

# SCANNING TECHNIQUE AND KAHOOT ASSESSMENT TO ENHANCE THE READING COMPREHENSION OF NARRATIVE TEXT AMONG ELEVENTH GRADE OF SMA INSTITUT INDONESIA SEMARANG IN ACADEMIC YEAR 2024/2025

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## Abstract

This study examines the effectiveness of the scanning technique combined with Kahoot assessments in enhancing the reading comprehension of narrative texts among eleventh-grade students at SMA Institut Indonesia Semarang during the academic year 2024/2025. Two classes were involved: XI.1 as the experimental group, which utilized the scanning technique and Kahoot, and XI.3 as the control group, which followed traditional teaching methods. A total of 60 students participated in the research, with data collected through pre-tests and post-tests in two observations to ensure reliability. The findings revealed that while both groups demonstrated improvements in reading comprehension, the experimental group consistently outperformed the control group in both observations. In the first observation, the experimental group's pre-test mean score of 79.50 improved to 90.00 in the post-test, compared to the control group's increase from 70.83 to 84.00. In the second observation, the experimental group's mean score rose from 65.60 to 85.50, while the control group's scores increased from 63.50 to 78.50. The results of normality and homogeneity tests confirmed the data's suitability for further analysis, and the independent samples t-test demonstrated significant differences between the groups. The integration of the scanning technique with Kahoot assessments not only improved students' reading comprehension but also enhanced their engagement, motivation, and critical thinking. This study highlights the potential of combining innovative teaching strategies with interactive digital tools to optimize learning outcomes. It recommends further exploration of such methods and their integration into English language teaching.

**Keywords:** *Scanning technique, Kahoot assessment, Reading comprehension, Narrative text.*

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## Introduction

A significant difficulty in contemporary teaching is the pervasive apathy towards reading among students. The Programme for International Student Assessment (PISA) (2018) reported that Indonesian students placed 72nd out of 77 nations in reading competence, achieving an average score of 371, much lower than the OECD average of 487. This study underscores the significant challenge students face in comprehending intricate texts and deriving conclusions from the information presented. Factors contributing to this diminished reading skill encompass restricted access to reading materials, substandard educational quality, underdeveloped reading habits, and inadequate familial support. Confronting these issues necessitates extensive initiatives, including augmenting access to reading resources, elevating instructional quality, and cultivating a reading culture in educational institutions and the wider society.

The Organisation for Economic Co-operation and Development (OECD) (2019) underscores the necessity of enhancing literacy practices, highlighting Indonesia's markedly subpar reading proficiency levels. The proliferation of digital entertainment, including social media and online gaming, has distracted kids from reading, posing an additional challenge to the cultivation of reading habits. Educators are pivotal in counteracting this trend by fostering an enjoyable and stimulating learning atmosphere that integrates technology into reading tasks, thus engaging students' interest. By aiding students in choosing appropriate and engaging reading resources, educators may progressively foster a robust reading culture.

A viable method for improving pupils' reading engagement and comprehension is the application of scanning techniques. This technique allows pupils to obtain critical information without perusing the entire document. Jenkins et al. (2007) assert that scanning is especially beneficial for children susceptible to reading challenges, as it offers a concise and reliable approach for discerning pertinent information. By concentrating on essential elements, scanning assists pupils in discerning pertinent information while simultaneously enhancing their critical thinking abilities. Incorporating scanning strategies into the educational process might enhance student motivation and render reading less intimidating.

The efficacy of scanning technique in its capacity to optimize the reading process. Grabe and Stoller (2019) assert that scanning enables students to swiftly identify specific information, which is especially advantageous when engaging with extensive or intricate texts. This efficiency diminishes cognitive load, enabling pupils to focus on evaluating essential topics and improving their overall understanding. By mastering scanning skills, pupils can enhance their reading fluency and adeptly confront difficult literature.

Utilizing scanning strategies in narrative texts can markedly enhance students' comprehension by aiding them in identifying essential components such as characters, places, and story aspects. Narrative texts frequently encompass an abundance of facts that can inundate pupils; yet, scanning enables them to concentrate on the most essential elements. Students may examine conversation to comprehend character interactions or identify descriptive passages that establish the setting. This focused method not only improves understanding but also enriches students' sense of narrative structure. Duke and Cartwright (2020) assert that scanning strategies facilitate deeper student engagement with the information, enhancing their connection to the text and enriching the reading experience.

