CHAPTER 3

RESEARCH METHOD

In this chapter, the researcher outlines the methodology used to collect and analyze the research data. It covers several key components, including the research design, variables, population and sample, research instruments, procedures, data collection methods, and data analysis techniques.

3.1 Research Design

This study employs a quasi-experimental research design, which is commonly used in educational research to evaluate the effectiveness of instructional methods (Creswell , 2018). The research compares YouTube-based learning and picture series in the effect of students' speaking skills in a SMK Al-Mahrusiyah Kediri. The study use pre-test and post-test to measure the impact of using YouTube (Sukardi 2003).

Table 1. The ilustration of Quasi-Experimental Design

Experimental Group	**Pre-test** assesed by speaking test	**Treatment** using YouTube	**Post-Test** assesed by speaking test
Control Group	**Pre-test** assesed by speaking test	**Treatment** using Picture series	**Post-Test** assesed by speaking test

A pre-test and post-test design is used to measure students' speaking performance before and after the treatment. The results from both groups will be analyzed to determine the more effective media for enhancing speaking proficiency. This design is effective in examining cause-and-effect relationships in educational settings where random assignment is not feasible (Ary et al., 2022).

3.2 Research Variables

This study consists of two main variables. The independent variable (X) is the use of media in teaching report text where YouTube videos and picture series are the learning tools in teaching report text speaking. YouTube serve authentic

video models and engaging visual content that help students understand the structure, language features, and pronunciation used in report texts, thereby enhancing their speaking skills (Moghavvemi et al., 2018). The dependent variable (Y) is students' speaking ability, assessed in terms of pronunciation, fluency, vocabulary, grammar, and comprehension (Brown, 2004).

YouTube is chosen as the primary instructional media due to its accessibility, authenticity, and multimedia features that support language learning. It exposes students to real-life language use and various speaking styles, helping them to develop listening comprehension, pronunciation accuracy, and speaking fluency (Berk, 2009). Furthermore, the visual and auditory elements in YouTube videos increase student engagement and motivation, which are crucial factors in improving speaking performance (Moghavvemi et al., 2018). By integrating YouTube into the classroom, students can observe contextual language use and practice speaking based on relevant and stimulating content.

3.3 Population and Sample

A population refers to all members of a clearly defined group of individuals, events, or objects.A population is the entire group of elements or individuals that serve as a data source and possess certain characteristics relevant to the research (Tanzeh, 2009). In this study, the population refers to all students of SMK Almahrusiyah, a vocational high school located within a pesantren (Islamic boarding school) environment. These students were selected because they participate in a unique educational setting that blends vocational training with Islamic religious education, often within a context where access to technology is limited and regulated. Such a learning environment may significantly affect students' engagement with English, particularly in practicing speaking skills related to report texts. The choice of SMK students is also aligned with their educational focus on practical and professional competence, making oral communication skills especially important for their future careers (Creswell, 2012).

The sample was selected using purposive sampling, allowing the researcher to choose participants based on specific criteria that support the

research objectives (Fraenkel, Wallen, & Hyun, 2012). The selected participants were students who were currently studying report texts as part of their English subject. Two classes from SMK Almahrusiyah were chosen, one assigned as the experimental group receiving YouTube-based instruction, and the other as the control group using picture series as a media. The researcher selected these two classes because they had relatively similar English proficiency levels, were taught by the same English teacher, and studied the same learning materials and curriculum. In addition, both classes had similar learning schedules and classroom conditions, which helped minimize external variables that might influence the research results. Therefore, these classes were considered appropriate to compare the effectiveness of YouTube and picture series in enhancing students' speaking skills. Experimental class consisted of 29 students while the control class consisted 28 students, forming a total sample size that is considered appropriate for educational research and sufficient for quantitative data analysis (Gall & Borg, 2007).

3.4 Research Instrument

The instruments employed in this study include:

3.4.1 Speaking Test

The speaking test serves as the main tool for evaluating students' ability to The speaking test serves as the primary instrument for assessing students' ability to present report texts orally. This test was administered in two stages: as a pre-test before the treatment and as a post-test after the treatment.

The pre-test was conducted prior to the implementation of YouTube-based instruction in the experimental group and picture series media in the control group. Its purpose was to measure the students' initial speaking competence in presenting report texts, providing a baseline for comparison. During the pre-test, students were asked to deliver a short oral report on a familiar topic related to their curriculum. This helped to identify their strengths and weaknesses in aspects such as pronunciation, fluency, comprehension, grammar, vocabulary, and clarity of factual information. The detailed instructions and materials of the pre-test can be seen in Appendix 1.

