

## RESEARCH ARTICLE

# THE EFFECT OF APPLYING HERRINGBONE TECHNIQUE ON SENIOR HIGH SCHOOL EFL STUDENTS' ABILITY TO COMPREHEND NEWS ITEM TEXTS: A QUASI-EXPERIMENTAL STUDY

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**Abstract:** Reading comprehension remains a complex skill that imposes significant challenges on senior high school students. However, the application of Herringbone technique is deemed to be an effective way to address these challenges. Therefore, this study examines the effect of applying Herringbone technique on senior high school EFL students' ability to comprehend news item texts as well as analyzes their attitudes towards learning English (reading comprehension of news item texts) using Herringbone technique. Quantitatively, this study employed a quasi-experimental with a pretest-posttest design to examine the effect and students' learning progress. A pretest was given before treatments, while the posttest was given after the students were taught by applying Herringbone technique. In addition, a 5-point Likert scale questionnaire was also distributed to examine the learning attitudes of the students' in the experimental class. 70 eleventh-grade students from a state senior high school in Pematangsiantar, North Sumatra, were purposively chosen as the sample in this study. To analyze the data, Hatch & Farhady's (1982) framework of statistical calculation was employed to examine the effect and students' learning progress. Additionally, frequency (percentage) calculation following SPSS version 16.0 was employed to examine the students' learning attitude. It was revealed that the mean score of the experimental class (78.42) is higher than that of the control class (70.71). The score of the *t*-test (3.18) is also higher than the *t*-table (1.99) at a level of significance of 5% of two-tailed test, which means the null hypothesis is rejected and the alternative hypothesis is accepted. The result of the questionnaire also indicates that the students have good and positive attitudes towards learning English (reading comprehension of news item texts) using Herringbone technique. Thus, this study concludes that Herringbone technique could have a significant effect on senior high school students' ability in comprehending news item texts.

**Keywords:** Herringbone Technique; News Item text; Reading Comprehension; Senior High School

## **PENGARUH PENERAPAN TEKNIK MENGAJAR HERRINGBONE TERHADAP KEMAMPUAN MURID SEKOLAH MENENGAH ATAS DALAM MEMAHAMI TEKS NEWS ITEM : STUDI EKSPERIMEN-QUASI**

**Abstrak:** Pemahaman bacaan tetap menjadi keterampilan yang kompleks dan menimbulkan tantangan signifikan bagi siswa SMA. Namun, penerapan teknik Herringbone dianggap sebagai sebuah cara yang efektif untuk mengatasi tantangan tersebut. Oleh karena itu, penelitian ini mengkaji dampak penerapan teknik Herringbone terhadap kemampuan siswa SMA dalam memahami teks *news item*, serta menganalisis sikap mereka terhadap pembelajaran Bahasa Inggris (pemahaman bacaan teks *news item*) menggunakan teknik Herringbone. Secara kuantitatif, penelitian ini menggunakan desain quasi-eksperimental dengan model pretest-posttest untuk menilai efek dan kemajuan belajar siswa. *Pretest* diberikan sebelum pengajaran, sedangkan *posttest* diberikan setelah siswa diajarkan dengan menerapkan teknik Herringbone. Selain itu, kuesioner skala Likert 5 poin juga dibagikan untuk melihat sikap belajar siswa di kelas eksperimen. Sebanyak 70 siswa kelas XI dari salah satu SMA negeri di Pematangsiantar, Sumatera Utara, dipilih secara purposif sebagai sampel dalam penelitian ini. Untuk menganalisis data, kerangka perhitungan statistik dari Hatch & Farhady (1982) digunakan untuk menguji pengaruh dan kemajuan belajar siswa. Selain itu, perhitungan frekuensi (persentase) menggunakan SPSS versi 16.0 digunakan untuk menguji sikap belajar siswa. Hasil penelitian menunjukkan bahwa skor rata-rata kelas eksperimen (78.42) lebih tinggi daripada kelas kontrol (70.71). Skor uji-*t* (3.18) juga lebih tinggi daripada nilai tabel-*t* (1.99) pada tingkat signifikansi 5% uji dua ekor, yang berarti hipotesis nol ditolak dan hipotesis alternatif diterima. Hasil kuesioner juga menunjukkan bahwa siswa memiliki sikap yang baik dan positif terhadap pembelajaran bahasa Inggris (pemahaman bacaan teks *news item*) menggunakan teknik Herringbone. Oleh karena itu, penelitian ini menyimpulkan bahwa teknik Herringbone dapat memberikan pengaruh yang signifikan terhadap kemampuan siswa SMA dalam memahami teks *news item*.

