms. Lubaba Sanjana who has been always there when I have faced any problem and has given me her valuable advice which helped me to carry out this research. I am thankful for all her comments, remarks, and suggestions which have inspired and encouraged me.

I am indebted to my family members and friends who have supported me throughout this journey. Apart from them, I want to thank all the faculty members of Department of English and Humanities, BRAC University who have taught me everything that I know now.

Finally, I would like to give special thanks to all the children who have taken part in this research.

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Development of Productive Tense Inflections in Bangla Speaking Pre-School Children

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## Abstract

This research attempts to investigate the relation between age and productivity of tense inflections of typically developing Bangla speaking pre-school children. Data has been collected from speech samples of 30 children aged 24 months to 48 months. Also, it tries to create a developmental sequence of verb inflections of tense. The findings of this research can be beneficial for future studies as well as to create a profile for typically developing children. Moreover, children with language impairments can be benefited from the findings. The researcher has tried to figure out the answers of these questions:

- a. When do children start to use different tense inflections productively?
- b. What is the comparative range of usage of the productive morphological verb inflections of Bangla tense among the children?
- c. Is there any developmental trend in the productive verb inflections of tenses in relation to Tomasello's (2008) *usage based approach*; for typically developing Bangla speaking pre-school children?

## Development of Productive Tense Inflections in Bangla Speaking Pre-School Children

Acquisition of morphological verb inflections which denote different tenses in Bangla is an interesting aspect in child language acquisition. According to Rácová (2009), tense is correlated to verb as it is indicated by the morphological inflection of the word class verb. Thus, manner of tense acquisition in children can be accessed by looking at the tense inflected verb forms. Also, it is essential to find out if there is any developmental trend for the acquisition of morphological verb inflections for tense. Although there have been different types of studies regarding Bangla verbs, acquisition of Bangla verbs and different types of Bangla tenses, there is a lack of research on relationship between age and productive tense inflections and development of these inflections for Bangla speaking children.

Sultana (2016b) asserted that in order to find out the progress of children with language difficulties as well as to create tasks to combat atypical language growth, it is crucial to measure the typical language growth. However, in Bangla language, an in depth scenario of typical growth in language has not been established by analysing child language data. This creates a problem in the area of speech and language therapy, where making correct assessment of children's language difficulty is hard to find out without a typical profile. This research will try to create a profile for a typical Bangla speaking child's productive tense inflections in relation to age and developmental trend in these inflections; which can be later used to create assessments and interventions for children with language impairment.

This study will look at language data collected through elicited production and elicited imitation from 30 typically developing pre-school children from 3 government operated day care centers in Dhaka city. Furthermore, the researcher will study these language data in order to

identify the productivity of Bangla tense inflections in relation to age and to detect developmental sequence in the children's tense production.

### **Problem Statement**

In Bangla language, different morphological inflections are used with bare verb stems to denote different types of tenses. As a result, Bangla tense system is very complex including different range of morphological verb inflections. Moreover, these inflections vary depending on person.

According to Sultana (2016a), the use of colloquial Bangla is somewhat restricted as this variety of Bangla is not understood by everyone in every context despite being understood by most people in Bangladesh. Standard Bangla is more used by the general population. However, studies on developmental linguistics usually interacts with very young children to elicit language samples from them. In these scenarios, a child will not understand and produce the standard Bangla verb tense inflected forms if he/she is used to the colloquial variety at home. Moreover, they might use both form interchangeably. Thus, both colloquial and standard variety of Bangla needs to be taken into account while collecting and analysing the language data. Bhattacharya, Choudhury, Sarkar & Basu (2005) explained that standard Bangla and colloquial Bangla evolved from the earlier form of Bangla which is known as *sadhuvasha* (the language of the learned).

Although these two dialects are used usually interchangeably by people in Dhaka city, children from different class background can have some differences in their language which will influence the tense inflections they produce. Addressing all these problems, this research will explore typically developing pre-school children's productivity of tense inflections of Bangla in relation to age as well as investigate the possibility of a developmental pattern in these inflections.

### **Purpose of the Study**

This study investigates Bangla speaking children's productivity of tense inflections in relation to age. It explores the probability of a developmental sequence in these inflections.

### **Central Research Questions**

This research addresses the following questions and aims to answer them through this study:

- a. When do children start to use different tense inflections productively?
- b. What is the comparative range of usage of the productive morphological verb inflections of Bangla tense among the children?
- c. Is there any developmental trend in the productive verb inflections of tenses in relation to Tomasello's (2008) *usage based approach*; for typically developing Bangla speaking pre-school children?

### **Significance of the Study**

In order to find out the progress of children with language difficulties as well as to create tasks to combat atypical language growth, it is crucial to measure the typical language growth. However, in Bangla language, an in depth scenario of typical growth in language has not been established by analysing child language data. This creates a problem in the area of speech and language therapy where making correct assessment of children's language difficulty is hard to find out without a typical profile (Sultana, 2016b). This study will include the review of existing literature related to language acquisition as well as productivity. Also, the researcher will be conducting her research based on language data collected from native Bangla speaking children aged 24 months to 48 months (age 2 to 4). Therefore, conclusion derived from this study is noteworthy in the area of Bangla tense inflection acquisition, productivity and development.

**Delimitations**

First of all, the data is collected in 1 month period from 3 day care centers. All of these day cares are government operated and situated in Dhaka city. All of the children speak using standard and colloquial Bangla language interchangeably with some variations depending on their class background. These children come from similar class background. Thus, children living outside Dhaka speaking different varieties and dialects are not part of this study. Furthermore, only 30 typically developed children aged 24 months to 48 months are included in the research. Therefore, the sample size is small which does not reflect all the social, economic, racial, ethnic, and dialectic community of Bangla speaking population. Despite all these, the researcher has tried to analyse the language data in detail by transcribing every single utterance spoken by the children.

**Limitations**

The limitations of this study are given below:

- a. The sample size does not reflect all the social, economic, racial, ethnic, and dialectic community of Bangla speaking population.
- b. The research would have been more reliable if the researcher were given more time and scope to include more diversity and participants.

**Operational Definitions**

Definitions of some important concepts used in this research are explained below:

- a. Morphological verb inflection for tense: In this study, this term will indicate a verb inflection that can mark a tense separately from another verb inflection of that particular tense. For example, -i and -o are two different morphological verb inflections for tense, although they mark the same tense (Present simple tense)

b. Tense inflection: In this research, tense inflection will indicate all the morphological verb inflection of one particular tense. Here, tense inflections of present simple of tense will include four morphological verb inflections (-i, -o, -e, -en).

## **Literature Review**

This chapter summarises the existing literature which are significant to provide theoretical framework for this research. Besides, it includes interesting aspects related to tense acquisition by children as well as Bangla tense acquisition. The study related to productivity, and theoretical aspects of data collection and data analysis are also notable factors in this chapter

### **Usage Based Approach**

In the usage based framework, properties of languages and their grammars are viewed mainly from bottom-up, diachronic and emergentist perspective (Bybee & Beckner, 2009). According to Tomasello (2008), usage based approach to language acquisition views that children acquire language structure from language use and frame language based on their general cognitive skills. This applies for both individual words and grammatical structure of the language. Ghalebi & Sadighi (2015) asserted that this approach focuses on two issues; meaning in use and structure that emerges from use. They explained that children begin language acquisition, at around one year of age, armed with two sets of cognitive skills. They are intention-reading (functional dimension) and pattern-finding (grammatical dimension). Intention-reading help them learn language conventions from cultural learning, whereas pattern-finding allows abstract processing leading to acquisition of grammar so that children can go productively beyond the individual utterances that are used around them in order to create abstract linguistic schemas or constructions (Ghalebi & Sadighi, 2015; Tomasello, 2008).

Tomasello (2000a; 2008) viewed that utterance which occurs within a single prosodic or intonational contour as the most fundamental and primary unit of psycholinguistic through which a person can express complete and coherent communicative intentions. He described that instead of learning words directly, children try to understand adult utterances which results into



comprehension of a word by deciding its functional role in the utterance and commonalities of this functional role across utterances (2008). In early acquisition stage, children try to reproduce an entire adult utterance but fail as they can only successfully reproduce one linguistic element of that utterance which is called “holophrase” (Tomasello, 2000a, p.65). Later in their acquisition phase; in multi word phase, their utterances become more complex and include an open slot for different lexical phrases or words. These utterances with an open slot is called “utterance schemas” (Tomasello, 2000a, p.66). These schemas or constructions are highly concrete, and not abstract. Moreover, children’s multi-word utterances can be of three types; word combinations, pivot schemas, and item-based constructions (Tomasello, 2008). In order to get full adult like competence children create “slots” in these item based schemas. Here, “slots” are created based on the similarity between form and function (Tomasello, 2000a, p.73). Tomasello (2000a) further explained that, when children want to communicate they use these set expressions which they have already mastered from their “stored linguistic experience” (p. 76). However, when there is no ready set expression, they modify their already mastered previous utterances or stored linguistic experiences to produce new utterances. This is known as “usage based syntactic operations” (p.76); which explains that children create their new utterances by assorting or “cutting and pasting” their “pre-existing psycholinguistic units” according to the communicative situation; instead of building their utterances from scratch, morpheme by morpheme. According to usage based model, children's early linguistic knowledge involves an “inventory of item-based constructions” which includes “utterance schemas” to structure new whole utterances (p.77). Tomasello (2008) claimed that children start constructing abstract constructions between two and three years of age where fewer specific lexical items required. These processes of continuous learning, chunking, making categories, and inferencing, in addition to fragmental or complete

repetition later result into establishment of the language categories and structures (Bybee & Beckner, 2009).

However, critics of usage based approach to language acquisition argue that this approach fails to deal with more complex constructions (including two verbs and syntactic embedding), neglects defining how the generalisation/abstraction process is constrained and is unsuccessful to attend to “poverty of the stimulus” (Tomasello, 2008, p.79). In addition, this model gives central focus on the language used by adult speakers who have more sophisticated social and cognitive abilities than children; and communicate in a broader range of domains. Bybee & Beckner (2009) added that their speeches can go beyond the grammatical structures and conventions where existing patterns can extend further on which children may fail to grasp.

### **Item Based Approach**

According to Tomasello (2000b), in early language acquisition period children follow an item based approach. Their early utterance includes particular words and phrases which lacks “system-wide syntactic categories or schemas” (p.156). He added that children become as competent as adult language users gradually in later life. However, in order to achieve adult like competency, it is necessary for them to understand structural and functional similarities in utterances (2000b). Studies also suggest that children mainly acquire item based constructions through imitative learning or cultural learning which allows them to know form-function relationship (Tomasello, 2000a). Owens Jr. (2014) also mentioned that children observe the patterns of language in use in the environment around them and form a “hypothesis” about the rules of the patterns and test them in their own speech. As the child reaches cognitive and social maturity he/she learns to use the “linguistic codes” with sophistication in his/her speech (p.294). MacWhinney (2005) went on stating that in each item based construction there is a set of specific

slots. In the Initial phase, children's comprehension of the first words encountered in this slot assign the features of these slots. Thus, item based learning is an ongoing process of generalisation of the semantic features of the arguments; where each item based construction is related to a particular lexical item. This approach towards language acquisition inspired Tomasello (2000b) to propose a "usage based model" which argues that children learn new linguistic expressions naturally by imitating language around them and using cognitive and social-cognitive skills to "categorise, schematise and creatively combine" these new expressions in order to reach adult like competence (p.156).

Desai (2002) later showed a "connectionist network" which showcases children's item-based learning behaviour in their early language learning stage. His language studies and laboratory experiments suggest that before reaching the age 3, a significant amount of child language is structured as specific items and expressions. Recent evidences also show that children's early language is grammatical as a result of imitating adults, rather than syntactic categorisation. Here, Owens Jr. (2014) asserted that cognitive relationship between the semantic and syntactic complexity as well as the frequency of use in adult speech of morphemes influence their order of acquisition. As children grow up, they are exposed to a rich context with more words. This exposure to diverse and richer contexts (their linguistic and non-linguistic experiences) allow them to recognise similarity of relationships, thus children go beyond the item based approach to syntactic categorical acquisition (Desai, 2002).

The connectionist model created by Desai (2002) further explained that when linguistic items are simple children exhibit "item based, context-bound" behaviour; and when linguistic items start to get complex they move toward "categorical and context free" behaviour (n.p.). It was proposed that children might start language acquisition in an item based manner which lacks

abstract categories, but as they start to grow up their language acquisition develops with rich linguistic and non-linguistic experience and shift to a syntactic categorisation approach (Desai, 2002).

In order to reduce the possibility of error while learning through the process of generalisation in item based approach, MacWhinney (2005) claimed that a child needs to be conservative in three ways. Firstly, he/she needs to define each syntactic combination as an item based construction. Also, for each item based construction, the semantic status for the utterances encountered needs to be recorded in a distinct grammatical structure (MacWhinney, 1987). Last but not the least, supervision of attempts to use the item-based construction with new utterances through following the stored semantics experience is crucial (MacWhinney, 2005). MacWhinney (2005) also claimed that over generalisation will lessen if a child has good memory and applies this method carefully, and thus there will be no need to repair any error due to over generalisation.