This study use scanning technique to tackle students' challenges in quickly reading large and

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dense materials. Collins and Smith (2019) observe that numerous students encounter difficulties in discerning critical information throughout reading assignments, impeding their comprehension and retention. This project seeks to implement scanning techniques at SMA Institut Indonesia to enhance students' proficiency in swiftly and effectively identifying key points, consequently bolstering their confidence and quickness in responding to test questions. This method not only conserves time but also improves students' academic achievement in multiple disciplines.

This research combines online learning tools like Kahoot to enhance the effectiveness of scanning technique. Kahoot is an engaging and fun platform for educators and learners to access educational resources. Educators can develop quizzes and conversations derived from essential elements of scanned books, prompting students to concentrate on the core content without engaging with the complete material. Kahoot's real-time feedback functionality enables students to engage actively in educational activities and evaluate their comprehension dynamically. Kahoot is available via digital devices, including computers, tablets, and smartphone, rendering it an inclusive tool that accommodates many learning situations. The integration of scanning techniques and Kahoot enhances learning efficiency and efficacy while promoting a more engaging and flexible educational experience.

This study investigates the utilization of scanning strategies in narrative texts within eleventh-grade classes at SMA Institut Indonesia Semarang, specifically emphasizing its capacity to improve students' reading abilities and engagement. Furthermore, it assesses the function of Kahoot as an evaluative instrument that enables the quantification of students' comprehension and academic accomplishments. This study seeks to uncover successful solutions for enhancing literacy practices in senior high schools through the integration of scanning techniques and online learning technologies. The results are anticipated to enhance educational growth by offering practical suggestions for educators and students, hence fortifying literacy culture among Indonesian adolescents

## Literature Review

### a. Scanning Technique

The scanning technique is a speed-reading method designed to quickly locate specific information within a text. This technique involves scanning the text rapidly to identify key words, phrases, or sentences that are relevant to the reader's purpose. By focusing on these critical elements, readers can efficiently filter through large volumes of information, making it easier to extract pertinent details without having to read every word in the text. The scanning technique is particularly useful in academic and professional settings where time is limited and the ability to swiftly identify important information is crucial.

### b. Kahoot Assessment

Kahoot, a game-based learning platform, has emerged as an effective assessment tool in reading comprehension for students. By transforming traditional quizzes into interactive and engaging experiences, Kahoot enhances student motivation and participation. When used in reading comprehension activities, Kahoot allows educators to create quizzes that test students' understanding of texts in a fun and competitive format. This gamified approach not only makes the assessment process enjoyable but also provides immediate feedback, helping students identify areas of improvement. Research has shown that integrating tools like Kahoot can lead to increased student engagement and better

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retention of information (Wang & Lieberoth, 2016). Moreover, Kahoot's ability to present questions in various formats—such as multiple-choice, true/false, and short answer—enables a comprehensive evaluation of different comprehension skills, from recalling details to analysing themes and inferring meanings. This versatility makes Kahoot an invaluable tool for educators aiming to enhance reading comprehension in an interactive and student-centered way.

## **c. Enhance**

Enhance pertains to the process of elevating or intensifying the value, impact, or significance of something. It entails making modifications, adjustments, or improvements that lead to a superior state or level of performance. Enhancing can encompass diverse aspects, such as augmenting skills, knowledge, experiences, or outcomes, with the objective of surpassing the current state and attaining an elevated outcome.

## **d. Reading Comprehension**

Reading comprehension involves the capacity to comprehend, interpret, and analyse written texts with efficacy. It necessitates the amalgamation of various abilities, such as decoding, vocabulary understanding, inference, and critical thinking, to derive meaning from written material. Proficient reading comprehension empowers individuals to engage with texts on a deeper level, establish connections, and extract pertinent information for the purpose of comprehension and learning (Oakhill et al., 2019).

