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Analysis of Critical Thinking Skills in the Group Discussion Process of Grade V Students on FPB and KPK Materials

Analisis Keterampilan Berpikir Kritis Pada Proses Diskusi Kelompok Peserta Didik Kelas V Materi FPB dan KPK

Aditya Nur Laili
Department of Elementary School Teacher Education
Malang, Indonesia
Adityasafik3@gmail.com

Nyamik Rahayu Sesanti
Department of Elementary School Teacher Education
PGRI Kanjuruhan University
Malang, Indonesia

I Ketut Suastika
Department of Elementary School Teacher Education
PGRI Kanjuruhan University
Malang, Indonesia

***Abstract*— Critical thinking skills are skills that need to be developed so that students master the concept of learning in analyzing problems, identifying information, and developing solutions collaboratively. In the research subjects studied, namely fifth grade students at an elementary school in Malang City, there were obstacles in the group discussion process so that their critical thinking skills were less active. This study aims to analyze critical thinking skills in the group discussion process using a descriptive qualitative method that describes these abilities in fifth grade FPB and KPK materials. The data analysis technique used is the technique developed by Miles and Huberman. The theory used is Jacob and Sam's critical thinking theory in 2008. Critical thinking skills in this study are seen based on the results of students' answers in answering questions on the questions. In addition, based on the results of observations conducted by researchers and interviews with homeroom teachers which were then described based on 4 indicators of critical thinking. The results showed that there were 3 groups that were able to meet the 4 indicators of critical thinking clarification, assessment, inference, strategy so that it can be said that the group is in the very critical category. Meanwhile, 1 group only fulfilled 2 indicators, namely clarification and inference, so it can be said to be included in the less critical category.**

Keywords*— *Critical thinking, group discussions, FPB and KPK

I. INTRODUCTION

Critical thinking is a skill that is very much needed by students to face future challenges, such as solving problems, analyzing information, and making rational decisions. The importance of developing critical thinking is because critical thinking skills can influence learning achievement, the learning process, and can help students understand the concept of existing material (Maura et al., 2020). According to Sukmadinata (2013) critical thinking is the ability to reason regularly, based on this opinion, someone who thinks critically will be able to solve problems effectively systematically, and express beliefs with clear evidence (Ningsih & Laili Rahmi, 2023). According to Armi (2021) with critical thinking skills, students will be able to distinguish between the positive and negative sides of existing problems. However, the importance of this thinking ability is inversely proportional to the current state of

students. The conditions that occurred in one of the elementary schools in Malang City found that many students had not yet shown their critical thinking skills. During learning, they are passive, so they do not show their critical thinking, especially during group learning. During group learning, they often rely on one to several people to answer questions given by the teacher. This results in their critical thinking skills being lacking. In mathematics learning, one example is the FPB and KPK material. This material is often considered difficult by students. At the research location, it was found that there were several students who did not understand the material. So teachers often had to repeat explaining what numbers are and so on. It was also found that there were students who were not fluent or proficient in counting, which was one of the existing problems.

Critical thinking skills not only affect how students think, but also affect a person's attitude, behavior, and character (Anggraeni, et al. 2022). Jacob and Sam (2008) explain four stages that reflect students' critical thinking skills in solving problems, namely: 1) Clarification, namely students are able to formulate the main problem by identifying the issues to be discussed; 2) Assessment, namely the ability to provide reasons from logical arguments; 3) Inference, namely providing clear conclusions from the results of the discussion; 4) Strategy, namely students will evaluate the steps to achieve solutions and predict the results of these steps (Astuti, 2019). This indicator is often used in mathematics learning where each indicator has been aligned with the problem-solving process (Ni'mah, 2022).

Critical thinking skills will develop scientifically by designing learning that encourages students to be active in conveying opinions based on supporting facts (Sa'diyah, Islamiah, and Fajari 2022). One effective learning method to foster critical thinking in students is group discussion. Group discussions are considered capable of developing critical thinking because students are able to interact, complement each other, and exchange ideas. According to Marwah & Nurrohmatul (2022), the group discussion method in education is a method of delivering teaching materials where teachers provide opportunities for students to collect opinions, draw conclusions, and compile alternative solutions to problems through group interactions. According to Assumpta Rumanti (2015), group discussions have several objectives, including: 1) to be able to solve problems; 2) Students are able to convey ideas systematically, freely, and orderly; 3) participants are able to provide solutions to each other so as to produce consensus results (Izzah et al., 2021).