### **Acquisition of Tense in English**

Tense morphemes tries to locate an incident in relation to the moment of utterance which is some other time (Ráková, 2009; Wittek & Tomasello, 2002). Generally, there are three tenses. Past tense describes an incident which happened before the moment of utterance. Present tense expresses an incident which takes place in the moment of utterance. Finally, future tense denotes an incident will take place after the moment of utterance (Paramita, 2006, Ráková, 2009). Paramita (2006) explained that time is a universal semantic concept, whereas tense is a grammatical one Ráková (2009) added that time adverbials can indicate the location of an incident whether anterior, simultaneous or posterior to the moment of utterance through their

lexical meaning; e.g., past (yesterday, before, last year), present (today, now, this year), or future (tomorrow, then, next year).

Wagner (n.d.) stated that as the meanings involved with tense are abstract, children face problems acquiring tense. It is easier for them to grasp “here-and-now” from their perspective (n.d., p.4). As a result, present progressive “-ing” occurs first (Owens Jr., 2014; Brown, 1973). In addition, in children’s early production, morphology of tense and aspect is guided by two natural classes. Their use of temporal morphology is widely under extended. In the beginning, they use past tense and perfective morphology only with bounded predicates (e.g., in English, they say ‘made’ and ‘broke’ but not ‘rode’ or ‘played’), and present tense and imperfective morphology only with unbounded predicates (e.g., they say ‘riding’ and ‘playing’ but not ‘making’ or ‘breaking’). Children have more understanding of different temporal forms which is seen during comprehension studies (Wagner, n.d., p.5).

Valian (2006) included that that the separation between tense and aspect being clear, the interaction of tense and aspect becomes complicated. Sometimes, languages lack explicit tense markers using only tense (e.g., Mandarin) and vice versa (e.g., Modern Hebrew). Also, in English tense and aspect are intertwined whereas in Japanese they are separate (Owens Jr., 2014; Valian, 2006). Sometimes, syntactic tense does not need to be present to assign a temporal interpretation to an utterance in English language (e.g., “Pick up your ID card tomorrow”) (Valian, 2006).

Valian (2006) viewed that children occasionally include tense inflected verbs in English either because they represent tense syntactically but do not lexicalise it usually; or their grammar lacks tense and have formulaic or lexically specific usage instead. The latter suggest that, children construct categories instead of acquiring them. Previously it was thought that children

do not view verbs as lexical items that occur in certain frames, rather as members of a syntactic category. On the contrary, if tense was represented syntactically in children's language, they ought to need to represent category verb as tense is a verbal inflection. However, Olguin and Tomasello (1993) found that very young children lack the category verb in their grammars. Here, Wilson (2003) mentioned that copula and progressive "is/was" are often absent in very early acquisition stage. Children's ability to distinguish copula "is" and "was" shows that early copula production is lexically specific or formulaic. Also, in 2 year old children's production, copula is/was occurs more than progressive "is/was". On the contrary, Auxiliary or helping "be" verb develops more slowly than copula (Owens Jr., 2014). In case of past tense acquisition, most of the children make errors of over generalisation of regular past tense inflection (Yang, 2002). In various research the development sequence for tense production of 2, 3 and 4 year old children have been studied.

**2 Year Old Children.** In his study Valian (2006) found that 2 year old children have unclear understanding of tense and temporal adverbs in comprehension tasks. They distinguish tenses very well on auxiliary "will" and "did", next on copula "is" and "was". They even can differentiate between past and present form of copula verb (is/was). Past tense is not automatically difficult for them as they could successfully distinguish "did" and "was" in the study. However, their understanding did not extend to progressive "is" and "was". They fail to differentiate present progressive "is" from the past progressive "was", even with the help of adverbs that 3-year-old children can (Wagner, 2001). Smith (1980) mentioned that temporal adverbs are developed later than verb inflections in children's spontaneous productions. (as cited in Valian, 2006). Thus, 2-year-olds' understanding of temporal adverbs is unclear as they

increased variability for them. Besides, in comprehension tasks, they can distinguish between present and past tense (Valian, 2006).

**3 Year Old Children.** Valian (2006) also expressed that 3 year old children do better on “will/did” contrast than 2-year-olds. They perform quite the same copula and progressive “be”. Moreover, they can be benefited from adverbs as they helped them with copula and progressive “was”.

**4 Year Old Children.** Although Valian (2006) in this study found that 2 and 3 year old childrens’ performance was imperfect, 4 year olds’ performance can be called “Expert”. They have the grasp over verbs in present and past tense independent of aspect. Also, they have full mastery of copula and auxiliary “be” (Owens Jr., 2014, p. 310)

### **Productivity**

In Linguistic studies, productivity is taken to mean “predictable” and “generalisable” (Yang, 2005, p. 272). Yang (2005) explained that a structure or rule is productive when it can be automatically used with a set of lexical items having particular properties and can be used with nonce items which similar properties. Brandt et al. (2011) explained that language acquisition, comprehension and production includes three main processes which are segmentation, categorisation, and recombination. Before learning to be productive children needs to make division of the linguistic inputs they receive into segments, and to form novel utterances they need to learn recombining these segments. In order to be productive, it is also important to assign meaning, and function to these segments as well as grouped them into categories. Therefore, children’s language productivity involves segmentation and abstraction.

Wittek & Tomasello (2002) viewed that development of productive command of tense morphemes is an important aspect of psycholinguists. Generally, German people use Perfekt

(present perfect) to express a past event. In their study, Wittek & Tomasello (2002) found that with age tense productivity increases. In an adult-scaffolded conversation, 2.6 year old to 3.6 year old children are better at forming past participles with novel verbs than infinitives with novel verbs. This study finds out that German-speaking 2.5 year old to 3 year old children produce regular past participles productively to indicate past tense before producing regular infinitive forms productively. Also, situation type does not influence their tense production. It takes another year or so (by the age of four) for them to master the full Perfekt construction which includes “haben (have)/sein (be)” auxiliary selection.

Using a comprehension test Wagner, Swensen & Naigles (2009) had found that 2.5 year old children have abstract knowledge of tense-aspect domain independent of any specific lexical items as they are capable of productively using both the forms and meanings of English tense/aspect morphology. Comprehension tasks is essential to understand children’s ability to abstractly represent morphology. Thus, the findings suggest that they have started to form an abstract grammar which includes abstract tense-aspect morphology.

Besides, patterns which are produced with one or two particular high frequency items are considered to be unproductive, as children are not likely to use them with novel items. On the contrary, Patterns which are used with many different items are considered to be productive, as children are more likely to use them with novel items (Bybee, 2006; Goldberg, 2006). Also, lexical items such as, formulaic expressions or chunks which are frequently used in child language are not viewed as productive, despite following a particular pattern. They are memorised as a unit which does not support acquisition of productive rules and abstract morphological or syntactic rules for their usage and comprehension event (Brandt et al., 2011). Thus, language processes which are not productive is learned though memorisation (Yang,



2005). However, in case of productivity of verbal inflection, simply adding inflections to verb stems does not mean that the child can use verbal inflections productively. Here, using appropriate inflection in the relevant syntactic context is important (Hohenstein & Akhter, 2007).

In addition, the target language's morphological complications influences children's performance as well. Children's productive acquisition takes place in rapid rate in a morphologically rich language (Xanthos et al., 2011). Here, frequency of exposure is an important aspect of childrens' tense productivity. Wittek & Tomasello's (2002) research showed that children experience "haben (have)/sein (be) - past participle" more than "können (can) - infinitive"; especially in their caretakers' speech. Again, within the Perfekt form "haben (have)" is more frequent in the child directed speech (CDS) or adult speech of the children than "sein (be)". Also, adult speech helps children to acquire linguistic elements. Hohenstein & Akhtar (2007) mentioned that children's vocabulary includes verbs only in the ways they have experienced them to be used around them as long as they do not experience other verbs. Besides, children's processing capacities controls their utterances. They use less challenging utterances extensively compromising their production when they face situations which constrains their processing ability (Leonard, 2014). Here, Sultana (2016) mentioned that the children's early morphological production is strongly determined by the structural and the cognitive complexities of the target forms; where usually the structure of substitute verb forms are simpler than the target forms.

### **Wug Test**

Gleason (1958) came up with a unique way to test children's possession of abstract rules for morphological inflection by using nonsense words. His procedure was later termed as "the wug test" (Lightbown & Spada, 2006, p.8). He experimented pre-school and first grade children

by giving them novel verbs, adjectives and nouns (spow, quirky, wug etc.) with picture clues with situations that required them to use morphological inflections. For example, “This is a man who knows how to spow. He is spowing. He did the same thing yesterday. What did he do yesterday? Yesterday, he \_\_\_\_\_.” Their ability to generalise these new words with patterns they already know suggests that acquisition of morphological inflections is more abstract than mere rote learning (Gleason, 1958). Lightbown & Spada (2006) adds that as the acquisition of grammatical morphemes develops in a systematic manner children’s knowledge of morphological inflection exceeds and they create creative words.

### **Bangla Verbal System**

There are two types of verbs in Bangla verbal system. They are, simple verbs and complex verbs (Chatterjee, 2014). Complex verbs can be of several constructions as well. For example; Noun/Adjective + do type, Noun/Adjective + do + Verb type and Verb + Verb type. N/A + do and N/A + do + V constructions are called conjunct verbs whereas, V+V constructions are called compound verbs (Thompson 2012). Complex verb refers to both conjunct and compound verbs (Butt, 2010).

Bangla language has a limited use of simple verbs and abundant usage of conjunct verbs. In two part conjunct verbs, noun or adjectives appear with a helping verb such as, kora (do). For example, bhul kora (to mistake). Here, the helping verb bears tense, person and aspect inflection. In three part conjunct verbs, noun or adjectives appear with two verbs; a helping verb such as, kora (do) and a vector verb such, neya (to take). For example, bhul kore niyechi (to take mistakenly). Here, the helping verb is in the perfective participle form, whereas the vector verb bears tense, person and aspect inflection (Chatterjee, 2014). Ramchand (1990) viewed that the

vector verb also affects the aktionsart and provides semantic meaning (as cited in Chatterjee, 2014).

Compound verbs contain two verbs to express a single event. The first or the main verb is in non finite perfective participle form which is known as the pole. The second verb is a light verb which bears tense, aspect and person inflection is known as the vector verb (Butt, 2010). In these type of verbs, the pole always bears conjunctive participial form “-e” or infinitive form “-te” (Paul, 2003) despite whatever aspect the vector has. For example, pore giyeche (have fallen). The vector verbs in compound verbs carry inflections and affects the aktionsart of the verbal construction (Chatterjee, 2014; Paul, 2003).

Hopper and Traugott (1993) explained that verbs which occur as a pole or simple verb contains its full meaning (as cited in Chatterjee, 2014). However, as vectors, these verbs tend to lose their inherent meanings and create slight difference in meaning (Chatterjee, 2014; Paul 2003). Bangla language has 16 vector verbs in total (Paul, 2003).

### **Background of Bangla Tense**

Rácová (2009) mentioned that, in general, there are eight tenses Bangla language. They are, simple present, present imperfect or present continuous or present progressive, present perfect, preterite or simple past, past imperfect or past continuous or past progressive, pluperfect or past perfect, past habitual, and future. Generally, in Bangla language, finite verb forms are marked for person, tense, aspect, and honour features, each attaching itself to the verb stem in a fixed order (Kar, 2009; Thompson, 2012). Unlike English, they are unmarked for plurality or gender. The markers attach to the verb in an incremental or agglutinative fashion (Kar, 2009). In Bangla language, the finite verb form not only includes the root morpheme which has the lexical meaning of the verb but also, tense marking grammatical morpheme + aspect marking

grammatical morpheme + personal endings (Ráková, 2009; Sultana et al., 2016). Even, the designations of finite verbal forms include information about the aspect as well as the tense (e.g., present perfect, past imperfect or past continuous etc.) (Ráková, 2009). In case of present tense, verbs do not have overt tense markers. Also, aspect markers are seen in case of only two contexts; progressive and perfective. The distinct person markers are there to indicate first, second, and third person agents (Sultana et al., 2016). Also, In Bangla, each tense is incorporated with a set of five term person morphemes which include the honour features. They are, person 1 (p1), person 2. status 1 (p2s1), person 2 status 2 (p2s2), person 2 status 3 (p2s3) and person 3 (p3). It is possible for these tense-person morphemes to have some allomorphs that might be suffixed to the verb root (Paramita, 2006). Bangla tense-aspect paradigm in all the three persons is included in Appendix A.

