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## A Comparison of Syntactic Structures in First-Graders' Oral and Written Language

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# A Comparison of Syntactic Structures in First-Graders' Oral and Written Language

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## **Abstract**

If an elementary program included writing activities from the beginning of first grade, might students' written language be as syntactically complex as their oral language? A review of the literature found no study in which a comparison of syntactic features had been made between first-graders' oral and written utterances. The purpose of the present study, therefore, was to compare the same subjects' oral and written language samples. Using T-unit analysis, 19 first-graders' oral and written language samples were compared to determine similarities and differences in specific syntactic structures.

# A COMPARISON OF SYNTACTIC STRUCTURES IN FIRST-GRADERS' ORAL AND WRITTEN LANGUAGE

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If language development is viewed as an integrated process involving both expressive language abilities (speaking and writing) and receptive language abilities (listening and reading), then knowledge of similarities and differences among these four language arts is needed for an understanding of language as an integrated process. Analysis of syntax, or sentence structure, is one means of describing linguistic utterances and thereby provides a means for noting similarities and differences among language samples. The present study was undertaken to compare syntactic structures in oral and written language.

Early studies of children's language considered total length of response (Bear, 1939; Hoppes, 1933), sentence length (Hoppes, 1933; McCarthy, 1954), and use of complex sentences (Bear, 1939; Hoppes, 1933) as measures of language growth. Within the last two decades, studies (Chomsky, 1969; Hunt, 1967; Loban, 1963, 1976; Menyuk, 1963; O'Donnell, Griffin, & Norris, 1967; Perron, 1977) have focused on syntax. Preference for T-unit analysis, a measure of syntactic complexity, has also been expressed (Hunt, 1967; Loban, 1976; O'Donnell et al, 1967).

A T-unit is a main clause and all subordinate clauses attached to it. T-unit analysis can be advantageous when studying the syntax of children's utterances because identification of their clause boundaries is often less difficult than determination of their sentence boundaries.

In the past it was thought that by the age of six the child had acquired most adult forms of syntax and grammar (Carroll, 1960). Later research, however, has shown this not to be true. Chomsky (1969) found that syntactic acquisition takes place up to the age of nine and possibly beyond.

Based on T-unit analysis, the following changes have been found to occur in syntax and are considered measures of language growth: 1) an increase in the number of words per language sample (Loban, 1963, 1976; O'Donnell et al, 1967); 2) an increase in the number of T-units per language sample (Hunt, 1967; Loban, 1963, 1976); 3) an increase in the number of sentences per language sample (Menyuk 1963); 4) an increase in the number of words per T-unit (Loban, 1963, 1976; O'Donnell et al, 1967); 5) an increase in the number of words per clause (Hunt, 1967; Loban, 1963, 1976); and 6) an increase in the ratio of clauses per T-unit (Hunt, 1967).

When comparing oral and written syntax of elementary school

children, both the O'Donnell et al study (1967) and the Loban study (1976) offer a number of insights. O'Donnell et al found oral responses were longer than written responses, third graders' oral syntax was more complex than written syntax, and from fifth grade on, written syntax was more complex than oral syntax. Thus, during the early elementary years, oral syntax was found to be more complex than written syntax. Loban also found oral syntax more complex than written syntax in the early elementary years. In average number of words per communication unit, oral language exceeded written language. This was also true when considering the number of dependent clauses per communication unit and the number of words in dependent clauses as a percentage of words in communication units. In addition, Loban found a greater proportion of noun, adjective, and adverb clauses in oral than in written language.

Results from the above studies brought forth the following question: If an elementary program included writing activities from the beginning of first grade, might students' written language be as syntactically complex as their oral language? A review of the literature found no study in which a comparison of syntactic features had been made between first-graders' oral and written utterances. The purpose of the present study, therefore, was to compare the same subjects' oral and written language samples. Using T-unit analysis, 19 first-graders' oral and written language samples were compared to determine similarities and differences in specific syntactic structures.

#### Description of Procedure

The children in this study began formal instruction in reading in first grade and began creative writing during the fall of the same year. The emphasis in the creative writing activities was on self-expression, rather than on the "correct" use of grammar and spelling. The grammar, however, revealed relatively few deviations from standard English, and the spelling differences showed some understandings of letter-sound correspondences. Creative writing was not the focus of the first grade curriculum; rather, it was incorporated as another important component of the reading/language program.

Pupils were divided into two groups according to a table of random numbers. Group A consisted of 10 students; group B consisted of nine students.

