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TEACHERS' PEDAGOGIC COMPETENCE IN DEVELOPING STUDENTS' CRITICAL THINKING ABILITIES IN ELEMENTARY SCHOOLS

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ABSTRACT

This research is motivated by the demands of the world of education to develop student's critical thinking skills early on. This study aims to describe the contribution of teachers' pedagogical competence in developing students' critical thinking skills in elementary schools. This type of research is descriptive with a qualitative approach. The research setting is at SDIT Anak Sholeh Mataram. The data collection procedure uses observation, interviews, and documentation. Data analysis uses data reduction, data presentation, and data verification. Data validity checking with triangulation techniques and sources. The results of the study indicate that the contribution of teachers' pedagogical competence in developing students' critical thinking skills at SDIT Anak Sholeh Mataram is carried out through various active participatory learning activities, such as (a) knowing in detail problems; (b) being able to identify problems; (c) being able to distinguish relevant and irrelevant ideas; (d) being able to distinguish facts from non-facts; (e) being able to distinguish between constructive and non-constructive criticism; (f) identifying attributes of humans, places, and objects; (g) being able to see a way out of the problem; (h) being able to connect one problem to another; (i) being able to make predictions from the information presented; (k) able to distinguish between wrong and correct conclusions; and (l) able to conclude.

Keywords: Pedagogical Competence, Critical Thinking, Elementary School Students

INTRODUCTION

Critical thinking skills are crucial skills that students must have in the 21st century, in this case, elementary school students. In elementary school, critical thinking is considered an academic ability and a crucial skill needed to face various challenges in everyday life (Kurniawan et al., 2020). In this challenging era of globalization, critical thinking skills help students solve problems and equip them with analytical thinking skills, make the right decisions, and evaluate information objectively and independently.

The role of teachers is very significant in developing students' critical thinking skills. Teachers are the primary agents in the learning process who direct, facilitate, and

guide students to learn profoundly. For this reason, a teacher's pedagogical competence is a crucial factor. Pedagogical competence is the teacher's ability to design, implement, and evaluate learning effectively by considering the needs and potential of students. Teachers who have good pedagogical competence will be able to manage classes dynamically, apply innovative learning methods, and encourage students to actively think and reflect critically. Thus, this teacher's pedagogical competence dramatically contributes to developing students' critical thinking skills, which is expected to improve their learning outcomes (Kristiyanto, 2020; Ramdani et al., 2020).

Children are at a critical stage of cognitive development at the elementary school level. Children learn to understand basic concepts and begin to develop more complex thinking skills. Students will be more motivated to think critically if teachers apply the right learning approach, such as problem-based learning models, class discussions, and collaborative projects. Several studies have shown active and interactive learning approaches can improve students' critical thinking skills (Adu & Cendana, 2022; Wicaksono et al., 2017). Using teaching aids and technology in learning has also improved students' critical thinking skills (Dafit et al., 2018; Sugandi, 2023). This shows that teachers who have pedagogical competence design and apply appropriate learning models to develop students' critical thinking skills. However, without adequate pedagogical competence, learning can be monotonous and tends only to emphasize memorization, which does not allow students to develop critical thinking skills.

The observation data showed that students in the High Class of SDIT Anak Sholeh Mataram looked active and enthusiastic in their learning. This is evident because, in learning, not only one or two people asked questions, but almost more than five students asked questions. When the teacher asked questions, students were also able to

answer them. The teacher also gave rewards. The reward offered is that students get points or high scores. Not only that but in class, the student's learning positions are also different, namely the sitting position in the shape of the letter U. So, during the learning process, it is easier for teachers to direct their students. This confirms a positive relationship between teacher pedagogical competence and critical thinking. Teachers should innovate in choosing learning models based on the objectives and materials taught to make the learning process enjoyable. Schools are expected to provide support and opportunities for teachers to create innovative learning processes by providing workshop training as provisions for teachers to achieve educational goals as well as produce high-achieving students (Nuzulaeni & Susanto, 2022).

In addition, in the context of the Independent Curriculum initiated by the Government, critical thinking skills are one of the main focuses of learning. In this case, students are expected to be able to adapt to rapid and complex changes (Kurniawan et al., 2020). This curriculum emphasizes the importance of student-centred learning. Students can explore ideas, analyze information, and solve problems independently. For the objectives of this curriculum to be achieved, teachers need to have pedagogical competence that can direct students in an interactive and experience-based learning process. In this context, teachers function as conveyors of information and facilitators who encourage students to think critically when solving problems. Therefore, it is crucial to explore the contribution of teacher pedagogical competence to developing students' critical thinking skills in elementary schools.