Chakraborty and Leonard (2012) reported that compared to tense and aspect markers, person markers of Bangla language are more difficult for children to acquire. In their study, present progressive and past progressive forms gained high accuracy. In her study, Sultana (2016b) found that present perfect form was produced in the highest number (over 92%) by the children. Present progressive verb forms in Bangla obtained a moderate production score. Performance on the Children frequently substituted past simple verb forms by the present perfect forms. The overall production of past progressive and past perfect verb forms was very low due to their structural and cognitive demands. In another study, Sultana et al. (2016) compared development of verb morphology of the Present Simple, the Present Progressive, and the Past Progressive tense. It was found from the performance of the typically developing children on the three tasks that the highest accuracy of acquisition was in Present Simple forms (88%), then in present progressive forms (67%), and the lowest in past progressive forms (44%).

### **Theories Used for Data Collection**

Data collection or data elicitation aims to uncover information about the participants' behaviour or knowledge independent of the context of data collection (Mackey and Gass, 2005). Observation is a data collection method where the researcher immerses in a research setting and observes the setting, interaction, relationships and actions and event and so on within it (Mason, 2002). Owens Jr. (2014) stated that the method of data collection depends on the aspects of language which is being studied. He mentioned that expressive language data are collected usually through two means; collecting spontaneous speech or structured testing. In general, the analysis of children's spontaneous speech is traditionally considered as a primary methodology (Wittek & Tomasello, 2002). However, spontaneous language data despite ensuring real-life behaviour can be influenced by many variables such as, context, amount of language and other unidentified possible variables. Also, the target language item might not be evident in a natural child conversation even though the child is aware of that item (Owens Jr., 2014). Eisenbeiss (2010) added that there is lack of researcher control which will result into incomparable language sample as well as difficulty in studying low-frequency utterances, semantics and productivity of the children's utterances. In order to critically analyse child behaviour in case of spontaneous production more experimental procedure is necessary. For example, analysing tense production in terms of abstract categories and schemas (Wittek & Tomasello, 2002). Experimental test allows the researcher to elicit the desired linguistic items through manipulation of the context. However, the sample should attain the prerequisite of naturalness and representativeness even in a testing situation by making sure that the children are uninhibited and in a familiar situation (Eisenbeiss, 2010; Owens Jr., 2014). Wittek & Tomasello (2002) also mentioned that whether

children will not respond or not respond instantly should be taken into account during the procedure

**Elicited Production.** Elicited production or narrative is a data collection measure used for various numbers of purposes which includes eliciting particular structure or narrative from the participants by placing them in a discourse scenario where the target response is particularly appropriate (Ambridge, 2012; Mackey & Gass, 2005). Elicited production methods can lie along with a continuum from least to most structured. Moreover, sentence or stem completion technique can allow the researcher to exert more control (Ambridge & Rowland, 2013). Ambridge (2012) viewed that this paradigm is useful when the researcher wants to investigate children's acquisition of rarely used structures. Sultana (2016b) used elicitation tasks in her study where the aim was to test a specific area of interest, i.e., verb inflections.

Some problems regarding this approach is that the participants may use a different form or avoid a certain form. Also, the researcher needs to plan time for eliciting narrative; e.g. whether to elicit immediately after providing stimulus or allow time for thinking (Mackey and Gass, 2005). Elicited production questions need to be communicative otherwise children will not respond willingly or appropriately. There is no appropriate age group for this technique as the elicited production tasks vary according to different contexts; however, the lowest limit can be 2 years (Ambridge & Rowland, 2013).

**Elicited Imitation.** Repetition or elicited imitation is necessary to constrain the target utterance more precisely (Ambridge & Rowland, 2013). In elicited imitation the children will hear some stimulus sentences which they will have to imitate, and the researcher will compare their production with the stimulus (Eisenbeiss, 2010). This paradigm is useful when particular discourse situation restricts children to use the target structure or, the target structure is avoided

by the children due to its complexity and infrequency (Ambridge, 2012). However, children might use some residual memory of the presented sentence imitation and, study might yield a lower overall error rate than an equivalent elicited production study (Ambridge, 2012; Ambridge & Rowland, 2013). In order to increase the sensitivity of these methods reaction time (e.g, latency to begin the repetition or, the duration of the repeated utterance) can be considered as well. Another suggestion is to use filler to avoid making the children aware that repeated instances of the same construction are being asked to them. Here, the overall number of trials is limited by children's attention span and willingness to continue (Ambridge & Rowland, 2013).

Semi-structured elicitation techniques are good for studying low-frequency language phenomena, semantic distinctions, and productivity of the participants' utterances. As these do not cause training effects, elicitation techniques with flexible procedures and variable stimuli can also be used repeatedly (Eisenbeiss, 2010, p.9). While designing production tasks, the experimenter may use either novel items (typically nouns or verbs), or familiar and real items. Using novel words may cause certain problems. They increase the difficulty of the experimental task as there is an additional requirement of remembering the novel form and its meaning. It becomes difficult to be sure that participants have acquired the precise intended meaning. Therefore, it is sensible to avoid using them when there is nothing particular to be gained (Ambridge & Rowland, 2013). Owens Jr. (2014) further mentioned that in an experimental situation the target linguistic elements are elicited using verbal and non-verbal stimuli which provides control of the situation. However, it provides narrow and limited sampling and might not reflect children's performance in everyday use. Moreover, noncompliance in the experimental situation does not mean that the child lacks knowledge of the linguistic items as in the case of pre-school children lack of attention or interest may cause incorrect response

### **Theories Used for Analysis**

Frequency is one of the main factors in a usage based model to explain the productivity of language schemas, and structures as well as the abstractness of these language structures (Brandt et al., 2011; Bybee 2008). Acquisition, production, and comprehension of linguistic structures can be understood by analysing the statistical distribution of specific items within and across specific structures (Bybee, 2006; Goldberg, 2006). Furthermore, usage patterns, frequency of occurrence, variation, and change can give provide direct evidence for cognitive representation (Bybee & Beckner, 2009). They added that when patterns or constructions relate to a high number of distinct items: they become more strongly represented in the language system, and also incline to be highly related to new or novel items. however, other factors such as, “schematicity” and “phonological or semantical features” need be taken into account (p. 841-842).

Mackey & Gass (2005) affirmed that measures of frequency can help to understand how often a particular behaviour or phenomenon takes place. They summarised the basic characteristics of the data which indicate the nature of data with minimum space expenditure. Frequency can be further divided into token and type frequency (Brandt et al., 2011; Bybee 2008). Yang (2005) mentioned that constitution of early vocabulary is directly related to token frequency, whereas productivity is depended on the type frequency of words in the early child vocabulary. Here, token frequency includes how many times a specific item is used in a specific pattern (Brandt et al., 2011; Ellis & Collins, 2009). It can refer to the number of times a lexical item occurs in child language data, i.e., a specific verb. Compared to low token frequency words, high token frequency items are strongly represented in memory, and are easily accessible (Rispen & De Bree, 2014). On the other hand, type frequency is a characteristic of patterns or



constructions. It deals with a number of distinct items which either occur in the open slot of a construction or occur to create a pattern (Bybee & Beckner, 2009; Ellis & Collins, 2009). In general sense, type frequency includes the number of different lexical items which are used in a specific pattern, i.e., a suffix. (Brandt et al., 2011; Bybee, 2007). Rispens & De Bree (2014) further mentioned that morphological productivity is highly influenced by type frequency.

## **Research Methodology**

In this chapter, the methodology of this study will be discussed which encompasses the design of research, theoretical framework, participants, sampling, setting, and instrumentation. In addition, the procedure of data collection, transcription and data analysis along with the obstacles encountered through this process will be explained in this chapter.

### **Research Design**

Burns, Grove & Gray (2015) interpreted research design as, “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings” (p. 195). This particular research has been designed to understand the productive nature of tense inflections in relation to age, and to find a development pattern in the these inflections. To investigate these issues, the researcher has collected language data from 30 typically developing Bangla speaking pre-school children aged 24 months to 48 months (age 2 to 4) from 3 day care centers in Dhaka. The language data is collected through two data collection methods which are: elicited production and elicited repetition. Furthermore, the researcher has done a complete morphological transcription of the language data in order to analyse them to answer the research questions stated for this study.

### **Theoretical Framework**

The data collected from the sample has been studied following the *usage based approach* proposed by Tomasello (2008). In this study, an inflection that has been used with even one verb stem is considered as productive use of that inflection. Moreover, the researcher has tried to connect the findings of this research with the existing literature in the same field.

**Participants**

The participants of this research are from 3 government operated day care centers in Dhaka city. There are in total 30 participants of this study who are aged from 24 months to 48 months (age 2 to 4). All of the participants are identified as typically developing children by the caregivers in the day care centers. The authority of the day care centers has confirmed that the participants included in this study have no reported speech and/or language delay.

**Sampling**

Theoretically, the sample of the children needs to reflect the total population by representing all socioeconomic, racial, ethnic and dialectic variation are the same proportion. In an experimental situation, pre-school children's performance is better with a known adult (Owens Jr., 2014). However, in this research, the sample only reflects the population living in Dhaka, speaking standard and colloquial Bangla language and coming from similar socioeconomic background causing a lack of diversity of socioeconomic status in the sample. Also, the sample size is relatively smaller than other research in this field keeping in mind the limited time given to complete the research.

The sample includes 20 minute language sample collected through elicited production and elicited repetition method from each of the 30 children (Mean= 36.33, Standard Deviation= 7.82). These children were identified by the caregivers in the day care centers as typically developing native speakers of Bangla language. The three day care centers are identified as: A, B, and C. The ratio of number of participants from each day care, A:B:C = 10: 11: 9.

**Setting**

The setting of this study is the three day care centers. While conducting the study it is necessary that the recording of child language data takes place in a place which is familiar to the

participants (Eisenbeiss, 2010). As the children stay in the day cares for a significant amount of time, it can be assumed that the place will be familiar to and comfortable for them. In a familiar surrounding the children will not be intimidated and will willingly take part in the study.

Eisenbeiss (2010) also mentioned that observer effect will be stronger if the researcher remains a stranger to the participants of the research before the actual recording take place. Therefore, the researcher needs to familiarise herself with the children in the place where the study will take place. Otherwise, the language sample will be unreliable containing insignificant data as the children will be frightened to take part in the elicitation process.

Also, the research has taken place in a quiet room with sufficient light away from noises and distractions, so that the sound and video quality is clear in the video recording. In order to maintain validity and reliability of the research, all the participants have taken part in the research under a similar environmental setting

### **Instrumentation**

In this study, the researcher has adopted elicited production and elicited imitation as her data collection method. She has created a set of elicitation questions to ask the children to elicit different form of tenses from them. To elicit the target forms elicited imitation has also been used by the researcher.

Before conducting the study, the researcher has spent 5-6 minutes to familiarise herself with each of the participant. During elicited production procedure, to engage the children in conversation, the researcher has used a set of toys including a car, a stuffed elephant and a teddy bear. The researcher has given the toys gradually to the children to engage them in a play session. The pre-planned question included questions related with the toys to capture the interest of the children. In the elicited imitation procedure, 5 pictures are taken from the popular cartoon

“Doraemon” to use along with a sentence related to each of the 5 pictures. The sentences were whispered to the children and they were asked to repeat them to the teddy bear.

The researcher has tried to follow a consistent process for all the participants to maintain reliability and validity. However, the responses from the children differed, and frequently they participated in conversation about various subjects interesting to them. The session lasted for almost 20 minutes for each child.

### **Data Collection Procedure**

This research looks at the language data collected from 3 day care centers in Dhaka city under the Department of Women’s Affair. She has submitted a recommendation letter written by her supervisor to the Director General of the department. After several weeks, the researcher was finally given the permission to conduct her study. The authorities of the day care centers allowed the researcher to come to collect data anytime during office hour that will be convenient for the research. The researcher had chosen day cares for particular reasons. First of all, in day cares there are children from different familial and socioeconomic background. Also, by conducting the study in day cares the researcher has tries to keep environmental variables for this study as minimum as possible. Furthermore, as children spent a long period of their day in day care centers, they would not be inhibited if the study takes place there.

The two data collection methods are elicited production and elicited imitation. It is viewed by Ambridge & Rowland (2013) that the techniques for elicited production method can lie along a continuum from least to most structured. At one end, the children are given the scope for natural production; on the other end, the researcher exerts control by constraining questions. Also, Sultana (2016b) believed that an effective method of data collection combines structured as well as spontaneous language samples. To elicit children responses for this research, the

researcher has created a set of questions which will help to give some amount of researcher control while using this method (see Appendix B). However, children are also given scope for natural language production as the research did not prohibit them from talking about things from their own experiences during the study. Toys have been used to keep the children engaged with the permission of the day care centers.

Ambridge & Rowland (2013) further viewed that in order to constrain the target utterance more precisely elicited imitation is vital. The researcher has used this method for 3 past tenses of Bangla which being a native speaker of Bangla she has felt will not be frequently used in child speech (see Appendix C). To give the child a context to repeat, a game has been played where the child will hear 1 sentence for each 5 pictures and will have to describe it to a third party (e.g., a puppet).