According to Ati and Setaiawan (2020), mathematics learning is learning that can be a measuring tool for making decisions on real problems (Unaenah, 2023). Where this learning emphasizes the concept of calculating, measuring, and applying it in real life (Izzah et al., 2024). The concepts that are continuous in learning the material are FPB and KPK materials. According to Mustakim and Astuty (2020) the Greatest Common Factor (GCF) is two or more numbers that have the largest value. While Yuniarto (2021) Least Common Multiple (LCM) where the result of multiplying the number by the original number will have the same value (Agus, 2022). FPB and KPK materials in mathematics learning are materials with a strong understanding of concepts and the ability to apply them in various situations. In FPB and KPK materials, the concepts that often appear are abstract concepts. Through group discussions, students are able to explain concepts in their own language, so that students understand the concepts more deeply.

Based on the description above, the researcher intends to conduct research that aims to describe students' critical thinking skills in the group discussion process for grade 5 on FPB and KPK material.

II. METHOD

This study aims to describe the critical thinking skills of students in the group discussion process of grade 5 on FPB and KPK material. The type of research used is descriptive research with a qualitative approach. The instruments used are test instruments, observation instruments, and interview guide instruments. This research was conducted at SD Pus Qurrota A'yun, with the research subjects being grade 5 students. With 5 questions, each question contains 5 sub-questions. The maximum score for each sub-question is 5, the score for wrong answers is 0 while the score for correct answers is 1 to 5.

The data analysis technique used is the qualitative data analysis technique developed by Miles and Hubberman (1992) (Sri Annisa, Indah, and Elvi Mailani, 2023), namely by: (1) Data collection, namely researchers start collecting research data using observation, interview, test, and documentation methods; (2) Data reduction, namely researchers sort the data that has been collected that will be used or not used; (3) Presenting data, namely the researcher will present the data that has been collected and reduced in detail, clearly, and systematically; (4) Drawing conclusions, namely the last stage the researcher draws conclusions from what has been researched based on the data that has gone through the data reduction stage.

Students' critical thinking skills are then assessed through group test sheets containing questions about FPB and KPK material. Researchers also triangulate sources, namely comparing the results of written answers with the results of interviews and observations of research subjects. Scoring for the answers they have discussed with the group for each sub is based on Jacob and Sam's critical thinking indicators.

The results of students' answers are analyzed by presenting the average score obtained and interpreted based on the guidelines for critical thinking skills criteria. The criteria for the percentage of critical thinking skills tests according to Arikunto and Suharsimi (Aini and Rosyid 2022) are as follows:

Table 1. Percentage of critical thinking

Percentage	Criteria
80% - 100%	Very Good
66% - 80%	Good
56% - 65%	Enough
41% - 55%	Poor
0% - 40%	Very Poor

By calculation:

$$\frac{Skor\ akhir}{Skor\ maksimal}\ x\ 100\% =$$

The scoring criteria for critical thinking skills in the group discussion process through written tests are as follows:

Table 2. Written test scoring

Critical Thinking Indicators	Question Aspects	Max Question	Group Assessment				Criteria
			1	2	3	4	
Clarification	Able to formulate the main problem	15					Max score 15 12-15: very good
Assessment	Ability to provide answers to questions	25					8-11: good 4-7: sufficient
Inference	Ability to provide reasons for answers	15					0-3: less
Strategy	Drawing conclusions from discussion results	25					Max score 25 20-25: very good
	Evaluation of resolution steps	15					13-19: good 7-12: sufficient 0-6: less
Total		95					
Percentage		100%					

III. RESULTS AND DISCUSSION

In this study, 4 groups have been formed which will then be analyzed for critical thinking skills based on critical thinking indicators used by researchers, namely clarification, assessment, inference, and strategy. The results of the discussion of students' critical thinking skills in the group discussion process for grade 5 on FPB and KPK materials are as follows. The results of the scores obtained by students for each indicator of critical thinking skills in the group discussion process in solving descriptive questions are as follows:

Table 3. Score results

Critical Thinking Indicators	Aspects and Question Criteria	Max Sxore	Assessment Per Group				Criteria
			1	2	3	4	
Clarification	Able to formulate the main problem	15	14	15	10	13	Max score 15 12-15: very good
Assessment	Ability to provide answers to questions	25	22	21	9	18	8-11: good 4-7: sufficient
Inference	Ability to provide reasons for answers	15	12	11	7	12	0-3: less
Strategy	Drawing conclusions from discussion results	25	21	21	15	17	Max score 25 20-25: very good
	Evaluation of resolution steps	15	13	13	5	9	13-19: good 7-12: sufficient
	Total	95	82	81	46	69	0-6: less
	Percentage		86,3%	85,2%	48%	72,6%	