Based on the description above, this study is essential and exciting in examining teacher pedagogical competence that contributes to building students' critical thinking skills. In addition, this study can also provide insight into the importance of professional

development for teachers in improving pedagogical competence to support effective and meaningful learning for elementary school students.

LITERATURE REVIEW

Teacher Pedagogical Competence

Teacher pedagogical competence is essential to understanding how teachers can manage and improve the learning process in elementary schools. Pedagogical competence covers various aspects, including understanding students, designing and implementing learning, and evaluating learning outcomes (Lestari, 2023). In this context, teacher pedagogical competence plays a significant role in the effectiveness of student learning and development (Putra et al., 2023). A critical aspect of pedagogical competence is the teacher's ability to apply a curriculum appropriate to students' needs. Lestari emphasized that teachers' understanding of the required pedagogical competence is essential for implementing the Independent Curriculum (Lestari, 2023). This shows that teachers with good pedagogical competence can adjust their teaching methods to meet the diverse learning needs of students.

Siswati et al. reported that collaborative learning training can significantly improve teachers' pedagogical competence (Siswati et al., 2023). Furthermore, Firmansyah et al. highlighted that teachers' pedagogical competence positively affects teacher performance (Firmansyah et al., 2022). This study shows that teachers with high pedagogical competence are more effective in managing classes and achieving learning objectives. This aligns with Rahmawati's findings, which show that a problem-based approach in education can help improve students' critical thinking skills and creativity, which are part of broader pedagogical competence (Rahmawati, 2023). In the context of training, Dewi noted that good training must be relevant to the needs of participants and can be applied in practice (Dewi, 2014). This is important to ensure that teachers have theoretical knowledge and the practical skills needed to manage learning in the classroom. Thus, developing teachers' pedagogical competence should be a primary focus in improving the quality of education in elementary schools.

From the explanations above, the pedagogical competence referred to here is the teacher's understanding of students, planning, implementation of learning, assessment of learning outcomes, and development of students to actualize their potential. Pedagogical competence is often also interpreted as the ability to manage learning, including teaching readiness, demonstrated by mastery of teaching knowledge and skills.

Students Critical Thinking Skills

The critical thinking skills of elementary school students are essential to develop in the context of modern education. Critical thinking is a mental process that involves analyzing, evaluating, and synthesizing information to make the right decisions (Oktariani & Ekadiansyah, 2020). In education, critical thinking skills help students face challenges and solve complex problems, which are necessary in today's era of globalization (Hayati & Setiawan, 2022).

Critical thinking includes analysing and evaluating information and making logical and reasoned decisions (Haryanti et al., 2022). Critical thinking skills help students face complex challenges and make the right decisions (Kawuryan et al., 2022).

Critical thinking is a reflective process that focuses on deciding what to believe or do. Critical thinking includes skills in analyzing arguments, concluding using inductive or deductive reasoning, evaluating, and making decisions or solving problems (Zakiah & Lestari, 2019).

Critical thinking indicators are essential in assessing students' ability to analyze, evaluate, and conclude information. Various studies have identified indicators that can be used to measure students' critical thinking skills, which include several different cognitive aspects. One essential indicator of thinking often used is interpretation ability, which includes students' ability to understand and explain the information provided. Utami noted that this indicator aligns with the cognitive domain in Bloom's Taxonomy, which includes understanding and analysis (Utami, 2023).

In addition, Shabrina identified six critical thinking indicators (Shabrina, 2023). The six indicators can be seen in Table 1 below:

Table 1. Critical Thinking Indicators

No.	Indicator	Sub-indicator
1.	Interpretation	a. Grouping b. Making meaning c. Clear meaning
2.	Analysis	a. Testing ideas b. Recognizing arguments c. Recognizing reasons d. Recognizing questions
3.	Evaluation	a. Assessing the credibility of questions b. Assessing the quality of arguments using inductive and deductive considerations c. Making and determining the results of considerations
4.	Inference	a. Assessing the quality of questions b. Assessing the quality of arguments using inductive and deductive considerations
5.	Explanation	a. Stating results b. Supporting procedures c. Presenting arguments
6.	Self-regulations	a. Self-monitoring b. Self-improvement

METHODOLOGY

This type of research is descriptive research using a qualitative approach. In this study, the data is interpreted descriptively. The data is in the form of oral and written data obtained from the attitudes of individuals or groups and social phenomena in natural conditions. The data is also revealed holistically-contextually by making the researcher the key instrument (Sobry & Hadisaputra, 2020). The research subjects comprised teachers and students in the High Class of SDIT Anak Sholeh Mataram. Observation, interviews, and documentation were conducted during the data collection procedure. Furthermore, the data was analyzed using data reduction, presentation, and verification

(Miles & Huberman, 1994). I checked the validity of the data by triangulating techniques and sources (Kerlinger, 2006).