According to Eisenbeiss (2010), the researcher can exclude data from the first some minutes of each recording session when the participants are getting settled in the recording situation. Thus, the data collection period has been consistent for all the children which is 20 minutes excluding the first 5-6 minutes spent to familiarise the children with the situation. The conversations have been video recorded. Previous child language studies have suggested that it is better to videotape than only audiotaping as it allows the researcher to observe the nonlinguistic items additional to linguistic ones by providing links between speech, gestures, and actions as well as multimodal interaction (Eisenbeiss, 2010; Owens Jr., 2014,). Eisenbeiss (2010) also mentioned that videos will also include additional situational information in order to understand object, deictic and temporal references. A digital camera and mobile camera have been used to record the sessions.

## **Transcription**

Transcription is the process of writing down spoken words as well as nonverbal gestures and actions during a set period of time (Rowe, 2012). Eisenbeiss (2006) explained that researchers can use orthographic transcriptions combined with additional conventions for capturing deviations from the target forms by also incorporating target like forms and the properties of the children's spoken speech sample, e.g., pauses, hesitations, gestures, etc. which can be sometimes relevant for its interpretation. For this particular study, the researcher has done a complete morphological transcription of the language data collected during the research.

## **Data Analysis Procedure**

The transcribed language data have been analysed following several steps. First of all, only simple verbs and conjunct verbs with Noun/Adjective+ do type (verb) have been included in the analysis. Then, to analyse the data the researcher has calculated frequencies. Eisenbeiss (2010) explained that type frequency includes the calculation of frequency of morphological verb inflections and token frequency includes the calculation of frequency of individual tense inflected verb forms which the children will produce.

For this study, an inflection that has been used with even one verb stem is considered as productive use of that inflection. While calculating frequency of productive inflections, same inflection produced with the same verb stem as well as different verb stems has been considered as a different item in every single use.

Production score of tense inflections has been generated by calculating mean score and standard deviation. Mackey & Gass (2005) mentioned that mean or arithmetic average is a commonly used measure of central tendency. Mean or arithmetic average despite being commonly used, is sensitive to extreme scores when the number of participants is small. Measure

of central tendency can be useful to show the typical behaviour of a group, but it tends to ignore some important information. Mean score does not show how the scores are dispersed around the mean. In order to measure variability or dispersion it is necessary to measure standard deviation. A smaller standard deviation means that in terms of a particular behaviour the group is more homogenous, and vice versa. The smaller the standard deviation, the better the mean indicates the behaviour of group. Thus, measures of dispersion serve as a quality control for measures of central tendency. Besides, comparison between 5 age groups have also been done in which children are divided into groups of 6 (Table 6). Graphical representation of the data collected from the sample has been done using Microsoft Excel.

### **Obstacles Encountered**

The researcher has faced some obstacles while conducting the study. The permission for collect data from the 3 day care centers has been granted after several weeks. Also, the researcher has gone to the Department of Women's Affairs multiple times in order to meet the Director General. Moreover, the transcription process has taken almost a month for the researcher which has been an arduous process. Other than these issues, the researcher has not faced any struggles for this research.



## Findings & Results

This chapter includes the data collected from 30 typically developing Bangla speaking children aged 24 months to 48 months (age 2 to 4) from 3 different day care centers in Dhaka. In this research, 20 minutes video of data have been collected using elicited production and elicited imitation methods. The findings from that data is presented to show the productivity of verb inflections of different tense type, the frequency of productivity, production score across 5 age groups and of each child, and developmental pattern of these inflections.

### Information Regarding the Sample

30 pre-school children from 3 different day care centers have taken part in this study (Table 1). The day care authority has provided information regarding children's age and has confirmed that the participants are typically developing Bangla speaking children.

Table 1

#### *Age Profile of Children*

Children Age (Months)	Mean (N= 30)	Standard Deviation	Age Range
			(Maximum Age- Minimum Age)
	36.33	7.82	48-24= 24

These 30 children have been divided into 5 age groups where each group has 6 children (Table 2). From group A to group E, the age of the children increases.

Table 2

#### *Age Groups*

Group	Number of Children	Mean of Age in Months (N= 30)	Standard Deviation of Age in Months	Age Range in Months (Max-Min)
A	6	25.83	1.60	4
B	6	30.50	1.87	5
C	6	36.50	1.87	5
D	6	42.33	1.63	4
E	6	46.50	1.38	3

### Measure of Productive Tense Inflections

For this study, an inflection that has been used with even one verb stem is considered as productive use of that inflection. In this section, the frequency of productive use of different tense inflections for each child is shown. While calculating frequency, same tense inflection produced with the same verb stem as well as the different verb stems has been considered as a different item in every single use. In total, 41 different morphological verb inflections for tense are found to be productive in this study. However, for a better representation, they have been shown under their particular tense inflection (Table 3). For example, four morphological verb inflections (-i, -o, -e, -en) represent present simple tense; thus, they have been shown under that particular tense inflection.

Table 3

*Productivity of Tense Inflections and Their Frequency of Use for Each Child*

No.	Children's Age in Months	Tense Inflections									
		Simple Present	Present Progressive	Present Perfect	Simple Past	Past Progressive	Past Perfect	Past Habitual	Future		
1	24	5	0	2	0	0	0	0	1		
2	24	10	0	1	0	0	0	0	2		
3	26	16	1	2	0	0	0	0	1		
4	26	15	4	1	1	0	0	0	4		
5	27	13	0	3	0	0	0	1	1		
6	28	12	0	1	0	0	0	0	2		
7	28	9	2	8	3	0	1	0	5		
8	29	14	3	5	0	0	3	1	4		
9	30	12	5	3	0	2	6	2	3		
10	31	12	0	11	1	1	1	1	3		
11	32	16	1	6	0	1	1	1	4		
12	33	15	4	8	2	0	3	1	5		
13	34	23	2	9	2	2	5	0	1		
14	35	27	2	14	0	1	3	3	3		
15	36	28	5	12	3	2	6	2	6		
16	37	25	7	15	0	1	0	3	5		
17	38	37	6	12	2	0	8	1	5		
18	39	36	6	11	2	1	7	1	2		
19	40	39	6	20	1	2	0	0	5		
20	41	59	4	14	1	1	7	3	6		

21	42	32	7	11	3	0	0	3	5
22	43	31	8	11	2	1	6	2	12
23	44	32	9	22	1	0	7	5	11
24	44	25	8	18	2	0	5	4	8
25	45	32	9	27	2	1	6	4	7
26	45	50	11	19	6	0	3	5	16
27	46	49	11	21	3	10	29	5	14
28	47	80	12	27	5	6	16	21	13
29	48	82	13	19	15	15	5	9	14
30	48	79	17	42	9	4	12	5	12

Apart from that, table 4 represents the production scores of tense inflections across age groups. Here, mean score and standard deviation of productive tense inflections have been measured for each group.

Table 4

*Mean Score and Standard Deviation of Tense Inflections Across Age Group*

Age Groups		A	B	C	D	E
Inflections of Simple Present Tense	Mean Score	11.83	13	29.33	36.33	62
	Standard Deviation	3.97	2.53	5.82	11.96	21.1
Inflections of Present Progressive Tense	Mean Score	0.83	2.5	4.67	7	12.17
	Standard Deviation	1.6	1.87	2.16	1.79	2.71

Inflections of Present	Mean Score	1.67	6.83	12.17	16	25.83
Perfect Tense	Standard Deviation	0.82	2.79	2.14	4.69	8.73
Inflections of Simple Past	Mean Score	0.17	1	1.5	1.67	6.67
Tense	Standard Deviation	0.41	1.26	1.22	0.82	4.76
Inflections of Past	Mean Score	0	0.67	1.17	0.67	6
Progressive Tense	Standard Deviation	0	0.82	0.75	0.82	5.69
Inflections of Past Perfect	Mean Score	0	2.5	4.83	4.17	11.83
Tense	Standard Deviation	0	1.97	2.93	3.31	9.7
Inflections of Past Habitual	Mean Score	0.17	1	1.67	2.83	8.17
Tense	Standard Deviation	0.41	0.63	1.21	1.72	6.52
Inflections of Future Tense	Mean Score	1.83	4	3.67	7.83	12.67
	Standard Deviation	1.17	0.89	1.97	3.06	3.08

From table 3, it can be said that different tense inflections start to become productive from different ages. From the group data (Table 4), it is also shown that productivity increases as the age of the children increases. However, exceptions can be noted for some group in case of some tense inflections (detailed explanation in chapter. 5).

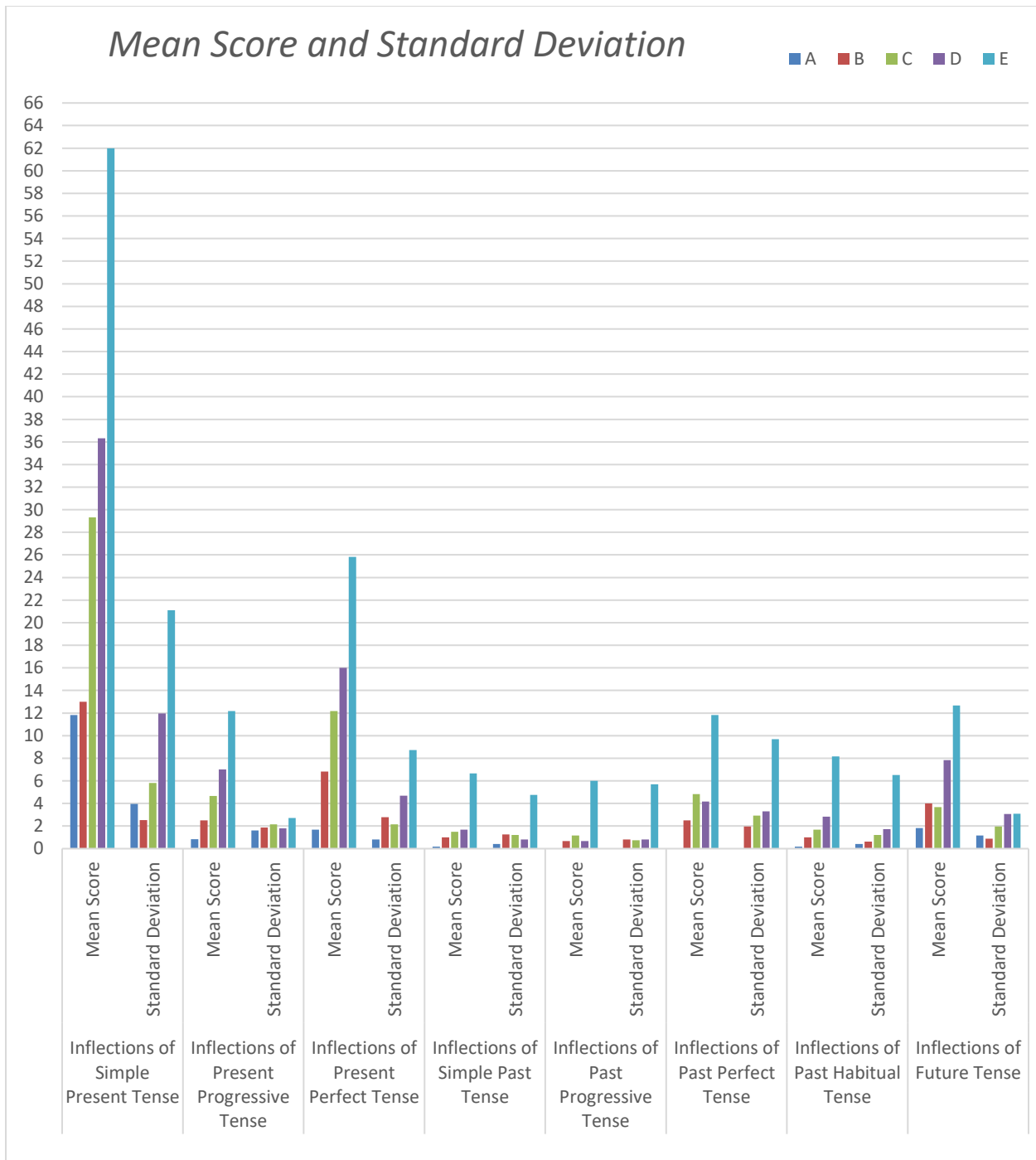


Figure 1. The columns show mean score and standard deviation of productive tense inflections across age groups

**Number of Productive Morphological Inflections of Verb for Tenses and Productive Tenses**

For this study, a verb inflection that has been used with even one verb stem is considered as productive use of that inflection. In this section, the total number of productive morphological inflections of verb for tenses for each child is shown (Table 5).

