The Relationship between Readers' Comprehension Skills and Awareness of Cohesive Relationships

Remzi Can

Ahi Evran University, Terme Caddesi, Kirsehir and 40100, Turkey
E-mail: can.remzi@hotmail.com

KEYWORDS Cohesive Relationship. Comprehension Skills. Reading. Screening Model. Text Linguistics

ABSTRACT This study aims to examine the relationship between good and poor readers' reading comprehension skills and their ability to establish cohesive relationships in a text. Out of general screening models, relational screening model was used in the research. As for sampling, 136 students were selected randomly from three secondary schools. An achievement test was prepared to observe the students' levels of reading comprehension. Two separate explanatory texts were used to determine the students' success in using cohesive devices. According to the results of this study, a significant difference exists between the reading comprehension levels of good and poor readers and their ability to use cohesive elements. Good readers make use of cohesive devices more successfully than poor readers do. It was seen that the higher scores students get on the reading comprehension test, the higher scores they get on the cloze deletion test of cohesive elements.

INTRODUCTION

Language is not just a communication tool made up of individual words but it is a system built of closely interrelated units valued by each other. Therefore, limiting all linguistic studies to sentences may be an unhealthy approach (Aydin 2007).

Text linguistics is a branch of science dealing with texts in their entirety as a supra-sentential unit as elaborated in linguistic studies today. It is an approach to analyse a text in its structural and semantic integrity and to understand the main constituents of a text. While semantics and rhetoric gravitate toward the power of meaning, text linguistics tries to unfold the interrelation between these semantic groups (Aytas 2008).

In Western countries, text linguistics is used in studies of text reading and comprehension, constructing texts in teaching foreign language, teaching writing in mother tongue, and improving writing skills (Ayata 2005).

Text, the main element of analysis in text linguistics, is described in different ways by various linguists. According to Ozkan (2004), text is a set of meaningful sentences sequenced in a certain communicative context. According to Tanyolac (2005), text is a consistent whole and structure woven with linguistic elements and made up of such processes as "progress", "continuity", and "recurrence". Each text element is interrelated. Therefore, as a textured whole, texts cannot be treated separately from their constituents. On the other hand, another article by Soruç and Griffiths (2015) reports on a study that investigated issues involved with the teaching of features of spoken English, sometimes called spoken grammar, including the use of vague language, placeholders, lexico-grammatical units and ellipsis.

In linguistic terms, text can be described as a set of sequenced sentences constituting a meaningful whole. However, it is a unique whole different from a sum of sentences. It is a meaningful structure that materialises with sentences rather than being a mere composition of sentences. While the sentence is treated as a grammatical unit, text is thought to be a process with reference to its communicative function. In other words, a text is both the product of its author and a process in which it is interpreted by the reader (Günay 2003).

Based on this information, we can describe text as a structure that is composed of linguistic units coming together in a certain communicative context, pursuant to certain criteria of textuality (Can 2012).

In order for a piece of writing to be called as a text, it needs to include certain criteria in company. The extent to which a piece of writing obeys these criteria determines its quality of textuality. De Beaugrande and Dressler (1981) regard cohesion among the essential criteria of textuality. According to Halliday and Hassan (1976), cohesion denotes lexical and grammatical relations that enable us to perceive a combination of sentences as a discourse rather than indepen-
Cohesive elements convey the meaning and build a sort of semantic integrity between textual units. Cohesive relations can be observed in the same sentence or between consecutive sentences, sometimes between non-consecutive sentences in a paragraph or between paragraphs within a text (Can 2012).

Text is the common area of interest for text linguistics and reading comprehension studies. According to structuralists, language comprehension is an interactive process between a text and its user. They argue that a text itself does not carry any meaning; it is the reader who can get the meaning on the basis of the clues existing in the text (Parvaz and Nodushan 2006). As reading is an interactive and communicative activity, the most effective learning environment should be a place where children and adults share a text, recognise the author behind the text, and question the thoughts and linguistic choices of the author. In this way, they will be more aware of the discourse organisation (Anderson 1990).

