

## The Implementation of Cornell Note-Taking to Improving Students' Reading Comprehension

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**Abstract.** *The main objective of this study was to determine the significant difference in improving students' reading comprehension before and after being taught using the Cornell Note-Taking method. This type of research is quantitative research using a quasi-experimental research design. This study sampled 62 of 287 students. Researchers collected data with pre-and post-tests. The test is multiple-choice with recount text material. The analysis revealed a significant difference between the experimental and control classes. After using Cornell Note-Taking, the experimental class scored 61.03 on the pre-test and 76.52 on the post-test, a 15.49 increase. Without treatment, the control class scored 54.32 pre-test and 67.87 post-test, a 13.55 increase. Experimental class scores were higher. Meanwhile, through the Independent Samples T-test, the T-test sig. (2-tailed) shows  $0.000 < 0.050$ , which means  $H_a$  is accepted and  $H_0$  is rejected. On the other hand, the result of the t-table test using a significance level of 5%, the resulting t-test value is greater than the t-table ( $5.410 > 1.670$ ). The resulting p-value of 0.000 is smaller than the significance level of 0.050, so the results of applying the Cornell Note-Taking method are proven effective and can improve students' reading comprehension skills.*

**Keywords:** Reading, Reading Comprehension, Cornell Note-Taking method

**Abstrak.** Tujuan utama dari penelitian ini adalah untuk mengetahui perbedaan yang signifikan dalam meningkatkan pemahaman membaca siswa sebelum dan sesudah diajar dengan menggunakan metode Cornell Note-Taking. Jenis penelitian ini adalah penelitian kuantitatif dengan menggunakan desain penelitian kuasi-eksperimen. Penelitian ini mengambil sampel sebanyak 62 dari 287 siswa. Peneliti mengumpulkan data dengan pre-test dan post-test. Tes tersebut berbentuk pilihan ganda dengan materi teks recount. Hasil analisis menunjukkan adanya perbedaan yang signifikan antara kelas eksperimen dan kelas kontrol. Setelah menggunakan Cornell Note-Taking, kelas eksperimen mendapat nilai 61,03 pada pre-test dan 76,52 pada post-test, sebuah peningkatan sebesar 15,49. Tanpa perlakuan, kelas kontrol mendapat nilai 54,32 pada pre-test dan 67,87 pada post-test, sebuah peningkatan sebesar 13,55. Skor kelas eksperimen lebih tinggi. Sementara itu, melalui uji Independent Samples T-test, nilai T-test sig. (2-tailed) menunjukkan  $0.000 < 0.050$  yang berarti  $H_a$  diterima dan  $H_0$  ditolak. Di sisi lain, hasil uji t-tabel dengan menggunakan tingkat signifikansi 5%, nilai t-test yang dihasilkan lebih besar dari t-tabel ( $5,410 > 1,670$ ). Nilai p-value yang dihasilkan sebesar 0,000 lebih kecil dari taraf signifikansi 0,050, sehingga hasil penerapan metode Cornell Note-Taking terbukti efektif dan dapat meningkatkan kemampuan membaca pemahaman siswa.

**Kata kunci:** Membaca, Pemahaman membaca, Metode Cornell-Note Taking

### BACKGROUND

English is not merely a language of foreign origin but rather a language that necessitates proficiency in the current era of globalization. Furthermore, the English language assumes a crucial function in other domains of the field worldwide, so it is natural

for people to understand and master English to keep up with globalization. (Appadurai, 1996) says there are many aspects of life both directly and indirectly influenced by English, such as in the world of technology, communication, economics & business, and education. English is provided in Indonesia by preschoolers through the tertiary education sector. In teaching English at school, students must understand four basic English skills, and the matter concern is reading.

Every student must possess reading skills to support academic success at school. (Bujaya, 2022) says the primary tool of academic modernization is reading. Thus, one must get used to reading, thinking, and reviewing a reading. Through reading, students can gain knowledge and improve the quality of study. As said (Ismail et al., 2017), reading is part of perceptive skills that are highly significant for learners. Meanwhile (Khasawneh, 2022) says that reading comprehension is the main of all reading processes.

(Bahrami & Nosratzadeh, 2017) Reading comprehension is an effort someone makes to explore and understand the meaning of a text both explicitly and implicitly. (Nurdianingsih, 2021) The thought of reading comprehension pertains to the cognitive process of receiving, deciphering, and understanding the value of reading. It might be inferred that reading encompasses more than simply perceiving written words. Students must also understand to gain knowledge from the text they read.