Table 5

*Productive Morphological Inflections of Verb for Bangla Tenses*

Children	No. of Productive Inflections of Verb	Children	No. of Productive Inflections of Verb
1 (24 months)	3	16 (37 months)	11
2 (24 months)	5	17 (38 months)	14
3 (26 months)	5	18 (39 months)	13
4 (26 months)	7	19 (40 months)	15
5 (27 months)	7	20 (41 months)	18
6 (28 months)	4	21 (42 months)	14
7 (28 months)	10	22 (43 months)	20
8 (29 months)	11	23 (44 months)	18
9 (30 months)	12	24 (44 months)	16
10 (31 months)	10	25 (45 months)	19

11 (32 months)	11	26 (45 months)	18
12 (33 months)	13	27 (46 months)	23
13 (34 months)	13	28 (47 months)	22
14 (35 months)	13	29 (48 months)	20
15 (36 months)	18	30 (48 months)	26

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Also, the number of productive tenses for each child is shown (Table 6)

Table 6

*No of Productive Tenses for Each Child*

Children	No. of Productive Tenses	Children	No. of Productive Tenses
1 (24 months)	3	16 (37 months)	6
2 (24 months)	3	17 (38 months)	7
3 (26 months)	4	18 (39 months)	8
4 (26 months)	5	19 (40 months)	6
5 (27 months)	4	20 (41 months)	8
6 (28 months)	3	21 (42 months)	6
7 (28 months)	6	22 (43 months)	8



8 (29 months)	6	23 (44 months)	7
9 (30 months)	7	24 (44 months)	7
10 (31 months)	7	25 (45 months)	8
11 (32 months)	7	26 (45 months)	7
12 (33 months)	7	27 (46 months)	8
13 (34 months)	7	28 (47 months)	8
14 (35 months)	7	29 (48 months)	8
15 (36 months)	8	30 (48 months)	8

Table 7 represents total number of produced productive inflections of verb for tense and productive tenses across age groups. Here, mean score and standard deviation of the produced inflections and tenses have been measured for each age group.

Table 7

*Mean Score and Standard Deviation of the Total Number of Productive Morphological Inflections of Verb for Tense and Productive Tenses across Age Groups*

Group of Children	Number of Children	Age Range in Months (Max- Min)	No. of Tenses		No. of Productive Inflections of Verb	
			Mea n Score	Stan dard Deviation	Mea n Score	Stan dard Deviation

A	6	4	3.67	0.82	5.17	1.60
B	6	5	6.67	0.52	11.17	1.17
C	6	5	7.17	0.75	13.67	2.34
D	6	4	7.00	0.89	16.83	2.23
E	6	3	7.83	0.41	21.33	2.94

From tables. 5 And 6, it can be found that there is an increase in number of productive verb inflections for tense and productive tenses along with the increase of age in the children. However, in case of productive tenses, there is slight fluctuation between the age range of 37 months to 45 months. From the group data (Table 7), the gradual increase of number of productive verb inflections for tense in age groups is shown. Also, it shows the gradual increase of number of productive tenses in age groups, except for age groups D.

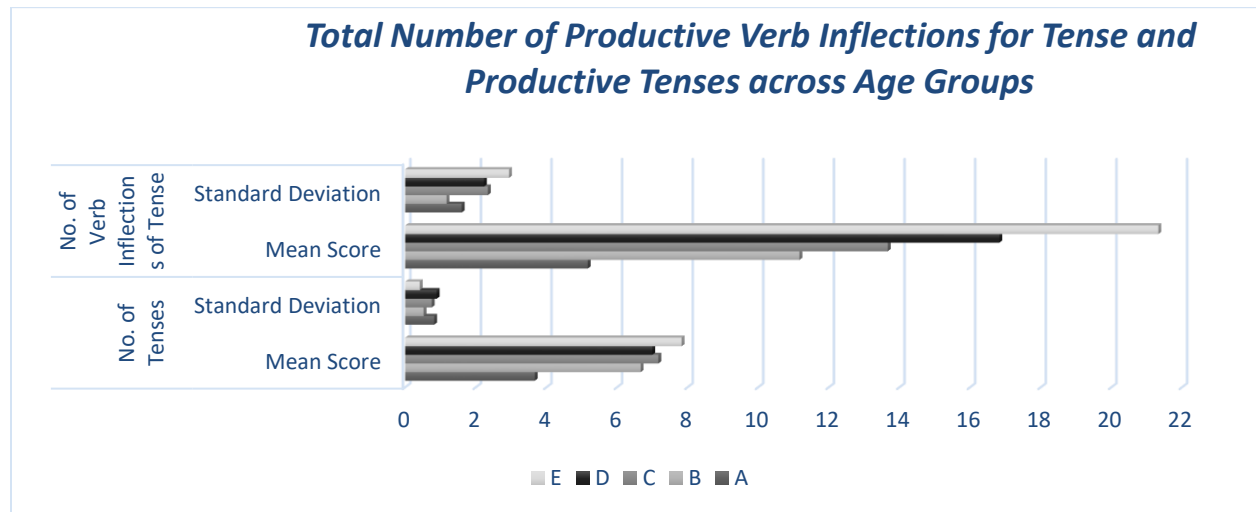


Figure 2. The bars display mean score and standard deviation of the total number of productive verb inflections for tense and productive tenses across age groups

### Frequency of Total Number of Child Use of Productive Verb Inflections for Tenses

This section provides information about frequency of total number of child use of productive morphological verb inflections of Bangla tenses. Here, for one verb inflection of tense, the number of children who use that inflection productively during the study has been taken as frequency of total number of child use for that particular inflection. Here, the percentage of each verb inflection will reveal which verb inflections are most used by the children and which are not (Table 8).

Table 8

#### *Usage Amongst Children*

Verb Inflection of Tense	Total Number of Child Use	Percentage (%)	Verb Inflection of Tense	Total Number of Child Use	Percentage (%)
-i	29	96.67			
-o	16	53.33	-chilam	9	30
-e	29	96.67	-tesilam	4	13.33
-en	2	6.67	-chilo	4	13.33
-chi	13	43.33	-tesilo	3	10
-tesi	10	33.33	-chile	1	3.33
-teso	1	3.33	-tesila	1	3.33
-che	16	53.33	-echilam	8	26.67
-tese	18	60	-silam	16	53.33
-chen	1	3.33	-echile	2	6.67

-echi	11	36.67	-sila	3	10
-si	27	90	-echilo	2	6.67
-echo	2	6.67	-silo	11	36.67
-so	11	36.67	-tam	15	50
-eche	6	20	-te	4	13.33
-se	22	73.33	-to	15	50
-sen	3	10	-bo	27	90
-lam	11	36.67	-mu	5	16.67
-le	10	33.33	-ba	9	30
-lo	12	40	-be	16	53.33
-len	3	10	-ben	1	3.33

### Production Scores of Tense Inflections

From the data of table 5, the production scores (mean score and standard deviation) for the tense inflections have been measured (Table 9)

Table 9

#### *Production Scores*

Tense Inflections	Mean Score (N=30)	Standard Deviation	Tense Inflections	Mean Score (N=30)	Standard Deviation
Simple Present	30.50	21.43	Past Progressive	1.70	3.29

Present	5.43	4.45	Past Perfect	4.67	6.04
Progressive					
Present	12.50	9.46	Past Habitual	2.77	4.07
Perfect					
Simple Past	2.20	3.17	Future	6.00	4.44

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### Response in Elicited Imitation Task

This section provides the response given by children in the elicited production task. For better understanding, only the inflected verb produced in this task has been shown (Table 10).

Table 10

#### *Elicited Imitation Task Result*

Children	Target Inflected Verb Forms				
	marlo	khelo	Urchilo	douracchilo	kedechilo
Response Inflected Verb Forms					
1 (24 months)	mare	khabe	Ure	dourabe	kadse
2 (24 months)	mare	khabe	Urbe	douray	kade
3 (26 months)	marse	kadse	Ure	dourabe	kadbe
4 (26 months)	marlo	khelo	Urtese	douracche	kadse
5 (27 months)	marlo	khelo	Uray	douray	kadse
6 (28 months)	mare	khelo	Urtese	douracche	kadbe

7 (28 months)	marlo	khelo	Ursilo	douracche	kade
8 (29 months)	marlo	khelo	Urlo	douralo	kadtese
9 (30 months)	marlo	khaise	Urse	douracche	kadse
10 (31 months)	mare	khelo	Urlo	douralo	kadlo
11 (32 months)	marlo	khelo	Urchilo	douracchilo	kadchilo
12 (33 months)	marlo	khelo	Ursilo	douraise	kadsilo
13 (34 months)	marlo	khelo	Urchilo	douray	kadsilo
14 (35 months)	marlo	khelo	Urchilo	douratesilo	kadsilo
15 (36 months)	marlo	khelo	Urchilo	douratesilo	kadsilo
16 (37 months)	marlo	khelo	Ursilo	douracchilo	kadsilo
17 (38 months)	marlo	khelo	Urse	douratesilo	kadtese
18 (39 months)	marlo	khelo	Urtese	douratesilo	kadsilo
19 (40 months)	marlo	khelo	Urchilo	douracchilo	kadchilo
20 (41 months)	marlo	khelo	Urchilo	douracche	kadsilo
21 (42 months)	marlo	khelo	Urtese	douracchilo	kadsilo
22 (43 months)	marlo	khelo	Urchilo	douracchilo	kedesilo
23 (44 months)	marlo	khelo	Urchilo	douracchilo	kadsilo
24 (44 months)	marlo	khelo	Urchilo	douracchilo	kadtesilo
25 (45 months)	marlo	khelo	Urchilo	douracchilo	kedechilo
26 (45 months)	marlo	khelo	Urchilo	douracchilo	kedesilo

27 (46 months)	marlo	khelo	Urchilo	douracchilo	kadsilo
28 (47 months)	marlo	khelo	Urchilo	douracchilo	kedechilo
29 (48 months)	marlo	khelo	Urchilo	douracchilo	kadsilo
30 (48 months)	marlo	khelo	Urchilo	douracchilo	kedechilo

## Analysis & Discussion

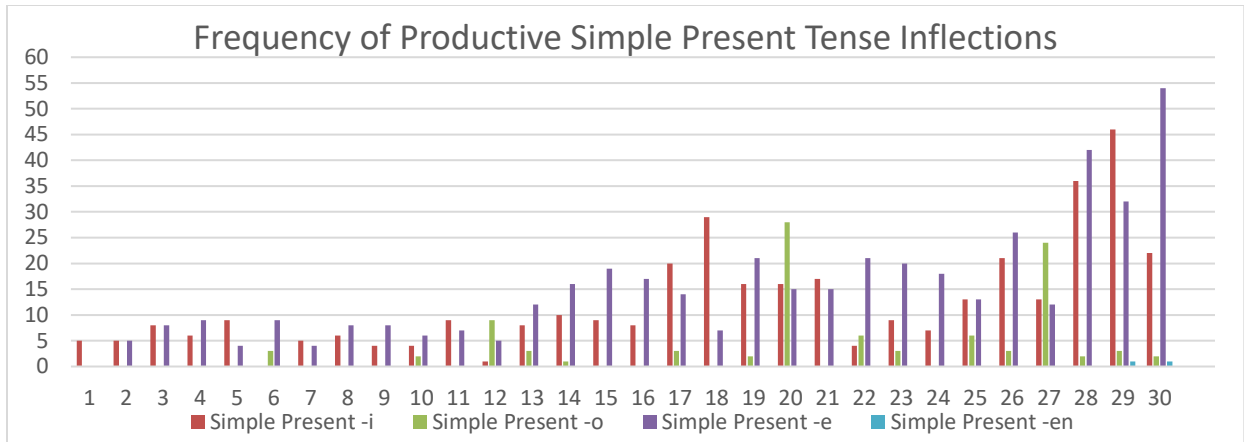
This chapter will discuss the findings of this research and interpret them in order to answer the central research questions. Also, the researcher tries to present a developmental trend of morphological verb inflections to denote tense following Tomasello's (2008) usage based theory. Moreover, she tries to analyse the findings of current study based on existing research on this field.

### Answering Central Research Questions

**In response to Central Research Question 1.** The first central research question enquires when Bangla speaking typically developing pre-school children start to use Bangla tense inflections productively. In the current study, 41 verb inflections which mark different Bangla tenses have been found. These inflections have been grouped according to the tense type they mark, and their productivity and frequency of use amongst the children have been presented in table 3.

***Simple Present Tense.*** From Table 3 it is seen that children start to use inflections of simple present tense productively from the age of 24 months. There is a gradual increase of mean score in the age groups, and the standard deviation increases rapidly except for age group B (Table 4). There is a slight increase of mean score for age group B which may be due to child 7 (28 months) whose productivity of simple present tense inflections were lower than others in that age group. Four verb inflections (-i, -o, -e, en) of simple present tense have been productive among the children in this study.





*Figure 3.* The columns show the frequency of all the productive simple present tense inflections for the 30 children.

**Present Progressive Tense.** From Table 3 it is seen that children start to use inflections of present progressive tense productively from the age of 26 months. However, child 5 (27 months), child 6 (28 months) and child 10 (31 months) have not used the inflections of this tense productively in the study. There is a gradual increase of mean score and standard deviation in the age groups, except for age group D (Table 4). The standard deviation of age group D is lower than age group B and C. The productivity of the participants in this age group did not fluctuate much. Six verb inflections (-chi, -tesi, -teso, -che, -tese, -chen) of present progressive tense have been productive among the children in this study.