There is a direct relationship between cohesion and reading comprehension. This standard of textuality not only determines the extent of concordance between the ideas within a text but also is a simplifying model for a reader in terms of associating the ideas. (Lightman et al. 2007). Cohesive ties are useful tools for questioning the linguistic choices of an author during reading comprehension as they keep the parts of a text together and function as a mechanism to define the text content (Anderson 1990). Silva and Cain (2015) state that 4 to 6-year-olds had 2 aims: first, to determine how lower level comprehension skills (receptive vocabulary and grammar) and verbal memory support early higher level comprehension skills (inference and literal story comprehension), and second, to establish the predictive power of these skills on subsequent reading comprehension.

Comprehending a text requires not only reader achievement but also a process in terms of building a cognitive presentation of the content conveyed in the text. Comprehending a text requires the ability to establish cohesion (Dafna 2005). According to Ehrlich (1990), reading comprehension involves several sub-processes in general. As stated by Ehrlich, two of these sub-processes are semantic integration and textual organisation which are directly related to cohesion.

Based on previous studies, this paper aims to uncover whether there is a relationship between good and poor readers’ reading comprehension skills and their ability to set cohesive relationships in a text. In reference to the research problem, the researcher tried to answer the questions below:

1. Is there a difference between good and poor readers’ reading comprehension skills and their ability to establish cohesive relationships using three cohesive elements (reference, conjunction, and lexical cohesion)?
2. Is there a difference between good and poor readers’ reading comprehension skills and their ability to establish intra- and intersentential cohesive relationships?
3. Is there a relationship between good and poor readers’ reading comprehension skills and their ability to establish cohesive relationships using three cohesive elements (reference, conjunction, and lexical cohesion)?
4. Is there a relationship between good and poor readers’ reading comprehension skills and their ability to establish intra- and intersentential cohesive relationships?

**METHODOLOGY**

**Research Model**

With the goal of examining the possible relationship between good and poor readers’ reading comprehension skills and their ability to establish cohesive relationships in a text, relational screening model was used in the present research. Among general screening models, relational ones are used to determine the existence and/or the extent of covariance between two or more variables (Karasar 2009).

**Formation of the Study Population**

Accessible population of the research is composed of eight-grade students receiving education in Kirsehir city center. As for sampling, 136 students were selected randomly from three secondary schools. The sample size is satisfactory enough to interpret the results obtained via measurement tools at a confidence interval of 95 percent (p<.05) (Fraenkel et al. 2012). While selecting this sample, the researcher cared to choose students with high, medium, and low socio-economic levels.
READERS’ COMPREHENSION SKILLS

Goal of the Research

If a piece of writing is unintelligible, this means either it does not comply with one of the most important criterion of textuality, namely cohesion, or the reader is not able to comprehend the cohesive relationships within it. Linguistic units cannot coalesce and create a meaningful whole if there is no integration and coherence of thoughts within and between sentences as well as paragraphs in a text or in the mind of the reader. Such kind of a text is like a stack of independent thoughts that are not related to each other and do not make sense as a whole.

In this context, this paper aims to examine the relationship between the secondary school students’ reading comprehension skills and their awareness of cohesive relationships. By this way, new approaches can be put forward to show how students can build better and more logical intra-textual relationships during text comprehension studies.

