

## Cohesion and Coherence in the Written Expressions of Students of Faculty of Education \*

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**Abstract:** In this study, the relationship between the Education Faculty students' ability to use the tools of cohesion and achieve coherence in their written texts was investigated. In addition, the relationship between the department of study and the student's ability to use the tools of cohesion was observed. The texts written by the students on free writing sessions were evaluated based on two text criteria, cohesion and coherence. This work was conducted in Ahi Evran University Faculty of Education on the academic year 2013-2014. The subject group of the study comprises 126 students from the departments of Science Teaching, Social Sciences Teaching, Primary Education-Level Mathematics Teaching, Classroom Teaching, Computer and Teaching Technologies Education and Turkish Education. Document evaluation method was used in the study. "Evaluation Criteria for The Tools of Cohesion" developed by Cořkun (2005) was used in identification of the elements of coherence, whereas "Evaluation Criteria for the Paragraph Coherence" developed by Can (2012) was used in evaluation of texts in terms of coherence. Results of the study showed that the ability of the students from the departments of Turkish Education and Classroom Teaching to use the tools of cohesion is significantly different compared to other departments. Moreover, it was concluded that the ability of the students to use the tools of cohesion is positively and significantly correlated with the coherence of their written texts.

*Keywords:* text linguistic, cohesion, coherence..

Text linguistics and reading and writing training are closely related. Reading texts, comprehension and production of texts are the basic activities in native and foreign language education. While other disciplines are primarily interested in the content of the texts, information provided by the texts, the delivery style of the text and the impact of the text, text linguistics is interested in the rules influencing the production of the text itself, production of the texts and their communicative functions (Fix, quoted by řenöz, 2005, p. 58). In reading education, finding the message delivered by the author based on text structure, separation of text structures, identification of the elements of cohesion and finding the elements of coherence would provide better understanding and interpretation of the text. In writing education, how the elements of cohesion and coherence affect the writing quality and how the students' ability to use the tools of cohesion can be improved based on the qualities of a good text are the important issues.

The aim of writing education is to provide students with the ability to express their emotions and ideas properly. Applied studies on writing education usually involve grammatical errors in student essays, expression ambiguities and problems in structural qualities and rarely focus on intratextual connections, transitions, formation of text elements, topic flow within the text and text structures that form the basis of the essay. The researchers who took this into account (Bae, 2001; Can, 2012; Cořkun, 2005; Karatay, 2010; Ramadan, 2003; Said, 1988; Witte and Faigley, 1981) focused on studying the structural elements that form the text in the light of text linguistics and investigated the correlation between students' use of cohesion tools in their written expressions and forming a coherent text.

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Text linguistics is a new approach that evaluates a text based on its structural and semantic integrity and understands the basic elements of the text based on this evaluation. It reveals the connection and the relationship between the semantic groups within the text (Aytaş, 2008, p. 56). Text linguistics tries to reveal the text structure by evaluating the text in terms of probably the two most important criteria: cohesion and coherence.

Texts are structures comprising words, prefixes and suffixes and sentences. These elements come together and complete each other, forming meaningful phrases. Therefore, revealing the connection between these prefixes and suffixes, words and phrases is important to make a healthy interpretation of the text. Revealing the connection is what we call cohesion. Cohesion in a text is to use other elements to explain or interpret an element within the text and to make explanations based on these elements.

Gutwinski (1976, p. 26) used the term cohesion for relationships existing between the sentences and clauses within the text. According to him, these relations occurring on a grammatical layer point to certain grammatical and lexical qualities that reflect semiotic discourse structure.

Tools of cohesion can be defined as the semantic relationship between an element and another element that plays an important role in the comprehension of that element within the text. Two elements that are semantically connected can be within the same text or one can be from outside of the text (Witte and Faigley, 1981, p. 190). While reference, conjunction and lexical cohesion are common in written expressions, ellipsis and substitution are used in oral expressions (de Beaugrande and Dressier, 1981; Witte and Faigley, 1981). According to Halliday and Hasan (1976, p. 4), cohesion is a concept that is referred to by the semantic relationship within a text and arises when the interpretation of an element in a discourse is dependent on another element.

