THE EFFECT OF LEARNING STRATEGIES AND COGNITIVE STYLE ON STUDENTS' ACHIEVEMENT IN READING COMPREHENSION

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Abstract. The objectives of the study were to (1) determine students' achievement in reading comprehension as taught by reciprocal teaching (RT) and collaborative strategies reading (CSR); (2) determine students' achievement in having dependent and independent cognitive styles; and (3) determine how learning strategies and cognitive style affect one another. The research population comprised 154 students from five classrooms in SMP Negeri 1 Angkola Timur's VIII class. Sixty-one students were sampled using cluster random sampling; of these, thirty students from class VIII-2 were taught the reciprocal teaching-learning strategy, and thirty students from class VIII-1 were taught the collaborative strategic reading (CSR) learning technique. The test was used as a means of gathering data. The findings indicated that: (1) students taught the Collaborative Strategic Reading (CSR) learning strategy $\overline{X} = 16.53$ had higher achievement than students taught the Reciprocal Teaching learning strategy $\overline{X} = 15.43$; (2) students with field-independent cognitive style $\overline{X} = 16.09$ had achievement than students with field-dependent cognitive style $\overline{X} = 15.80$ with Fcount = 7.79 > Ftable = 1.00; and (3) there is an interaction between learning strategies and cognitive styles on reading comprehension achievement.

Keywords: Learning Strategies, Cognitive Styles, Reading Comprehension

INTRODUCTION

Students' intellectual, social, and emotional growth is greatly influenced by language, which also helps them succeed in learning in all subject areas. It is anticipated that studying a language will aid students in understanding both their own and other cultures. Learning a language also makes it easier for students to interact with others, communicate their thoughts and feelings, and even identify and utilize their creative and analytical skills.

Speaking, listening, reading, and writing are the four language abilities that make up the ability to discourse, which is the comprehension and production of spoken or written texts. These four linguistic abilities are utilized to both initiate and respond to social discourse. One of the languages for written and oral communication is English. It is thought that teaching English in schools is one approach to assist students in acquiring these language abilities and becoming proficient enough to converse and engage in discourse at a

particular literacy level. English literacy levels include informational, performative, functional, and epistemic. The literacy level at the performative level encompasses the following skills: writing, speaking, listening, and reading while using the symbols. The ability to utilize language to meet daily requirements, such as reading newspapers, manuals, or directions, is included in the functional level of literacy. The ability to articulate knowledge in the target language is included in the epistemic literacy level, whereas the informational literacy level includes the ability to access knowledge through language skills.

The National Education Standards (SNP) outline the government's expectations and efforts about education goals in Indonesia. Planning, carrying out, and overseeing education to achieve high-quality national education are all based on the National Education Standards (SNP). Standards for content are one of the requirements. The learning load, the curriculum at the unit level, the education calendar, and the fundamental framework and structure of the curriculum are all included in the content standards. Regarding Content Standards for Primary and Secondary Education Units, Permendiknas No. 22 of 2006, junior high school English language instruction aims to help students become proficient communicators both orally and in writing so they can reach functional literacy levels. It also aims to make students aware of the value of English and its nature to boost the country's competitiveness in the global economy.

The expectations for the reading comprehension learning objectives, however, remain distant from reality. The International Association for the Evaluation of Educational Achievement (IEA) has been conducting Progress in International Reading Literacy (PIRLS), an international scale assessment of reading comprehension for secondary schools, every five years since 2001. The IEA released the reading achievement rankings of 49 participating countries in PILS in 2011. According to the survey, Indonesia placed 42nd in PIRLS 2011 out of 49 participant nations. The reading comprehension learning outcomes of students in several Indonesian schools, including SMP Negeri 1 Angkola Timur, likewise demonstrate the low reading comprehension learning outcomes of Indonesian students at the worldwide level, as reported by PIRLS 2011. This is based on observations and interviews with eighth-grade students and English teachers. Data collected by the

writer indicated that reading comprehension was a challenge for students in the eighth grade. The average reading comprehension score of pupils who fall short of the class's Minimum Completion Criteria (KKM) of 7.5 demonstrates this.

Research examining how students' reading comprehension might be enhanced through the implementation of collaborative strategic reading (Moreilon, 2007; Nosratinia, 2013; Fawaz, 2015). In line with that, the implementation of a reciprocal teaching (RT) learning technique can enhance students' reading comprehension learning results, according to Ahmadi's (2012) research on secondary school students. These studies highlighted one variable that is considered to affect reading comprehension learning outcomes.

Collaborative Strategic Reading (CSR) is a learning strategy developed by Klingner as a modification of the reciprocal teaching (RT) learning strategy. CSR is a combination of collaborative learning strategy and reading learning strategy. There are procedures in CSR that can aid students in comprehending the book. The process consists of four phases: acquire the gist (searching for the primary idea), click and clunk (finding the meaning of difficult terms), preview (brainstorming), and wrap up (identifying questions about the text studied) (Klingner, 1998). Reciprocal teaching aims to develop student's learning independence and reading comprehension skills through learning in groups where students take turns acting as teachers to teach their peers.