## **e. Narrative Text**

Narrative text is a type of writing that tells a story by presenting a sequence of events or experiences, often featuring characters, settings, and a plot that includes a beginning, middle, and end. This form of text is commonly used to convey a particular theme or message through storytelling, which can be either fictional or based on real events. According to Derewianka and Jones (2016), narrative texts are structured to entertain, inform, or instruct readers by immersing them in the story's world, allowing them to engage with the characters and events on an emotional level. The purpose of narrative texts is to create a compelling story that captivates the reader's imagination, making it an effective tool for teaching various literary elements and enhancing reading comprehension skills (Derewianka & Jones, 2016).

## **f. The Eleventh-grade Students**

Eleventh-grade students' reading comprehension typically involves more advanced skills compared to earlier grades. At this stage, students are expected to engage with complex texts, including both literary and informational genres, with a greater emphasis on critical analysis and interpretation. The complexity of texts and the cognitive demands of comprehension tasks increase as students approach their senior year. For example, in eleventh grade, students might analyze thematic elements, character development, and literary devices in narrative texts, while also evaluating arguments and evidence in informational texts. In contrast, twelfth-grade students often focus on synthesizing information from multiple sources, constructing well-supported arguments, and exploring more sophisticated literary and rhetorical techniques. This progression reflects an increasing depth in reading and analytical skills required as students prepare for higher education and more advanced academic challenges (Beck & McKeown, 2020; Gambrell & Malloy, 2021).

## **g. SMA Institut Indonesia**

SMA Institut Indonesia Semarang is a distinguished senior high school located at Maluku Street No. 25, Karangtempel Subdistrict, East Semarang District, Semarang City,

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Central Java Province, Indonesia. Known for its commitment to providing a high-quality education that prepares students for both higher education and future careers, the school offers a comprehensive curriculum emphasizing academic excellence, critical thinking, and character development. It boasts modern facilities, a dedicated and experienced teaching staff, and a range of extracurricular activities designed to enhance students' overall development. SMA Institut Indonesia Semarang is also noted for its innovative approaches to learning, including the integration of technology in the classroom and a strong focus on developing students' reading comprehension and other essential skills.

## **h. Semarang**

Semarang is the capital city of Central Java Province in Indonesia, located on the northern coast of the island of Java. It is a significant economic and cultural hub, known for its vibrant history, diverse population, and strategic port. Semarang is home to various educational institutions, including SMA Institut Indonesia Semarang, which is renowned for its commitment to academic excellence. The city's blend of historical heritage and modern development provides a dynamic backdrop for educational research and innovation

## **Research Methodology**

### **a. Design of the Research**

The research design for this ongoing study titled "Scanning Technique and Kahoot Assessment to Enhance the Reading Comprehension of Narrative Texts among Eleventh Grade Students of SMA Institut Indonesia Semarang in the Academic Year 2024/2025" adopts a quasi-experimental research design. The study is investigating the impact of the scanning technique on students' reading comprehension skills and using Kahoot as a student assessment tool. According to Cook, Campbell, and Shadish (2002), in their book "Experimental and Quasi-Experimental Designs for Generalized Causal Inference," they present a thorough examination of research designs that facilitate the inference of causal relationships. The book offers an extensive exploration of both experimental and quasi-experimental designs, with particular emphasis on the latter and their practical applications. Readers find in-depth discussions on the intricacies of quasi-experimental designs, enabling them to grasp the nuances and benefits of employing such designs in their research endeavors.

Data collection for this research involves administering pre-tests and post-tests to both the experimental group, where the scanning technique is being implemented as a teaching tool to enhance students' reading comprehension, and the control group, which is using traditional teaching and assessment methods. The pre-test is conducted before the intervention, while the post-test is administered after the completion of the scanning technique-based instruction. These tests assess the students' reading comprehension abilities.

Additionally, observations are being conducted throughout the research process to gather qualitative data on student engagement, participation, and interactions during teaching activities. The observation process provides insights into the effectiveness and impact of the scanning technique as an instructional tool for enhancing reading comprehension. By employing a quasi-experimental research design and using pre-tests, post-tests, and observations, this study aims to evaluate the effectiveness of the scanning technique on students' reading comprehension skills and Kahoot as an assessment tool, specifically in the eleventh grade of SMA Institut Indonesia Semarang during the academic year 2024/2025.