**Kata kunci:** Teknik Herringbone; Teks *News Item*; Pemahaman Bacaan; Sekolah Menengah Atas

## **INTRODUCTION**

The forces of globalization and the unprecedented growth of Society 5.0 have resulted in the need and urgency to master English (Nguyen et al., 2021) even in EFL (English as a Foreign Language) contexts such as Indonesia. For that reason, a number of public and private English education sectors (e.g. schools, English language courses, etc.) in such EFL contexts have steadily expanded over decades (Ahn, 2021). Each promotes approaches, methods, techniques and strategies to teach and learn English (as a foreign language) more effectively, ensuring that the learning objectives are achieved.

Effective and appropriate teaching techniques are crucial in English language teaching and learning contexts, not only to help students acquire and comprehend the major language skills and knowledge better, but also to hone those skills in real-life situations. In terms of this, reading comprehension, as one of the major language skills in English, is, without a doubt, necessary for

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students' success in life. Scholars such as Duke et al. (2021) and Woolley (2011) defined reading comprehension as a complex ongoing cognitive process whereby students concurrently extract and derive linguistic meaning through interaction with written texts to make sense of the relationship between the texts and their prior knowledge. Furthermore, Heilman (1981) has even proposed five key components of comprehension, highlighting the importance of this reading skill. They are: 1) recalling word meaning, 2) making inferences, 3) following the text's structure, 4) recognizing the writer's purpose, attitude, tone and mood, and 5) finding explicit information within the text. Not surprisingly, deficiencies in one of these areas of comprehension may negatively influence a student's classroom performance since this skill is connected to a broad range of cognitive skills as they engage in the text.

Due to the fact that reading comprehension is linked to a broad range of cognitive skills, this specific language skill often poses challenges and difficulties for students (Oliveira et al., 2023; Safaie, 2020; Sitio, 2020). Students were found to struggle to develop meaning from written texts, make inferences, find (un)stated detail information, recall and summarize information, and even actively monitor their comprehension (Watson et al., 2012).

In the context of senior high school EFL classrooms in Indonesia, previous studies have reported that students also faced similar problems (Astria, 2019; Dewi et al., 2023; Handayani, 2017; Qulub, 2024). Their findings suggest that difficulties in identifying the main idea and author's tone from the text, as well as recalling detailed and sometimes unstated information within the text, become core problems that result in failing to fill in blanks and answer questions related to the text, as well as other classroom performance (Dewi et al., 2023; Handayani, 2017). Another problem found is a lack of motivation to read and engage in written texts (Astria, 2019; Yusuf et al., 2016). Theoretically, the relation between proficient reading and motivation is synergistic (Duke et al., 2021). Studies have also shown that students with high motivation in reading are more likely to engage in extensive reading activities, persevere in challenging texts, and utilize effective reading strategies, leading to improved reading comprehension (Ma & Zhao, 2025; Sitio, 2020).

Regarding the above phenomena, a number of previous studies have conducted systematic investigations into the effectiveness of Herringbone technique in teaching reading comprehension in English language instructions (Halimah et al., 2023; Rohmah, 2018; Rosyida & Ghuftron, 2018; Yusuf et al., 2016) as one of the solutions to the above-mentioned problems. The findings of these studies generally indicate that the Herringbone technique produces significant and positive effects on students' reading comprehension abilities across various educational levels, including university students (Rohmah, 2018), senior high school students (Halimah et al., 2023; Rosyida & Ghuftron, 2018), and junior high school students (Kurniawan & Indrawati, 2016; Yusuf et al., 2016). However, to the best of the researchers' knowledge, none of the existing studies specifically investigated the use of Herringbone technique in teaching reading comprehension of news item texts. Most of them focused on Recount (Halimah et al., 2023; Yusuf et al., 2016) and Narrative texts (Kurniawan & Indrawati, 2016). Accordingly, this study contributes to the state of the art by providing empirical evidence on the use of Herringbone technique for teaching reading comprehension of news item texts in an Indonesian senior high school EFL classroom, an area that has not been explicitly addressed in the previous research.

Herringbone technique is one of the teaching techniques that facilitates students' comprehension of texts by visually organizing key information through six guiding questions—who, what, when, where, why, how—arranged on a fish-bone diagram (McKnight, 2010; Rosyida & Ghuftron, 2018). This structured questioning strategy encourages readers to interact actively with the text, integrate key ideas, and synthesize information into a unified understanding. The use of a visual organizer further supports comprehension by making abstract textual relationships explicit, which is particularly beneficial for EFL students who may struggle with complex informational texts (Rohmah, 2018; Yusuf et al., 2016).



