

CHAPTER IV

FINDINGS AND DISCUSSION

A. Findings of the Research

1. Description of The Data

This research was conducted within the real context of the school environment and its students, providing a holistic understanding of how data were collected, analyzed, and interpreted. The study took place from August 27 to September 4, 2025, a period chosen to capture the dynamics of learning that actually occurred at that time. The school environment was characterized by students' diverse backgrounds, learning behaviors, and patterns of interaction that influenced the learning process. Social norms at school, classroom communication, and collaborative practices among students played important roles in shaping their learning experiences. This research focused on how those conditions affected students' behavior and responses during learning activities using an inquiry-based learning model, especially in the everyday classroom situations students experienced. To gain an in-depth understanding of these conditions, the study adopted a qualitative approach with a case study design following Stake (2008). The case study was chosen because the school and its students have unique characteristics that require deep exploration. This approach allowed the researcher to analyze classroom processes, student interactions, and learning

outcomes in their authentic context. Through this focus, the study aimed to produce contextual and meaningful findings related to the school environment and student learning.

2. Inquiry-Based Learning for Reading-Viewing Skills

a. Observation Results

Table 4. 1 Observation Results 1

No	Student Name	Inquiry-Based Learning Aspect	Indicator	Observation Results		Notes
				Yes	No	
1 2 3 4 5 6	ARS AA AD AM AK AJS	Engagement	The student shows interest and curiosity about the topic or problem, asks initial questions, and actively participates in discussions	✓		
7 8 9 10 11 12	AS AT BKA CC EMT FA	Question Formulation	The student is able to formulate clear, relevant, and investigable questions, and transforms general questions into more specific ones.	✓		
13 14 15 16 17 18 19	FAB FM FAR GMN GK IA IZ	Investigation Planning	The student designs procedures or steps to find answers, identifies the necessary tools and materials, and determines appropriate methods of data collection..	✓		
20 21 22 23 24 25 26	MF MZP NSK PHA RPE RGG SA	Data Collection & Analysis	The student carefully conducts observations or experiments, systematically records data, and analyzes the collected data to identify patterns or relationships	✓		
27 28 29	SM SV TML	Conclusion Formulation	The student states conclusions based on the evidence gathered,	✓		

30 31	VS ZA		connects the conclusions to the initial questions, and identifies			
		Communication of Findings	The student presents the results of the investigation clearly and logically (orally, in writing, or visually), uses evidence to support arguments, and responds to questions from peers or the teacher.	✓		
		Reflection	The student evaluates the learning process and outcomes, identifies what has been learned and what needs improvement, and connects new knowledge to prior experiences..	✓		
		Collaboration	The student works effectively in a group, shares ideas and responsibilities, and listens to and respects others' opinions.	✓		

The data in the table represents a recapitulation of observations on the students' aspects of Inquiry (investigation) and collaboration. Based on the check marks (✓) in the "Yes" column for each indicator, it can be concluded that this observation demonstrates that all 31 students have shown or met all the assessed aspects and indicators of inquiry and collaboration. Based on the results of the first observation on August 27, 2025, overall, the observation results for the 31 students indicate a very good and consistent level of achievement across all aspects of inquiry and collaboration. Each indicator within every aspect is marked with a check (✓)

in the "Yes" column, which signifies that all students (from Ade Ryan Saputra to Zahran Asyaraf) have successfully demonstrated or met the established criteria for each indicator:

1. Engagement(Eg1)

Students demonstrate interest and curiosity towards the topic or problem, pose initial questions, and actively participate in discussions. All students showed high engagement in the learning process. They actively demonstrated interest and curiosity towards the discussed topic, as evidenced by their initiative in posing initial questions. The level of participation in discussions was also very active and evenly distributed among all students.

2. Question Formulation(QF2)

Students can formulate clear, relevant, and investigable questions and change general questions into more specific ones. Students collectively show good cognitive skills in formulating problems. They can construct questions that are not only clear and relevant but also investigable. Furthermore, they are skilled in sharpening general questions into a more specific investigative focus.

3. Investigation Planning(IP3)

Students design procedures or steps to find answers, identify necessary tools and materials, and determine appropriate data collection methods. The aspect of investigation planning is also well fulfilled. All students can logically design procedures and steps to find answers. They

show a good understanding of identifying and preparing the tools and materials needed, as well as selecting the data collection methods most appropriate for the investigation's goals.

4. Data Collection & Analysis(DCA4)

Students conduct observations or experiments carefully, systematically record data, and analyze the collected data to find patterns or relationships. During the implementation stage, students demonstrate precision and perseverance. They conduct observations or experiments carefully, ensuring that data recording is done systematically. Their data analysis skills are also prominent, as they successfully process the gathered data to identify relevant patterns or relationships.

5. Conclusion Formulation(CF5)

Students state conclusions based on the evidence obtained, connect conclusions to initial questions, and identify important findings. The conclusion formulation stage is carried out on a strong scientific basis. All students can formulate conclusions supported by the empirical evidence they have obtained. They also successfully reconnect the conclusions to the initial questions that have been formulated and identify and highlight important findings from their investigations.

6. Communication of Findings(CoF6)

Students present investigation results clearly and logically (orally, in writing, or visually), using evidence to support arguments and responding to questions from peers or teachers. Students show effective scientific communication skills. They can present investigation results clearly and logically, whether through oral presentations, written reports, or visual media. Their expertise in using evidence to strengthen arguments is commendable, and they are responsive and able to answer questions from peers and teachers well.