In literature, there are different opinions on the classification of the tools of cohesion. Halliday and Hasan (1976, p. 4), Günay (2001, p. 57-88), Onursal (2003, p. 121-132), Uzun (1995) and Balcı (2009, p. 33) classified the tools of cohesion differently. In this study, classification of the tools of cohesion is based on "Cohesion in English" by Halliday and Hasan and the tools are evaluated under the titles: reference, ellipsis, substitution, conjunction and lexical cohesion.

Another element that text linguistics focuses on and accepts as text criteria is coherence. It is sought-after in a text rather than cohesion and if not found, the text is considered inadequate and incomplete (Aytaş, 2008, p. 57). In a well-prepared text, besides the formal tools of cohesion, semantic coherence should be found. Coherence of the text comprises comprehensive realization of what is told in the text, succeeding statements supportive of the preceding and the text being uncontradictory in itself.

While coherence is defined as the link that contains all kinds of grammatical and semantic relationships between the sentences that form a text in the early studies of text linguistics, within time, the grammatical relationships are evaluated under the concept of cohesion and coherence is regarded as semantic and logical link within the text (Toklu, 2003, p. 124). According to Aksan (1999, p. 259), cohesion defines the grammatical links between the sentences that form the text while coherence is the semantic and logical links between those sentences. According to Witte and Faigley (1981, p. 202), cohesion defines the mechanisms that bring the text together while coherence defines the semantic relationships that enables a text to be understood and utilized.

The written expressions of the students are evaluated based on formal properties, writing, punctuation and grammar, whereas they should be evaluated based on the properties of a quality text such as: logical coherence and integrity of the written subject, appropriate transitions between paragraphs, supporting the main idea with the assisting ideas, the final part of the text being conclusive and effective. Therefore, under these circumstances, studies to improve the writing skills of the students to ensure appropriate transitions between paragraphs, integration among the main idea with the assisting

ideas, overall consistency of the text are underestimated. Students who complete their secondary education have difficulties in written expression (Can, 2012; Karatay, 2010).

The aim of this study is to investigate the relationship between the Faculty of Education students' ability to use the tools of cohesion and form a coherent text. In the light of this aim, the questions raised are as follows:

1. Does the ability of students to use tools of cohesion in written expression differ depending on their department of study?
2. Does the ability of students to form a coherent text differ depending on their department of study?
3. Is there a relationship between the length of the text and cohesion and coherence?
4. Is there a relationship between tools of cohesion (reference, ellipsis, substitution, conjunction and lexical cohesion) and coherence of the text?

### **Method**

In this study to investigate the relationship between the Education Faculty students' ability to use the tools of cohesion and form a coherent text, document review as a qualitative data collection method was used. Document evaluation comprises the analysis of written material on the subject or subjects that are under investigation (Yıldırım and Şimşek, 2008, p. 187). This work was conducted with the first-year students in Ahi Evran University Faculty of Education on the autumn semester of the academic year 2013-2014. The subject group of the study comprises students from the departments of Science Teaching (18 students), Social Sciences Teaching (21 students), Primary Education-Level Mathematics Teaching (20 students), Classroom Teaching (21 students), Computer and Teaching Technologies Education (23 students) and Turkish Education (23 students). The written texts of students were evaluated based on the concepts of cohesion and coherence, which are accepted as text criteria by the text linguistics. The study abides by the cohesion taxonomy of Halliday and Hasan (1976). "Evaluation Criteria for The Tools of Cohesion" developed by Coşkun (2005) was used as a scale in identification of the elements of coherence, whereas "Evaluation Criteria for the Paragraph Coherence" developed by Can (2012) was used as a scale in evaluation of texts in terms of coherence.