RESULT AND DISCUSSION

RESULT

The research results obtained data on students' critical thinking skills in the High Class of SDIT Anak Sholeh Mataram, based on teacher pedagogical competence's contribution. To facilitate understanding, the following data findings are presented in Table 2 below:

Table 2. Research Findings Data

No.	Critical Thinking Aspect	Observation	Interview	Contribution of Teacher Pedagogical Competence
1.	It is knowing in detail a problem.	Students know in detail a problem by asking the teacher about the problem so that they understand the meaning of the problem	"Yes, students ask me directly about every problem."	In classroom management, teachers provide students with the habit of analyzing or knowing in detail a problem first. When students have tried to understand the issue but still have difficulty, they can ask the teacher.
2.	Able to identify problems.	Students identify problems by asking the teacher about the issue.	"I ask students first to identify what the problem is."	In implementing learning, the teacher gives students space to ask the teacher. However, students must first try to identify the problem.
3.	Able to distinguish between relevant and irrelevant ideas	Students can distinguish between relevant and irrelevant ideas by analyzing the problem first. So, students do not accept it raw without distinguishing between relevant ideas.	"We, class teachers in high classes, accustom our students to be independent in working on the assignments we give to choose and sort out relevant and irrelevant ideas."	In classroom management, high-class teachers accustom their students to work independently so they do not readily absorb irrelevant ideas. The students have done the analysis first.
4.	Able to distinguish between facts and non-facts.	Their friends do not easily influence students, and they ask people who understand the problem better, namely their	"Problems that are logical, we give more time to think so that the problem can be solved."	In implementing learning, teachers provide space for students to ask anything that will be asked, including providing clarity regarding the facts requested by students.

		teachers. This is done so that students can explain the reasons for a logical problem.		
5.	Able to distinguish between constructive and unconstructive criticism	High school students of SDIT Anak Sholeh Mataram can differentiate between constructive and unconstructive criticism by seeing the effects of the criticism. So, when students are given criticism, students will first think about the reasons for being criticized and the effects of the criticism.	"If something is still confusing and we don't ask, we will be scolded by the teacher. But the teacher's anger is to advise us so that we can understand the lesson."	The teacher provides views on the positive and negative impacts that will occur. So students can distinguish between constructive and unconstructive criticism based on its effects.
6.	We are identifying attributes of people, places, and objects.	The teacher must guide high-grade students who cannot identify them independently.	"The teacher guides us in identifying places, objects, or people."	The teacher continues to provide directions on identifying the attributes of people, places, and objects.
7.	Able to see a way out of the problem.	When the fourth grade was given time to practice a drama with a bullying theme, the drama members were unprepared and had difficulty giving directions. However, one of the students took over and began to act firmly so that his members would immediately practice the drama and convince his friend.	"When we were doing the drama, we were not ready because my friends were not. But I took over and was firm with my friends. If not, the drama would not have happened."	Teachers always get their students used to not avoiding a problem but facing it until it is resolved.
8.	Able to connect one problem to another.	One of the contexts of the problem appears to be menstruation. Female students who have experienced menstruation are seen to know how to take care of themselves.	"Yes, because when we are in grade IV, there are those who are menstruating, Sis, so they have to be separated. When we menstruate, we have to take better care of ourselves. We are also happy that the boys' and	The teacher expands the discussion of the problem within the exact scope of explanation and also talks about the daily lives of her students.

		Students relate this to their daily lives.	girls' classes are separated because we can be free to fix our headscarves."	
9.	Be able to make predictions based on the information presented.	High-grade students of SDIT Anak Sholeh Mataram can make predictions from the information presented by getting to know the details and seeing a way out of the problem.	"The teacher asked us to make predictions about the information presented through the video."	In implementing the learning, the teacher provides detailed explanations, broadening the context of the problem discussion.
10.	Able to distinguish between wrong and correct conclusions.	Students are seen to be able to distinguish between wrong and right conclusions regarding the information received by validating the conclusion to their teacher.	"We were asked to conclude. We also asked the teacher about the conclusion if we doubted its truth."	The teacher accustomed students to working independently, asking students to ask for valid sources and providing confirmation for every opinion that was not quite right.
11.	Able to conclude.	High-class students are seen to be able to solve every problem given. However, students can conclude when it has been detected as valid.	"If I want to ask, I just ask, but if I don't, I'll be more curious. Ustadzah also always advises us if there is something we are confused about or have questions about, but we choose to remain silent. Here, we have 22 people, all of whom are active except for six people."	High-class teachers make it a habit at the end of each lesson to conclude the learning material that has been carried out and re-emphasized by the teacher.