7. Reflection(R7)

Students evaluate the learning process and the outcomes, identify what has been learned and what needs improvement, and connect new knowledge with previous experiences. The reflection aspect shows mature self-awareness (metacognition). Students can critically evaluate the entire learning process and outcomes they have gone through. They successfully identify new knowledge gained, determine areas needing improvement, and actively connect this new knowledge with concepts or experiences they have previously learned.

8. Collaboration(C8)

Students work effectively in groups, share ideas and responsibilities, and listen to and respect others' opinions. The quality of collaboration among student groups is assessed as

very good. All students show the ability to work effectively as a team. They actively share ideas and equally bear responsibilities. Most importantly, they demonstrate a high level of respect by listening to and considering the opinions of other group members.

To ensure the data's accuracy, the researcher conducts a second observation on August 29, 2025, based on the observation table below:

Table 4. 2 Observation Results 2

No	Student Name	Inquiry-Based Learning Aspect	Indicator	Observation Results		Notes
				Yes	No	
1 2 3 4 5 6 7	AD ADP ACP AL ANF BPM BVP	Engagement	The student shows interest and curiosity about the topic or problem, asks initial questions, and actively participates in discussions	✓		
8 9 10 11 12	DR EP FAB FB HAP	Question Formulation	The student is able to formulate clear, relevant, and investigable questions, and transforms general questions into more specific ones.	✓		
13 14 15 16 17 18 19	ICH JTA KP KEA KR MAPA MA	Investigation Planning	The student designs procedures or steps to find answers, identifies the necessary tools and materials, and determines appropriate methods of data collection..	✓		
20 21 22	MKI MNR MRA	Data Collection & Analysis	The student carefully conducts observations or experiments,	✓		

23	MRS		systematically records data, and analyzes the collected data to identify patterns or relationships			
24	NA					
25	NA					
26	RAS					
27	SAH					
28	SRP	Conclusion Formulation	The student states conclusions based on the evidence gathered, connects the conclusions to the initial questions, and identifies	✓		
29	TIS					
30	TH	Communication of Findings	The student presents the results of the investigation clearly and logically (orally, in writing, or visually), uses evidence to support arguments, and responds to questions from peers or the teacher.	✓		
31	ZF					
		Reflection	The student evaluates the learning process and outcomes, identifies what has been learned and what needs improvement, and connects new knowledge to prior experiences..	✓		
		Collaboration	The student works effectively in a group, shares ideas and responsibilities, and listens to and respects others' opinions.	✓		

Based on the observation results in the table, it shows the ability in various Inquiry aspects or scientific inquiry/learning-based questions. The data is a recap of observations on the aspects of Inquiry (investigation) and collaboration among students. Based on the checkmarks (✓) in the "Yes" column for each indicator, it can be concluded that this observation shows that all 31 students have demonstrated or met all inquiry and

collaboration aspects and indicators assessed. Based on the second observation results on August 29, 2025, overall, the observation of the 31 student names shows a very good and consistent achievement level in all aspects of inquiry and collaboration. Each indicator in each aspect is marked with a check (✓) in the "Yes" column, indicating that all students (Aira Deswitarani to Zack Fernando) have met or demonstrated the expected behavior in every observed inquiry aspect:

1. Engagement(Eg1)

Students show interest and curiosity towards the topic or issue, ask initial questions, and actively participate in discussions. The level of student engagement is very high. All students show clear interest and curiosity in the presented material. They proactively ask initial questions as a sign of curiosity and actively participate in class discussions, indicating mental readiness to start the inquiry process.

2. Question Formulation(QF2)

Students can formulate clear, relevant, and investigable questions, and change general questions into more specific ones. The ability to formulate questions is at a satisfactory level. They are skilled in constructing clear and relevant questions. Furthermore, they can change general questions into more specific and investigable questions, a crucial step in inquiry.

3. Investigation Planning(IP3)

Students design procedures or steps to find answers, identify necessary tools and materials, and determine appropriate data collection methods. In the aspect of investigation planning, students show good competence. They can logically design work procedures and steps to find answers. They successfully identify the necessary tools and materials and determine the most appropriate data collection methods for their investigations.

4. Data Collection & Analysis(DCA4)

Students conduct observations or experiments carefully, systematically record data, and analyze the collected data to find patterns or relationships. The data collection and analysis process is carried out effectively. Students perform observations or experiments carefully, showing diligence in the procedures. They systematically record data and actively analyze the gathered data to identify relevant patterns or relationships.

5. Conclusion Formulation(CF5)

Students state conclusions based on the evidence obtained, connect conclusions to initial questions, and identify important findings. The conclusion formulation stage is carried out on a strong scientific basis. All students can formulate conclusions supported by the empirical evidence they have obtained. They also successfully reconnect the conclusions to the initial questions that have

been formulated and identify and highlight important findings from their investigations.

6. Communication of Findings(CoF6)

Students present investigation results clearly and logically (orally, in writing, or visually), using evidence to support arguments and responding to questions from peers or teachers. The communication of findings aspect shows good performance from students. They can present investigation results clearly and logically through various formats. They consistently use evidence to support their arguments and are active and effective in responding to questions from peers and teachers.

7. Reflection(R7)

Students evaluate the learning process and outcomes, identify what has been learned and what needs improvement, and connect new knowledge with previous experiences. Students show high awareness in reflection. They can critically evaluate the entire inquiry process and the results they have obtained. They successfully identify new knowledge gained, determine areas needing improvement, and actively connect this new knowledge with concepts or experiences they have previously learned.