While assessing the data collected in line with the aims of this research, we carried out frequency, arithmetic mean, standard deviation, t-test, one-way ANOVA, Scheffe's test and correlation analyses. We used SPSS 15.0 in analysing the data and assumed a significance level of 0.05 while interpreting the data.

### **Findings**

In this section, the ability of students to use tools of cohesion and form a coherent text was interpreted in tabular form by using statistical methodology appropriate to the aims of this study. Table 1 shows the statistical values assessed by the analyses performed to investigate the students' ability to use the tools of cohesion depending on their department of study.

Table 1 shows that the ability of the students to use the ellipsis and conjunction tools of cohesion has a significant difference ( $p < 0,05$ ) depending on their department of study. There is no significant difference ( $p > 0,05$ ) in reference, substitution and lexical cohesion depending on the students' department of study. Scheffe test was conducted to identify the difference between the groups based on the department of study and the results showed that there is a significant difference in the average use of ellipsis between the students of Turkish Teaching and Computer Technologies and Mathematics Teaching departments. The arithmetic mean of the group suggests that the average use of ellipsis is higher in students of Turkish Teaching department compared to students from other departments.

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**Table 1**

Mean, Standard Deviation and Single Factor ANOVA results on the ability of students to use the tools of cohesion depending on their department of study

Cohesion Measures	Department	n	$\bar{X}$	SS	Sd	F	P	Significant Difference
Reference	Turkish Language	23	15,60	6,562	5/120	2,184	,060	-
	Primary School	21	15,28	6,907				
	Social Sciences	21	13,19	5,767				
	Sciences Teach.	18	12,27	5,549				
	Computer Teach.	23	10,95	5,489				
	Mathematics	20	12,10	4,678				
Ellipsis	Turkish Langu.	23	20,17	6,161	5/120	3,452	,006	A-E A-F
	Primary School	21	17,85	5,322				
	Social Sciences	21	17,00	7,204				
	Sciences Teach.	18	16,50	4,668				
	Computer Teach.	23	14,43	4,550				
	Mathematics	20	14,20	5,454				
Substitution	Turkish Langu.	23	,47	,790	5/120	1,976	,087	-
	Primary School	21	,33	,577				
	Social Sciences	21	,14	,358				
	Sciences Teach.	18	,22	,548				
	Computer Teach.	23	,08	,288				
	Mathematics	20	,10	,307				
Conjunctions	Turkish Langu.	23	20,39	8,606	5/120	3,732	,004	B-E
	Primary School	21	21,14	6,010				
	Social Sciences	21	17,90	5,769				
	Sciences Teach.	18	17,44	5,962				
	Computer Teach.	23	14,21	5,116				
	Mathematics	20	15,90	5,990				
Lexical Cohesion	Turkish Langu.	23	51,91	15,931	5/120	,267	,931	-
	Primary School	21	51,00	12,393				
	Social Sciences	21	49,61	12,757				
	Sciences Teach.	18	53,61	10,971				
	Computer Teach.	23	50,73	18,454				
	Mathematics	20	49,00	10,867				

A= Turkish Langu. B= Primary School C= Social Sciences D= Sciences Teach. E= Computer Teach. F= Mathematics

The results on the use of conjunction elements show that the average use by the students of Classroom Teaching and Computer Technologies Teaching is significantly different ( $p < 0,05$ ). This difference is in favour of the Classroom Teaching students. Table 2 shows the statistical values assessed by the analyses performed to investigate the students' ability to form a coherent text depending on their department of study.