Based on the researcher's observations when carrying out a school internship, the writer found difficulties experienced by most students when reading. Students can read a text, but they need more vocabulary and grammar to understand the reading text. During the reading process, students read without constructing every information point they get when reading activities occur. This problem leads to challenges for students in discerning the primary message, comprehending the material presented, and grasping the text's overall meaning.

In addition to students assuming that English is a complex subject to learn, the teaching style applied by the teacher is also reasonably monotonous. For example, the teacher guides the students, directing them to engage in independent reading and respond to the question prompts presented within the printed copy of the book. The teacher explains to students if parts need to be clarified. This makes students quickly bored and unmotivated to read, especially when understanding a reading text. In this case, teachers' obligation is to provide students with more effective and entertaining learning approaches to improve students' reading comprehension. The Cornell Note-Taking method is one method for improving students'

reading comprehension. Cornell Note-Taking method is a scholarly approach to reading and note-taking, initially invented by Walter Pauk, an esteemed Professor of Education at Cornell University. Cornell Note-Taking is a systematic method commonly used by many students. In the process, this method leads students to read while thinking critically and actively (Wong, 2009:261). This method also makes students more interested in the lesson because they must pay attention to the material, be careful, and focus when sorting out information (Mustofa, 2018). Based on the series of explanations above, the researcher supposes that the method can help students improve their reading comprehension.

## **LITERATURE REVIEW**

### **1. Reading**

(Yurko & Protsenko, 2022) Reading is called the most effective way for someone who wants to learn and remember language because by reading a person can acquire skills that are useful for his life as we know reading is very closely related to everyday life, whenever and wherever a person has to deal with things that require him to read in order to obtain information and knowledge before doing something. (Ratna Sari & Fitriasia, 2022) Reading is an activity that must be prioritized in all types of language classes because, in addition to reading being considered the main of information, reading is also a place to connect the knowledge that students already have while expanding it with new knowledge. Through reading, students also have the possibility to get to know more about vocabulary, language organization, formulation of sentences, and other language components.

### **2. Reading Comprehension**

(Nugroho et al., 2019) Reading comprehension is a skill where a person can deftly read a text, process each piece of information, and then understand its meaning. Comprehension means that the reader can filter any information gained as efficiently as possible and is able to answer the questions posed without further interaction with the text. During the reading process, the reader produces meaning that is captured by the eyes and then processed through the mind; on the other hand, the mind also connects a series of meanings from the previous lines with the following lines so that the reader can determine the idea of a text both implied and explicit.

### **3. Cornell Note-Taking**

(Pauk & Owens, 2013) Cornell Note-Taking method brings students to focus on taking notes with a clear set of instructions that must be followed: Students are asked to provide a

sheet of paper, then divided into three columns: The right-hand column is used to write points, main ideas, and brief explanations of information obtained from a text, the size of the right-hand column is also larger than the left-side column. The left-side column serves to write questions and keywords related to the right-side column, and the last is the bottom column or summary column; in this column, students are asked to recap the notes on the right and left side columns and then write conclusions in their own language, the summary column also helps clarify the meaning. So, the Cornell Note-Taking method is claimed to be a useful one since it may help students understand reading, train focus, investigate students' critical thinking, and can be repeated at any time.

## **RESEARCH METHOD**

### **A. Research Design**

The researcher adopted a quasi-experimental approach applying a Non-equivalent Control Group design. During the quasi-experimental study, the researcher established two distinct groups: experimental and control groups. The treatment administered to each class varied, with the experimental class being presented with teaching using the Cornell Note-Taking method, whereas the control class did not receive any kind of treatment.

### **B. Data Collection**

#### **1. Pre-Test**

Before implementing the treatment, the researcher administers a pre-test to the students.

#### **2. Treatment**

After being given a pre-test, the researcher gave Cornell Note-Taking treatment to students, but only in the experimental class.

#### **3. Post-Test**

The researcher administers a post-test to the subjects subsequent to the implementation of the treatment. The post-test aims to examine the significant differences between the Cornell Note-Taking treatment in improving students' reading comprehension.

### **C. Data Analysis**

#### **1. Scoring**

The researcher executed an analysis and evaluation of both the pre-test and post-test outcomes completed by the students.