8. Collaboration(C8)

Students work effectively in groups, share ideas and responsibilities, and listen to and respect others' opinions. The collaboration aspect is also well executed. Students

show the ability to work effectively in groups. They actively share ideas and take responsibility evenly. Importantly, they demonstrate a high level of respect by listening to and considering the opinions of other group members.

After conducting observations 1 and 2 to ensure data validity, the researcher carried out the third observation on September 2, 2025.

Table 4. 3 Observation Results 3

No	Student Name	Inquiry-Based Learning Aspect	Indicator	Observation Results		Notes
				Yes	No	
1	APD	Engagement	The student shows interest and curiosity about the topic or problem, asks initial questions, and actively participates in discussions	✓		
2	AAP					
3	AAH					
4	AN					
5	BS					
6	BRA					
7	CR					
8	DBW	Question Formulation	The student is able to formulate clear, relevant, and investigable questions, and transforms general questions into more specific ones.	✓		
9	DDH					
10	DTS					
11	EAO					
12	FHF					
13	FMQ	Investigation Planning	The student designs procedures or steps to find answers, identifies the necessary tools and materials, and determines appropriate methods of data collection..	✓		
14	FA					
15	FNS					
16	IA.					
17	MA					
18	MN					
19	MBPPM					
20	KP	Data Collection & Analysis	The student carefully conducts observations or experiments, systematically records data, and analyzes the	✓		
21	MRP					
22	PDH					
23	PPK					
24	RKS					
25	SAP					

26	SSF V VA WSFA		collected data to identify patterns or relationships			
27		Conclusion Formulation	The student states conclusions based on the evidence gathered, connects the conclusions to the initial questions, and identifies	✓		
28						
29		Communication of Findings	The student presents the results of the investigation clearly and logically (orally, in writing, or visually), uses evidence to support arguments, and responds to questions from peers or the teacher.	✓		
30						
		Reflection	The student evaluates the learning process and outcomes, identifies what has been learned and what needs improvement, and connects new knowledge to prior experiences.	✓		
		Collaboration	The student works effectively in a group, shares ideas and responsibilities, and listens to and respects others' opinions.	✓		

This observation table evaluates 30 students (from Alfiyyah Putri Dzakhirah to Wulan Suci Fitri A) based on eight fundamental Inquiry aspects. The data indicates that all students achieved or demonstrated the expected behavior (marked with ✓ in the "Yes" column) for all observed indicators. This indicates the successful implementation of inquiry-based learning in the classroom.

1. Engagement(Eg1)

Students show interest and curiosity towards the topic or issue, ask initial questions, and actively participate in discussions. The level of student engagement is very high. All students consistently demonstrate interest and curiosity towards the material. This engagement is manifested through their initiative in asking initial questions and active participation in discussions, signaling critical mental readiness.

2. Question Formulation(QF2)

Students can formulate clear, relevant, and investigable questions and change general questions into more specific ones. The students' ability to formulate questions is at a satisfying level. They successfully construct clear questions that are relevant to the topic. Moreover, they can change general questions into more specific and investigable questions, demonstrating structured analytical thinking.

3. Investigation Planning(IP3)

Students design procedures or steps to find answers, identify necessary tools and materials, and determine appropriate data collection methods. In the aspect of investigation planning, students demonstrate good competence. They can logically design work procedures and steps to find answers. They successfully identify the necessary tools and materials and determine the most

appropriate data collection methods for their investigations.

4. Data Collection & Analysis(DCA4)

Students conduct observations or experiments carefully, systematically record data, and analyze the collected data to find patterns or relationships. The data collection and analysis process is carried out effectively. Students perform observations or experiments carefully, showing diligence in the procedures. They systematically record data and actively analyze the gathered data to identify relevant patterns or relationships.

5. Conclusion Formulation(CF5)

Students state conclusions based on the evidence obtained, connect conclusions to initial questions, and identify important findings. The conclusion formulation stage is carried out on a strong scientific basis. All students can formulate conclusions supported by the empirical evidence they have obtained. They also successfully reconnect the conclusions to the initial questions that have been formulated and identify and highlight important findings from their investigations.

6. Communication of Findings(CoF6)

Students present investigation results clearly and logically (orally, in writing, or visually), using evidence to support arguments and responding to questions from peers or teachers. The communication of findings aspect shows good performance from students. They can present

investigation results clearly and logically through various formats. They consistently use evidence to support their arguments and are active and effective in responding to questions from peers and teachers.

7. Reflection(R7)

Students evaluate the learning process and outcomes, identify what has been learned and what needs improvement, and connect new knowledge with previous experiences. Students show high awareness in reflection. They can critically evaluate the entire inquiry process and the results they have obtained. They successfully identify new knowledge gained, determine areas needing improvement, and actively connect this new knowledge with concepts or experiences they have previously learned.

8. Collaboration(C8)

Students work effectively in groups, share ideas and responsibilities, and listen to and respect others' opinions. The collaboration aspect is also well executed. Students show the ability to work effectively in groups. They actively share ideas and take responsibility evenly. Most importantly, they demonstrate a high level of respect by listening to and considering the opinions of other group members.

b. Interview Results

In this interview section, the researcher presents the research findings by describing the eight aspects of Inquiry-Based Learning that have been implemented by the informants.