**Table 2**

Mean, Standard Deviation and Single Factor ANOVA results on the ability of students to form a coherent text depending on their department of study

	Department	n	$\bar{X}$	SS	Sd	F	P	Significant Difference
Coherence	Turkish Language	23	3,96	,512	5/120	4,861	,000	A-D A-E B-E
	Primary School	21	3,90	,392				
	Social Sciences	21	3,59	,538				
	Sciences Teach.	18	3,43	,618				
	Computer Teach.	23	3,39	,428				
	Mathematics	20	3,67	,466				

A= Turkish Langu. B= Primary School C= Social Sciences D= Sciences Teach. E= Computer Teach. F= Mathematics

According to Table 2, while Turkish Teaching students got the highest points in coherence evaluation scale on a scale of 5 (3,96), students of Computer Technologies Teaching department got the lowest points (3,39). Scheffe test was conducted to identify the difference between the groups based on the department of study and a significant difference was found between Turkish Teaching and Computer Technologies and Mathematics Teaching departments; and Classroom Teaching and Mathematics Teaching departments ( $p < 0,05$ ). Table 3 shows the statistical values assessed by the analyses performed to investigate the relationship between the length of text and the students' ability to form a coherent text and use the tools of cohesion.

**Table 3**

*Mean, Standard Deviation and Single Factor ANOVA results on the relationship between the length of text and the students' ability to form a coherent text and use the tools of cohesion*

		Text Length	Coherence	Cohesion
Text Length	r	1	,475**	,740**
	p		,000	,000
Coherence	r	,475**	1	,426**
	p	,000		,000
Cohesion	r	,740**	,426**	1
	p	,000	,000	

n=126 \*. Correlation is significant at the level of 0,05. \*\*. Correlation is significant at the level of 0,01.

Table 3 shows the highly significant relationship between the coherence ( $r = ,475$ ,  $p < ,05$ ) and cohesion ( $r = ,740$ ,  $p < ,05$ ) and the length of the text. It could be seen that there is a positive and significant relationship between the coherence and cohesion ( $r = ,426$ ,  $p < ,05$ ). Table 4 shows the statistical values assessed by the analyses performed to investigate the relationship between the ability to form a coherent text and the tools of cohesion.

**Table 4**

*The table of correlation between the students' ability to form coherent texts and use the tools of cohesion*

		Coherence	Reference	Ellipsis	Sunstitution	Conjunctions	Lexical Cohesion
Coherence	r	1	,208*	,302*	,224*	,448**	,347**
	p		,020	,001	,012	,000	,000
Reference	r	,208*	1	,316**	,236**	,561**	,130
	p	,020		,000	,008	,000	,147
Ellipsis	r	,302*	,316**	1	,167	,491**	,131
	p	,001	,000		,062	,000	,145
Substitution	r	,224*	,236**	,167	1	,304**	-,021
	p	,012	,008	,062		,001	,812
Conjunctions	r	,448**	,561**	,491**	,304**	1	,261**
	p	,000	,000	,000	,001		,003
Lexical Cohesion	r	,347**	,130	,131	-,021	,261**	1
	p	,000	,147	,145	,812	,003	

n=126 \*. Correlation is significant at the level of 0,05. \*\*. Correlation is significant at the level of 0,01.

On Table 4 it could be seen that there is a low-level and significant relationship between the students' ability to form coherent texts and to use tools of cohesion such as reference ( $r = ,208$ ,  $p < ,05$ ), ellipsis ( $r = ,302$ ,  $p < ,05$ ) and substitution ( $r = ,224$ ,  $p < ,05$ ). The correlation between the ability to form coherent text and conjunction ( $r = ,448$ ,  $p < ,05$ ) and lexical cohesion ( $r = ,347$ ,  $p < ,05$ ) is moderate and significant.

### Conclusion and Discussion

In this study to investigate the relationship between the Education Faculty students' ability to use the tools of cohesion and form a coherent text, the results obtained are as follows:

When the ability of students to use the tools of cohesion depending on their department of study is investigated, a significant difference ( $p < 0,05$ ) could be observed in the tools ellipsis and conjunction. Reference, substitution and lexical cohesion don't show a significant statistical difference ( $p > 0,05$ ) depending on the students' department of study. Scheffe test was conducted to identify the difference between the groups based on the department of study and a significant difference in the average use of ellipsis by the Turkish Teaching and Computer Technologies and Mathematics Teaching students. When the arithmetic mean of the groups is analysed, the average use of ellipsis is higher in Turkish Teaching students compared to other departments' students. The average use of conjunction is significantly different ( $p < 0,05$ ) in Classroom Teaching and Computer Technologies Teaching and this difference is in favour of the Classroom Teaching students.