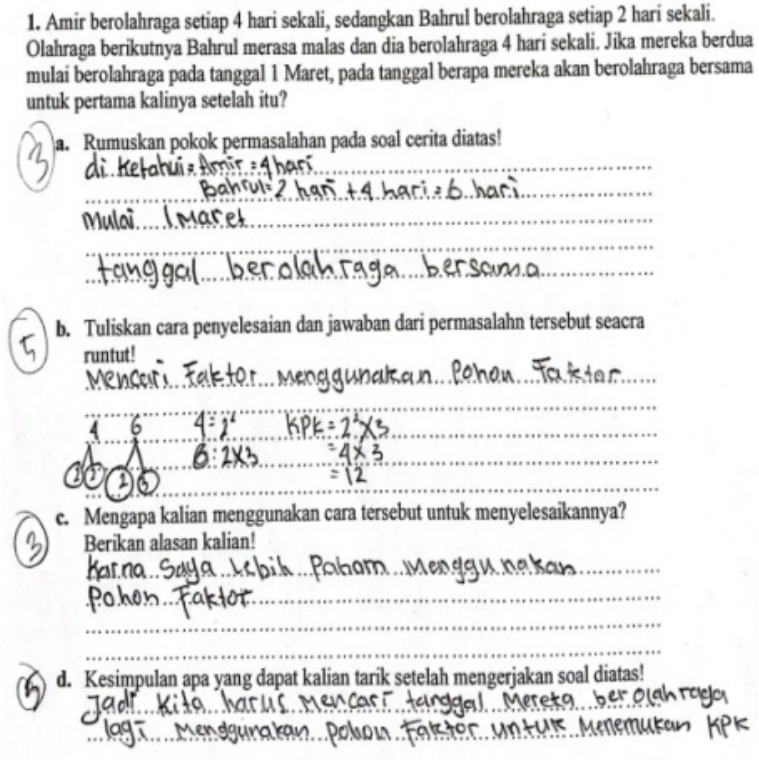
In group 1, the first stage is clarification, namely the group can formulate the existing information clearly, systematically and precisely. The results of written answers, interviews and observations show that group 1 is able to state what they know and are

asked from the questions that have been given. The score obtained is 14 out of the maximum score. This is in line with the results of observations and interviews with the homeroom teacher, he said "students are very good at analyzing the scope of the problem. They can choose which information is relevant to solve which questions are not needed. In fact, they often discuss together to ensure that important information has been considered". Thus, group 1 at this early stage has very high critical thinking skills because they are able to analyze information, identify and formulate logical and effective arguments (Anggraeni, et al. 2022).

At the assessment stage, the results of the written test for group 1 for this stage answered questions using the factor tree method because they found it easier and understood. However, for the final execution they were less careful and needed more practice, for example on question number 5. In this question, they had to write 2 problems but the group only wrote 1 problem. However, group 1 is still in the very good category. This is supported by the results of observations and interviews showing that group 1 wrote reasons clearly, precisely, systematically, and logically. Their critical thinking skills The homeroom teacher said that their ability to collect relevant information was very good, he said "I am very happy to see almost all students in the group able to collect relevant information very well. They can identify important data from the questions and sort out the information needed to solve problems". Group discussions can help students solve problems collaboratively, so that they can encourage students to think critically (Salichah, 2021). Thus, at this stage group 1 is included in the very good category.

At the inference stage, the results of the written test showed that the group was able to draw conclusions clearly, precisely, appropriately, and systematically. They drew the conclusion that if they were looking for a date together using the KPK solution method, if they were looking for many pockets, teams, or others, they could search using FPB. This is in line with the results of observations and interviews, they were able to explain the relationship between the information they knew and the information they would choose to solve the problem. Group 1 is in accordance with the characteristics of critical thinking according to Faiz (2020), namely using facts appropriately, meaning they are able to use the information they have found to solve problems appropriately (Padmakrisya & Meiliasari, 2023).

Furthermore, the strategy stage of group 1 showed very good results where they were able to re-check the results of their work. The results of observations and interviews showed similar results. This is in line with the opinion of Cahyo and Murtiyasa (2023) that students who have critical thinking skills are motivated to be able to solve problems and evaluate the solutions they have obtained.