1. Engagement(Code Eg1)

According to ERS, in the engagement aspect, the teacher stimulates students' curiosity by providing contextual materials and connecting them to students' daily lives as well as to previously learned topics. To arouse interest, the teacher uses simple guiding questions at the beginning of the lesson. Strategies to encourage students to ask questions include the use of engaging instructional media such as videos, audiovisual materials, games, or song lyrics. Indicators of student engagement observed by the teacher include students' responses, active questioning, and reflection or feedback. To address passive students, the teacher appreciates even the smallest signs of participation they demonstrate in order to enhance their motivation.

According to FF, the teacher demonstrates strong ability in stimulating curiosity by relating the material to daily activities and using pictures as prompts for initial questioning. Emphasizing the principle that "there is no wrong answer" and providing praise creates a safe classroom environment and encourages active discussion, which constitutes an essential foundation of Inquiry-Based Learning (IBL).

Meanwhile, according to MYE, the teacher shows clear and structured efforts to stimulate and sustain students' interest. The lesson begins with simple and relevant questions about the topic and incorporates pictures or photographs to spark interest, which is an effective approach for triggering initial curiosity. The teacher also observes students' learning styles (visual, auditory, and kinesthetic) and forms heterogeneous groups based on these styles with the aim of ensuring that each student feels comfortable and motivated to contribute.

Based on the research findings, all three teachers demonstrated similarities in implementing the engagement aspect of Inquiry-Based Learning. ERS, FF, and MYE consistently began their lessons with simple and relevant questions to stimulate students' curiosity. In addition, they connected the learning materials to students' daily lives, making the instruction more contextual and meaningful. The use of visual media was also a common strategy, including pictures, videos, and audiovisual materials to build students' initial interest. Furthermore, all three teachers showed concern for student engagement by creating a classroom atmosphere that supports active participation.

Despite these shared foundational strategies, several differences were identified in their approaches. ERS placed greater emphasis on the variation of instructional media (such as videos, audiovisual materials, games, and song lyrics) and provided appreciation for even the smallest forms of

participation as a strategy to address passive students. ERS also observed engagement indicators through students' responses, active questioning, and reflections. FF highlighted the creation of a safe classroom environment through the principle that "there is no wrong answer" and the provision of praise. This approach focused more on students' psychological aspects to encourage confidence in participating in discussions. Meanwhile, MYE demonstrated a more structured approach by considering students' learning styles (visual, auditory, and kinesthetic) and forming heterogeneous groups based on those styles. This strategy reflects attention to differentiated instruction to ensure that each student feels comfortable and motivated to contribute.

2. Question Formulation(QF2)

According to ERS, in training students to formulate clear and focused questions, the teacher emphasizes the importance of limiting the scope of the material by concentrating on topics that are closest to students' experiences. When students pose general questions, the teacher redirects the question (e.g., "What do you mean by that?") and then throws it back to the class to be answered or discussed collectively. Students' ability to identify questions worthy of investigation is reflected in their focus, engagement, and active roles in asking questions that are relevant to the theme.

According to FF, the teacher provides a simple framework or guideline for formulating questions, such as

using interrogative words like “why,” “how,” “where,” “what,” and “when.” The quality of students’ questions is assessed based on their relevance to the topic and the extent to which they demonstrate broader curiosity about the material.

Meanwhile, according to MYE, the use of the 5W + 1H framework represents a highly structured and effective strategy for training students to construct clear and directed questions. Students’ ability to identify investigable questions particularly those related to real-world issues (for example, climate change) indicates that their critical thinking skills are beginning to develop, although they still require guidance. The teacher supports students in the initial stages by explicitly teaching the 5W + 1H framework as a foundation for question formulation and by providing the necessary linguistic structures. Probing techniques such as “why?” or “what happened that caused this to occur?” are employed to encourage students to deepen and clarify their questions. Additionally, the teacher offers simple guiding questions using key interrogatives (what, why, how), which are especially helpful for students who are new to the inquiry process.

Based on the research findings, ERS, FF, and MYE all provided structured guidance to ensure that students’ questions were not overly general and remained relevant to the learning topic. Furthermore, all three teachers played an active role in directing and clarifying students’ questions through

reinforcement and probing techniques, thereby enabling students to gradually develop their critical thinking skills.

Despite sharing the same objective, differences were identified in the strategies they employed. ERS placed greater emphasis on limiting the scope of the material to ensure that questions remained focused and closely related to students' experiences. When questions were too general, the teacher responded with clarification questions and involved classmates in discussing them collectively. This approach highlights an emphasis on collaborative discussion and clarification of meaning. FF utilized a simple framework consisting of basic interrogative words (why, how, where, what, and when) as a guide for formulating questions. This approach was practical in nature and helped students understand the fundamental structure of well-formed questions without introducing excessive complexity. MYE demonstrated the most systematic and structured approach by explicitly implementing the 5W + 1H framework and providing the linguistic structures needed by students. MYE also consistently applied probing techniques to deepen the quality of students' questions, including connecting them to real-world issues such as climate change. This approach reflects a stronger focus on the development of critical thinking skills and contextual relevance.

3. Investigation Planning(IP3)

According to ERS, the teacher guides students in designing investigation procedures by providing simple and easily understandable examples of procedural sequences that focus on the lesson material. The teacher's role in determining tools and materials involves demonstrating their use through instructional media. Students decide on data collection methods based on the direct examples provided by the teacher, ensuring that the experiments or projects conducted align with expectations. Students' independence is reflected in their group collaboration and their sense of responsibility during project implementation. A common difficulty encountered at the planning stage is students' confusion in structuring experiments or projects; therefore, the teacher acts as a facilitator by providing clarification.