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## **b. Subject of the Study**

### **1. Population**

According to Sekaran and Bougie (2016) in their book "Research Methods for Business: A Skill-Building Approach," the concept of population pertains to the complete set of individuals, objects, or events that satisfy particular criteria and are of significance to the researcher. It represents the wider group from which a sample is chosen and conclusions are inferred. The population is typically delineated based on specific characteristics or attributes that the researcher intends to investigate.

In this study, the population refers to the entire group of elements being studied, encompassing all individuals, objects, or events relevant to the research. The focus is on students at SMA Institut Indonesia Semarang, a high school in Semarang. The total population of eleventh-grade students at SMA Institut Indonesia is currently 271, distributed across eight classes.

### **2. Sample**

In his book "The Practice of Social Research," Babbie (2020) explains that a sample refers to a smaller subgroup or subset chosen from a population to serve as a representative and yield insights about the larger population. The selection of a sample aims to minimize the resources, time, and effort necessary to collect data from the entire population, all while enabling valid and dependable inferences to be drawn.

The research study is currently taking place at SMA Institut Indonesia Semarang, focusing on 11th grade students specifically in class XI.1 and XI.3, with a total of 60 students chosen as the sample for this study. The sample selection process involves employing the purposive random sampling method. The researcher assigns class XI.1 as the experimental group, implementing the scanning technique as a learning tool and Kahoot as an assessment tool, while class XI.3 serves as the control group, utilizing traditional teaching techniques without Kahoot. The treatment procedures employed for each group aim to enhance reading comprehension scores.

### **3. Sampling Technique**

The sampling technique used is purposive random sampling. The researcher intentionally selects two specific classes (XI.1 and XI.3) based on their nearly identical abilities to ensure a neutral starting point for the study. Purposive random sampling involves selecting a sample based on specific characteristics or criteria that are relevant to the research objectives. In this case, the nearly identical abilities of the two classes are the criteria for selection.

## **c. Instrument of the Research**

The research employs two main instruments: tests and documentation. At the start of the study, both classes take a pre-test to evaluate their initial knowledge, serving as a basis for comparison with the post-test results. Class XI IPA 1, as the experimental group, applies the scanning technique and uses Kahoot, while Class XI IPA 3, as the control group, relies on traditional teaching methods without Kahoot. The researcher ensures that the treatments are implemented consistently to measure the impact of these methods on students' learning outcomes. At the end of the study, a post-test is conducted in both classes to determine how well students have understood the material taught using their respective methods. Comparing pre-test and post-test results helps evaluate the effectiveness of the teaching

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techniques. Additionally, documentation is carried out by taking photos during key activities, such as classroom sessions and student engagement, to provide visual evidence of the research process. Baseline data on students' performance before the interventions is also collected to compare with their performance after the study.

## **d. Method of Data Collection**

The method of data collection for the study titled "Scanning Technique to Enhance the Reading Comprehension of Narrative Texts among Eleventh Grade Students of SMA Institut Indonesia Semarang in the Academic Year 2024/2025" involves multiple steps to ensure a comprehensive assessment of the intervention's effectiveness.

Firstly, a pre-test is being administered to assess the initial reading comprehension skills of the students before the implementation of the scanning technique. The pre-test consists of reading comprehension questions specifically designed to gauge the students' baseline understanding and serves as a basis for comparison in the post-test.

Following the pre-test, distinct treatments are being administered to the two classes as specified. Class XI.1 is the experimental group, implementing the scanning technique as a learning tool, while Class XI.3 serves as the control group, utilizing traditional teaching techniques. At the conclusion of the study, a post-test is conducted for both the experimental and control groups. The post-test includes similar reading comprehension questions to the pre-test and evaluates the impact of the scanning technique on the students' reading comprehension skills. By comparing the scores obtained from the post-test to the pre-test scores, any significant improvements are determined.

Through the integration of pre-tests, post-tests, this quasi-experimental method enables a comprehensive assessment of the influence of the scanning technique on students' reading comprehension skills. The data collected through these methods yield valuable insights into the effectiveness of implementing the scanning technique within the specified educational context.

## **e. Method of Data Analysis**

### **1. Statistical Analysis Software**

The researcher is using SPSS 21 (Statistical Package for the Social Sciences) to conduct statistical analysis to interpret and analyze data collected during the study. By using SPSS, the researcher can efficiently process and analyze the quantitative data collected from the pre-tests and post-tests, providing a reliable foundation for evaluating the effectiveness of the scanning technique on reading comprehension.