1. Amir berolahraga setiap 4 hari sekali, sedangkan Bahrul berolahraga setiap 2 hari sekali. Olahraga berikutnya Bahrul merasa malas dan dia berolahraga 4 hari sekali. Jika mereka berdua mulai berolahraga pada tanggal 1 Maret, pada tanggal berapa mereka akan berolahraga bersama untuk pertama kalinya setelah itu?

(3) a. Rumuskan pokok permasalahan pada soal cerita diatas!
di ketahui = Amir = 4 hari
Bahrul = 2 hari + 4 hari = 6 hari
Mulai 1 Maret
tanggal berolahraga bersama

(5) b. Tuliskan cara penyelesaian dan jawaban dari permasalahn tersebut seacra runtut!
Mencari Faktor menggunakan Pohon Faktor
4 = 1
6 = 2 x 3
KPK = 2 x 3 x 2
= 4 x 3
= 12

(3) c. Mengapa kalian menggunakan cara tersebut untuk menyelesaikannya? Berikan alasan kalian!
Karna Saya lebih Paham menggunakan Pohon Faktor

(5) d. Kesimpulan apa yang dapat kalian tarik setelah mengerjakan soal diatas!
Jadi kita harus mencari tanggal mereka berolahraga lagi menggunakan pohon Faktor untuk menemukan KPK

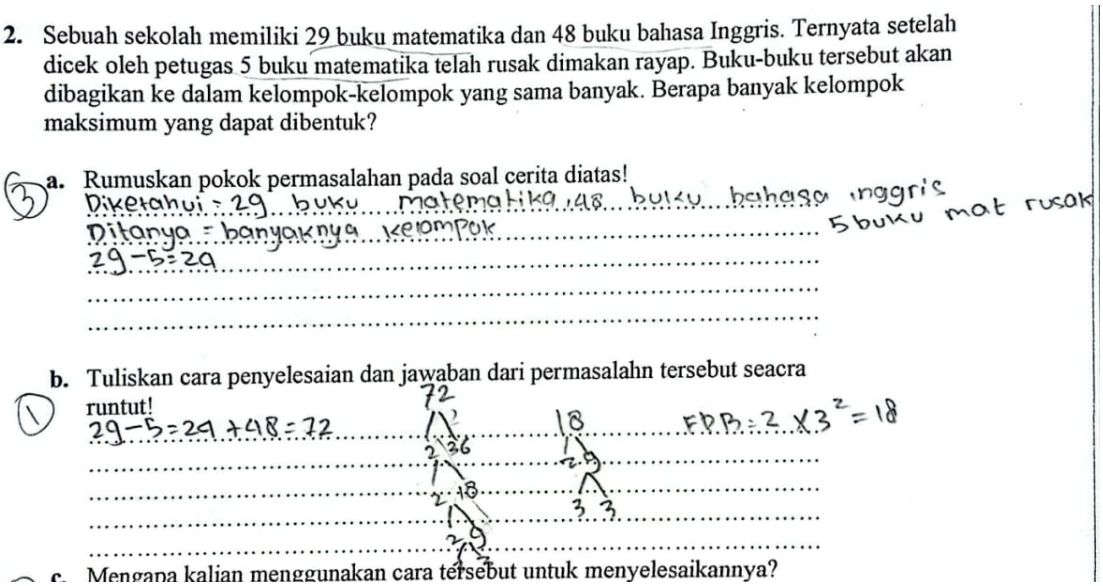
Fig 1. Results of written test group 1

Based on the results of tests, interviews, and observations of group 1, 86.3% of students in the group were able to think critically, meaning they were in the very good category. Students have met the 4 indicators of critical thinking revealed by Jacob and Sam, namely clarification, assessment, inference, and strategy.

In group 2, the initial stage, namely clarification, was very satisfactory, in other words, they were able to write down the information in the story questions given. They wrote the information clearly, systematically, and precisely so that at this stage they

were able to be said to be very good. Critical thinking is emphasized to students so that they can understand and implement it in relation to a problem, especially in learning. Learning that leads to higher-order thinking skills (HOTS) trains students to develop critical thinking skills. Thus, critical thinking is an action to solve problems that have been observed and analyzed (Rastal et al., 2022). This is in line with the results of the researcher's observations. It has been observed that students can state the information known in the questions very well. In addition, they are able to state the information stated in the questions correctly. The results of the interview with the homeroom teacher said that "I saw that almost all students were able to formulate the problem clearly" meaning that the group could show a deep understanding of what was asked in the question.