According to FF, the teacher assumes the role of a facilitator by offering gradual guidance, beginning with simple examples of procedural steps. The use of demonstrations or videos assists students in independently identifying appropriate tools and materials. Although junior high school students still require guidance, this approach encourages greater independence in planning investigations.

Meanwhile, according to MYE, the teacher provides simple procedural examples that directly focus on the topic as a form of scaffolding to help students construct their procedures. Instructional media are used to present visual

examples of how tools and materials are utilized, making the selection process more concrete. The teacher first guides students to understand the purpose of the experiment, then facilitates discussion regarding possible methods along with their advantages and disadvantages, enabling students to choose the most effective method. This approach fosters the development of strategic thinking skills.

Based on the research findings, all three teachers demonstrated similarities in guiding students to design investigative procedures by providing simple procedural examples as initial scaffolding. ERS, FF, and MYE consistently assumed the role of facilitators who offered gradual guidance to prevent students from experiencing confusion in constructing investigation procedures. In addition, the use of instructional media or visual demonstrations to clarify the use of tools and materials was a common strategy among them. Although students still required guidance, this approach gradually fostered greater independence in planning investigations or projects.

Differences in implementation, however, were evident in the depth of guidance and the focus of development. ERS placed greater emphasis on providing direct examples so that students could model and adapt the procedures according to the intended learning objectives. The teacher actively offered clarification when students encountered difficulties, particularly in structuring experiments or projects. Students'

independence was primarily reflected in their group collaboration during the implementation phase. FF employed a gradual approach supported by demonstrations or videos to help students identify tools and materials more independently. While still offering guidance, FF placed stronger emphasis on encouraging students to attempt designing procedures on their own based on the examples provided. MYE demonstrated a more systematic and reflective approach. In addition to providing simple procedural examples, MYE first guided students to understand the purpose of the experiment before discussing various methodological options along with their advantages and disadvantages. This strategy not only supported technical planning but also fostered the development of strategic thinking skills in selecting the most effective method.

4. Data Collection & Analysis(DCA 4)

According to ERS, to ensure that observations or experiments are conducted carefully, the teacher emphasizes the role as an active facilitator so that the learning process remains meaningful even when students work independently. The techniques used by students to record data systematically include the use of simple tables, observations, and interviews or peer questioning. The teacher trains students to analyze data by providing step-by-step examples to ensure that experiments are conducted as expected. Common obstacles in data collection include confusion or lack of focus in determining the most appropriate experiment, as well as a lack of confidence in

the results achieved. Students identify patterns or relationships within the data through collaboration and group discussions.

According to FF, the teacher ensures accuracy through direct observation (supervision) during the experiment. The use of simple tables represents a fundamental yet effective systematic technique for recording data. The school's literacy initiatives to enhance students' reading interest are also relevant, as reading is a key skill in data analysis and pattern identification.

Meanwhile, according to MYE, the teacher highlights the importance of serving as an active facilitator and adopting a systematic approach, ensuring that learning is not entirely student-centered without guidance but remains meaningful through appropriate support. Students are trained to use simple tables to organize data, which constitutes an effective foundational technique for data visualization and management. They also engage in collaborative processes, such as active group discussions, to organize data, facilitating the identification of patterns and relationships and making the analysis process more systematic.

Based on the research findings, all three teachers demonstrated similarities in positioning themselves as active facilitators during the processes of data collection and analysis. ERS, FF, and MYE consistently trained students to use simple tables as a fundamental technique for recording data. This strategy enabled students to organize information

systematically, thereby facilitating the identification of patterns or relationships among the data. In addition, group discussion played a crucial role in supporting students' collaborative analysis and interpretation of the data.

Differences in implementation, however, were evident in the focus of assistance and strategic emphasis. ERS highlighted step-by-step guidance in the data analysis process and employed various data collection techniques, such as observation, interviews, and question-and-answer sessions. ERS also identified challenges experienced by students, including lack of focus in determining the most appropriate experiment and limited confidence in their results, prompting the teacher to provide clarification and reinforcement. FF placed greater emphasis on direct supervision during experiments to ensure data accuracy. Furthermore, FF connected data analysis skills to the school's literacy culture, underscoring the importance of reading skills in understanding and identifying patterns from the collected data. MYE demonstrated a more systematic approach by emphasizing the balance between student independence and teacher guidance. MYE underscored the importance of well-organized data presentation through tables, as well as active group discussions as a systematic means of detecting patterns and relationships in greater depth.

5. Conclusion Formulation(CF5)

According to ERS, students collaboratively formulate conclusions based on existing evidence or facts, ensuring that the conclusions reached represent collective group decisions. The teacher assists students in connecting their conclusions to the initial questions through an in-depth approach that emphasizes positive interaction and appreciation of students' contributions. The relationship between conclusions and evidence is considered relatively strong, as the outcomes of group discussions serve as the group's final conclusions. Students are trained to question the accuracy of their conclusions by applying the material in contexts that are beneficial to themselves and the school environment. The teacher also helps identify errors by reviewing students' work and conducting assessment and correction when inaccuracies are found.

According to FF, the strength lies in emphasizing reflection and open discussion to connect conclusions with the initial questions. The evaluation of conclusions through intensive discussion and collective assessment of evidence indicates that the relationship between conclusions and evidence is relatively strong. Furthermore, the teacher proactively trains students to question the accuracy of their own conclusions.

Meanwhile, according to MYE, students formulate conclusions by examining the data that appear most and least

frequently, which represents a simple yet logical way to connect findings to conclusions (for example, in the use of “to be” in English lessons). The teacher employs an interactive and reflective approach through open discussion and question-and-answer sessions to assist students in linking their findings to the initial questions or hypotheses.