### **2. Descriptive Measure**

The analysis involves examining various descriptive measures, such as means and standard deviations, to understand central tendencies and variabilities within the data. Calculating these metrics for pre-test and post-test scores helps in identifying overall performance trends and the spread of scores among the students. This analysis offers valuable insights into how the scanning technique influences students' reading comprehension.

### **3. Correlation and Regression Analysis**

The researcher is conducting correlation and regression analyses to explore the relationships between different variables and how the scanning technique may impact reading comprehension. These analyses allow for a deeper understanding of the connections between students' pre-test and post-test performance and the effectiveness of the scanning technique.

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## 4. Assessment of Research Participants

To assess the research participants' overall performance and progress, the researcher is calculating the average scores obtained from various assessment instruments. This method provides a clear measure of student progress over time, allowing the researcher to evaluate the impact of the scanning technique on students' reading comprehension.

## 5. Comparative Analysis

A t-test is being employed to compare the effectiveness of the teaching methods. The t-test compares the pre-test and post-test scores of the experimental class (using the scanning technique) and the control class (using traditional methods). This comparison helps determine the effectiveness of the scanning technique in enhancing reading comprehension. It is anticipated that the experimental class will show significant improvements in reading comprehension compared to the control class, highlighting the benefits of integrating the scanning technique into their learning process.

## Findings

The research aimed to test the effectiveness of the scanning technique combined with Kahoot assessments in improving the reading comprehension skills of narrative texts among eleventh-grade students. The study was conducted in two classes, XI.1 and XI.3, at SMA Institut Indonesia Semarang during the academic year 2024/2025. Class XI.1 served as the experimental group, applying the scanning technique and Kahoot, while class XI.3 served as the control group, using traditional teaching methods.

The study involved 60 students. Initially, a pre-test was conducted to assess the students' reading comprehension abilities before any interventions. However, during the first data collection, it was observed that the students' pre-test scores were already above average, raising concerns about potential anomalies in the data. To ensure the accuracy and reliability of the results, a second round of data collection was conducted. The findings from the second data collection revealed that the students' pre-test scores were also relatively high, suggesting that the students already possessed a strong baseline ability in reading comprehension.

Despite this, the research showed that there was still a notable improvement in the post-test scores of the experimental group after the treatment. This indicates that while the students already demonstrated good comprehension skills, the implementation of the scanning technique combined with Kahoot further enhanced their abilities.

For three weeks, the experimental group was taught using the scanning technique, a method that encourages students to locate specific information quickly within a text. This method was integrated with Kahoot, an interactive digital tool that allowed students to engage in quizzes and discussions in a fun, competitive manner. Meanwhile, the control group received instruction using conventional teaching methods without Kahoot.

During the learning process, students in the experimental group were guided to focus on specific keywords and information in narrative texts, then verify their understanding through Kahoot quizzes. This approach encouraged active engagement and reinforced understanding through collaboration and discussions in small groups.

The research results from both data collections consistently showed a significant improvement in the post-test scores of the experimental group compared to the control group. On average, the experimental group not only performed better in understanding the texts but also demonstrated increased motivation and engagement during the learning process. Observations noted that these students were more active in class and posed higher-quality questions, reflecting enhanced

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critical thinking skills.

Thus, the study concludes that the scanning technique combined with Kahoot assessment is effective in improving students' reading comprehension, engagement, and overall motivation. It also confirms that the students in the sample had a strong baseline ability, but the intervention further supported their progress. The study recommends further exploration of integrating digital tools like Kahoot into English teaching strategies and encourages teacher training in these approaches to maximize student outcomes in reading comprehension.