The next stage, the assessment stage, showed that the group got very good grades but needed more accuracy, for example in number 2. they wrote a number that was not in the previous stage, so the final result was less precise. The results of observations and interviews, namely at this stage the group can identify important information that will help solve the problem, however, the accuracy in the group causes the final result in the solution to be less than satisfactory. Tjokrodiharjo (2013) the group discussion process has several stages, including students being directed to discuss groups given problem issues. Then the teacher acts as a monitor between groups so that group discussions can run systematically, interactively, and enjoyably (Gita Gagulu, 2023).


2. Sebuah sekolah memiliki 29 buku matematika dan 48 buku bahasa Inggris. Ternyata setelah dicek oleh petugas 5 buku matematika telah rusak dimakan rayap. Buku-buku tersebut akan dibagikan ke dalam kelompok-kelompok yang sama banyak. Berapa banyak kelompok maksimum yang dapat dibentuk?

a. Rumuskan pokok permasalahan pada soal cerita diatas!
Diketahui = 29 buku matematika, 48 buku bahasa inggris, 5 buku mat rusak
Ditanya = banyaknya kelompok
29 − 5 = 24

b. Tuliskan cara penyelesaian dan jawaban dari permasalahn tersebut seacra runtut!
29 − 5 = 24 + 48 = 72
72 = 2 × 36 = 2 × 2 × 18 = 2 × 2 × 2 × 9 = 2 × 2 × 2 × 3 × 3
18 = 2 × 9 = 2 × 3 × 3
FPB = 2 × 3² = 18

c. Mengapa kalian menggunakan cara tersebut untuk menyelesaikannya?

Fig 2. Results of written test for group 2

The third stage is inference, at this stage they are able to draw conclusions that they can take from working on questions that have been worked on with their group. The results of observations conducted by researchers show that students in groups are able to use the selected information to solve questions correctly. Furthermore, they are able to provide conclusions from the discussions they have achieved (Rubi Babullah et al., 2024). In the interview results he said "I observed being able to draw logical conclusions based on the information they analyzed." Thus the group is included in the very good category.

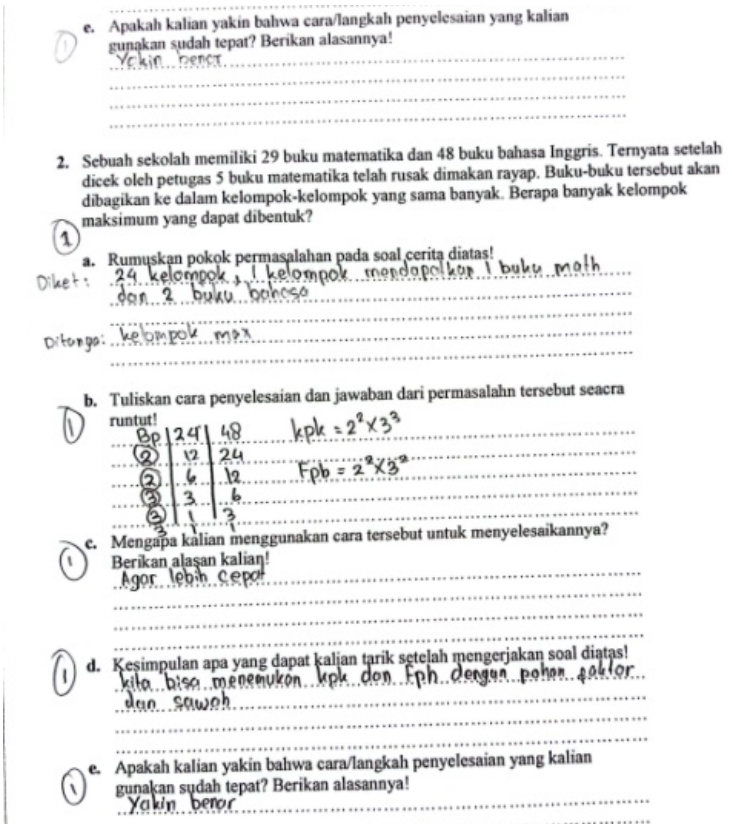
The final stage is the strategy at this stage is able to convey information well. Evaluating the steps to solve the problem even though in number 2 they write answers that do not match the context of the existing question. However, the results of the interview and observation are said to be very good, although the group needs more guidance. Based on the results of the test, interviews, and observations of group 2, 85.2% of students in the group are able to think critically, meaning they are included in the very good category.