In terms of the English genre of texts, news items, as one of the genres of texts necessary for senior high school EFL students to comprehend, are known to be one of the most complex genres of texts (Dewi et al., 2023; Srinon & White, 2023). According to Gerot & Wignell (1994), news item is a factual text used to report events of the day, which are considered newsworthy to the public. It consists of four main generic structures: 1) headline, 2) newsworthy event, 3) background event, and 4) sources. This type of text is deemed to pose challenges for students due to the interplay of structural, linguistic, and cognitive demands placed on readers (students). The way information is organized and expressed within this text requires a relatively high level of language proficiency and background knowledge (Qulub, 2024). Students have to preview and predict the content, seek clarification of an unclear information, monitor and evaluate their comprehension while grappling with the texts (Tarchi, 2017).

Thus, based on the aforementioned sequence of phenomena above, this study intends to answer the following empirical research questions:

- 1) Does the application of Herringbone technique significantly affect senior high school students' ability to comprehend news item texts?
- 2) What are the students' overall attitudes towards learning English (reading comprehension of news item texts) using Herringbone technique?

Moreover, to provide a scientific basis for examining the effect of Herringbone teaching technique, this study attempts to test the following hypotheses:

- 1) Null hypothesis ( $H_0$ ): Herringbone technique does not significantly affect senior high school students' ability to comprehend news item texts.
- 2) Alternative hypothesis ( $H_a$ ): Herringbone technique significantly affects senior high school students' ability to comprehend news item texts.

## RESEARCH METHOD

### Research Design

Quantitatively, this study used a quasi-experimental with a pretest and posttest design. Quasi-experimental research involve investigation of an independent variable on a dependent variable without random assignment of the participants, typically using intact groups (Ary et al., 2010; Creswell & Creswell, 2017). This design is best to be used (in educational research) when the researcher cannot randomize study groups due to ethical, logistical, or other barriers (Chatterji, 2010; Cohen et al., 2002).

**Table 1**

Research Design (adapted from Ary et al., 2010)

Group	Pretest	Treatment	Posttest
Experimental	X1	E	X2
Control	Y1	C	Y2

Notes:

- X1 and Y1 = Pretest in both experimental and control groups  
 X2 and Y2 = Posttest in both experimental and control groups  
 E = Teaching by applying Herringbone technique in EG  
 C = Teaching without applying Herringbone technique (conventional technique) in CG

### Research Site and Participants

The participants involved in this study were Grade 11 students of a state senior high school in Pematangsiantar, North Sumatra, Indonesia. They comprise of two intact classes: one (XI-IA-6) was assigned as the experimental group ( $n = 35$ ) and another (XI-IA-7) was assigned as the control group ( $n = 35$ ). They were purposively chosen as the sample out of 282 students of population. Purposive

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sampling was employed in this study based on specific criteria relevant to the objectives of this study, such as their learning background, specific learning needs, and different learning characteristics. Moreover, purposive sampling helped minimize the effect of extraneous variables and ensured that the groups were appropriately chosen for examining the effect of the treatment (Memon et al., 2025).

## Data Collection

In order to build upon the comprehensive understanding of the effect of Herringbone technique on the students' ability to comprehend news item texts, as well as analyze their learning attitudes, this study used a test and questionnaires to collect the relevant data.

First, a text-based multiple-choice test was used as the main instrument of the study. The test consisted of 20 items with five answer choices, which were adopted from several Indonesian National Examination tests (years 2018 – 2019) and TOEFL reading tests. Hence, the test is supposed to be tested and evaluated, thereby confirming the validity and reliability. The test was conducted two times: the first was given (before treatment) as the pretest, and the second was given (after treatment) as the posttest. In terms of scoring the test, the researchers employed a scoring range from 0 to 100, which was later counted using the following formula:

$$S = \frac{R}{n} \times 100 \quad (1)$$

Notes:

$S$  = Total score

$R$  = Total correct

$n$  = Test items

Additionally, to support the test results, a set of closed-ended questionnaires comprising 19 items were constructed. The questionnaires were divided into two parts: students' demographic information and their attitudes towards learning English (reading comprehension) using Herringbone technique. This set of questionnaires is a five-point Likert scale, which was adopted from several previous questionnaires from the previous research (Arwuttawin & Porkaew, 2018; Farzaneh & Nejadansari, 2014; Rangkuti et al., 2023), which are pertinent to the relevant issues, and then subsequently modified by the researchers. As having been applied in the published previous studies, the questionnaires were supposed to be tested and evaluated, thereby confirming the validity and reliability. This set of questionnaires were distributed to the students of the experimental class only, since they were taught by applying Herringbone technique. For the accuracy and understanding of participants' response, the translated Indonesian version of the questionnaires was distributed as well.