Below are the pre-test and post-test scores for both classes in the first and second data collections:

Table 1. The Students' Pre-test and Post-test Scores in Class XI.1  
Experimental Class Observation 1

No	Students	Pre-Test	Post-Test
1	X1	80	95
2	X2	85	90
3	X3	70	85
4	X4	75	95
5	X5	85	90
6	X6	90	100
7	X7	70	85
8	X8	85	95
9	X9	85	90
10	X10	90	100
11	X11	75	85
12	X12	85	90
13	X13	70	80
14	X14	80	90
15	X15	75	95
16	X16	85	95
17	X17	90	95
18	X18	95	100
19	X19	75	85
20	X20	80	85
21	X21	90	100
22	X22	65	80
23	X23	75	90
24	X24	75	85
25	X25	70	80
26	X26	70	85
27	X27	70	90
28	X28	85	90
29	X29	85	90
30	X30	75	85
Total Score		2385	2700

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Table 2. The Students' Pre-test and Post-test Scores in Class XI.1  
Experimental Class Observation 2

No	Students	Pre-Test	Post-Test
1	X1	65	95
2	X2	70	90
3	X3	65	100
4	X4	50	100
5	X5	50	90
6	X6	75	100
7	X7	80	95
8	X8	75	100
9	X9	60	90
10	X10	60	95
11	X11	80	100
12	X12	65	95
13	X13	75	100
14	X14	55	90
15	X15	65	95
16	X16	70	90
17	X17	70	100
18	X18	55	100
19	X19	45	100
20	X20	60	95
21	X21	75	100
22	X22	75	95
23	X23	50	100
24	X24	80	90
25	X25	55	100
26	X26	70	90
27	X27	70	100
28	X28	65	90
29	X29	70	100
30	X30	65	95
Total Score		1965	2565

Table 3. The Students' Pre-test and Post-test Scores in Class XI.3  
Control Class Observation 1

No	Students	Pre-Test	Post-Test
1	Y1	70	80
2	Y2	60	85
3	Y3	70	90
4	Y4	60	80
5	Y5	70	90
6	Y6	75	85
7	Y7	60	85
8	Y8	60	80
9	Y9	65	85

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10	Y10	60	75
11	Y11	55	90
12	Y12	65	85
13	Y13	60	80
14	Y14	70	85
15	Y15	60	85
16	Y16	70	75
17	Y17	85	90
18	Y18	80	80
19	Y19	90	95
20	Y20	85	90
21	Y21	75	80
22	Y22	75	75
23	Y23	70	85
24	Y24	80	80
25	Y25	75	90
26	Y26	70	85
27	Y27	75	80
28	Y28	85	85
29	Y29	80	90
30	Y30	70	80
Total Score		2125	2520

**Table 4. The Students' Pre-test and Post-test Scores in Class XI.3  
Control Class Observation 2**

No	Students	Pre-Test	Post-Test
1	Y1	65	85
2	Y2	65	75
3	Y3	70	80
4	Y4	50	70
5	Y5	70	85
6	Y6	60	75
7	Y7	65	70
8	Y8	50	75
9	Y9	70	80
10	Y10	70	90
11	Y11	60	80
12	Y12	70	80
13	Y13	50	70
14	Y14	75	85
15	Y15	85	90
16	Y16	55	70
17	Y17	45	70
18	Y18	65	75
19	Y19	75	85
20	Y20	80	90
21	Y21	45	70

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22	Y22	80	90
23	Y23	55	80
24	Y24	55	65
25	Y25	65	70
26	Y26	70	85
27	Y27	50	75
28	Y28	65	75
29	Y29	70	85
30	Y30	55	80
Total Score		1905	2355

Continuing to follow completion of research, the researcher analyzed the pre-test and post-test results. The analysis' specifics were discussed further below;

Table 5. Descriptive Statistics 1

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest experiment	30	65	95	79.50	7.917
Post-test experiment	30	80	100	90.00	6.01722
Pretest control	30	55	90	70.83	9.199
Post-test control	30	75	95	84.00	5.153
Valid N (listwise)	30				

Table 6. Descriptive Statistics 2

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experiment	30	45	80	65.50	9.769
Post-Test Experient	30	70	95	85.50	6.991
Pre-Test Control	30	45	85	63.50	10.680
Post-Test Control	30	65	90	78.50	7.328
Valid N (listwise)	30				

Based on the table above, it showed that the score of pre-test and post-test in experimental class were different. In the first observation, the experimental students' pre-test mean was 79,50, with the lowest score 65 and the highest score 95. Meanwhile, the post-test mean was 90, with the lowest score 80 and the highest score 100. The control student' pre-test mean was 70,83, with the lowest score 55 and the highest score 90. The post-test mean was 84, with the lowest score 75 and the highest score 95. Meanwhile, for the second observation, the experimental students' pre-test mean was 65,60, with the lowest score 45 and the highest score 80. Meanwhile, the post-test mean was 85,50, with the lowest score 70 and the highest score 90. The control student' pre-test mean was 63,50, with the lowest score 45 and the highest score 85. Meanwhile, the post-test mean was 78,50, with the lowest score 65 and the highest score 90. It may be concluded that a considerable difference exists between the experimental class and the control class both observation 1 and observation 2, with the average of the experimental class exceeding that of the control class. This can be exemplified with the subsequent diagram.