The present investigation focused on two variables that are thought to have an impact on the reading comprehension achievement of eighth-grade students at SMP Negeri 1 Angkola Timur. These variables are the students' cognitive style and learning strategies they employ when learning English, specifically about reading comprehension.

METHOD

This study was carried out at SMP Negeri 1 Kecamatan Angkola Timur. The population of this study was VIII grade students of SMP Negeri 1 Angkola Timur. To figure out the representative class, the cluster random sampling technique was used by drawing lots. From the entire population in class VIII of SMP Negeri 1 Angkola Timur, it was determined that class VIII-1 used the collaborative strategic reading (CSR) learning strategy, and class VIII-2 used the reciprocal teaching-learning strategy in learning reading comprehension. This research method is quasi-experimental research. An experimental

design with a factorial of two by two was the research design employed in this investigation. In this study, there are two independent variables. The independent variables in this study are learning strategies consisting of collaborative strategic reading (CSR) and reciprocal teaching learning strategies. The dependent variable is reading comprehension achievement.

To get information on reading comprehension achievement, a test was implemented. While collecting cognitive styles, we used the Group Embedded Figure Test (GEFT). Both descriptive analysis and inferential analysis were employed as data analysis methods in this investigation. Research data, such as mean, median, mode, variance, and standard deviation, are meant to be described by descriptive analytic techniques. Additional data is shown as frequency distribution tables and histograms. On the other hand, the goal of the inferential analysis method is to use the two-way analysis of variance (ANOVA) approach to evaluate the hypothesis.

FINDING AND DISCUSSION

Finding

1. Students Reading Achievement Through Collaborative Strategic Reading (CSR) Learning Strategy

Considering the information that was collected, the student's reading comprehension achievement with the Collaborative Strategic Reading (CSR) learning strategy showed that the lowest score of 11 and the highest score of 22, the average score of 16.53, mode 15.61, median 17.33, variance 7.69, and standard deviation 2.77. It's displayed in the table 1.1 below:

Table 1. List of Frequency Distribution of Students Reading Achievement Through Collaborative Strategic Reading (CSR) Learning Strategy

No	Interval Class	F kum	Percentage (%)
1	11– 12	2	6,45
2	13 – 14	5	16,13
3	**15 – 16**	**10**	**32,26**
4	17 – 18	6	19,35
5	19 – 20	5	16,13
6	21 – 22	3	9,68
	Total	**31**	**100,00**

The student's reading comprehension achievement through collaborative strategic reading (CSR) learning strategy showed 3 people (9.6%) categorized as high, 26 people (83.87%) categorized as medium, and 2 people (6.45%) categorized as low.

2. **Students Reading Achievement by Using Reciprocal Teaching Learning Strategy**

Considering the information that was collected, the score of students' reading comprehension achievement with the lowest score of 11 and the highest score of 21, the average score of 15.43, mode 15.00, median 15.75, variance 6.54, and standard deviation 2.56. It's displayed in the table 1.2 below:

Table 2. List of Frequency Distribution of Student's Reading Achievement by Using Reciprocal Teaching Learning Strategy

No	Interval Class	f	Percentage (%)
1	10-11	2	6,50
2	12-13	4	12,90
3	**14-15**	**10**	**32,30**
4	16-17	8	25,80
5	18-19	4	12,90
6	20-21	2	6,50
	Total	**30**	**100,00**

The achievement of students reading comprehension through reciprocal teaching learning strategies showed as a whole 2 people (6.6%) are categorized as high, 24 people 80.00% are categorized as medium, and 4 people (13.30%) are categorized as low.

3. **Students Reading Achievement with Field Independent Cognitive Style**

The student's reading comprehension achievement through field-independent cognitive style showed an average value of 16.09; mode 15.30; median 15.83; variance 8.86; and standard deviation of 2.98. It's displayed in Table 1.3 below:

Table 3. The List of Distribution of Students' Reading Achievement with Field Independent Cognitive Style

No	Interval Class	f	Percentage (%)
1	11-12	4	12,90
2	13-14	7	22,58
3	**15-16**	**9**	**29,03**
4	17-18	6	19,35
5	19-20	5	16,13

6	21-22	3	9,68
	Total	**34**	**100,00**

The acquisition of reading comprehension learning outcomes of students with cognitive style field Independent tendency score of student learning outcomes as a whole 2 people (6.6%) categorized as high, 24 people (80.00%) categorized as moderate, and 4 people (13.30%) categorized as low.

4. **Students Reading Achievement with Collaborative Strategic Reading (CSR) Learning Strategy and Field Independent Cognitive Style.**

Students' reading comprehension achievement with Collaborative Strategic Reading (CSR) and field-independent cognitive style showed an average value of 15.88; mode of 15.50; median of 15.70; variance of 8.12; and standard deviation of 2.85. It's displayed in Table 1.4 below:

Table 4. List of Frequency Distribution of Students Reading Achievement with Collaborative Strategic Reading (CSR) Learning Strategy and Field Independent Cognitive Style.