## Data Analysis

Firstly, to answer the first research question, an in-depth statistical calculation and analysis following the formula of Hatch & Farhady (1982) was employed in order to examine and assess the effect of the application of Herringbone technique.

1) Finding mean score of both experimental and control groups

$$\bar{X} = \frac{\sum fx}{N} \quad (2)$$

Notes:

$\bar{X}$  = Average score

$\sum fx$  = Sum of the raw score

$N$  = Number of students



2) Finding standard deviation of both experimental and control groups

$$S = \frac{\sqrt{\sum d^2}}{N-1} \quad (3)$$

Notes:

S = Standard deviation

$\sum d^2$  = Sum of mean deviation

N = Number of students

1 = Constant number

3) Finding standard error of difference of mean

$$SE(\chi_e - \chi_c) = \sqrt{\left(\frac{se}{\sqrt{N_1}}\right)^2 + \left(\frac{sc}{\sqrt{N_2}}\right)^2} \quad (4)$$

Notes:

$SE(\chi_e - \chi_c)$  = Standard error

se = Standard deviation of experimental group

sc = Standard deviation of control group

N1 = Number of students in experimental group

N2 = Number of students in control group

4) Testing hypotheses

$$t_{test} = \frac{\bar{X}_e - \bar{X}_c}{SE(\chi_e - \chi_c)} \quad (5)$$

Notes:

$\bar{X}_e$  = Mean of posttest in experimental group

$\bar{X}_c$  = Mean of posttest in control group

$SE(\chi_e - \chi_c)$  = Standard error

Furthermore, to answer the second research question, a descriptive statistical analysis (frequency and percentage count) using the Statistical Package for the Social Sciences (SPSS) software version 16.0 in order to statistically reveal the students' learning attitudes towards the learning English (reading comprehension of news item texts) by applying Herringbone technique.

## RESULTS

### Analysis of the Effect of Herringbone Technique on Students' Reading Comprehension

This section presents the results of in-depth statistical calculations and analysis in order to answer the first research question, consisting of the calculations of students' scores on the pretest and posttest in both experimental and control groups, students' learning progress after treatment, variance and standard deviation (SD), the t-test, and the degree of freedom (df).

#### *Students' Scores (Pretest-Posttest) and Progress in both Experimental and Control Groups*

**Table 2** presents the results of the students' scores in both pretest and posttest in the two groups. As seen, the total scores of in pretest of the experimental group is 1985, which can be calculated that the average score (mean) is 56.71. As for the posttest, the total scores in the experimental group is 2745, which can be calculated that the average score (mean) is 78.42.

Meanwhile, the total scores of in pretest of the control group is 2150, which can be calculated that the average score (mean) is 61.42. As for the posttest, the total scores in the control group is 2475, which can be calculated that the average score (mean) is 70.71.

**Table 2**

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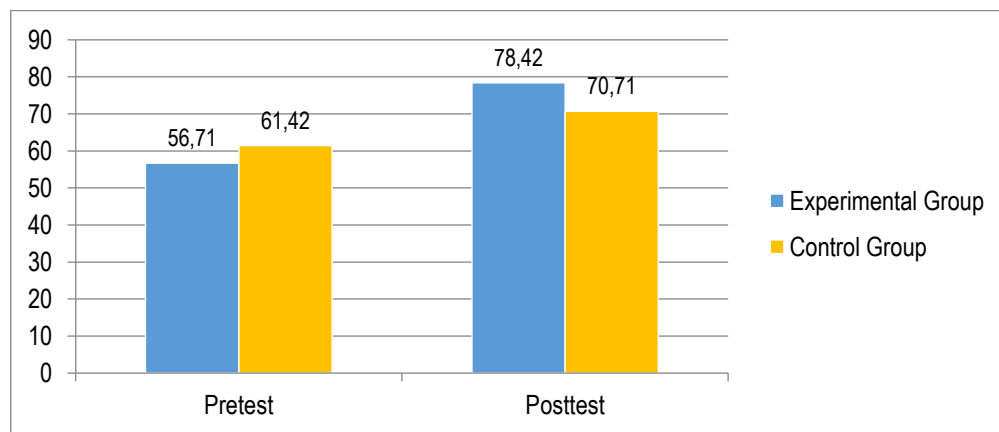
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Students' Scores of Pretest and Posttest in both EG and CG

	Experimental (n = 35)			Control (n = 35)		
	Pretest	Posttest	Range	Pretest	Posttest	Range
Σ	1985	2745	760	2150	2475	325
Mean	56.71	78.42	21.71	61.42	70.71	9.29

Following the results of the students' scores in both pretest and posttest above, the students' learning progress after treatment was carried out on both groups (EG = Herringbone technique, CG = conventional teaching technique) shows a statistically significant difference between the two groups.