Data Collection Tools

In order to observe the students’ levels of reading comprehension, a 30-question achievement test was prepared by using the student placement exams carried out by the Ministry of National Education in different years for placing eighth graders to high schools. In order to determine the students’ success in using cohesive devices, two separate explanatory texts were extracted from the eighth grade Turkish Language coursebooks (Sahin 2011; Alkan et al. 2008) taught in the secondary schools subordinate to the Ministry of National Education. These texts include 803 and 336 words. Explanatory texts were preferred because students are likely to have more difficulty in understanding this type of texts when compared to narrative ones having similar contents which are familiar to students (Best et al. 2006, as quoted by Olson 1985). Some cohesive devices were deleted from the texts and students were asked to fill those blanks. The blanks were carefully and equitably distributed for three cohesive devices. The number of excluded cohesive devices is as follows: 34 conjunction elements, 26 reference elements, and 30 lexical cohesion elements. While preparing the texts and achievement tests, the researcher asked the opinions of two Turkish Language and Literature specialists and two Turkish Language teachers (Table 1).

Validity and Reliability of Data Collection Tools

In order to assess the validity and reliability of the achievement tests, a pilot study was carried out with a group of 100 students. Item difficulty indexes of different achievement tests were calculated at first. Difficulty index was 0.65 for the 30 items in the reading comprehension achievement test; 0.55 for the 34 items related to conjunctive/connective elements; 0.51 for the 26 items related to referential elements, and 0.47 for the 30 items related to lexical cohesion in the cohesive devices achievement test. The item difficulty indexes are expected to have values ranging from 0 (zero) to +1. The closer the value of an item difficulty index is to +1, the more correctly it answers; and the closer it is to 0, the less correctly it answers. An ideal assessment tool has an item difficulty index with an overall value of 0.50 (Ozcelik 2010). The values calculated for the achievement tests in the scope of this research were closer to 0.50 as a desired indicator of the validity and reliability of this assessment tool.

In addition to this, means of the top and bottom 27 percent were calculated for each achievement test. Their t-values yielded the significant value for each item. This result shows that each item is enough to discriminate the achievement of students.

KR-20 reliability coefficient of the achievement tests was computed as 0.75 for reading

<table>
<thead>
<tr>
<th>Table 1: Analysis values for the validity and reliability of achievement tests are carried out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading comprehension achievement test</td>
</tr>
<tr>
<td>Number of items</td>
</tr>
<tr>
<td>P (Difficulty index)</td>
</tr>
<tr>
<td>T-value for top and bottom 27% (Discrimination)</td>
</tr>
<tr>
<td>Kuder Richardson 20 (KR-20)</td>
</tr>
</tbody>
</table>
comprehension; 0.78 for conjunctive/connective elements in the cloze deletion test of cohesive devices; 0.71 for referential elements and 0.69 for lexical cohesion. Reliability coefficients of assessment tools range from 0 to 1. A coefficient is accepted as considerably reliable if it has a value between 0.60 and 0.80 (Kalayci 2009). As the values for each achievement test in this research were in this range, it can be concluded that the items of this assessment tool produced considerably reliable results.

Data Collection Process

Students with different socio-economic levels were selected from three secondary schools in Kirsehir city center. 136 students participated in the research, 40 of them were from Cumhuriyet Secondary School, 49 from Cacabey Secondary School, and 47 from Vali Mithat Saylam Secondary School. All the tests were applied to the students by the researcher himself. After some explanations about the achievement test, the students were asked to answer 30 questions during a course time (40 minutes). In the second course time, the students were informed about being careful while filling in the deleted parts in passages, and their questions were answered. For the cloze deletion test of cohesive devices, two texts were given to each student. These data collection tools were coded in order to know to which students the achievement test and two texts belong. Then were matched the achievement test and texts of the same students and proceeded to the data analysis.

Data Analysis

In data analysis, SPSS 17.0 software package (Statistical Package For Social Sciences) was used. Students were classified as good and poor readers according to their scores on the achievement test for reading comprehension skills. Those who correctly answered 68 percent of the questions were regarded as good readers, the remaining students as poor readers (Bridge and Winogard 1982).