When the ability of students to form a coherent text depending on their department of study is investigated, while Turkish Teaching students got the highest points in coherence evaluation scale on a scale of 5 (3,96), students of Computer Technologies Teaching department got the lowest points (3,39). Scheffe test was conducted to identify the difference between the groups based on the department of study and a significant difference was found between Turkish Teaching and Computer Technologies and Mathematics Teaching departments; and Classroom Teaching and Mathematics Teaching departments ( $p < 0,05$ ).

The lengths of the written expression texts of students are determined and the average length of the texts from Turkish Teaching is 195, Classroom Teaching 200, Social Sciences Teaching 187, Science Teaching 189, Computer Technologies Teaching 185 and Mathematics Teaching 197 words.

There is a high-level and significant correlation between the text length and coherence ( $r = 0,475$ ,  $p < 0,05$ ) and cohesion ( $r = 0,740$ ,  $p < 0,05$ ). There is also a positive and significant correlation between the coherence and cohesion ( $r = 0,426$ ,  $p < 0,05$ ).

The relationship between the ability of the students to form a coherent text and reference ( $r = 0,208$ ,  $p < 0,05$ ), ellipsis ( $r = 0,302$ ,  $p < 0,05$ ) and substitution ( $r = 0,224$ ,  $p < 0,05$ ) is low-level and significant. The correlation between the ability to form a coherent text and conjunction ( $r = 0,448$ ,  $p < 0,05$ ) and lexical coherence ( $r = 0,347$ ,  $p < 0,05$ ) is moderate and significant.

Coşkun (2005) evaluated the narrative storytelling of a total of 371 students at 5th and 8th grades in terms of cohesion, coherence and text elements and found a high-level and significant relationship between text length and cohesion ( $r = 0,865$ ,  $p < 0,05$ ) and coherence ( $r = 0,614$ ,  $p < 0,05$ ). Moreover, coherence and cohesion had a high level of correlation ( $r = 0,655$ ,  $p < 0,05$ ). While Coşkun (2005) could not find any relationship between coherence and substitution ( $r = 0,002$ ), there is a moderate relationship between coherence and reference ( $r = 0,339$ ); coherence and conjunction ( $r = 0,441$ ) and lexical cohesion ( $r = 0,615$ ) had high-level relationship between them.

Bae (2001) showed that the highest correlation between the tools of cohesion and coherence is between reference ( $r = 0,766$ ) and lexical coherence ( $r = 0,766$ ). Other than this, correlation between coherence and conjunction elements is ( $r = 0,413$ ) and ellipsis is ( $r = 0,372$ ) and substitution is ( $r = 0,245$ ). The correlation between the text coherence and text length is found to be ( $r = 0,760$ ).

Karatay (2010), in his study on the correlation between the level of the use of cohesion tools and coherent text writing, revealed a moderate relationship between conjunction elements and coherence

( $r=,389$ ). On the other hand, Lui and Brane (2005) investigated the relationship between the essay grades of the students and the use of the tools of cohesion and found that while there are no correlations between essay grades and conjunction elements ( $r=,065$ ), there is a significant correlation between essay grades and lexical coherence ( $r=,536$ ).

Yang and Sun (2012) have investigated the relationship between the writing points of the students the use of the tools of cohesion and identified that the relationship between the writing points and reference was ( $r=,502$ ), conjunction was ( $r=,362$ ) and lexical cohesion was ( $r=,473$ ).

These results are consistent with the results of our study and show that there is a relationship between coherence and text length and the use of the tools of cohesion. Therefore, it can be concluded that the reading and writing studies based on the ability of the students to use the tools of cohesion could, in the meantime, affect the ability of the students to form a coherent text.

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