As illustrated in **Figure 1**, the scores of the pretest in the experimental group (56.71) are statistically lower than in the control group (61.42). After treatment was carried out, the scores of the posttest in the experimental group (78.42) are significantly higher than in the control group (70.71). This depicts that there is an improvement in the students' learning progress in the experimental group at 21.71 points, which is also significantly higher than in control group at 9.29 points.



**Figure 1**

The students' learning progress (achievement) after treatment

Generally, the result of the students' progress after treatment shows that Herringbone technique could have a more significant effect on the students' ability to comprehend news item texts than the conventional teaching technique.

## *Variance and Standard Deviation in Posttest of both Experimental and Control Groups*

The total sum of squares of the students at the time of administering the posttest in the experimental group was 3138.571. Those points are necessarily required in order to determine the standard deviation (SD) of the posttest in the experimental group, which is in turn compared to the same data at posttest in the control group. Therefore, the calculation of the standard deviation in posttest of the experimental group can be seen as follows:

$$S^e = \sqrt{\frac{\sum d^2}{N - 1}}$$

$$S^e = \sqrt{\frac{3138.571}{35 - 1}}$$

$$S^e = \sqrt{\frac{3138.571}{34}}$$

$$S^e = \sqrt{92.3109}$$

$$S^e = 9.6$$

Meanwhile, the total sum of squares of the students at the time of administering the posttest in the control group was 3824.998. Those points are necessarily required in order to determine the standard deviation (SD) of the posttest in the experimental group, which is in turn compared to the same data at posttest in the experimental group. Therefore, the calculation of the standard deviation in posttest of the control group can be seen as follows:

$$S^c = \sqrt{\frac{\sum d^2}{N - 1}}$$

$$S^c = \sqrt{\frac{3824.998}{35 - 1}}$$

$$S^c = \sqrt{\frac{3824.998}{34}}$$

$$S^c = \sqrt{112.4999}$$

$$S^c = 10.6$$

### ***Testing Hypotheses and Finding out t-test and Degree of Freedom***

As part of the first research question, the hypotheses of this study need to be tested to assess the theory and provide a testable conclusion of the study. Accordingly, finding out the *t*-test and the degree of freedom (df) were carried out in order to test the hypotheses. First, the following calculation was carried out to find out the *t*-test.

$$t_{test} = \frac{\bar{X}_e - \bar{X}_c}{SE(\chi_e - \chi_c)}$$

$$t_{test} = \frac{78.42 - 70.71}{2.41}$$

$$t_{test} = \frac{7.71}{2.41}$$

$$t_{test} = \mathbf{3.18}$$

Next, the following calculation was carried out to find out the degree of freedom (df).

$$\begin{aligned} df &= (N_e - 1) + (N_c - 1) \\ &= (35 - 1) + (35 - 1) \\ &= 34 + 34 \end{aligned}$$

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Since the *t*-table at the level of significance of 5% is 1.99, therefore, based on the formula of hypotheses which was designed before, the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted as the score of the *t*-test (3.18) is higher than the *t*-table (1.99) at a level of significance of 5% for the two-tailed test. It proves that Herringbone technique significantly affects the targeted senior high EFL students' ability to comprehend news item texts.

**Analysis of the Students' Attitudes towards Learning English (Reading Comprehension of News Item Texts) using Herringbone Technique**

This section presents the result of an in-depth statistical analysis of the questionnaires administered to the students in the experimental group to assess their attitudes towards learning English (reading comprehension of news item) by applying Herringbone technique in order to answer the second research question.

As seen in **Table 3**, there are ten statements provided in the questionnaires that the students need to rate on a scale from 1 (strongly disagree/SD) to 5 (strongly agree/SA). The statements were divided into two characteristics: positive (no. 1 to 6) and negative (no. 7 to 10). The statements are: 1) I find the learning English (reading comprehension of news item texts) using Herringbone technique easy, 2) I find the learning English (reading comprehension of news item texts) using Herringbone technique interesting, 3) I prefer learning English (reading comprehension of news item texts) using Herringbone technique than the conventional technique, 4) Learning English (reading comprehension of news item texts) using Herringbone technique helps my English improved, 5) I look forward to learning more English texts (reading comprehension) using Herringbone technique, 6) I am satisfied with my performance on English (reading comprehension of news item texts) after learning using Herringbone technique, 7) I find the learning English (reading comprehension of news item texts) using Herringbone technique boring, 8) Learning English (reading comprehension of news item texts) using Herringbone technique is a waste of time, 9) Learning English (reading comprehension of news item texts) using Herringbone technique serves no purpose for me, and 10) I dislike learning English (reading comprehension of news item texts) using Herringbone technique.