No	Interval Class	f	Percentage (%)
1	11-12	2	12,50
2	13-14	3	18,75
3	**15-16**	**5**	**31,25**
4	17-18	3	18,75
5	19-20	2	12,50
6	21-22	1	6,25
	Total	**16**	**100**

Students' reading comprehension achievement with Collaborative Strategic Reading (CSR) Learning Strategy and Field Independent Cognitive Style showed 3 people (18.75%) categorized as high, 11 people (68.75%) categorized as medium and 2 people (12.50%) categorized as low.

5. **Students' Reading Achievement with Reciprocal Teaching Learning Strategy and Field Independent Cognitive Style.**

Students' reading comprehension achievement with reciprocal teaching-learning strategy and cognitive style Field Independent showed an average value of 15.38; mode 13.50; median 14.70; variance 9.24; and standard deviation 3.04. It's displayed in Table 1.5 as follows:

Table 5. List of Frequency Distribution of Students Reading Achievement with Reciprocal
Learning Strategy and Field Independent Cognitive Style**.**

No	Interval Class	F	Percentage (%)
1	11-12	3	8,33
2	**13-14**	**5**	**29,40**
3	15-16	3	17,60
4	17-18	3	17,60
5	19-20	2	11,80
6	21-22	1	5,9
	Total	**17**	**100,00**

Students' reading achievement with reciprocal learning strategy with field-independent cognitive style showed as a whole 2 people (6.6%) categorized as high, 24 people (80.00%) categorized as medium and 4 people (13.30%) categorized as low.

6. **Students' Reading Achievement with Reciprocal Teaching Learning Strategy and Field Dependent Cognitive Style**.

Students' reading achievement with reciprocal learning strategy and field-dependent cognitive style obtained an average value of 16.70; mode of 15.50; median of 15.90; variance of 7.69; and standard deviation of 2.77. It's displayed in Table 1.6:

Table 6. Students Reading Achievement with Reciprocal Learning Strategy and Field Dependent Cognitive Style.

No	Interval Class	F	Percentage (%)
1	11-7	1	7,70
2	13-10	2	15,40
3	**15-13**	**5**	**38,50**
4	17-16	2	15,40
5	19-20	2	15,40
6	21-22	1	7,70
	Total	**18**	**100**

Students' reading achievement with reciprocal learning strategy and cognitive style field dependent showed as a whole 3 people (23.07%) categorized as high, 9 people (69.23%) categorized as medium and 4 people (7.69%) categorized as low. The factorial ANOVA 2 x 2 calculation provided an F-count of 5.44 and an F-table of 1.00 for dk (1,60) at a real level of $\alpha = 0.05$. It comes out that the hypothesis testing accepts Ha and rejects Ho because the value of F-count = 5.44> F-table = 1.00. Therefore, it

may be said that cognitive style and learning strategies interact to affect how well students learn about reading comprehension.

Discussion

The study's findings demonstrated that, despite slight differences in the average achievement between the two groups, students who were taught Collaborative Strategic Reading (CSR) had higher achievement than those who were taught reciprocal teaching. The results of the investigation indicate learning strategies aid in the completion of learning tasks. The results of this study corroborate those of earlier research by Nosratinia (2004), which looked at how each student's cognitive style varies and indicates how they prefer to understand the content they read. Ahmadi (2012) carried out a similar study that demonstrated the impact of students' cognitive styles—Field Independent and Field Dependent—on their academic performance. At SMP Negeri 1 Angkola Timur, the application of CSR learning methodologies significantly promotes the enhancement of student learning outcomes and boosts students' capacity for autonomous learning in reading comprehension courses.

In addition, the findings demonstrated that reading comprehension students with a field-independent cognitive style had superior average achievement than those with a field-dependent cognitive style. This suggests that, in comparison to students with a cognitive style that is field dependent, it is easier for students to understand reading comprehension sessions if they have a field-independent cognitive style. This makes sense because (1) Everyone has a cognitive style, which is a strategy of breaking down an issue into smaller components and using that structure to influence how they behave to solve the problem. Cognitive styles vary widely in their abilities. (b) seen from the perspective of how a person's individuality interacts with his surroundings in social interaction.

CONCLUSION

Considering data processing and discussion of the research results stated earlier, the research can conclude that students' reading comprehension achievement practicing the collaborative strategic reading (CSR) learning strategy is higher than students' achievement using the reciprocal teaching-learning strategy. Students' reading achievement who have a

field-independent cognitive style is higher than those who have a field-dependent cognitive style.

The findings dealing with the interaction between the use of learning strategies and cognitive style in influencing students' reading comprehension achievement. Students with a field-dependent cognitive style obtained higher reading comprehension achievement if taught with a collaborative strategic reading (CSR) learning strategy and a reciprocal teaching-learning strategy.

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