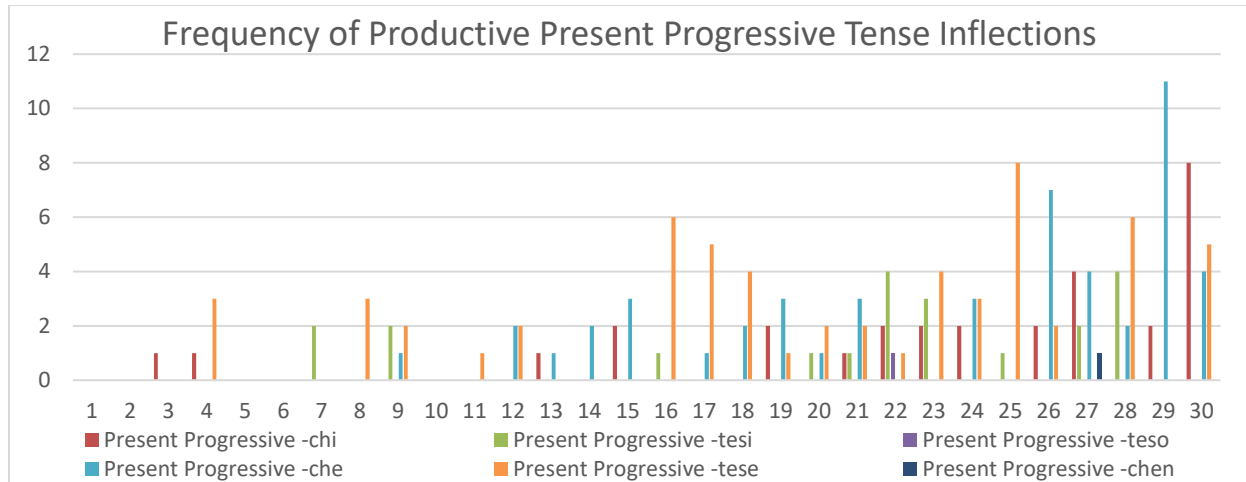


Figure 4. The columns show the frequency of all the productive present progressive tense inflections for the 30 children.

**Present Perfect Tense.** From Table 3 it is seen that children start to use inflections of present perfect tense productively from the age of 24 months which is similar to the inflections of simple present tense. There is a gradual increase of mean score and standard deviation in the age groups. There is a rapid increase in mean score and standard deviation for age group E may be due to child 30 (48 months) whose frequency of productive of present perfect tense inflections was highest (42) amongst the children. Seven verb inflections (-echi, -si, -echo, -so, -eche, -se, -sen) of present perfect tense have been productive among the children in this study.

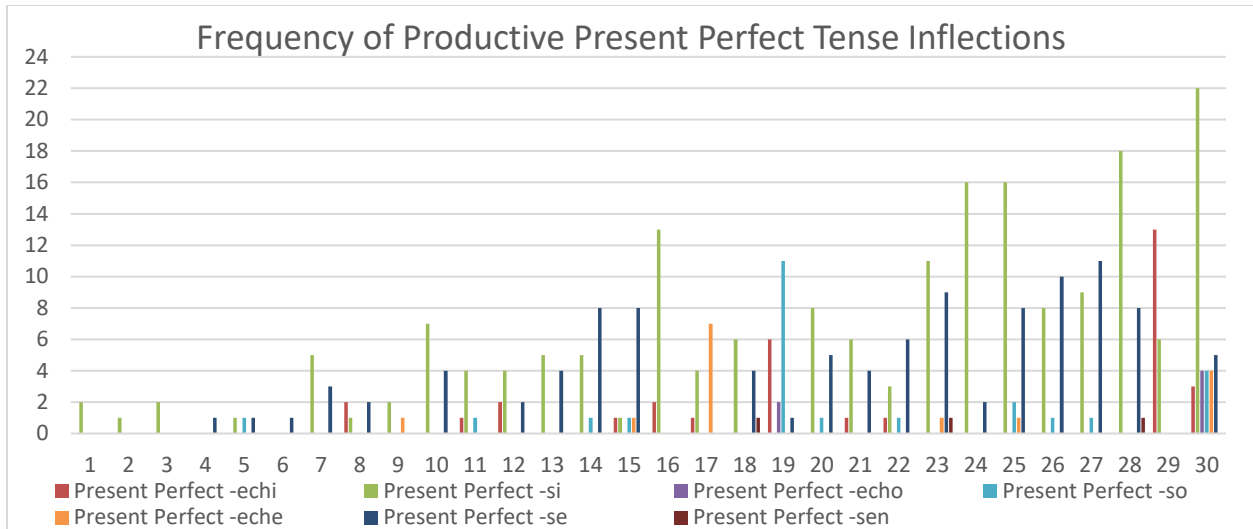


Figure 5. The columns show the frequency of all the productive present perfect tense inflections for the 30 children.

**Simple Past Tense.** From Table 3 it is seen that children start to use inflections of simple past tense productively from around 33 months. Before that age, only three children have used the inflections of this tense. However, the use was very limited (up to 3 inflections). Even after 33 months there is lower frequency of use of the inflections of this tense for most of the children. There is a gradual increase of mean score and standard deviation in the age groups, except for age group D (Table 4). The standard deviation of age group D is lower than age group B and C. Similar to present progressive tense, the productivity of the participants in this age group did not fluctuate much. Four verb inflections (-lam, -le, -lo, -len) of simple past tense have been productive among the children in this study.

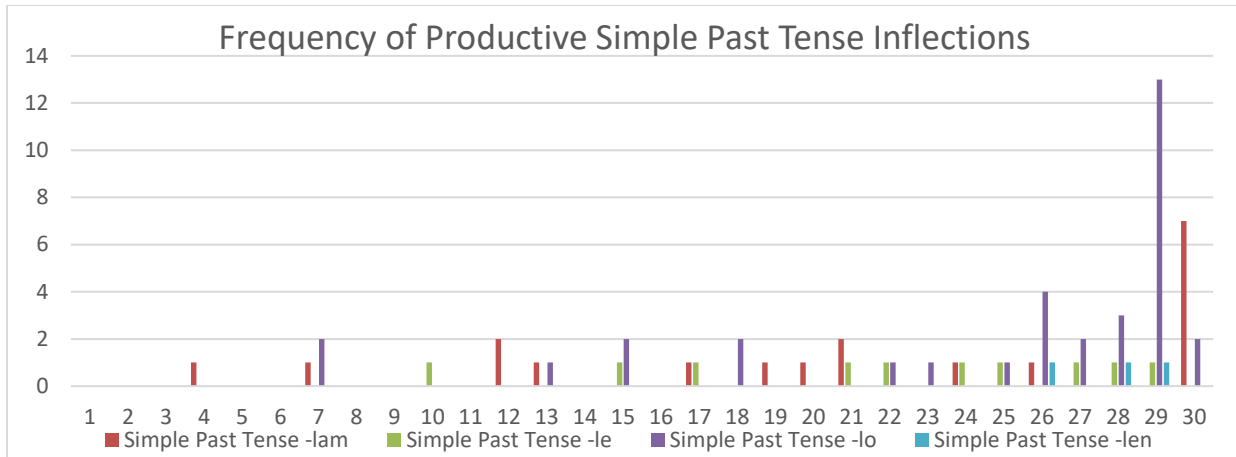


Figure 6. The columns show the frequency of all the productive simple past tense inflections for the 30 children.

**Past Progressive Tense.** From Table 3 it is seen that children start to use inflections of past progressive tense productively from around 46 months. Before that age, there have been some productive use of the inflections of this tense. However, the use was very limited (up to 2 inflections). Moreover, productive use of this tense inflections has been very rare among the children. From child 9 (30 months) to child 25 (45 months), there have been irregularity of productive use of this tense inflections. There is fluctuation mean score and standard deviation in the age groups. The mean score and standard deviation of age group D is same as the mean score and standard deviation of age group B. However, they increase significantly for age group E. Six verb inflections (-chilam, -tesilam, -chilo, -tesilo, -chile, -tesila) of past progressive tense have been productive among the children in this study.

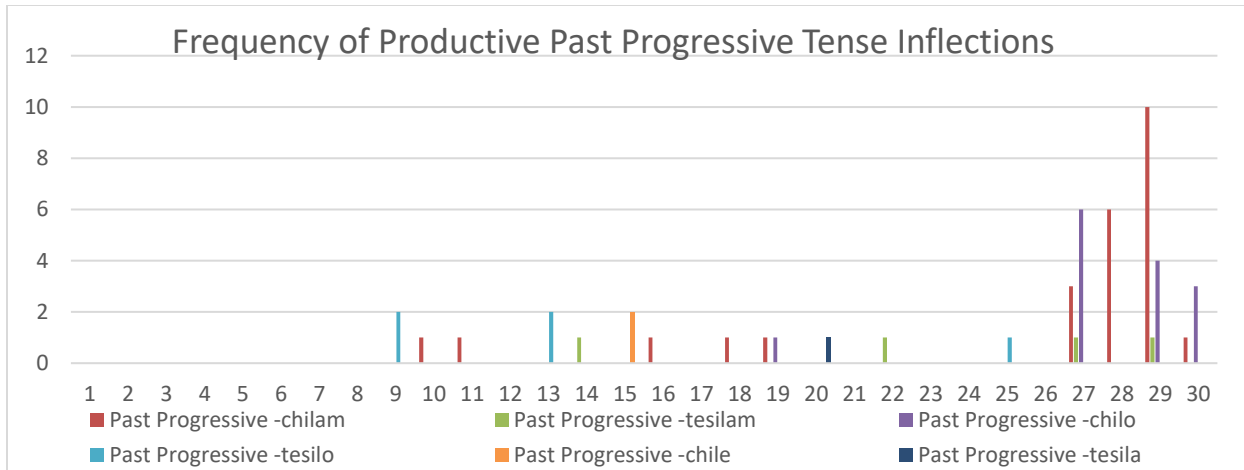
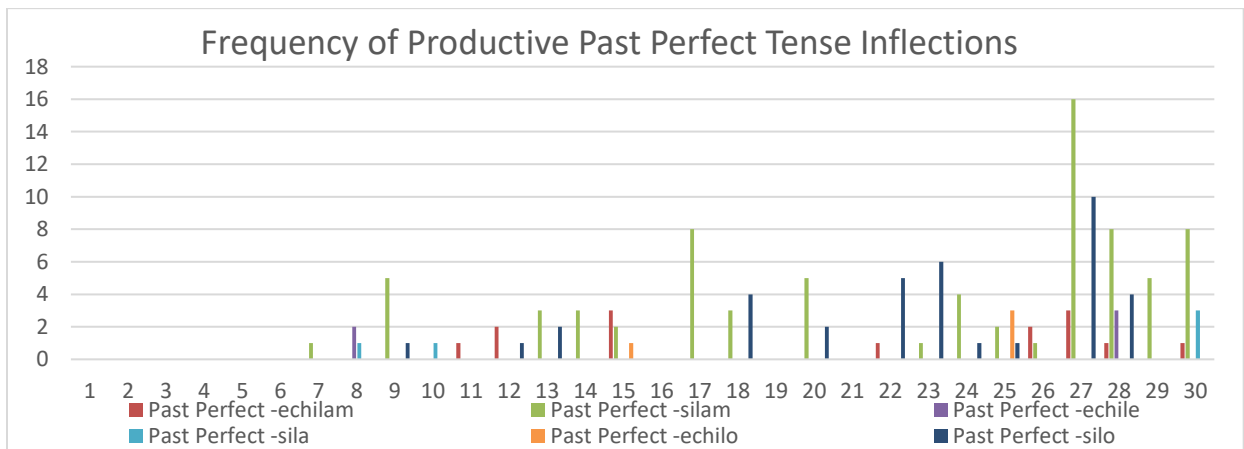


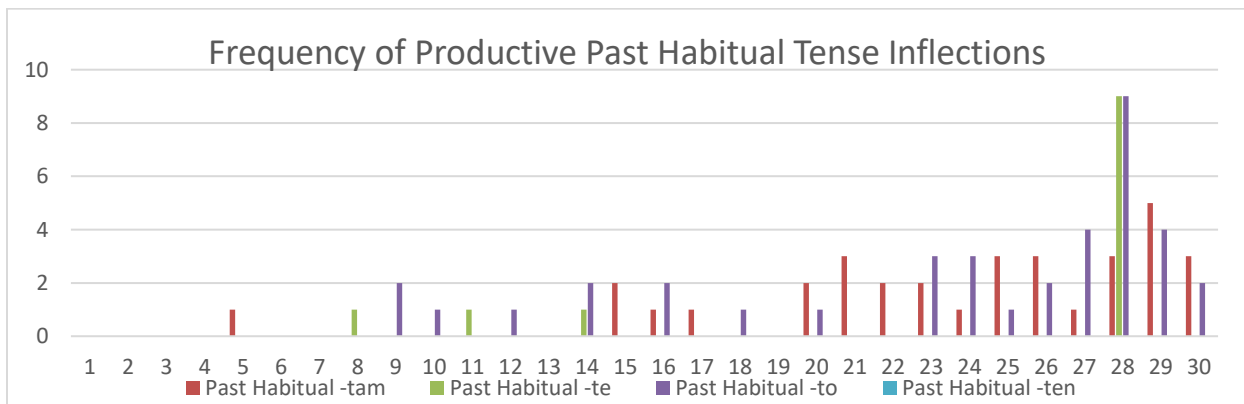
Figure 7. The columns show the frequency of all the productive Past Progressive Tense inflections for the 30 children.

