The Relationship Between Cognitive Reading and Reading Comprehension Ability of Students at SMAN 1 Kampar Kiri Tengah

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Abstract. This research focuses on the relationship between cognitive reading and reading comprehension ability of class XI students of SMAN 1 Kampar Kiri Tengah. This research was motivated by the fact that some students still have difficulty in understanding English texts even though they have used certain reading strategies. The method used was quantitative method with correlational approach. The total population in this research was 49 students, with the research sample consisting of 30 students from class XI.6 and 19 students from class XI.5. The instruments used were Cognitive Reading Questionnaire and reading comprehension test. Data analysis was conducted by Pearson Product Moment test using SPSS version 2023. The results showed that there was no correlation between cognitive reading and students' reading comprehension ability. This is indicated by the significance value of 0.710 which is greater than 0.05, so Ha is rejected. Thus, it can be concluded that there is no significant relationship between the two variables. It is expected that teachers and schools can develop more effective reading learning methods to improve students' reading comprehension.

Keywords: *Relationship, Cognitive reading, Reading comprehension.*

Abstrak. *Penelitian ini berfokus pada hubungan antara cognitive reading dengan kemampuan reading comprehension siswa kelas XI SMAN 1 Kampar Kiri Tengah. Penelitian ini dilatarbelakangi oleh kenyataan bahwa beberapa siswa masih mengalami kesulitan dalam memahami teks berbahasa Inggris meskipun mereka telah menggunakan strategi membaca tertentu. Metode yang digunakan adalah metode kuantitatif dengan pendekatan korelasional. Jumlah populasi dalam penelitian ini sebanyak 49 siswa, dengan sampel penelitian terdiri atas 30 siswa dari kelas XI.6 dan 19 siswa dari kelas XI.5. Instrumen yang digunakan berupa kuesioner Cognitive Reading Questionnaire dan tes reading comprehension. Analisis data dilakukan dengan uji Pearson Product Moment menggunakan aplikasi SPSS versi 2023. Hasil penelitian menunjukkan bahwa tidak terdapat korelasi antara cognitive reading dengan kemampuan reading comprehension siswa. Hal ini ditunjukkan dengan nilai signifikansi 0.710 yang lebih besar dari 0.05, sehingga Ha ditolak. Dengan demikian, dapat disimpulkan bahwa tidak ada hubungan yang signifikan antara kedua variabel. Diharapkan guru dan pihak sekolah dapat mengembangkan metode pembelajaran membaca yang lebih efektif untuk meningkatkan pemahaman bacaan siswa.*

Kata Kunci: Hubungan, Membaca Kognitif, Pemahaman Membaca.

1. BACKGROUND

Proficiency in English is a key requirement in the era of globalization as it is a means of international communication, access to education, and mastery of technology. One of the most important basic skills is reading, which serves as a gateway to understanding both academic and non-academic information. However, PISA reports show that Indonesian students' reading literacy skills are still below the OECD average, indicating a major challenge in building a strong literacy culture (Ratri & Ambarwati, 2021).

In the context of English language learning in Indonesia, many high school students still have difficulty understanding English texts. These difficulties are generally caused by low reading interest, limited vocabulary, and a lack of effective reading strategies. However, reading comprehension is an important factor for students to be able to master academic material, face college entrance exams, and prepare themselves for the world of work. Thus, reading skills are not only linguistic skills, but also cross-disciplinary academic skills that determine student learning success (Hafiza et al., 2024 ; Wahyuni & Triayomi, 2024).

One approach that can be used to improve reading comprehension is cognitive reading. Cognitive reading refers to an active mental process that includes the ability to recognize text structure, make inferences, predict the content of the reading, and monitor comprehension while reading. This approach helps students to not just translate words one by one, but to understand the text thoroughly and critically. By looking at the important role of cognitive reading in supporting reading comprehension, this study was conducted to determine the relationship between cognitive reading and the reading comprehension abilities of high school students (Grabe & Stoller, 2019; Perfetti & Stafura, 2014; Sari et al., 2020).

2. LITERATURE REVIEW

Cognitive reading refers to the mental processes used to understand written text. The aspects involved include decoding, working memory, attention, inference, and monitoring, which enable readers to process and integrate information from the text with their prior knowledge (Perfetti & Stafura, 2014; Grabe & Stoller, 2019).

Reading comprehension is an active process of constructing meaning from a text through literal, inferential, critical, and creative understanding. This ability is influenced not only by internal factors such as vocabulary, motivation, and background knowledge, but also by the reading strategies students use to understand texts in depth (Sari et al., 2020; Duke & Pearson, 2004 ; Wahyuni & Triayomi, 2024).