On the cloze deletion test, the students were asked to answer cohesive device questions in different numbers (34 conjunctive, 26 referential, 30 lexical cohesion elements). Therefore, the means as well as values of percentage were given in order to assess their achievement in a clearer way. Values of frequency (f), percentage (%), arithmetic mean (X) and standard deviation (Ss) regarding the achievement test for reading comprehension skills and the cloze test for cohesive elements were calculated. Lastly, the researcher conducted a t-test and correlation analysis showing the relationship between the scores of students on the achievement test and the cloze test.

RESULTS

This section includes the results and interpretations related to the research.

As it is seen in Table 2, there is a significant difference in favour of good readers in terms of placing the elements of conjunction, reference and lexical cohesion correctly in the gaps (p<0.05).

As it is seen in Table 3, a significant difference exists in favour of good readers regarding the ability to use intra- and intersentential cohesive elements (conjunction, reference, lexical cohesion) in a correct way.

As it is seen in Table 4, the results of Pearson correlation analysis conducted to see whether a relationship exists between the students’ scores on the achievement test and their scores of con-

<table>
<thead>
<tr>
<th>Reader type</th>
<th>f</th>
<th>X</th>
<th>Ss</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Achievement Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>69</td>
<td>23.68</td>
<td>2.637</td>
<td>16.250</td>
<td>.000</td>
</tr>
<tr>
<td>Poor</td>
<td>67</td>
<td>14.97</td>
<td>3.558</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conjunction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>69</td>
<td>22.65</td>
<td>4.321</td>
<td>9.210</td>
<td>.000</td>
</tr>
<tr>
<td>Poor</td>
<td>67</td>
<td>14.92</td>
<td>5.416</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reference</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>69</td>
<td>18.60</td>
<td>4.091</td>
<td>11.537</td>
<td>.000</td>
</tr>
<tr>
<td>Poor</td>
<td>67</td>
<td>9.55</td>
<td>5.022</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
READERS’ COMPREHENSION SKILLS

Table 3: Results of independent t-test showing the relationship between good and poor readers’ scores on the comprehension test and their use of intrasentential and intersentential cohesive elements

<table>
<thead>
<tr>
<th>Reader type</th>
<th>f</th>
<th>X</th>
<th>Ss</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Test</td>
<td>Good</td>
<td>69</td>
<td>23.68</td>
<td>2.637</td>
<td>17.402</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>67</td>
<td>14.97</td>
<td>3.558</td>
<td></td>
</tr>
<tr>
<td>Intra-sentence</td>
<td>Good</td>
<td>69</td>
<td>39.83</td>
<td>7.839</td>
<td>10.742</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>67</td>
<td>24.17</td>
<td>8.907</td>
<td></td>
</tr>
<tr>
<td>Inter-sentence</td>
<td>Good</td>
<td>69</td>
<td>17.95</td>
<td>4.845</td>
<td>8.586</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>67</td>
<td>10.60</td>
<td>4.984</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Correlation between the comprehension test and the scores of cohesion for good and poor readers

<table>
<thead>
<tr>
<th>Achievement tests</th>
<th>Conjunction</th>
<th>Reference</th>
<th>Lexical cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Tests</td>
<td>r</td>
<td>.750 (**)</td>
<td>.811 (**)</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Conjunction</td>
<td>r</td>
<td>.750 (**)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Reference</td>
<td>r</td>
<td>.811 (**)</td>
<td>.816 (**)</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Lexical Cohesion</td>
<td>r</td>
<td>.786 (**)</td>
<td>.853 (**)</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

*p < .05; ** p < .01

Table 5: Correlation between the comprehension test scores of good and poor students and their scores of intrasentential and intersentential cohesive elements

<table>
<thead>
<tr>
<th>Achievement tests</th>
<th>Intra-sentence cohesion</th>
<th>Inter-sentence cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Test</td>
<td>R</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>.000</td>
</tr>
<tr>
<td>Intra-sentence Cohesion</td>
<td>R</td>
<td>.737 (**)</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>.000</td>
</tr>
<tr>
<td>Inter-sentence Cohesion</td>
<td>R</td>
<td>.720 (**)</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>.000</td>
</tr>
</tbody>
</table>

*p < .05; ** p < .01

Junction, reference and lexical cohesion indicate that there is a positive and highly significant relationship between the achievement test and conjunction elements (r=0.750, p<.01), between the achievement test and reference elements (r=0.811, p<.01), and between the achievement test and lexical cohesion elements (r=0.786, p<.01). According to these results, the higher the students’ scores on the comprehension test are, the higher their scores of cohesive elements are.