**Table 3**  
Students' Attitudes towards Learning English (Reading Comprehension) using Herringbone technique

Statement	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree		Total (F)	Total (%)
	F	%	F	%	F	%	F	%	F	%		
1	10	28.57	21	60	3	8.57	1	2.85	0	0	35	100
2	9	25.71	21	60	4	11.42	1	2.85	0	0	35	100
3	5	14.28	18	51.42	12	34.28	0	0	0	0	35	100
4	2	5.71	16	45.71	16	45.71	1	2.85	0	0	35	100
5	9	25.71	20	57.14	6	17.14	0	0	0	0	35	100
6	4	11.42	20	57.14	11	31.42	0	0	0	0	35	100
7	0	0	0	0	5	14.28	26	74.28	4	11.42	35	100
8	0	0	0	0	0	0	6	17.14	29	82.85	35	100
9	0	0	0	0	2	5.71	28	80	5	14.28	35	100
10	0	0	1	2.85	0	0	22	62.85	12	34.28	35	100

Note: F = Frequency

**Table 3** presents the results of how the students in the experimental group reacted to the teaching and learning English (reading comprehension of news item texts) by applying Herringbone technique. It can be seen that 21 students (60%) out of 35 agreed that learning English (reading



comprehension) using Herringbone technique was easy and interesting. 18 students (51.42%) out of 35 preferred learning English (reading comprehension of news item texts) using Herringbone technique than the conventional teaching technique as they used to learn. However, when they were inquired whether learning English (reading comprehension of news item texts) using Herringbone technique helped improve their English performance, 16 (45.71%) students agreed with it whilst 16 others (45.71%) said that they were neutral (neither agree nor disagree). This may linked to the fact that the students still looked forward to learning more English texts (reading comprehension) using Herringbone technique seen from the amount of 20 students (57.14%) out of 35 agreed with it. It can also be seen that 20 students (57.14%) out of 35 were satisfied with their classroom performance on English (reading comprehension) after learning using Herringbone technique.

In terms of the negative statements, 26 students (74.28%) out of 35 disagreed that learning English (reading comprehension of news item texts) using Herringbone technique was boring. 29 students (82.85%) out of 35 even strongly disagreed that learning English (reading comprehension of news item texts) using Herringbone technique was a waste of time. 28 students (80%) out of 35 disagreed that learning English (reading comprehension) using Herringbone technique served no purpose for them. Yet, there were 2 (5.71%) students out of 35 who took a neutral stance on it. Last but not least, 22 students (62.85%) out of 35 disagreed that they disliked learning English (reading comprehension of news item texts) using Herringbone technique, even though 1 student (2.85%) out of 35 seemed to agree with the statement.

Regarding the results of the questionnaires, it can be indicated that senior high school students have good and positive attitudes towards learning English, especially on reading comprehension of news item texts, using Herringbone technique.

## DISCUSSION

Despite the results of this study have shown that teaching reading comprehension of news item texts using Herringbone technique could give a significant effect, it may not be the most efficient teaching technique since there are many others and these techniques differ from one to another (Farzaneh & Nejadansari, 2014; Yusuf et al., 2016). However, the evidence has shown that Herringbone technique does assist senior high school EFL students in comprehending the news item texts on the structural and linguistic features of the text, explicit information they read, and staying focused on the points relevant to the purpose of reading. In support of that, the result of the questionnaire indicates that the students have good and positive attitudes towards learning English, especially on reading comprehension of news item texts, using Herringbone technique. This findings support the existing studies (Halimah et al., 2023; Rohmah, 2018; Rosyida & Ghufon, 2018; Yusuf et al., 2016), which also indicate that the use of Herringbone technique contributes positively to students' reading comprehension by guiding them to focus on essential textual elements and organize information coherently. Through structured questioning and visual representation, Herringbone technique encourages active engagement with the texts, which may lead to improved comprehension outcomes.

Furthermore, this study's findings also line with Astria (2019) and Qulub (2024) whose studies found out that challenges such as students' poor understanding of the text structure and lack of motivation, fail to interpret the implied information, and the implementation needs much more time to succeed, this study also faced such problems. There were a few students who deemed comprehending news item texts served no purpose for them and had low interest in reading. In this case, the role of the teachers is necessarily important to make sure that their students can cope with the various challenges and obstacles in developing effective reading comprehension skills (Arwuttawin & Porkaew, 2018; Duke et al., 2021; Oliveira et al., 2023). They can attempt to integrate technology into their reading classrooms. As Mihret & Joshi (2025) found out that mobile and digital learning tools can facilitate adaptive and engaging learning environments, especially for struggling students. This is essential because the better achievement gained by the students through learning

# The Effect of Applying Herringbone Technique on Senior High School EFL Students' Ability to Comprehend News Item Texts: A Quasi-Experimental Study

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process in reading, the better comprehension they have upon the texts. By having good ability in reading comprehension, the students will have the capability to associate with texts and its elements.