A number of studies have shown a correlation between cognitive skills and reading comprehension, although the results vary. Some studies found a significant relationship between cognitive reading and text comprehension, while others showed a weak

correlation that requires further study, especially in the context of high school students in Indonesia (Kendeou et al., 2014; Husna et al., 2025; Gustanti & Ayu, 2021).

3. REASERCH METHOD

This research used a quantitative correlation design to examine the relationship between cognitive reading (X) and reading comprehension skills (Y). The study population consisted of all 197 students in grade XI at SMAN 1 Kampar Kiri Tengah. The study sample consisted of 49 students, selected using simple random sampling (30 students from class XI.6 and 19 students from class XI.5). The instruments used consisted of two parts: first, a cognitive reading questionnaire consisting of 14 items adopted from Hamhijd, (2017) Second, a reading test consisting of 16 multiple-choice questions adopted from Penjaitan, (2022). Data analysis used SPSS version 23 with reliability, normality, linearity, and Pearson's product-moment correlation tests..

4. RESULT AND DISCUSSION

A. RESULT

Descriptive Statistics

The descriptive analysis of students' cognitive reading is presented below:

Table 1. Descriptive Statistic of Cognitive Reading

Statistics		
Cognitive Reading		
N	Valid	48
	Missing	1
Mean		49,3542
Std. Error of Mean		0,87797
Median		51,0000
Mode		51,00
Std. Deviation		6,08273
Variance		37,000
Range		31,00
Minimum		30,00
Maximum		61,00

Table 2. Descriptive Statistic of Reading Comprehension Ability

Statistics		
Reading comprehension Ability		
N	Valid	49
	Missing	0
Mean		60,27
Std. Error of Mean		1,401
Median		62,00
Mode		62
Std. Deviation		9,806
Variance		96,157
Range		38
Minimum		37
Maximum		75

Based on the results of descriptive analysis, students' cognitive reading scores were in the moderate to high category with an average score of 49.35. Meanwhile, the average score for students' reading comprehension skills was 60.27, which is in the fairly good category.

Normality and Linearity Tests

Before correlation analysis, the assumptions of normality and linearity were tested.

Table 3. Normality Test (Kolmogorov-smirnov)

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		48
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	1,58153210
Most Extreme Differences	Absolute	0,112
	Positive	0,089
	Negative	-0,112
Test Statistic		0,112
Asymp. Sig. (2-tailed)		.175[c]
a. Test distribution is Normal.		

| b. Calculated from data. |
| c. Lilliefors Significance Correction. |

Since both significance values are greater than 0.05, the data are normally distributed.

Table 4. Linearity Test

ANOVA Table							
			Sum of Squares	df	Mean Square	F	Sig.
reading comprehension * Cognitive Reading	Between Groups	(Combined)	46,893	17	2,758	1,165	0,347
		Linearity	0,358	1	0,358	0,151	0,700
		Deviation from Linearity	46,535	16	2,908	1,228	0,304
	Within Groups		71,024	30	2,367		
	Total		117,917	47			

The significance value of 0.304 (>0.05) indicates a linear relationship between the two variables.

Correlation Analysis

Table 5. Pearson Correlation Analysis

Correlations			
		Cognitive Reading	reading comprehension
Cognitive Reading	Pearson Correlation	1	0,055
	Sig. (2-tailed)		0,710
	N	48	48
reading comprehension	Pearson Correlation	0,055	1
	Sig. (2-tailed)	0,710	
	N	48	49

The Pearson correlation coefficient was r = 0.055 with a significance value of 0.710. This shows a weak positive correlation that is not statistically significant.

B. DISCUSSION

The results of this research indicate that there is no significant relationship between Cognitive Reading and Reading Comprehension Ability in class XI

students of SMAN 1 Kampar Kiri Tengah, with a correlation value of r = 0.055 and significance p = 0.710 (p > 0.05). This finding indicates that students' cognitive reading ability naturally does not give significant influence on reading comprehension ability.

5. CONCLUSION AND SUGGESTIONS

This research concluded that there was no significant relationship between cognitive reading and reading comprehension skills among 11th grade students at SMAN 1 Kampar Kiri Tengah. Teachers are advised to develop more varied reading teaching methods by paying attention to vocabulary, reading interests, and student learning strategies. Further research could expand the variables studied, such as motivational factors or metacognitive strategies.

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