Based on the research findings, all three teachers demonstrated similarities in guiding students to formulate conclusions based on the data or evidence that had been collected. ERS, FF, and MYE consistently emphasized the importance of collaborative discussion as the foundation for drawing conclusions, ensuring that the outcomes were not individual decisions but rather the result of collective reasoning. Furthermore, all three teachers assisted students in connecting their conclusions to the initial questions or hypotheses, thereby maintaining a systematic inquiry process aligned with the objectives of the investigation. The teachers also encouraged students to reflect on and review the accuracy of their conclusions through discussion and clarification.

Despite these shared principles, differences were evident in their approaches. ERS placed greater emphasis on positive interaction and appreciation of students during the conclusion-drawing process. The teacher also reviewed and corrected students' work to ensure accuracy and trained students to test their conclusions by applying them in real-life contexts beneficial to themselves and the school environment.

FF demonstrated a strong emphasis on reflection and open discussion as means of evaluating conclusions. The teacher proactively encouraged students to question and reassess their own conclusions through collective evaluation of the evidence. MYE employed a simpler and more logical approach in helping students draw conclusions by examining the most dominant or least frequently occurring data. This strategy facilitated students' understanding of the relationship between findings and conclusions, particularly in the context of English language learning, through interactive discussions and reflective question-and-answer sessions.

6. Communication of Findings(CoF6)

According to ERS, students present the results of their investigations through collaborative presentations in front of the class. The most commonly used form of communication is verbal communication during the presentation. Students support their arguments with evidence by preparing facts or data based on group agreements prior to presenting. Their ability to respond to questions from the teacher or peers regarding the presented results is reflected in their active awareness and understanding during the learning process; when they encounter something they do not understand, they automatically raise questions. The teacher evaluates these presentation skills using a previously prepared assessment rubric.

According to FF, students routinely present their findings in the form of presentations (PowerPoint or posters), which foster both verbal and visual communication skills. The teacher emphasizes the use of evidence (key facts) to support arguments, which is essential in scientific reasoning.

Meanwhile, according to MYE, this aspect focuses on the presentation and accountability of investigative findings. Students present their results either individually or in groups using PowerPoint or simple posters, involving both verbal and visual communication. The most common forms of communication are written and oral presentations delivered in front of the class. Students are trained to review key facts that support their arguments prior to presenting, ensuring that each claim is grounded in solid evidence. The teacher employs a prepared assessment rubric to evaluate students' performance during the presentation of their discussion results.

Based on the research findings, all three teachers demonstrated similarities in providing students with opportunities to present their investigative results in front of the class as a form of academic accountability. Presentations were conducted individually or in groups, with emphasis on the use of relevant evidence or facts to support arguments. ERS, FF, and MYE consistently trained students to use verbal communication when presenting their findings and to utilize media such as PowerPoint or simple posters to enhance the visual aspect. Furthermore, all three teachers used assessment

rubrics as evaluation instruments to objectively assess students' communication skills and the quality of their presentations.

Although the form of implementation was similar, several differences emerged in terms of strategic emphasis. ERS placed greater emphasis on group preparedness prior to the presentation through collective agreement on the facts or data to be delivered. Students' ability to respond to questions was assessed based on their active awareness and understanding throughout the learning process. FF highlighted a balanced integration of verbal and visual communication through the use of PowerPoint or posters. The primary emphasis was on the use of key facts as the foundation of scientific reasoning in presenting arguments. MYE emphasized the aspect of accountability in presenting investigative findings by training students to review essential facts before delivering their presentations. This approach reflects a focus on strengthening the foundation of arguments to ensure that each statement is supported by clear and logical reasoning.

7. Reflection(R7)

According to ERS, after the learning activities, the teacher encourages reflection by asking students to share their opinions about the lesson that has been learned. The forms of reflective activities implemented include writing reflections on post-it notes and attaching them to a designated space, or expressing reflections orally. Students' effectiveness in identifying what they have learned is considered relatively

good, with most students able to mention the main points. Students connect new learning with prior experiences by ensuring that the material delivered is contextual and related to their surrounding environment and daily lives. This reflection is used to enhance future learning processes and serves as a benchmark for evaluating instructional success.

According to FF, the teacher conducts reflection by reviewing challenges and memorable moments during the lesson. Writing important points in a small notebook represents a simple yet effective form of written reflection. This reflective practice is also used as a reference for improving future instruction, demonstrating a positive cycle of continuous improvement.

Meanwhile, according to MYE, reflection functions as a means of metacognition and instructional improvement. The teacher employs simple closing questions, such as “What did you understand?” or “What is your conclusion?” to stimulate reconsideration and deeper thinking. Most students are considered effective in clearly formulating their core understanding. The connection between new learning and prior experiences is facilitated through discussions and reflections that relate concepts to real-life situations in their immediate environment. Reflection is also utilized as a basis for refining future instruction, indicating an ongoing cycle of continuous improvement.

Based on the research findings, all three teachers demonstrated similarities in positioning reflection as an essential component of the learning process. ERS, FF, and MYE consistently encouraged students to review what they had learned as a form of evaluating their understanding. Reflection was also utilized as a reference for improving future instruction, indicating the presence of a continuous improvement cycle within the teaching and learning process. Furthermore, all three teachers assisted students in connecting new learning to prior experiences or real-life contexts, thereby making the learning more meaningful and relevant.