DISCUSSION

The 21st century has demanded that students have critical thinking skills. These skills must be developed through various interactive and participatory learning approaches. These approaches engage students in classroom activities that encourage them to think more deeply and critically, thus significantly increasing their critical thinking skills.

In the High Class of SDIT Anak Sholeh Mataram, students' critical thinking skills appear to be developing based on the contribution of teacher pedagogical competence. Students demonstrate their critical thinking skills, such as knowing a problem in detail, being able to identify problems, being able to distinguish relevant and irrelevant ideas, being able to distinguish facts from non-facts, being able to differentiate between constructive and non-constructive criticism, identifying attributes of humans, places, and objects; being able to see a way out of the problem; being able to connect one issue to another; being able to make predictions from the information presented; being able to distinguish between wrong and correct conclusions; and being able to conclude. For more details, please see the following:

1. Recognizing a Problem in Detail

   Students in the Higher Class of SDIT Anak Sholeh Mataram tend to be able to recognise and describe problems in detail. Students not only see issues in general but can break them down into smaller parts to make them easier to understand and analyze. Students who can do this are generally more active participants in class discussions and tend to ask relevant questions to clarify the problems faced. This aligns with Susandi's statement that the first step in critical thinking is to analyze the problem well to focus on the problem and determine the concept that will be used to solve the problem (Susandi, 2021). In class, teachers get students used to analyzing or getting to know the problem in detail first. When students have tried to recognise the problem but still have difficulty, the teacher is a facilitator and motivator to help students.

2. Able to Identify Problems

   The ability to identify problems is an essential step in critical thinking. Students in the Higher Class of SDIT Anak Sholeh Mataram who are accustomed to problem-based learning better recognise the problem's core. Students can quickly determine

which aspects are the root of the problem and which are merely symptoms or effects of the problem. This is in line with Hayati and Setiawan's explanation that critical thinking skills help students face challenges and solve complex problems, which are essential in today's era of globalization (Hayati & Setiawan, 2022). In class, teachers provide space for students to ask questions. However, teachers still allow students to identify their problems first.

3. Able to Distinguish Relevant and Irrelevant Ideas

   One crucial indicator of critical thinking is the ability of students to distinguish between relevant and irrelevant ideas or information. Students in the High Class of SDIT Anak Sholeh Mataram are often involved in discussion activities. These activities are intended to help students better assess the relevance of information. Students can eliminate ideas that do not contribute to solving problems and focus on relevant information. Haryanti explained that critical thinking includes analysing and evaluating information and making logical and reasoned decisions (Haryanti et al., 2022). In class, teachers accustom their students to be independent in working so they do not readily absorb irrelevant ideas. However, teachers still ask students to do an analysis first.

4. Able to Distinguish Facts from Non-Facts

   Students who have critical thinking skills can distinguish between facts and opinions. Students in the High Class of SDIT Anak Sholeh Mataram can analyze texts or information critically and more easily assess the truth of a statement. Students tend to look for valid evidence before accepting information as a fact. Zakiah explains that critical thinking includes components of argument analysis skills, making conclusions using inductive or deductive reasoning, evaluation, and making

decisions or solving problems (Zakiah & Lestari, 2019). Teachers allow students to ask anything they want, including clarifying the requested facts in class. Teachers hope that students will be able to distinguish between facts and opinions.

5. Able to Distinguish between Constructive and Non-Constructive Criticism

   One of the essential critical thinking skills is the ability to receive and provide constructive criticism. Students in the High Class of SDIT Anak Sholeh Mataram can accept constructive criticism, tend to correct their mistakes, and are more open to improvement. Students can also distinguish criticism intended to improve the process from negative or non-constructive criticism. Sholeh explained that the ability to receive and provide constructive criticism is a form of critical thinking skills (Sholeh et al., 2024). In class, teachers provide views on constructive and non-constructive criticism's positive and negative impacts. In other words, teachers emphasize the effects of positive and negative criticism on their students. All criticism is intended for self-improvement to be even better.