In group 3, the initial stage was not able to write down all the information in the question. They wrote incomplete information and some were inaccurate. In addition, the results of group observations in writing the information in the questions were inaccurate and incomplete. This allows for the next stage the group not to solve the questions properly. All of this is supported by the results of the interview that "I observed that there were many difficulties in identifying the main problem in the questions, which resulted in confusion in the solution process" meaning that the group had not been able to show a deep understanding of what was asked in the questions.

The second stage, namely the assessment in the test assessment, was less than satisfactory. Where group 3 could not provide reasons for the information they had collected with their group. They wrote it incompletely and not systematically. This is in line with the results of observations and interviews. Plus they only rely on one person in their group. This lack of collaboration is what makes their group less effective. This is one of the shortcomings in group discussions put forward by Humairoh (2022), namely that students who have good communication will become dominant so that students who lack critical thinking skills become inferior.

The next stage, namely the inference stage, group 3 has not been able to draw conclusions that they can draw after working on the questions. These results are supported by the results of observations and interviews, namely that students tend to provide final answers without including evidence or logical reasons that support their conclusions. In addition, the teacher said that the ability to draw conclusions was difficult, he said "I observed that students were less able to draw logical conclusions based on the information they analyzed." Students have not been able to make conclusions which they will then combine relevant information (Farisi, 2020).

The final stage is the strategy where the test results show that the Group cannot evaluate the steps they have taken. They have difficulty in evaluating the steps they have taken in solving the problem. The results of the observation show that they do not show creativity in finding alternative solutions. They tend to follow the same pattern without trying new or different methods. In line with the results of the interview, namely that group 3 is less good at evaluating the steps of the solution, he said "students have not shown the ability to evaluate their steps of solution, they only rely on one of the students"


e. Apakah kalian yakin bahwa cara/langkah penyelesaian yang kalian gunakan sudah tepat? Berikan alasannya!
Yakin benar

2. Sebuah sekolah memiliki 29 buku matematika dan 48 buku bahasa Inggris. Ternyata setelah dicek oleh petugas 5 buku matematika telah rusak dimakan rayap. Buku-buku tersebut akan dibagikan ke dalam kelompok-kelompok yang sama banyak. Berapa banyak kelompok maksimum yang dapat dibentuk?

a. Rumuskan pokok permasalahan pada soal cerita diatas!
Diket: 24 kelompok, 1 kelompok mendapatkan 1 buku math dan 2 buku bahasa
Ditanya: kelompok max

b. Tuliskan cara penyelesaian dan jawaban dari permasalahn tersebut seacra runtut!
Kpk = $2^3 \times 3^3$
Fpb = $2^2 \times 3^2$

c. Mengapa kalian menggunakan cara tersebut untuk menyelesaikannya? Berikan alasan kalian!
Agar lebih cepat

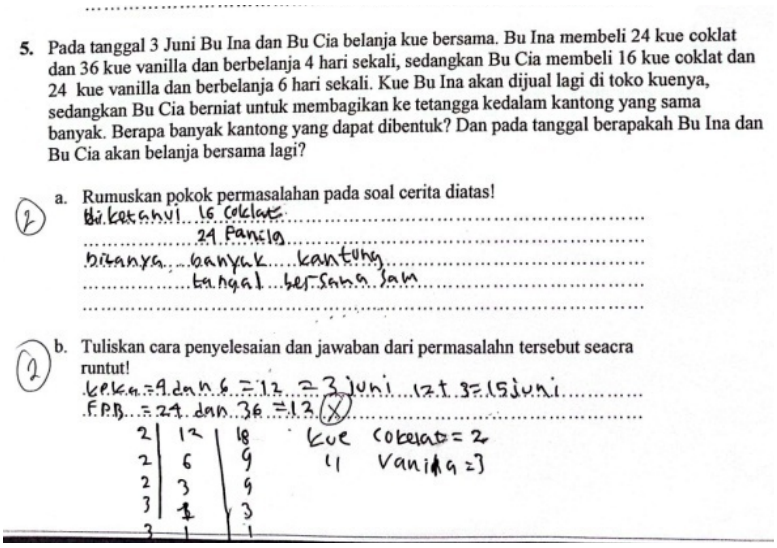
d. Kesimpulan apa yang dapat kalian tarik setelah mengerjakan soal diatas!
kita bisa menemukan kpk dan fpb dengan pohon faktor dan sawah

e. Apakah kalian yakin bahwa cara/langkah penyelesaian yang kalian gunakan sudah tepat? Berikan alasannya!
Yakin benar

Fig 3. Results of written test for group 3

Based on the results of the test, interviews, and observations of group 3, 48% of students in the group were able to think critically, meaning they were in the poor category.