Despite sharing the same objective, differences were evident in the techniques and emphasis of reflection. ERS employed more varied reflection methods, such as asking students to write their opinions on post-it notes or express them orally. ERS also assessed the effectiveness of reflection based on students' ability to identify and articulate the main points of the material learned. FF implemented reflection by reviewing challenges and memorable moments encountered during the lesson. The use of a small notebook to record key points served as a simple yet consistent form of written reflection and functioned as documentation of students' learning progress. MYE placed greater emphasis on reflection as a means of fostering metacognitive awareness by employing simple guiding questions such as "What did you understand?" or "What is your conclusion?" This approach assisted students in

formulating their core understanding clearly and systematically through reflective discussion.

8. Collaboration(C8)

According to ERS, the teacher organizes group work effectively by grouping students based on their learning styles (one learning style per group) to enhance collaboration. The roles of group members are clearly defined, a leader coordinates the activities, a secretary records the discussion results, and other members are responsible for seeking answers. Students' contributions within the group are assessed based on observable participation (whether students are actively engaged or reluctant to cooperate). A culture of listening and respecting opinions is established through classroom agreements made at the beginning, emphasizing empathy, respect, and teamwork. Common challenges in collaboration include differences in students' personalities (active and less active learners). The teacher addresses these challenges by improving internal factors (presenting engaging instruction), using appropriate instructional media, and grouping students according to their learning styles.

According to FF, organizing heterogeneous groups and assigning clear roles (leader, secretary, presenter) represent effective strategies to encourage active participation and ensure that each student holds responsibility. The presence of a group contribution assessment mechanism (such as notes from group

members) indicates an effort to evaluate individual contributions within teamwork.

Meanwhile, according to MYE, the teacher organizes collaboration by emphasizing clearly defined roles and group diversity. Heterogeneous groups are formed based on varied abilities and gender, while avoiding grouping based solely on intelligence levels, which reflects best practices in knowledge transfer and social skill development. Each member is assigned a specific role (Leader, Secretary, Information Seeker), fostering collective responsibility and independence. Assessment is conducted through observation of students' participation (actively asking questions, contributing ideas, helping peers) and by identifying those who are passive or reluctant to engage. Students demonstrate mutual respect by applying classroom rules (giving opportunities to speak and listening without interrupting), which are developed through teacher guidance and consistent practice.

Based on the research findings, all three teachers demonstrated similarities in organizing group work in a structured manner with clearly defined roles, such as leader, secretary, and member or presenter. This strategy helped ensure that each student assumed responsibility within the learning process. ERS, FF, and MYE also consistently assessed individual contributions within groups, either through direct observation or group records, allowing student participation to be monitored objectively. Furthermore, all three teachers

fostered a culture of mutual respect through classroom rules and habitual practices of listening to peers' opinions as part of teamwork.

Differences in implementation, however, were evident in grouping strategies and approaches to addressing collaborative challenges. ERS grouped students according to the same learning style within each group, aiming to enhance comfort and cooperation effectiveness. ERS also emphasized improving internal factors, such as delivering engaging instruction and using appropriate instructional media, to address less active students. FF formed heterogeneous groups and applied a contribution evaluation mechanism through notes recorded by group members. This approach emphasized individual accountability within teamwork and ensured active participation from each member. MYE implemented heterogeneous grouping based on ability and gender while avoiding grouping based solely on intelligence levels. This approach aimed to promote more equitable knowledge transfer and social skill development. MYE also consistently cultivated mutual respect through classroom rules and observation of students' active participation during discussions.

B. Discussion

The findings of this study were analyzed based on the research questions formulated in Chapter I. These research questions aimed to explore and describe the implementation of

Inquiry-Based Learning (IBL) in teaching reading-viewing skills at SMPN 20 Kota Bengkulu, particularly in terms of engagement, question formulation, investigation planning, data collection and analysis, conclusion formulation, communication of findings, reflection, and collaboration. The results indicate that the research questions were comprehensively addressed through data obtained from observations, interviews, and documentation. The findings reveal that students demonstrated improvement in the learning process, as reflected in changes in learning behavior, viewed through the following eight aspects:

1. Engagement

The findings show that students' engagement during the implementation of Inquiry-Based Learning was at a very high level across all observed learning sessions. Students demonstrated curiosity, enthusiasm, and active participation when interacting with reading texts and visual media. This finding aligns with Piaget's constructivist theory, which emphasizes that learning occurs optimally when learners are actively involved in constructing knowledge through meaningful experiences.

These results also support Royani (2023), who states that Inquiry-Based Learning enhances student engagement by positioning learners as active seekers of knowledge rather than passive recipients of information. Archer-Kuhn and MacKinnon (2023) further argue that engagement is the initial and most crucial stage in inquiry-based learning, as

curiosity serves as the primary driving force for subsequent investigative processes. In the context of reading-viewing skills, student engagement enables learners not only to comprehend written texts but also to interpret visual elements integratively, as suggested by Exley (2024). Compared to the study by Cahya and Katemba (2023), which also reported increased student engagement through IBL, this study differs in its focus on multimodal engagement, involving simultaneous interaction with both textual and visual media.

2. Question Formulation

The results indicate that students were able to formulate clear, relevant, and investigable questions based on the textual and visual materials studied. This demonstrates that Inquiry-Based Learning is effective in developing students' critical and analytical thinking skills in reading-viewing activities. This finding is consistent with Aulia (2023), who argues that question formulation is a crucial cognitive process that encourages students to analyze texts more deeply. Kehoe and McGinty (2024) also emphasize that questioning skills play a vital role in fostering reasoning and exploration, which form the foundation of effective reading instruction. Through inquiry guidance, students in this study were able to transform general questions into more specific investigatory questions,

leading to deeper comprehension of textual and visual meanings.