The post-test was administered after the teaching interventions had been completed. The structure of the test was similar to the pre-test to maintain consistency and reliability, but with different topics of report texts to avoid memorization. The post-test aimed to evaluate the extent of improvement in students' speaking performance after being taught using YouTube (experimental group) and picture series (control group). By comparing the results of the pre-test and post-test, the researcher was able to determine the effectiveness of each teaching medium in enhancing students' speaking skills. The detailed instructions and materials of the pre-test can be seen in Appendix 1.

The test prompts were carefully designed to align with the students' learning materials and curriculum objectives, ensuring that the evaluation reflected the skills targeted during the course. Detailed scoring criteria were applied consistently to both the pre-test and post-test, focusing on pronunciation, fluency, comprehension, grammar, vocabulary, and clarity. *The complete scoring rubric is presented in Appendix 3.*

3.5 Research Procedure

The research procedure consists of three key stages: preparation, implementation, and evaluation (Putra & Lestari, 2021). In the preparation stage, the researcher designs the speaking test, prepares materials aligned with the learning objectives, selects the population, and select the sample using purposive sampling. The choosen students will be devided into two an Experimental group which will be taught using YouTube and Control group which will be taught using Picture-series.

Importantly, the experimental group is instructed directly by the researcher in order to ensure consistency in the delivery of the YouTube-based learning model. In the meantime, a different English teacher instructs the control group. This teacher follows the lesson plan in addition to using the materials the researcher prepared so instructional objectives are the same.

During the implementation phase, both the experimental and control groups first take a pre-test to evaluate their initial speaking proficiency. The experimental group is instructed using YouTube**,** where they watch real-life speaking examples, participate in guided exercises, and engage in interactive

discussions to improve their speaking skills (Setyosari, 2021).While, the control group uses picture series as their learning medium, practicing spoken descriptions and storytelling based on visual sequences (Widodo, 2020). Over the course of four instructional sessions**,** each group works through activities tailored to their respective media. At the end of the treatment period, a post-test is administered to assess any progress in students' speaking abilities and to compare the outcomes between the two approaches.

3.5.1 Treatment Procedure

The treatment was carried out in one meeting for both the experimental group and the control group. The topic, duration, and classroom procedures were kept the same, while the difference lay in the teaching media: the experimental group was taught using YouTube, and the control group was taught using Picture Series. The teaching process followed three main stages pre-activity, whilst-activity, and post-activity adopted from the communicative language teaching framework (Harmer, 2007; Brown, 2004).

Table 2. Treatment Procedure for the Experimental and Control Group

Stage	**Experimental Group (YouTube-Based Learning)**	**Control Group (Picture Series-Based Learning)**
Pre-Teaching	Teacher greets students and introduce the lesson topic (report text)	Teacher greets students and introduce the lesson topic (report text)
	Teacher explain learning objectives and motivates students	Teacher explain learning objectives and motivates students
While Teaching	Students watch a selected YouTube video related to the report text topic.	Students observe a **Picture Series** related to the report text topic
	Teacher explains vocabulary, pronunciation, and report text structure based on the video.	Teacher explains vocabulary and report text structure based on the pictures.

	Students practice retelling the content orally in pairs/groups.	Students practice describing the pictures orally in pairs/groups.
Post-Teaching	Students deliver short oral presentations of report text individually based on the video.	Students deliver a report text on a different topic using the learned structure and vocabulary.
	Teacher provides reinforcement and feedback on speaking performance	Teacher provides reinforcement and feedback on speaking performance.

The treatment was conducted after the pre-test had been administered to both the experimental and control groups. The experimental group received treatment through YouTube-based instruction, while the control group was taught using picture series media. The treatments were carried out during regular English class sessions and focused on teaching report text as part of the students' curriculum.

In the experimental group, the teacher used YouTube videos related to report text topics as learning media. During the teaching process, the teacher played the YouTube videos twice. The first video was used to explain the material and provide students with factual information related to the report text topic. Through this video, students learned the generic structure, language features, pronunciation, vocabulary, and important content of report texts. The second video was used as an example of how to present a report text orally. By watching the example video, students could observe proper pronunciation, fluency, intonation, and speaking performance. After watching the videos, the students discussed the content, practiced speaking, and presented their own oral report texts based on the information they had learned from the videos.

Meanwhile, the control group received instruction using picture series media. The teacher provided sequential pictures related to certain topics and asked students to observe and describe the information shown in the pictures. The students then organized the information into report text form and delivered short oral presentations. Through this activity, students practiced speaking by relying on visual aids without audiovisual support.