As it is seen in Table 5, the results of Pearson correlation analysis conducted to examine whether a relationship exists between good and poor readers’ scores on the comprehension test and intra- and intersentential cohesive elements indicate that there is a positive and highly significant relationship between the scores on the achievement test and the scores of intrasentential cohesive elements (r=0.737, p<.01) and between the scores on the achievement test and the scores of intersentential cohesive elements (r=0.750, p<.01). According to these results, the higher the students’ scores on the comprehension test are, the higher their scores of intra- and intersentential cohesive elements are.

**DISCUSSION**

Text comprehension is a complex process involving several interdependent factors. These can be grouped into two categories, firstly the text itself and, secondly, the reader’s idiosyncratic features. Text properties, its structure and...
coherence relate to the first category whereas reader’s skills and previous knowledge about the text can be given as examples for personal features (Shakiba et al. 2013).

Comprehending a text and creating cohesion in it necessitate coherence devices and connectives that characterise relations between sentences (Cain 2011). The quality and richness of a written text can be measured with cohesion analysis (Ghasemi 2013). As argued by Konstabel et al. (2012), less coherent texts require more effort.

In accordance with the research results, in terms of setting logical relationships and interpretation skills, good and poor readers are more successful at conjunctions than they are at the other types of cohesion in Turkish. Good readers’ success at conjunctive elements is 66.6 percent and that of poor readers is 44.02 percent. While this is the case for Turkish, the study by Bridge and Winogard (1982) in English concludes that, among the three cohesive elements examined in terms of setting connections and constructing meaning, conjunctions are the ones which ninth grade good and poor reader students are the least successful at. Good readers’ success average for conjunctions is \( X = 3.6 \) while that of poor readers is \( X = 1.0 \). This contrastive situation between Turkish and English possibly results from the structural features of these two languages or the difficulty levels of conjunctive elements in cloze deletion tests. According to the study by Goldman and Murray (1992), students comprehend additive and causal conjunctions more successfully than they do adversative and temporal conjunctions. In the same vein, Cain (2011) argues that the presence of an appropriate connective facilitates processing of text.

Reference signifies any relationship or connection between people, objects, or places denoted with noun groups or adverbial phrases consisting of personal and demonstrative pronouns, and comparisons in different parts of the text (Aidinlou et al. 2012). Good reader students’ success level in referential elements is 64.80 percent and poor readers’ percentage of achievement for the same elements is 37.11 percent. The study by Bridge and Winogard (1982) for English concludes that ninth grade good and poor students are successful mostly at reference among the three cohesive elements examined in terms of establishing connections and constructing meaning. Good readers’ success average for referential elements is \( X = 4.7 \) while that of poor readers is \( X = 2.6 \).

Lexical cohesion signifies the most advanced level of cohesion. Therefore, it is the most obscure one among the types of cohesion. Coherent effect of lexical cohesion takes place when a sentence or a word group in a sentence is interrelated to each other (Wu 2010). According to Wilawan (2007), teaching lexical cohesion helps students understand the main idea of a text. Lexical cohesion is the type of cohesive element at which good and poor readers are the least successful in Turkish in terms of setting connections and constructing meaning in the text. Good readers’ success at lexical cohesion is 62 percent and poor readers’ success level is 31.83 percent. In English (Bridge and Winogard 1982), good readers’ success level in lexical cohesion is \( X = 4.6 \) while that of poor readers is \( X = 2.5 \).