In comparison with Alshammari's (2022) study conducted at the tertiary level focusing on metacognitive reading comprehension, this study demonstrates that similar skills can be developed at the junior high school level, with an added emphasis on visual questioning that strengthens students' reading-viewing skills.

3. Investigation Planning

At the investigation planning stage, students were able to design inquiry steps, select appropriate tools, and determine data collection methods for analyzing texts and visual media. This finding indicates that Inquiry-Based Learning supports the development of structured thinking and learner autonomy. This result aligns with Chu et al. (2021), who state that IBL plays a significant role in developing information literacy through systematic investigative processes. Tawfik (2025) also emphasizes that inquiry-based learning is not merely about seeking answers but involves careful planning and logical reasoning. In the context of reading-viewing, investigation planning helps students determine effective ways to explore the relationships between written texts and visual elements.

Unlike the study by Hendriarto et al. (2021), which focused on basic reading skills at the elementary level, this

study emphasizes the integration of investigation planning with multimodal literacy at the junior high school level.

4. Data Collection and Analysis

During the data collection and analysis stage, students were able to systematically gather information from texts and visual media, record their findings, and identify emerging patterns or relationships. This process strengthened students' analytical abilities in reading and viewing skills. These findings are consistent with the study conducted by Al Khamaiseh (2023), which concluded that Inquiry-Based Learning enhances students' reading skills through evidence-based analytical learning. Similarly, Agustini et al. (2024) demonstrated that discovery-based learning improves critical thinking through active exploration and analysis of various learning materials.

In the present study, students not only read written texts but also analyzed images, graphs, and videos. This practice supports the theory of multimodal integration proposed by Exley (2024), which emphasizes that deeper comprehension is achieved through interaction with multiple modes of representation.

5. Conclusion Formulation

The results show that students were able to formulate conclusions based on evidence gathered throughout the inquiry process and relate them to the initial questions. This indicates that Inquiry-Based Learning is effective in

developing logical reasoning and deep understanding in reading-viewing activities. This finding supports Archer-Kuhn and MacKinnon (2023), who emphasize that conclusion formulation is a critical stage in inquiry, as it requires students to synthesize information and justify their interpretations. Pangestika et al. (2023) also highlight the importance of viewing skills in supporting evidence-based conclusions in multimodal texts.

Unlike previous quantitative studies that focused primarily on final outcomes, this qualitative study provides a detailed depiction of students' thinking processes in deriving meaning from texts and visual elements.

6. Communication of Findings

The study found that students were able to communicate their inquiry findings clearly and logically through oral presentations, written reports, and visual media. This indicates that Inquiry-Based Learning contributes to the development of students' communication skills as part of reading-viewing literacy. This finding aligns with Tawfik (2025), who states that inquiry-based learning requires students to articulate and defend ideas in a structured manner. Santos and Paglinawan (2023) also emphasize the role of viewing skills in students' ability to present and interpret visual information.

Compared to Cahya and Katemba (2023), which primarily emphasized reading test scores, this study

highlights communication as a significant learning outcome in inquiry-based reading-viewing instruction.

7. Reflection

Reflective activities enabled students to evaluate their learning processes, identify strengths and weaknesses, and connect new knowledge with prior experiences. This demonstrates that Inquiry-Based Learning plays a role in developing students' metacognitive awareness. This finding is consistent with Anita (2024), who states that inquiry-based learning strengthens reflective and interpretative abilities in reading and viewing activities. Reflection helps students become more aware of the strategies they use to comprehend texts and visual materials.

Unlike some previous studies that placed limited emphasis on reflection, this study positions reflection as a core component in the development of reading-viewing skills.

8. Collaboration

The collaboration aspect shows that students were able to work effectively in groups, share responsibilities, and respect differing viewpoints. This supports the social constructivist perspective that knowledge is constructed through social interaction. This finding aligns with Rizki et al. (2025), who argue that collaboration enriches understanding through processes of sharing and negotiating meaning. In reading-viewing instruction, group discussions

help students validate and expand their interpretations of texts and visual materials.

In contrast to previous studies that focused more on individual performance, this study emphasizes the importance of collaboration in enhancing students' reading-viewing skills.

Overall, the discussion highlights that Inquiry-Based Learning is effective in improving students' reading-viewing skills through systematic inquiry stages. Similarities with previous studies reinforce the validity of IBL's effectiveness, while the differences highlight the novelty of this study in integrating multimodal literacy and a qualitative approach at the junior high school level. Students' active engagement throughout the learning process demonstrates that IBL promotes meaningful and contextual learning. Their ability to formulate questions, design investigations, and analyze data from textual and visual sources indicates the development of critical thinking and multimodal literacy skills. Furthermore, students were able to draw evidence-based conclusions, communicate inquiry results systematically, and reflect on their learning processes.

These findings are consistent with constructivist theory and previous research asserting that Inquiry-Based Learning is effective in enhancing literacy skills. However, this study is distinctive in its focus on reading-viewing skills

and its use of a qualitative case study approach at the junior high school level. Therefore, the discussion provides a strong foundation for concluding that Inquiry-Based Learning is an effective instructional approach for improving students' reading-viewing skills and is highly relevant for implementation in English language teaching at the junior high school level.

