

Basic sentence structures in the children (10-12) texts based on the Dependency Grammar

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1. Introduction

Dependency Grammar, as one of the prominent linguistic theories in recent decades, examines the relationships among sentence elements, emphasizing their holistic and component-based connections. This theory defines the head and dependent relationship, wherein the verb serves as the head or governing element, dictating the number and types of complements required in a sentence (Herbest, 1988, p. 209). Dependency Grammar theory falls within the domain of structural and Formalist theories, focusing on the investigation of dependency relations among head elements and dependents within syntactic phrases, aiming to describe syntactic structures across diverse languages.

Within the framework of Dependency Grammar, every sentence features a central verb. By considering its obligatory and optional complements, one can ascertain the fundamental structure of sentences in which the verb is employed. Tabibzadeh (2012), following Dependency Grammar theory and an analysis of verb valency structures, has identified twenty-four syntactic structures referred to as the basic structure for Persian sentences. These basic structures serve as foundational templates, enabling the generation, definition, combination, or conversion of sentences within a language. They provide the basis for producing all potential and existing sentences in that language. Due to the limited number of governing principles governing their expansion and combination, children can rapidly acquire the syntactic structure of a language.

The extraction of these basic structures plays a pivotal and essential role in syntactic analysis. These structured and recurrent configurations constitute the building blocks for all syntactic structures in a language (Tabibzadeh, 1998). Despite ongoing efforts to extract syntactic structures in the Persian language, no prior research has focused on recognizing the syntactic features of children. Thus, this research is pioneering in its attention to the syntactic characteristics of sentences generated by children. The primary objective of this study is to examine the basic structure of sentences within written texts produced by children aged 10 to 12 years, employing the twenty-four basic structures of the Persian language (Tabibzadeh, 2012) within a dependency framework.

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2. Materials and methods

The research methodology adopted for this study is non-experimental, survey-based, and conducted in a field setting. During the academic year 1395-96, children from various sample schools were requested to write memoirs as part of data collection. A total of 868 texts were collected for analysis. These texts were systematically selected, and 868 sentences were extracted from them. This selection method involved numbering the sentences based on their position within the texts. To clarify, the first sentence of the first text was assigned number one, followed by the middle sentence of the second text, and so on, creating a continuous sequence. This approach was consistently applied to all texts.

The extraction of basic structures from the children's memoirs was carried out manually, ensuring a rigorous and systematic process. The basic structures, along with details of the extraction procedure, were meticulously examined within their natural context. Subsequent data processing, calculations, and analyses were conducted using the SPSS environment to derive meaningful insights and findings.

3. Results and discussion

According to the theory of valency in the Dependency Grammar, using the sum of the complements of the central verb in a sentence, the valency of that verb, the basic structure of that sentence will be obtained. The following results were observed by determining the valency structure of each of the 868 verbs studied from children's written texts.

Table (1): valency construction of the verbs of the studied sentences

Total					
	4	3	2	1	
868	9	184	578	97	Frequency
100%	1.0%	21.2%	66.6%	11.2%	Percentage

The table shows that 11/2% or 97 sentences are monovalent, 66/6% or 578 sentences are divalent, 21/2% or 184 sentences are trivalent and 1/0% or 9 sentences are quadrilateral sentences. In general, the average use of valency in children's sentences is divalent, trivalent, monovalent and quadrilateral, respectively. In the present study, based on 24 basic structures of sentences and the presented structure code (Tabibzadeh, 2012), basic structures in sentences of children's written texts were extracted and recorded.