**Past Perfect Tense.** From Table 3 it is seen that children start to use inflections of past perfect tense productively from the age of 28 months. There is a gradual increase of mean score in the age groups, except for age group D. The standard deviation of the age groups increases gradually. The mean score of age group D decreased than age group C, as child 19 (40 months) and child 21 (42 months) have not shown productivity. There is a rapid increase in mean score and standard deviation for age group E. Six verb inflections (-echilam, -silam, -echile, -sila, -echilo, -silo) of past perfect tense have been productive among the children in this study.



*Figure 9.* The columns show the frequency of all the productive Past Perfect Tense inflections for the 30 children.

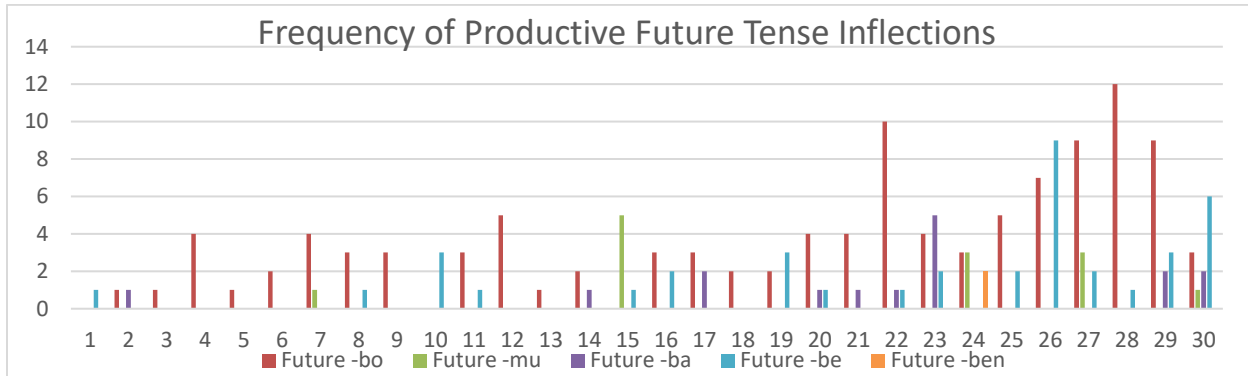
**Past Habitual Tense.** From Table 3 it is seen that children start to use inflections of past habitual tense productively from around 29 months. Before that age, only one child, child 5 (27 months) has used the one inflection of this tense. There is a gradual increase of mean score and standard deviation in the age groups. The standard deviation of age group D is lower than age group B and C. There is a rapid increase in mean score and standard deviation for age group E. Three verb inflections (-tam, -te, -to) of past habitual tense have been productive among the children in this study.



*Figure 9.* The columns show the frequency of all the productive Present Habitual Tense inflections for the 30 children.

**Future Tense.** From Table 3 it is seen that children start to use inflections of future tense productively from the age of 24 months which is similar to the inflections of simple present tense and simple perfect tense. There is a gradual increase of mean score, except for age group C. The standard deviation also increases in the age groups, except for age group B. Frequency of production is steady in age group B. Moreover, in age group C half of the children showed very

little frequency of productivity. Five verb inflections (-bo, -mu, -ba, -be, -ben) of future tense have been productive among the children in this study.



*Figure 10.* The columns show the frequency of productive Future Tense inflections for the 30 children.

**In Response to Central Research Question 2.** The second central research question tries to find out which morphological verb inflections of tenses are more prominent in children, as well which tense inflections are most productive. There have been 41 productive morphological verb inflections of the 8 tenses in this study. Some of these productive morphological verb inflections of tenses have been more frequent in children and some of them have been less frequent. From table 9, it can be seen that -i and -e inflections of present simple tense have been used by 29 children (96.67%). Therefore, these two verb inflections are used by most of the children in this study. On the other hand, -teso, -chen, -chile, -tesila, -ben verb inflections have been used by only one children (3.33%). Based on the number of child use, the researcher can propose the following order of use for all the morphological verb inflections of different Bangla tenses:

-i, -e> -si, -bo> -se> -tese> -o, -che, -silam, -be> -tam, -to> -chi> -lo> -echi, -so, -lam, -silo> -tesi, -le> -chilam -ba> -echilam> -eche> -mu> -tesilam, -chilo, -te> -sen, -len, -tesilo, -sila> -en, -echo, -echile, -echilo> -teso, -chen, -chile, -tesila, -ben

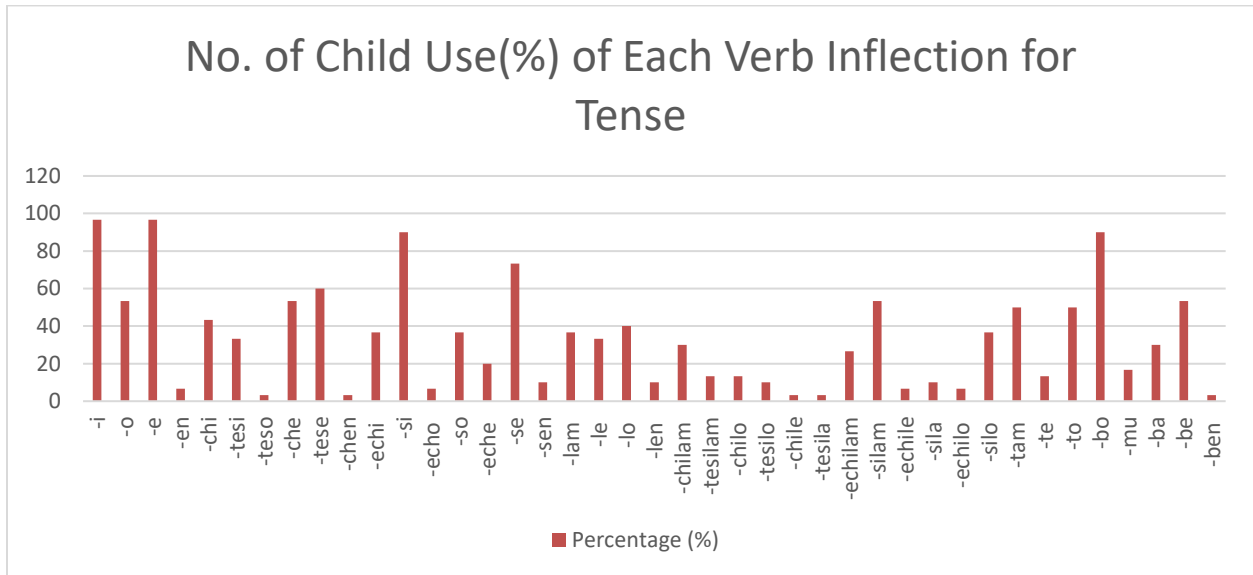
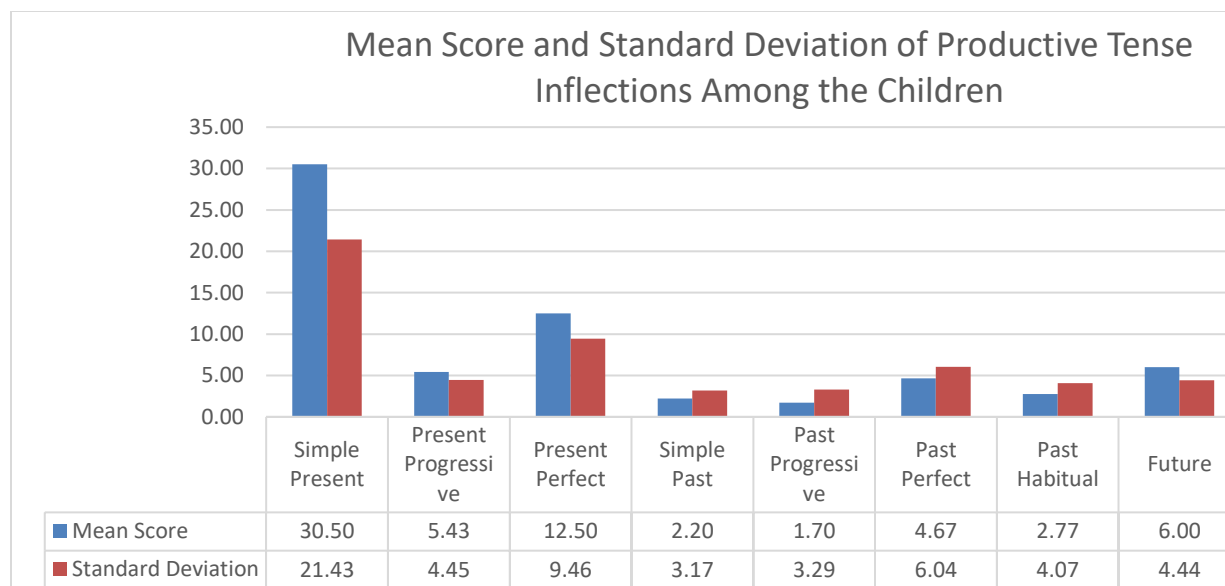


Figure 11. The columns show the percentage of usage of each productive verb inflections of tense.

From the comparative analysis amongst the tense inflections (Table 9) it is found that in the current study, present simple tense gets the highest production score (Mean Score= 30.50, Standard Deviation= 21.43). Past progressive tense gets the least production score in the study (Mean Score= 1.70, Standard Deviation= 3.29). Based on the production scores of the tense inflections, the following order of use can be proposed:

Inflections of Simple Present Tense> Inflections of Present Perfect Tense>Inflections of Future Tense>Inflections of Present Progressive Tense>Inflections of Past Perfect Tense>Inflections of Past Habitual Tense>Inflections of Simple Past Tense>Inflections of Past Progressive Tense





*Figure 12.* Production scores of tense inflections.

**In Response to Central Research Question 3.** The third central research question tries to find developmental trend in productive tense inflections followed by Tomasello's (2008) usage based approach for typically developing Bangla speaking pre-school children. Unfortunately, from the current study the exact manner of development of tense inflections cannot be proposed. However, there is a certain pattern in the productive use of the tense inflections which is observed during this study. First of all, from table 5 it can be seen that the number of productive verb inflections of tenses starts to increase as the age of the children increase. It is visible in the group data as well. The mean score and standard deviation of the age groups increase along with the age of the children; except for age group D. There is a relatively less fluctuation in this group than its previous one, age group C.

However, this increase in productive tense inflections does not necessarily mean that productive tense increases along with age. As seen from table 6, there is a fluctuation of number of tenses produced by the children. From 37 months to 45 months, the number of tenses

produced varied from 6 to 8. In group data (Table 7), we can see these trends very clearly. The mean score of number of tenses produced increases along with age except for, group D which includes the age range of 40 months to 44 months. The number of productive tense fluctuated the most in case of this group (Standard Deviation= 0.89). Also, group A which include the youngest children has the lowest number of productive tense and relative high degree of fluctuation as well. Moreover, the standard deviation of number of tenses produced does not follow any trends across the age group.

The researcher believes that younger children lack the cognitive skills and produce less productive verb inflections and tenses. In these early years, their “stored linguistic experience” (Tomasello, 2000a, p.76) includes only those inflections and tenses which do not require complex linguistic understanding. However, as they age, and their cognitive skill starts to mature, they learn to create “utterance schemas” (Tomasello, 2000a, p.66). They create slots for the inflections they have learned from their linguistic experience to use with variety of range of verb stems. At first these use of new inflections are not appropriate as they seem cognitively challenging for the children. However, as they gain experience they begin to get more proficient in using the verb inflections and tenses more productively.

As mentioned earlier, the exact manner of development of each and every single verb inflections of tense are not visible from this study. However, the researcher has plotted the data regarding the frequency of all the productive morphological verb inflections of tense (Figure. 13) and frequency of productive tense inflections (Figure 14) to show the pattern of development of all the tense inflections found for the 30 children in this study. Figure 13 and 14 further ensures that, productivity of tense inflections increases with age.