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## 1. Normality test

In quantitative research, ensuring that data meet the assumption of normal distribution is a crucial step before performing parametric statistical tests. According to Field (2013), a normal distribution allows for the accurate application of statistical techniques that rely on means and standard deviations, such as t-tests or ANOVA. To determine whether the data in this study followed a normal distribution, a normality test was conducted using the Kolmogorov-Smirnov method, which is suitable for medium to large sample sizes.

The results indicated that the pre-test and post-test scores of both the experimental and control groups followed a normal distribution, as the p-values for all datasets were greater than 0.05 ( $p > 0.05$ ). Based on these findings, it was concluded that the assumption of normality was met, allowing the use of parametric tests for further analysis. The outcome is presented below:

Table 7. Tests of Normality 1

	Class	Kolmogorov-Smirnov <sup>a</sup>			Conclusions
		Statistic	df	Sig.	
result	Pre-test experiment	.146	30	.073	Normal
	Post test experiment	.140	30	.121	Normal
	Pre-test control	.156	30	.058	Normal
	Post test control	.150	30	.115	Normal

Table 8. Tests of Normality 1

	class	Kolmogorov-Smirnov <sup>a</sup>			Conclusions
		Statistic	df	Sig.	
result	Pre test experiment	.146	30	.101	Normal
	Post test experiment	.140	30	.137	Normal
	Pre test control	.156	30	.061	Normal
	Post test control	.150	30	.082	Normal

The results indicate that the data from the two courses exhibited a normal distribution. The experimental class and the control class both observation 1 and observation 2 exhibit nearly identical speaking abilities.

Since the data were found to be normally distributed based on the Kolmogorov-Smirnov test, the next step was to assess the homogeneity of variances between the groups. This was done using Levene's test for homogeneity of variances, which is commonly used to determine whether the assumption of equal variances has been met before conducting parametric tests like t-tests.

## 2. Homogeneity Test

Following the normality test, the subsequent stage is the homogeneity test. It aimed to evaluate the similarity of the samples in both classes. The criterion is that if the significance (Sig.) of Based on mean  $>0.05$ , it indicates that the data are homogeneous at a significance level of  $\alpha = 0.05$ . The outcome is as follows:

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**Table 9. Test of Homogeneity of Variance 1**

	Levene Statistic	df1	df2	Sig.
Result Based on Mean	.297	1	58	.588
Based on Median	.540	1	58	.466
Based on Median and with adjusted df	.540	1	57.344	.466
Based on trimmed mean	.293	1	58	.590

**Table 10. Test of Homogeneity of Variance 2**

	Levene Statistic	df1	df2	Sig.
Result Based on Mean	.452	1	58	.504
Based on Median	.386	1	58	.537
Based on Median and with adjusted df	.386	1	57.936	.537
Based on trimmed mean	.394	1	58	.533

The first observation, the data presented in the table above indicated that the significant value based on mean was 0.588. The data from the pre-test and post-test was homogeneous, as the significance value  $>0.05$ .

Meanwhile, the second data presented in the table above indicated that the significant value based on mean was 0.504. The data from the pre-test and post-test was homogeneous, as the significance value  $>0.05$ .

The results of Levene's test for homogeneity of variances indicated that the data from both the first and second observations were homogeneous, as all significant value based on mean were greater than 0.05 ( $p > 0.05$ ). This confirms that the assumption of equal variances between the experimental and control groups was met in both datasets. With the assumptions of normality and homogeneity satisfied, the analysis proceeded to the final step, which was the independent sample t-test. This test was conducted to compare the performance of the experimental and control groups in terms of their pre-test and post-test scores.