## CONCLUSION

This study has examined the effect of the application of Herringbone technique on senior high school students' ability in comprehending news item texts, as well as analyzes their attitudes towards learning English (reading comprehension) using Herringbone technique. The results show that the average scores (mean) of the posttest in the experimental class (78.42) is statistically higher than the control class (70.71). The score of the  $t$ -test (3.18) is also higher than the  $t$ -table (1.99) at the level of significance of 5% for the two-tailed test. Therefore, the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted. It proves that Herringbone technique significantly affects the targeted senior high EFL students' ability to comprehend news item texts. In support of that, the result of the questionnaire indicates that the students have good and positive attitudes towards learning English, especially on reading comprehension of news item texts, using Herringbone technique.

Regardless of the particular use of Herringbone technique, this study highlights that an effective English reading comprehension teaching and learning should be thoroughly structured, scaffolded, and intensive, encompassing practice opportunities and including noteworthy assignments. The EFL teachers have to regularly monitor and evaluate their students' progress when dealing with comprehending news item texts, due to the fact that this type of text is deemed to pose challenges for students due to the interplay of structural, linguistic, and cognitive demands placed on students.

Lastly, since the empirical evidence has shown that some teaching-learning practices using Herringbone technique may work for some levels of students, schools, areas, cities, and even countries, but not for others. Therefore, further research on the same topic but with different levels of students, schools, areas, cities, and even countries needs to be carried out in order to gain and add more insights to the field of reading comprehension.

## REFERENCES

- Ahn, S. Y. (2021). English language learners' visualization of identities in transformation in an imagined world. *Language Awareness*, 30(4), 371–390.  
<https://doi.org/10.1080/09658416.2021.1933507>
- Arwuttawin, P., & Porkaew, K. (2018). *The attitudes of Thai undergraduate students towards the use of news articles as supplementary English reading materials*. [Master's Theses, Language Institute, Thammasat University]. Thammasat University repository. Retrieved from:  
[https://digital.library.tu.ac.th/tu\\_dc/frontend/Info/item/dc:166969](https://digital.library.tu.ac.th/tu_dc/frontend/Info/item/dc:166969)
- Ary, D., Jacobs, L. C., & Sorensen, C. (2010). *Introduction to Research in Education*. USA: Wadsworth Cengage Learning
- Astria, W. J. (2019). An analysis of students' reading ability in identifying generic structure of News Item text. *Jurnal Ilmiah Pendidikan Scholastic*, 3(2), 27-31.  
<https://doi.org/10.36057/jips.v3i2.357>
- Chatterji, M. (2010). Evaluation Methodology. *International Encyclopedia of Education*. 735–745.  
<https://doi.org/10.1016/B978-0-08-044894-7.01608-0>
- Cohen, L., Manion, L., & Morrison, K. (2002). *Research Methods in Education*. Routledge.



- Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. USA: Sage publications.
- Dewi, M. S. N., Sakina, R., Kulsum, E. M., Uyun, A. S., & Arifin, R. A. (2023). Scaffolding in teaching writing news item text, its benefits and challenges. *English Review: Journal of English Education*, 11(1), 63-74. <https://doi.org/10.25134/erjee.v11i1.6563>
- Duke, N. K., Ward, A. E., & Pearson, P. D. (2021). The science of reading comprehension instruction. *The Reading Teacher*, 74(6), 663-672. <https://doi.org/10.1002/trtr.1993>
- Farzaneh, N., & Nejadansari, D. (2014). Students' attitudes towards using cooperative learning for teaching reading comprehension. *Theory & Practice in Language Studies (TPLS)*, 4(2). <https://doi.org/10.4304/tpls.4.2.287-292>
- Gerot, L., & Wignell, P. (1994). *Making Sense of Functional Grammar: An Introductory Workbook*. Australia: Antipodean Educational Enterprises
- Hlimah, N., Saini, F., Saud, I. W., & Mutmainnah, N. (2023). The implementation of Herringbone technique to improve students' reading comprehension. *ELITE Journal*, 5(1), 167-182.
- Handayani, R. (2017). Teaching reading comprehension in news item text by using facts questions responses strategy. *Edukasi Jurnal Pendidikan Dan Pengajaran*, 4(2), 48-56.
- Heilman, W. A. (1981). *Principles and Practices Reading*. Washington: A Bell and Howell Company Ltd.
- Kurniawan, A. Y., & Indrawati, I. (2016). The effectiveness of Herringbone technique to teach reading of Narrative Text. *ELT Forum: Journal of English Language Teaching*, 5(2). <https://doi.org/10.15294/elt.v5i2.11229>
- Ma, L., & Zhao, Z. (2025). Reading motivation and reading comprehension achievement among English majors in China: A descriptive correlational study. *Heliyon*, 11(3). <https://doi.org/10.1016/j.heliyon.2025.e42427>
- McKnight, K. S. (2010). *The Teacher's Big Book of Graphic Organizers: 100 Reproducible Organizers that Help Kids with Reading, Writing, and the Content Areas*. USA: John Wiley & Sons.
- Memon, M. A., Thurasamy, R., Ting, H., & Cheah, J. H. (2025). Purposive sampling: Review and guidelines for quantitative research. *Journal of Applied Structural Equation Modeling*, 9(2), 1-23. [https://doi.org/10.47263/JASEM.9\(1\)01](https://doi.org/10.47263/JASEM.9(1)01)
- Mihret, G., & Joshi, J. (2025). Understanding and addressing reading comprehension challenges: Magnitude, causes and solutions. *Journal of English as a Foreign Language Teaching and Research*, 5(1), 1 – 11. <https://doi.org/10.31098/jefltr.v5i1.3220>
- Nguyen, T. T. M., Marlina, R., & Cao, T. H. P. (2021). How well do ELT textbooks prepare students to use English in global contexts? An evaluation of the Vietnamese English textbooks from an English as an international language (EIL) perspective. *Asian Englishes*, 23(2), 184–200. <https://doi.org/10.1080/13488678.2020.1717794>
- Oliveira, A. M., Santos, J. L. F., & Capellini, S. A. (2023). Reading comprehension performance of elementary and senior high school students. *Frontiers in Education*, 8, p. 1086040. <https://doi.org/10.3389/educ.2023.1086040>
- Qulub, A. S. (2024). *An Analysis of Students' Difficulties in Understanding News Item Text at SMAN 8 Kota Kediri* [Bachelor's Theses, IAIN Kediri]. IAIN Kediri Repository. Retrieved from: <https://etheses.iainkediri.ac.id/14037/>

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- Rangkuti, R., Khairina, J., Zulfan, Z., & Yusuf, M. (2023). The attitude of Indonesian senior high school students towards learning English. *World Journal of English Language*, 13(6), 460-460. <https://doi.org/10.5430/wjel.v13n6p460>
- Rohmah, H. (2018). The implementation of herringbone technique in reading comprehension at second semester of non-English Department. *Celt: A Journal of Culture, English Language Teaching & Literature*, 18(1), 64-78. <https://doi.org/10.24167/celt.v18i1.555>
- Rosyida, F., & Ghufron, M. A. (2018). Herringbone and Tri Focus Steve Snyder technique: The techniques for teaching reading comprehension viewed from students' reading habit. *International Journal of Instruction*, 11(3), 603-616. <https://doi.org/10.12973/iji.2018.11341a>
- Safaie, S. (2020). The effects of explicit and implicit teaching of connectors on the reading comprehension performance of Iranian EFL learners. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1777806>
- Sitio, I. T. (2020). The effect of scientific approach-based English learning strategy (SABELS) on the students' reading comprehension ability at grade ten of SMA Negeri 4 Pematangsiantar. *Nommensen Journal of English Studies*, 1(1), 12-24.
- Srinon, U., & White, P. R. (2023). Genre analysis of students' English hard news story writing in a Thai EFL university context. *Journal of Language and Linguistic Studies*, 19(4).
- Tarchi, C. (2017). Comprehending Expository texts: The role of cognitive and motivational factors. *Reading Psychology*, 38(2), 154-181. <https://doi.org/10.1080/02702711.2016.1245229>
- Watson, S. M., Gable, R. A., Gear, S. B., & Hughes, K. C. (2012). Evidence-based strategies for improving the reading comprehension of secondary students: Implications for students with learning disabilities. *Learning Disabilities Research & Practice*, 27(2), 79-89. <https://doi.org/10.1111/j.1540-5826.2012.00353.x>
- Woolley, G. (2011). Reading Comprehension. In *Reading Comprehension: Assisting children with learning difficulties* (pp. 15-34). Dordrecht: Springer Netherlands. [https://doi.org/10.1007/978-94-007-1174-7\\_2](https://doi.org/10.1007/978-94-007-1174-7_2)
- Yusuf, Y. Q., Fajrina, D., & Sari, I. (2016). Developing the EFL students' reading comprehension by employing Herringbone Technique. *Al-Ta Lim Journal*, 23(3), 183-190. <http://dx.doi.org/10.15548/jt.v23i3.250>