## **2. Normality Test**

The researcher applied the Kolmogorov-Smirnov test to identify whether the data from the experimental and control classes were circulating properly or not, which means that if the normality test results show more than 0.05 ( $> \alpha = 0.05$ ), then the data results can be called normal. At the same time, if the data results show less than 0.05 ( $> \alpha = 0.05$ ), it is called abnormal.

## **3. Homogeneity Test**

The researcher performed a homogeneity test to assess the similarity between the data obtained from the experimental group and the control group. The researcher performed a homogeneity test to assess the similarity between the data obtained from the experimental group and the control group. A significance level of  $< 0.05$  was used to determine the acceptance or rejection of the data. If the test generated a result less than  $< 0.05$ , it indicated a lack of similarity or rejection of the data. Conversely, if the result was greater than  $> 0.05$ , it indicated the similarity or acceptance of the data as homogeneous.

## **4. Independent Samples T-test**

The data was evaluated and tested using the T-test approach following the final step of the two trials. The T-test was used to check out the contrast between the experimental group and the control group, as well as to determine the acceptance or rejection of the hypothesis. The researcher executes an analysis using a two-sided significance level, which indicates that if the significance value (two-tailed) is below 0.05, there exists a difference between the pre-test and post-test data. Conversely, if the significance value (two-tailed) is above 0.05, there is no obvious difference between the pre-test and post-test data.

## **FINDING AND DISCUSSION**

### **1. The students' reading comprehension before being taught using Cornell Note-Taking method.**

Statistical pre- and post-test findings for the control group are presented in the table below:

**Table 1. Descriptive Statistic of Control Class**

| Descriptive Statistics |    |         |         |       |                |
|------------------------|----|---------|---------|-------|----------------|
|                        | N  | Minimum | Maximum | Mean  | Std. Deviation |
| Pre-test Control       | 31 | 48      | 68      | 54.32 | 5.243          |
| Post-test Control      | 31 | 52      | 80      | 67.87 | 6.490          |
| Valid N (listwise)     | 31 |         |         |       |                |

The data above is data from the control class that did not receive treatment in the form of the Cornell Note-Taking method; the mean obtained by the control class in the pre-test was 54.32 with a minimum student score of 48 and a maximum score of 68, while the mean obtained in the post-test was 67,87 with a minimum score of 52 and a maximum of 80.

## **2. The students' reading comprehension after being taught using Cornell Note-Taking method.**

Here's a table showing the statistical before-and-after test scores of the experimental group:

**Table 2. Descriptive Statistic of Experimental Class**

| Descriptive Statistics |    |         |         |       |                |
|------------------------|----|---------|---------|-------|----------------|
|                        | N  | Minimum | Maximum | Mean  | Std. Deviation |
| Pre-test Experimental  | 31 | 52      | 72      | 61.03 | 4.586          |
| Post-test Experimental | 31 | 68      | 92      | 76.52 | 6.088          |
| Valid N (listwise)     | 31 |         |         |       |                |

The mean data from the experimental class pre-test shows 61,03 with a minimum score of 52 and a maximum score of 72, while the mean in the post-test is 76.52 with a minimum score of 68 and a maximum score of 92.

## **3. Significant difference of the students' reading comprehension before and after being taught using Cornell Note-Taking method.**

In order to identify the presence of a statistically significant disparity between two groups of students, one group being unexposed to the Cornell Note-Taking method and the other group having received instruction on the application of the Cornell Note-Taking method, the writer has conducted the following tests and obtained the subsequent outcomes:

**Table 3. The Difference between Pre-test and Post-test of Control Class and Experimental Class**

| Data                   | N  | Min | Max | Mean  | Mean Difference |
|------------------------|----|-----|-----|-------|-----------------|
| Pre-test Control       | 31 | 48  | 68  | 54,32 | 13,55           |
| Post-test Control      | 31 | 52  | 80  | 67,87 |                 |
| Pre-test Experimental  | 31 | 52  | 72  | 61,03 | 15,49           |
| Post-test Experimental | 31 | 68  | 92  | 76,52 |                 |

According to the data presented in the table, it can be observed that the average score of the experimental group, who received the Cornell Note-Taking treatment, is greater than that of the control group, which did not get the treatment.