In group 4, the initial stage of clarification showed good results. They were able to write down the information in the question, although they were not writing it completely, for example in number 5, they only wrote the analysis of the known part by only looking at 1 problem even though there were 2 problems. This allows the final results of the group's work to be less precise. Students were unable to identify the basic assumptions related to the problem. This is in line with the results of observations and interviews showing that they have not been able to bring up their critical thinking. at the clarification stage it is at a fairly good level, the low ability to formulate problems, analyze the scope is the main challenge that needs to be overcome.



5. Pada tanggal 3 Juni Bu Ina dan Bu Cia belanja kue bersama. Bu Ina membeli 24 kue coklat dan 36 kue vanilla dan berbelanja 4 hari sekali, sedangkan Bu Cia membeli 16 kue coklat dan 24 kue vanilla dan berbelanja 6 hari sekali. Kue Bu Ina akan dijual lagi di toko kuenya, sedangkan Bu Cia berniat untuk membagikan ke tetangga kedalam kantong yang sama banyak. Berapa banyak kantong yang dapat dibentuk? Dan pada tanggal berapakah Bu Ina dan Bu Cia akan belanja bersama lagi?

(2) a. Rumuskan pokok permasalahan pada soal cerita diatas!
Diketahui 16 coklat
24 Pancia
ditanya banyak kantong
tanggal bersama sama

(2) b. Tuliskan cara penyelesaian dan jawaban dari permasalahn tersebut seacra runtut!
kelipatan 9 dan 6 = 12 = 3 juni 12 + 3 = 15 juni
FPB = 24 dan 36 = 12 (X)

2	12	18	kue coklat = 2
2	6	9	" vanila = 3
2	3	9	
3	1	3	
3	1	1	

Fig 4. Results of written test for group 4

The results of the assessment test showed that they were able to provide reasons, but were not clear enough which could have an impact on the final results of the work, for example in number 4, they gave unclear reasons. This shows that their critical thinking skills in making reasons or arguments for the solutions they made were good but needed more guidance. The interview results stated that their ability to collect relevant information needed more guidance, he said "I see that students are quite good at collecting relevant information. They can identify important data from the questions, although there are still some students who need more guidance".

at the inference stage shows the results They can draw conclusions that they get after they work on the questions. They show the ability to use the right arguments to support conclusions. Where the group is able to explain the steps they took in reaching conclusions, although some still need to practice to clarify their explanations. This is one of the characteristics of group discussions, namely being able to draw conclusions, so that at the end of each discussion they will provide the conclusions they have reached (Rubi Babullah et al., 2024). Group discussions of students will be more creative in compiling ideas and concepts. Thus, the group is included in the good category.

Furthermore, the final stage shows good ability in evaluating their solution steps. The group explains behind the selection of certain steps, and considers other alternatives if the first step is unsuccessful. They show the ability to choose the right method, such as rice fields and factor trees according to the type of question given. This is in line with the opinion of Humairoh (2022) regarding the advantages of group discussions which states that group discussions of students will be more creative in compiling their ideas and concepts. Group 4 uses more than 1 solution method so that it has a good impact on the group. Based on the results of tests, interviews, and observations of group 4, 72.6% of students in the group are able to think critically, meaning they are included in the good category.

IV. CONCLUSION AND SUGGESTIONS

Based on the analysis and discussion of students' critical thinking skills in the 5th grade group discussion process on FPB and KPK material according to JS theory, it can be concluded that 3 groups were able to meet the four indicators of critical thinking, namely clarification, assessment, inference, and strategy. However, there is 1 group that is lacking in developing critical thinking skills. So that the group needs more guidance. So that for 1 group only meets 2 indicators, namely clarification and inference. So that the group for critical thinking skills is at a low level because it only meets two indicators of critical thinking skills.

Suggestions that can be put forward by the researcher are as follows:

a. For teachers, it is hoped that they can provide continuous training to improve critical thinking skills in the fifth grade group discussion process, especially on FPB and KPK materials, paying more attention to groups that are lacking in developing these skills. It is hoped that learning will be more innovative and effective.

b. For students, it is hoped that they can increase their focus and concentration fully in following the discussion process. Students also need to train their critical thinking skills by asking more questions and being confident when presenting in front of.

c. For further researchers, it is suggested to be able to study more deeply related to the implementation of the discussion method by considering other aspects. Research in schools with different class levels can also be conducted to be able to expand the findings.