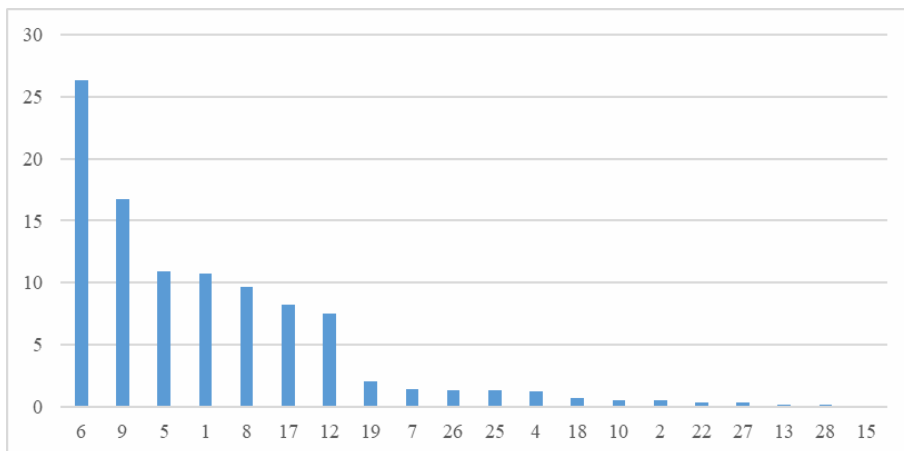


Figure (1): Basic structures of children written sentences

Figure (1) shows, structures 6 ||Subject, Prepositional Object complement|| With 26/3%, 9 ||Subject, subject complement|| With 16/7%, 5 ||Subject, Object complement|| With 10/9%, 1 ||Subject|| With 10/7% and 8 ||Subject, Complement clause|| With 9/7%, they are the most widely used basic structures. The results of sentence analysis show that in general, 74/3% of all children's written sentences are dedicated to the use of these 5 widely used structures.

Tabibzadeh's basic structures 3 ||Deleted Subject Clause||, 11 ||Subject Clause, Object complement||, 14 ||Subject, Object complement, Complement clause||, 16||Subject, Object complement, adverbial complement||, 20||Subject, Prepositional complement, Object complement||, 21 ||Subject, Genitive complement, Object complement||, 23 ||Subject, Prepositional complement, Prepositional complement, Complement clause||, 24 ||Subject, Prepositional complement, Genitive complement, Complement clause|| were not found in any of the sentences in the children's written texts.

In addition to Tabibzadeh's structures, other basic structures have been observed and studied in children's written sentences. In this way, the basic structure of 25 ||Subject, Object complement, adverbial complement||, 26 ||Subject, Object complement, subject complement||, 27 ||Subject, Object complement, Object complement, adverbial complement||, 28 ||Subject, Prepositional Object complement, Prepositional Object complement, adverb complement|| and 29 ||Subject, Object complement, Object complement, Object complement|| were observed in the sentences of children's written texts. The presence or absence of each of the verb complements in the studied sentences, the frequency and percentage of each of the verb complements are examined and are given in Table (2).

Table (2): Status of the 8 verb complements in the studied sentences

Percentage	Frequency	
97.9%	850	Subject
1.6%	14	subject clause
19.1%	166	Complement
39.3%	341	Prepositional Object complement
2.4%	21	Genitive/ Object complement
11.5%	100	Complement clause
2.0%	17	Adverbial complement
0.1%	1	Object complement
19.0%	165	subject complement
38.8%	337	Adjunct

As the table shows, the subject with 97/9, the prepositional object complements with 39/3%, the direct complements with 19/9%, subject complements with 19/0%, complement clause with 11/5% respectively had the most application compared to other verb complements in the written sentences by children.

4. Conclusion

Regarding the use of complements, the findings indicate that as children age, there is a decrease in the use of nominal subjects and an increase in the use of subject clauses. This suggests that, with advancing age, there is a reduction in the utilization of sentences with simpler structures containing nominal subjects and an increase in more complex structures within children's sentences. The prepositional object complement is consistently used across various basic structures in children's

sentences. However, the use of a single prepositional object complement has declined with age, while the utilization of two or three prepositional object complements has increased. This shift suggests a growing proficiency in constructing complex sentence structures. The direct complement, which is an obligatory element in sentence structure, is extensively used in children's writing, indicating a preference for transitive verbs over intransitive ones. Subject complements rank as the fourth most frequently used complement in children's written sentences, and their usage has increased with age. The complement clause is the fifth most widely used in children's written sentences, and its usage has also increased with age.

Keywords: Basic Sentence Structures, Central Verb, Dependency Grammar, Obligatory Complement, Optional Complement