Both groups received the same learning objectives, materials, duration of treatment, and speaking assessment criteria. The difference between the two groups was only the instructional media used during the teaching and learning process.

In the final evaluation stage, both groups take pre-tests and post-tests to measure any improvement in their speaking skills, and the data is analyzed to determine the effectiveness of the treatment.

3.6 Data Collection

The data collection in this study focuses on evaluating students' speaking proficiency through the use of pre-test and post-test assessments. These assessments are designed to measure key components of speaking skills, including pronunciation, fluency, grammar, vocabulary, and comprehension. The pre-test is administered before the teaching intervention to establish a baseline of students' speaking abilities, while the post-test is conducted after the treatment to determine any improvements. This method provides a clear and measurable comparison of speaking proficiency before and after the use of two different instructional media.

The research was conducted at SMK Al-Mahrusiyah Kediri and involved two groups of 11th-grade students. One group served as the experimental group and received instruction through YouTube-based learning, while the other group served as the control group and was taught using picture series as the main instructional media. These two approaches were selected to compare the effectiveness of modern digital media and traditional visual-based teaching tools in enhancing speaking skills.

To reduce bias and ensure fairness, teaching responsibilities were divided between two instructors. The experimental group was taught and observed by the research partner using a structured lesson plan based on YouTube videos that modeled speaking. Meanwhile, the control group was handled by the researcher, who used printed picture series to guide storytelling, event description, and structured oral activities. This separation helped maintain the independence of each group and ensured that differences in outcomes were due to the instructional media rather than teaching style.

The study was carried out over the course of one month, with each group participating in three teaching sessions. Each session lasted for one regular class period and included a range of speaking activities tailored to the instructional media used. The experimental group used YouTube videos to demonstrate speaking examples, pronunciation, and conversational contexts, while the control group used picture series to prompt discussions, retell events, and practice descriptive speaking. Both groups participated in structured practice targeting the speaking components assessed.

Speaking proficiency was evaluated through pre-test and post-test sessions using a standardized scoring rubric. This rubric assessed five key areas: pronunciation, fluency, grammar, vocabulary, and comprehension. Each aspect was rated quantitatively to provide an objective and reliable measure of student performance. Assessments were conducted during regular class time to ensure consistency and minimize external disruptions.

In conclusion, this study was carefully designed to compare the effectiveness of YouTube-based and picture series-based instruction in improving students' speaking skills. By controlling instructional variables, applying objective assessment tools, and maintaining a consistent classroom setting, the research aims to provide valid and reliable findings that can support the development of effective speaking instruction in vocational education settings.

3.7 Validity and Reliability

To make sure the results of this research are trustworthy, this study considers both validity and reliability of the speaking test and scoring process.

3.7.1 Validity

This study uses content validity to check that the speaking test and the scoring rubric truly measure what they are supposed to measure students' speaking skills. The speaking test includes topics that are familiar and relevant

to senior high school students. The questions are designed to help students speak naturally and clearly, especially when presenting report texts.

The scoring rubric is adapted from Brown (2004) and includes four main aspects: fluency**,** pronunciation**,** vocabulary**,** and grammar. These match the goals of the English subject in the Indonesian high school curriculum, so the test and rubric are appropriate for assessing speaking skills. rubric were checked by two experts an English lecturer and a senior English teacher to make sure everything fits the learning goals and the topic of the study. Their suggestions helped improve the quality of the instruments.

3.7.2 Reliability

To make sure the scoring is fair and consistent, this study uses inter-rater reliability. Two English teachers will score each student's speaking performance using the same rubric. They will score the tests separately and not influence each other's judgment.

results will be compared. If there are differences, the scorers will discuss and agree on a final score. This process helps reduce bias and ensures the results are reliable. If needed, a statistical test like Cohen's Kappa can be used to check how much the scorers agree with each other. A high agreement score shows that the scoring is consistent and trustworthy. This way, both the test and the scores are fair and dependable, supporting the quality of the research findings.

3.8 Data Analysis

The results from the pre-test and post-test were examined through descriptive and inferential statistical methods, with descriptive statistics used to present students' performance by calculating the mean and standard deviation for each group. Before conducting further analysis, assumption tests including normality and homogeneity tests were performed. The results indicated that the

data were not normally distributed and not homogeneous; therefore, a non-parametric test was applied.

To identify any significant differences between the experimental and control groups, inferential analysis was carried out using the Mann-Whitney U test. This non-parametric test is appropriate when the data violate the assumptions required for parametric analysis. The data were analyzed using SPSS to maintain accuracy and reliability.

By applying these statistical procedures, the study provides empirical evidence regarding the effectiveness of YouTube-based learning on students' speaking skills.