### 3. Independent Sample T-Test

Following the previous assessments, specifically the normality and homogeneity tests, which demonstrated that the data were normally distributed and exhibited homogeneous variances, the subsequent procedure is to perform an Independent Samples T-Test. This test aims to determine if a significant difference exists in the mean scores of two separate groups: the experimental group (taught with scanning technique) and the control group (without scanning technique).

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**Table 11. Independent Samples Test 1**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Result	.452	.504	3.785	58	.000	7.000	1.849	3.298	10.702
			3.785	57.872	.000	7.000	1.849	3.298	10.702

Based on the Independent Samples T-Test results, the Sig. (2-tailed) value, if less than 0.05, indicates a statistically significant difference between the two groups. In addition, the mean difference quantifies the magnitude of this difference, demonstrating the impact of the scanning technique on students' reading comprehension compared to traditional teaching methods.

**Table 12. Group Statistics**

	class	N	Mean	Std. Deviation	Std. Error Mean
result	Posttest Experimen	30	90.00	6.017	1.099
	Posttest Control	30	84.00	5.153	.941

**Table 13. Independent Samples Test 2**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Result	.452	.504	3.785	58	.000	7.000	1.849	3.298	10.702
			3.785	57.872	.000	7.000	1.849	3.298	10.702

Based on the Independent Samples T-Test results, the Sig. (2-tailed) value, if less than 0.05,

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indicates a statistically significant difference between the two groups. In addition, the mean difference quantifies the magnitude of this difference, demonstrating the impact of the scanning technique on students' reading comprehension compared to traditional teaching methods.

**Table 14. Group Statistics**

	Class	N	Mean	Std. Deviation	Std. Error Mean
Result	Experiment	30	85.50	6.991	1.276
	Control	30	78.50	7.328	1.338

From the group statistics table, it can be concluded that there are the significant differences of mean between experiment and control class. That means the scanning technique can efficiently increase students' interest in learning at SMA Institut Indonesia, with the average improvement in the experimental class higher than in the control class.

## Conclusion

The researcher draws the following conclusions from the research result and discussion that have been presented:

1. In the control group, students were taught using traditional, teacher-centered methods. These methods involved the teacher explaining the content and structure of narrative texts while students passively followed along. Comprehension was tested through standard questioning or written exercises, focusing on rote memorization rather than active engagement or strategic reading. While this approach led to some improvement in scores, the progress was less significant compared to the experimental group. For instance, in the first observation, the control group's pre-test mean score was 70.83 (ranging from 55 to 90), which increased to 84.00 (with a range of 75 to 95) in the post-test. Similarly, in the second observation, the pre-test mean score was 63.50 (ranging from 45 to 85), improving to a post-test mean of 78.50 (with scores between 65 and 90). These results indicate that while traditional teaching methods facilitate moderate progress, they lack the dynamic and interactive elements needed to maximize comprehension.
2. In the experimental group, a student-centered approach was implemented by teaching students the scanning technique. This method trained students to locate specific information in texts by focusing on keywords and targeted phrases, encouraging active and efficient reading. To enhance engagement, Kahoot was integrated into the lessons as an interactive tool, allowing students to participate in quizzes and receive immediate feedback. The gamified nature of Kahoot further motivated students and fostered collaborative learning. This approach resulted in significant improvements in post-test scores. In the first observation, the experimental group's pre-test mean score was 79.50 (with a range of 65 to 95), which increased to 90.00 (ranging from 80 to 100). In the second observation, their pre-test mean was 65.60 (ranging from 45 to 80), which improved substantially to a post-test mean of 85.50 (with scores between 70 and 90). These findings demonstrate the effectiveness of combining the scanning technique with Kahoot in improving comprehension and fostering student engagement.
3. The study revealed that students in the experimental group, taught using the scanning technique

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and Kahoot, consistently outperformed those in the control group. In the first observation, the experimental group's mean improvement from pre-test to post-test was 10.50 points, compared to the control group's 13.17 points. In the second observation, the experimental group's improvement was 19.90 points, compared to 15.00 points in the control group. Beyond the numerical data, classroom observations highlighted that students in the experimental group were more actively engaged, demonstrated higher motivation, and posed more critical questions than their peers in the control group. These results underscore the value of combining interactive, student-centered methods like the scanning technique with digital tools such as Kahoot to achieve greater improvements in reading comprehension.

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