6. Identifying Attributes of People, Places, and Objects

   In critical thinking, identifying attributes or characteristics of people, places, and objects is essential for understanding the context of the problem. Students in the High Class of SDIT Anak Sholeh Mataram have identified these details better to understand the situation and formulate more appropriate solutions. This is in line with the results of Maulana's research, which states that the ability to identify attributes or characteristics of humans, places, and objects is part of the context of critical thinking (Maulana, 2017). In class, teachers provide directions for identifying the attributes of humans, places, and objects. By understanding these attributes, teachers have helped students understand the context of their problems.

7. Able to See a Way Out of Problems

   One of the signs of a student who thinks critically is their ability to find solutions to their problems. Students in the High Class of SDIT Anak Sholeh Mataram can offer multiple solutions to a problem and assess each proposed solution's advantages and disadvantages. Elsabrina's research found that students' ability to solve their issues is part of critical thinking (Elsabrina et al., 2022). In class, teachers get students used to not avoiding problems. Teachers emphasize that difficulties must be faced until they are resolved.

8. Able to Connect One Problem with Another

   Students in the High Class of SDIT Anak Sholeh Mataram can see the relationship between one problem and another. Students do not see problems separately but look for relationships between various aspects of the problem. This ability helps them find more comprehensive solutions and not only solve one problem but also prevent other problems from arising in the future. This aligns with Rahmazatullaili's research, which states that students can relate one problem to another without seeing the problem separately but looking for relationships with various problems (Rahmazatullaili et al., 2017). In class, teachers discuss problems related to students' daily lives. Teachers try to describe the material being studied to social problems in life.

9. Able to Make Predictions from the Information Presented

   Critical thinking skills also reflect students' ability to predict based on available information. Students in the High Class of SDIT Anak Sholeh Mataram are involved in data analysis and simulation activities. They can project what might happen based on patterns or trends found in the data. This helps them make better decisions.

Rahman emphasized that critical thinking skills are reflected in students' ability to make predictions from available information (Rahman, 2022). In class, the teacher explains the material in detail. The teacher also expands the context of the discussion of the problem to help students make predictions from the material being studied by the students.

10. Able to Distinguish Between Wrong and Right Conclusions

    One of the essential skills in critical thinking is the ability to distinguish between wrong and correct conclusions. Students in the High Class of SDIT Anak Sholeh Mataram are often involved in argumentation exercises or more critical discussions to evaluate arguments and findings. Students can identify logical weaknesses or wrong assumptions in an argument, so they do not readily accept wrong conclusions. Critical thinking distinguishes wrong and correct conclusions (Zubaidah, 2010)In class, teachers accustom students to working independently. They ask students to find relevant sources to answer or conclude various problems they are studying.

11. Able to Draw Conclusions

    Concluding is the final step in the critical thinking process. Students in the High Class of SDIT Anak Sholeh Mataram are accustomed to exploration and discussion-based learning, which makes it easier to draw the correct conclusions from the information available. Students can also summarize the main ideas and connect them to form logical conclusions supported by valid evidence. Nuraida emphasized that the final step for students in critical thinking is the ability to conclude (Nuraida, 2019)Teachers accustom students to concluding and reflecting on the material being studied in class. They also reinforce students' understanding of the material.

CONCLUSION

From the findings and discussion data above, this study can conclude that teachers with high pedagogical competence are more effective in managing classes and achieving learning objectives. With a problem-based approach to working classes, teachers help improve students' critical thinking skills in the High Class of SDIT Anak Sholeh Mataram. Students in the High Class of SDIT Anak Sholeh Mataram demonstrate their critical thinking skills, such as knowing a problem in detail, being able to identify problems, being able to distinguish relevant and irrelevant ideas, being able to distinguish facts from non-facts, being able to differentiate between constructive and non-constructive criticism; identifying attributes of humans, places, and objects; being able to see a way out of problems; being able to connect one issue to another; being able to make predictions from the information presented; being able to distinguish between wrong and correct conclusions; and being able to conclude. This is important to ensure that teachers have theoretical knowledge and the practical skills needed to manage learning in the classroom.

The contribution of teachers' pedagogical competence in developing students' critical thinking skills in elementary schools cannot be ignored. Teachers' pedagogical competence is essential to understanding how teachers can manage and improve the learning process in elementary schools. Pedagogical competence covers various aspects, including understanding students, designing, implementing learning, and evaluating learning outcomes. Therefore, the contribution of teacher pedagogical competence should be the main focus in efforts to improve and develop the quality of education in the 21st century, in addition to critical thinking skills, namely creative thinking skills, communication skills, and student collaboration skills in elementary schools.

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