There is a significant difference between good and poor readers regarding their levels of setting intra- and intersentential relationships. Good readers’ success in establishing intrasentential relationships is 76.59 percent while poor readers’ success in establishing intrasentential cohesive relationships is 46.48 percent. Good readers’ success in establishing intersentential cohesive relationships is 56.09 percent while that of poor readers is 33.12 percent. Similarly to these results, in their study for English, Bridge and Winogard (1982) conclude that ninth grade good and poor readers are more successful in using intrasentential cohesive relationships when compared to intersentential cohesive relationships. Similarly the differences among the effects of the above-mentioned techniques were statistically significant in the findings of the Abdollahi et al. (2015).

In parallel with these results, Cox et al. (1990) argue that knowledge of cohesion is closely related to children’s developing reading ability. According to them, good readers are more successful in finding and using appropriate cohesive items in more difficult texts and they have more opportunities in learning cohesion because reading orientates them to understand cohesion. According to O’Reilly et al. (2007), students with less knowledge about the text better comprehend the texts with a high cohesion quality whereas students with more knowledge about the text can learn also from the texts with a low cohesion quality.

CONCLUSION

Results indicate a significant difference between the reading comprehension levels of good
and poor readers among the eighth grade secondary school students and their ability to use cohesive elements.

In accordance with the results, in terms of setting logical relationships and interpretation skills, good and poor readers are more successful at conjunctions than they are at the other types of cohesion in Turkish. Good readers’ success at conjunctive elements is 66.6 percent while that of poor readers is 44.02 percent.

Good reader students’ success level in referential elements is 64.80 percent while poor readers’ percentage of achievement for the same elements is 37.11 percent.

Lexical cohesion is the type of cohesive element at which good and poor readers are the least successful in Turkish in terms of setting connections and constructing meaning in the text. Good readers’ success at lexical cohesion is 62 percent and poor readers’ success level is 31.83 percent.

Another remarkable result of this study is that there is a significant difference between good and poor readers regarding their levels of establishing intra- and intersentential relationships. Good readers’ success in establishing intrasentential relationships is 76.59 percent while poor readers’ success in establishing intrasentential cohesive relationships is 46.48 percent. Good readers’ success in establishing intersentential cohesive relationships is 56.09 percent while that of poor readers is 33.12 percent.

While building meaning in their minds, good readers make use of cohesive devices more successfully than poor readers do. The higher scores students get on the reading comprehension test, the higher scores they get on the cloze deletion test of cohesive elements. In other words, there is a positive correlation between these two.

The higher scores students get on the reading comprehension test, the higher scores they get on the cloze test of intra- and intersentential cohesive elements. There is a positive correlation between two variables.

**RECOMMENDATIONS**

Below are some suggestions based on the results of this research:

How authors establish links in texts and how they link various ideas to each other should be shown on texts. Children should be provided with text evaluation skills along with the criteria of textuality. High and low quality texts in terms of cohesion should be presented to students. They should know practically what makes them high and low quality.

Findings of text linguistics should be used while selecting texts for course books. In the relevant literature, there are several studies supporting this suggestion. Because texts with higher level of cohesion contain less conceptual and structural gaps. On the other hand texts with a low-level cohesion help students with high-level knowledge because such kind of texts impel students to infer more and increase the possibility of information storage.

Students should be engaged in vocabulary enrichment activities in order to assist them to comprehend the relations of lexical cohesion (synonym, superordinate, antonym, tenor, using words from the same conceptual field).

Students’ awareness of cohesive elements in texts should be enhanced in reading processes. In particular, students with a low-level reading comprehension skill should make more time to read. Their knowledge and experience on how cohesive relationships are built in a text should be enhanced by comparing various types of texts.

**REFERENCES**


O’Reilly T, McNamara DS 2007. Reversing the reverse cohesion effect: Good texts can be better for strategic, high-knowledge readers. *Discourse Processes*, 43:121-152.