**a. Normality Test**

The researcher conducted a normality test in order to determine the distribution of data between the two groups. The findings of the normality test are outlined below:

**Table 4. Result of Normality Test**

| Tests of Normality |                                 |    |      |              |    |      |  |
|--------------------|---------------------------------|----|------|--------------|----|------|--|
| Class              | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |  |
|                    | Statistic                       | df | Sig. | Statistic    | df | Sig. |  |
| Result Pre_Con     | .155                            | 31 | .056 | .903         | 31 | .009 |  |
| Post_Con           | .153                            | 31 | .062 | .933         | 31 | .054 |  |
| Pre_Exp            | .154                            | 31 | .059 | .938         | 31 | .072 |  |
| Post_Exp           | .147                            | 31 | .088 | .936         | 31 | .063 |  |

a. Lilliefors Significance Correction

In the Kolmogorov-Smirnov section, the significance column shows that the results are more significant than  $> 0.050$ , which means that all data from both classes are normally distributed.

**b. Homogeneity Test**

The homogeneity test was performed by the researcher to see if the data from both samples revealed a similar variance. The subsequent section presents the outcomes of the homogeneity test conducted on the two samples:

**Table 5. Result of Homogeneity Test**

**Test of Homogeneity of Variance**

|        |                                      | Levene Statistic | df1 | df2     | Sig. |
|--------|--------------------------------------|------------------|-----|---------|------|
| Result | Based on Mean                        | .688             | 3   | 120     | .561 |
|        | Based on Median                      | .625             | 3   | 120     | .600 |
|        | Based on Median and with adjusted df | .625             | 3   | 111.545 | .600 |
|        | Based on trimmed mean                | .643             | 3   | 120     | .589 |

The significance column shows a number greater than  $> 0.050$ , which means the data is said to be homogeneous.

**c. Independent Samples T-test**

The researcher performed an independent t-test to identify whether there was a statistically significant contrast between the class of students instructed using the Cornell Note-Taking approach and the class of students who did not get instruction using the Cornell Note-Taking approach. The subsequent findings present the outcomes of the independent T-test that were acquired:

**Table 6. Result of Independent Samples T-test**

**Result of Independent Samples T-test**

**Independent Samples Test**

|        |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |        |                 | 95% Confidence Interval of the Difference |                       |         |        |
|--------|-----------------------------|---|------|------------------------------|--------|-----------------|---|-----------------------|---------|--------|
|        |                             | F                                       | Sig. | t                            | df     | Sig. (2-tailed) | Mean Difference                           | Std. Error Difference | Lower   | Upper  |
| Result | Equal variances assumed     | .002                                    | .961 | -5.410                       | 60     | .000            | -8.645                                    | 1.598                 | -11.842 | -5.448 |
|        | Equal variances not assumed |   |      | -5.410                       | 59.756 | .000            | -8.645                                    | 1.598                 | -11.842 | -5.448 |

The t-test value obtained is 5.410, above the critical t-value ( $5.410 > 1.670$ ). The p-value obtained is 0.000, which indicates that the value is smaller than the predetermined significance limit ( $0.000 < 0.050$ ). Based on the data collected, it can be statistically concluded that there is a significant difference in the mean scores between the experimental and control groups. The experimental group showed an average score of 76.52. In contrast, the control group had a mean score of 67.87. Based on the data analysis, it can be concluded that the mean score in the experimental group, which used the Cornell Note-Taking method, was significantly higher compared to the control group that did not use this approach. Based on the significance (2-tailed), it shows a value of 0.000, which is smaller than the conventional standard of 0.050. These results indicate that the alternative hypothesis ( $H_a$ ) is accepted, while the null hypothesis ( $H_o$ ) is rejected. In essence, there is a significant



difference between courses that do not use the Cornell Note-Taking approach and courses that use the Cornell Note-Taking method.

## **CONCLUSION**

1. The control class obtained an average score of 54.32 on the pre-test and 67.87 on the post-test, an increase of 13.55 without treatment.
2. The experimental class obtained an average value of 61.03 in the pre-test, then after the treatment of the Cornell Note-Taking method, there was an increase of 15.49, so the average post-test value produced was 76.52. It was concluded that the experimental class was far superior because it used the Cornell Note-Taking method, so students were far more understanding and careful in answering questions.
3. The Cornell Note-Taking method is an effective method to use because, through this method, students can improve their reading comprehension. This is evidenced by the results of the average post-test value of the experimental class, which managed to reach 76.52 compared to the control class of 67.87, which is lower than the experimental class because the control class did not get treatment. In addition, it is also supported by the T-test, which is higher than the 5% t-table ( $5.410 > 1.670$ ), so it can be stated that  $H_a$  is accepted,  $H_o$  is rejected, and there is a significant difference between the experimental class that received treatment in the form of the Cornell Note-Taking method and the control class that did not receive any treatment.

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