Two weeks prior to the study, students were given the Gates-MacGinitie Reading Test, Primary A, Form 1, by their regular teacher. This test yields two scores, vocabulary and comprehension. Although these children were first graders, the majority of students scored between high second and low third grade reading levels. The mean grade equivalent for group A was 3.13 on the vocabulary section and 3.15 on comprehension. For group B, the mean was 3.0 on vocabulary and 3.07 on comprehension.

The researcher was introduced to the students two weeks prior to the study and frequently visited the classroom and took part in activities in order to establish rapport with the students.

The study was conducted on two separate days, at which times students were shown parts of two filmstrips, each with a narrated

recording accompanying the story. Norman the Doorman was shown on Tuesday, and The Cow That Fell in the Canal was shown on Thursday.

On Tuesday, group A saw Norman the Doorman as a group. The filmstrip and recording were stopped part way through the presentation and students were instructed to write an ending to the story. There were no time limits. Pupils were asked to write without talking aloud or discussing the story among themselves. The pupils were instructed to spell in the best way they knew, and to raise their hands if they wanted help with spelling. The researcher supervised while students did their writing.

Also on Tuesday students from group B viewed Norman the Doorman, but did so on an individual basis and in a separate classroom. The filmstrip and recording were stopped at the same place as they were stopped when being presented to group A. Each member of group B, however, was asked to relate orally his/her ending to the story. The researcher recorded these oral endings on tape and later typed them.

On Thursday the same procedure was followed with the story The Cow That Fell in the Canal, but the assignments were reversed. Group A viewed the presentation on an individual basis, in a separate classroom, and were instructed to orally supply an ending to the story. Students in group B viewed the filmstrip as a group and were instructed to write an ending to the story. Again, the filmstrip and recording were stopped at the same place for both groups.

Thus each student contributed one written language sample and one oral language sample. These language samples were then organized into two groups—one was all written passages, the other all oral passages. T-unit analysis was then performed on each language sample to determine the following: number of T-units per language sample; number of words per T-unit; number of adjective clause; number of adverb clauses; number of dependent noun clauses; and, total number of clauses per T-unit.

TABLE I

	<u>Oral</u>		<u>Written</u>		T-Value
	Mean	Stan. Dev.	Mean	Stan.Dev.	
# T-units per passage	11.47	22.22	5.53	7.10	-1.07
# words per T-unit	6.81	2.73	7.79	2.80	+1.24
# adverb clauses per T-unit	.02	.05	.14	.22	+2.51*
# adjective clauses per T-unit	.06	.13	.04	.10	- .54
# dependent noun clauses per T-unit	.08	.23	.11	.21	+ .45
# total clauses per T-unit	1.16	.34	1.30	.30	+1.13

\* Significant at .05

## Results

Concerning the number of T-units per passage, the mean for oral language samples was more than twice the mean for written language samples. Students were more verbose when responding orally than when responding on paper. However, concerning the number of words per T-unit, the number of dependent noun clauses per T-unit, and the total number of clauses per T-unit, the means were higher for written passages than for oral. Only in number of adjective clauses per T-unit was the mean higher for oral passages than for written. There was one significant difference; in number of adverb clauses per T-unit, the mean for written language samples was significantly higher ( $p < .05$ ) than the mean for oral language samples.

## Discussion

This study sought to determine if the writing samples of first graders who had been involved in creative writing activities would be as syntactically complex as their oral language samples. With the exception of number of adverb clauses per T-unit, oral and written expression was found to be similar in syntactic complexity.

These findings raise the following issue: could early involvement in writing activities contribute to early syntactic maturity in written expression? Research based on actual classroom activities and early elementary language programs is needed in order to answer this question. The findings of the present study are limited and can therefore only suggest a need for further research. The sample size was small and the group was somewhat atypical, in that all children were reading above grade level as early as first grade. There were undoubtedly a number of factors contributing to the language abilities of these students. For example, informal observations revealed the following: The teacher was a very warm, caring individual. The classroom was inviting, filled with objects and displays of student work, and contained a variety of reading materials and teacher made games. Writing was encouraged and teacher comments concerned story content rather than attention to standard grammar and standard spelling. Children were frequently invited to the board to write a sentence about an unexpected classroom event. The teacher took advantage of "the teachable moment."

## Conclusion

We have much to learn about the processes involved in language development and about their relation to classroom instruction. And equally important, we need to develop strategies which facilitate those processes. If language development is an integrated process, then we need strategies which are holistic in nature, which require the student to actively participate in the use of language in all its forms—listening, speaking, reading, and writing.

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