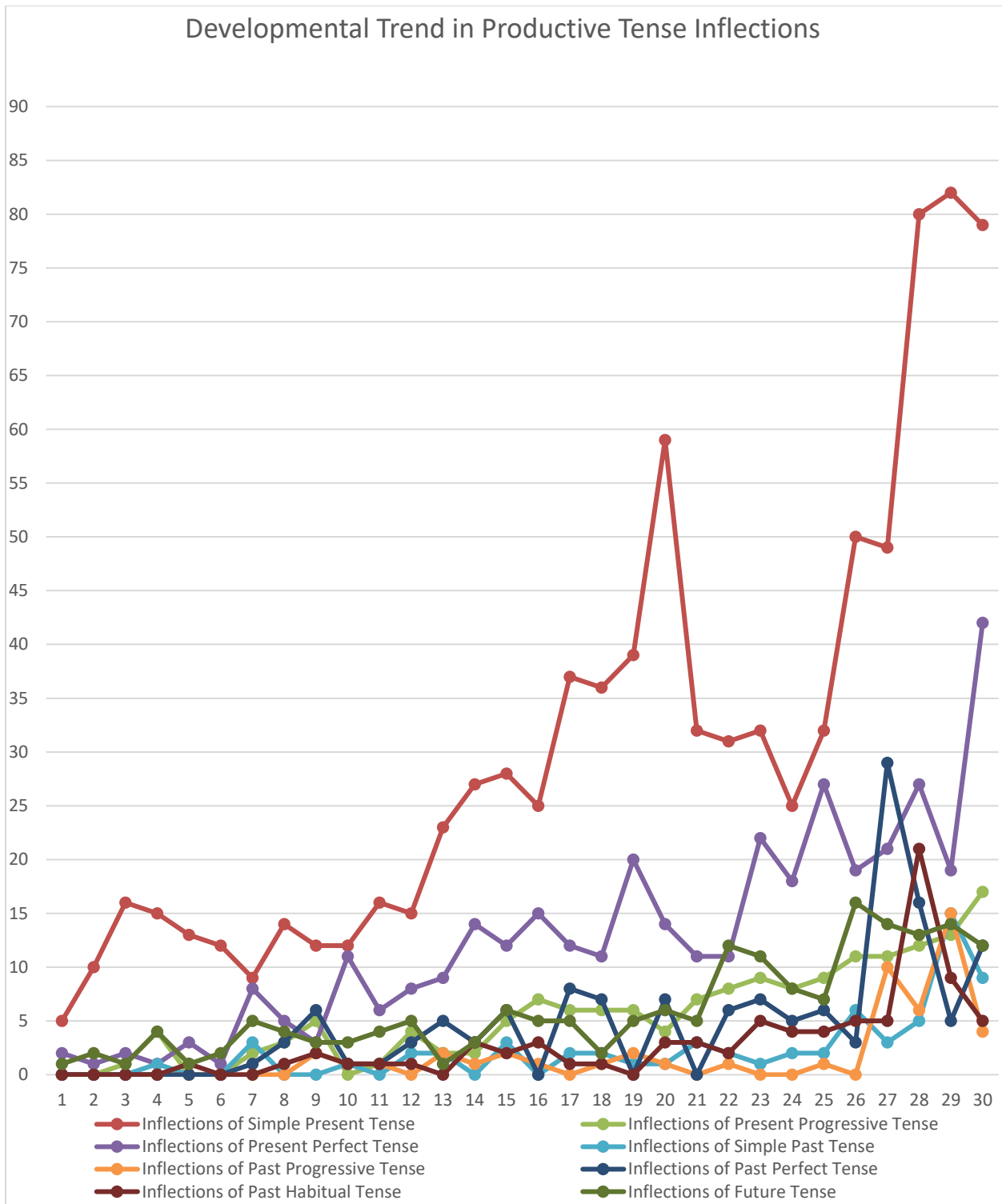


Figure 14. Developmental trend in productive tense inflections. Here, X axis represents the children, and the Y axis represents the scores in number.

### **Overall Discussion Based on Literature Review**

From the study it is found that inflections of present simple tense, present perfect tense and future tense start to be used productively from the earliest period (24 months) by the children. However, inflections of present simple tense are found to be most productive in this study. Two of the simple present tense inflection (-i and -e) are used by 96.67% of the total sample in this study. This is different than English language where children's early utterances include present progressive tense the most (Brown, 1973). The reason which makes it the "earliest developing form" is that the structure of this form is the simplest and requires the least complex tense and aspect markers (Sultana et al., 2016, p.14). The research also feels that cultural learning plays an important role in acquisition of productive tense inflections (Ghalebi & Sadighi, 1025). In the early years, children are exposed to these tense inflections more than others in their social and linguistic environment.

Inflections of present progressive tense become productive later than these 3 tenses (around 26 months). In the study, it has been observed that by the researcher that children have tended to use present perfect tense in the context of present progressive tense. Again, this may be due to the relative complexity of the present progressive tense inflections than the perfect ones (-echi, -si, -echo, -so, -eche, -se, -sen > -chi, -tesi, -teso, -che, -tese, -chen). Although children start to use future tense inflections before tense inflections of present progressive tense, there production scores are quite similar (see Table 9). Again, this is due to the children's avoidance of talking about incidents in the future in the study. Moreover, in the context of future tense children have tended to use present tenses. An interesting observation has been made by the research is that only the children who are exposed to "-mu" inflection from adult speech used

that during the research, whereas others did not. This again strengthens the argument that children's vocabulary is heavily influenced by adult speech (Hohenstein & Akhtar, 2007)

The findings of past tense have been quite interesting in the current research. The researcher expected the inflections of simple past tense to be productive from an earlier period. However, it is seen that inflections of past perfect tense and past habitual are productive earlier than simple past tense inflection in the elicited production task amongst the sample. Again, from the result of the elicited imitation tasks (Table 10), it is seen that children were able to imitate the target simple past tense inflection from the age of 26 months. From 26 months onwards, most of the children have been successful to imitate this tense inflection. The target past progressive tense inflection starts to be imitated from 32 months. However, the imitation of this tense inflection fluctuated widely. Interestingly, the target past perfect tense inflection is imitated correctly by only 3 children from 45 months. It might be because “-echilo” inflection is productively used by only two children in the elicited production study (Table 3). As anticipated, inflections of past progressive tense become productive later than all the other tense inflections. Sultana et al. (2016) explains that these forms can be cognitively challenging for the children and they often can be replaced by non-target forms. In Sultana's (2016b) study, past progressive and past perfect verb forms were very low due to their structural and cognitive demands. On the contrary, in Chakraborty and Leonard's (2012) study past progressive forms were highly accurate. There is a lack of uniformity in case of past tense inflections in this study as well as other previous studies which requires further research.

Children create categories and slots as they learn new inflections, and later test them in conversational context; finally form a generalisation about the semantic features. While doing so, they are bound to make mistakes, which is why production of tense has gone through fluctuation

from 37 months to 45 months. Thus, the findings in this research argue against the view that linguistic acquisition and production of children involves consciously learning linguistic terms and their constructions in order to gradually reconstruct them to form more “abstract and word general” linguistic items. (Wittek & Tomasello, 2002, p.586).

## Conclusion

This research has addressed the following questions and has intended to answer them through this study:

- a. When do children start to use different tense inflections productively?
- b. What is the comparative range of usage of the productive morphological verb inflections of Bangla tense among the children?
- c. Is there any developmental trend in the productive verb inflections of tenses in relation to Tomasello's (2008) *usage based approach*; for typically developing Bangla speaking pre-school children?

## Summary of the Findings

This research tries to investigate of productive use of tense inflections in children. The study finds out the different age range when different tense inflections become productive. Moreover, it has created an order of use of morphological verb inflections of tense and tense inflections for the 30 children in this study. In addition, a relationship between age and tense inflections has been observed.

## Contribution to Research

This study can be used as an inventory by researcher as it includes real-life data from 30 typically developing Bangla speaking pre-school children. Moreover, this reaserch will help other reaserchers who are interested to work on Bangla tense and inflection development in children. Furthermore, this dissertation can help in creation of a typical profile of Bangla morphological verb infections of tense which can also help children with language impairment.

## Practical Implications

The readers are expected to get to know the fashion in which Bangla speaking



children acquire verb inflections. The parents can get the idea how their conversation with their children might enrich the knowledge of vocabulary items of their children.

### **Recommendations**

Recommendations for future studies are given below:

- a. Future studies can explore the other factors except age for tense inflection production
- b. They can include complex and conjunct verb forms.
- c. They can include aspectual and personal markers as well.
- d. They can include larger sample to draw more generalisations.
- e. They can use other data collection methods.

### **Further Studies**

Further studies can explore other linguistic and environmental factors which determines productivity of tense inflections as well.

### **Conclusion**

To conclude, the researcher employs two data collection methods: elicited production and elicited imitation; to investigate the productive tense inflections in Bangla speaking pre-school children from 3 day care centers. With the permission from the authority, this study has been conducted. In her study, the researcher has found that age of the children plays in acquisition of tense inflections. Although, other variables, such as exposure to forms in environment, or processing capacity of children etc. have not been studied in this research, the finding of this study is helpful to create a developmental profile for typically developing children. Also, further research can be based on the findings of this study.

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### Appendix A

Table on Bangla tense-aspect paradigm (Ali, Sarker, Ahmed & Das, 2010; Bhattacharya, Choudhury, Sarkar & Basu, 2005; Paramita, 2006; Sultana 2016a)

Table 11

#### *Bangla tense-aspect paradigm*

Here, Gen=General, Neg=Negligible and Res= Respect

TENSE	1 <sup>st</sup> Person		2 <sup>nd</sup> Person			3 <sup>rd</sup> Person	
		Neg	Gen	Res	Gen	Res	
Simple Present	-i	-ish	-o	-en	-e	-en	
	Pori	Porish	Poro	Poren	Pore	Poren	
Present	-chi/-tesi	-chis/-tesis	-cho/-teso	-chen/-	-che/-tese	-chen/-	
Progressive	Porchi/	Porchish/	Porcho/	tesen	Porche/	tesen	
	Portesi	Portesis	Porteso	Porchen/	portese	Porchen/	
				Portesen		Portesen	
Present Perfect	-echi/-si	-echis/ -sis	-echo/-so	-echen/-	-eche/-se	-echen/-	
	Porechi/	Porechis/	Porecho/	sen	Poreche/	sen	
	Porsi	Porsis	Porso	Porechen/	Porse	Porechen/	
			Porsen		Porsen		
Simple Past	-lam	-li	-le	-len	-lo	-len	
	Porlam	Porli	Porle	Porlen	Porlo	Porlen	
Past progressive	-chilam/-	-chilish/-	-chile/-	-chilen/-	-chilo/-	-chilen/-	
	tesilam	tesilish	tesila	tesilen	tesilo	tesilen	
	Porchilam/	Porchilish/	Porchile/	Porchilen/	Porchilo/	Porchilen/	
	Portesilam	Portesilish	Portesila	Portesilen	Portesilo	Portesilen	

Past Perfect	-echilam/-	-echili/ -	-echile/-	-echilen/-	-echilo/-	-echilen/-
	silam	sili	sila	silen	silo	silen
	Porechilam/	Porechili/	Porechile/	Porechilen/	Porechilo/	Porechilen/
	Porsilam	Poresli	Porsila	Porsilen	Porsilo	Porsilen
Past Habitual	-tam	-ti	-te	-ten Porten	-to	-ten
	Portam	Porti	Porte		Porto	Porten
Future	-bo/-mu	-bi	-ba	-ben	-be	-ben
	Porbo/	Porbi	Porba	Porben	Porbe	Porben
	Pormu					

## Appendix B

### Sample of Elicited Production Questionnaire

1. Basic introductory questions:

a. Tomar nam ki?

b. Kemon acho?

2. Questions focusing on tense:

a. Ki korcho?

b. Sokale ki korecho?

c. Dekho to eta ki? (showing the child a toy car).

d. Garita die ki koro?

e. Gari ta die ki ki kora jay amake ektu bolo toh?

f. Accha, tumi ei putul take bolo toh tumi kal ke ki ki korechile? (showing the child a doll)

g. Acting as if the doll is speaking: Hi amar nam bulu, amar kono bondhu nei. Ami ki korle tumi amar bondhu hoba?

h. Acting as if the doll is speaking: Ami Jodi kanna kortam tahole tumi ki korta?

i. Acting as if the doll is speaking: Tumi jokhon basay kanna koro tokhon tomar ammu korto?

j. Acting as if the doll is speaking: Ami Jodi tomake boka tahole ki korba tumi?

k. Acting as if the doll is speaking: Tomake ki abbu/ ammu boka dile ki koro?

l. Tickling the doll: Dekho putul tar onek katukutu ache. Tomake keu katukutu dite chaile ki korta?

m. (Giving the child the doll) Ektu age putuler sathe ki korla bolo toh amake?

n. Putula ta ki die ki koro?

o. (Dancing a teddy in front of the child) Bolo teddy ta ki korche?

p. Teddy ta jante chasse ajk basay jeye ki ki korba?

q. (Pinching the teddy) Teddyta ke etokkhon ki kortechilam?

r. (Giving the child the teddy) Teddyta r na onek mon kharap oke ektu bolo toh valo teddy hote hole ki ki korte hobe?

s. Tumi boro hoe ki ki korba?

Appendix C

Table 12

*Sample of Sentences and Pictures for Elicited Imitation Task*

Nobitake onek marlo.



Sobai mojar khabar khelo.



Ora sobai voye douracchilo.



Sobai akashe urchilo.



Doramon khub kedechilo.