REFERENCES

[1] Agus, N. (2022). Analisis Pembelajaran FPB dan KPK dengan Model Pohon Faktor dan Tabel Kelas VII SMPN 2 Banyakan Satu Atap. Jurnall Pendidikan: SEROJA, 1(2), 135– 142. http://jurnal.anfa.co.id/index.php/seroja

[2] Aini, K. N., & Rosyid, H. (2022). Analisis Berpikir Kritis Mahasiswa Dalam Memecahkan Masalah Ditinjau Dari Gaya Kognitif. Euclid, 9(1), 47–55. https://doi.org/10.33603/e.v9i1.6247

[3] Anggraeni, N., Rustini, T., & Wahyuningsih, Y. (2022). Keterampilan Berpikir Kritis Siswa Sekolah Dasar Pada Mata Pelajaran Ips Di Kelas Tinggi. Jurnal Review Pendidikan Dasar : Jurnal Kajian Pendidikan Dan Hasil Penelitian, 8(1), 84–90. https://doi.org/10.26740/jrpd.v8n1.p84-90

[4] Astuti, M. A. W. (2019). Profil Berrpikir Kritis Siswa SMP dalam Memecahkan Masalah Matematika Kontekstual Ditinjau dari Gaya Kognitif Visualizer-Verbalizer dan Perbedaan Jenis Kelamin. MATHEdunesa, 8(2), 153–162.

[5] Cahyo, T. S. S., & Murtiyasa, B. (2023). Analisis Kemampuan Berpikir Kritis Matematis Melalui Pendekatan Problem Based Learning dalam Pembelajaran Matematika di SMP. Jurnal Cendekia : Jurnal Pendidikan Matematika, 7(2), 1597–1610. https://doi.org/10.31004/cendekia.v7i2.2329

[6] Farisi, S. Al. (2020). Peningkatan Kemampuan Berpikir Kritis Siswa melalui Pendekatan Open-ended dalam Pembelajaran Matematika di Kelas VII SMP Negeri 1 Kuta Baro. 5(2), 121–129.

[7] Maura, D. S., Saputri, D. Y., & Bakdiyah, N. (2020). Analisis kemampuan berpikir kritis peserta didik dalam menemukan ide pokok teks non fiksi deskripsi kelas IV sekolah dasar. Universitas Sebelas Maret, 2–7.

[8] Gita Gagulu, S. R. (2023). Peran Guru Dalam Mengatasi Kesulitan Belajar Siswa Pada Mata Pelajaran Matematika Menggunakan Metode Diskusi Kelompok. Journal of Education and Teaching Learning, 1(1), 6–11. https://doi.org/10.59211/mjpjetl.v1i1.10

[9] Humairoh, F. (2022). Metode Pemb : Mengoptimalkan Pembelajaran Melalui Diskusi Kelompok : Strategi dan Manfaatnya. Pendidikan Bahasa Dan Sastra Indonesia, Universitas Riau, 3. https://osf.io/preprints/gax5n

[10] Izzah, A. A., Ningsih, R., & Sancaya, S. A. (2021). Bimbingan Peningkatan Kemampuan Berpikir Kritis Siswa melalui Penggunaan Teknik Diskusi Kelompok. Prosiding Konseling Kearifan Nusantara (KKN), 2, 35–39.

[11] Izzah, Z. N., Humairah, H., & Kharisma, A. I. (2024). Analisis Penyebab Kurangnya Kemampuan Berhitung pada Materi KPK dan FPB Siswa Kelas V SDN Canditunggal. JagoMIPA: Jurnal Pendidikan Matematika Dan IPA, 4(1), 167–177. https://doi.org/10.53299/jagomipa.v4i1.505

[12] Marwah Sholihah, & Nurrohmatul Amaliyah. (2022). Peran Guru Dalam Menerapkan Metode Diskusi Kelompok Untuk Meningkatkan Keterampilan Berpikir Kritis Siswa Kelas V Sekolah Dasar. Jurnal Cakrawala Pendas, 8(3), 898–905. https://doi.org/10.31949/jcp.v8i3.2826

[13] Farisi, S. Al. (2020). Peningkatan Kemampuan Berpikir Kritis Siswa melalui Pendekatan Open-ended dalam Pembelajaran Matematika di Kelas VII SMP Negeri 1 Kuta Baro. 5(2), 121–129.

[14] Maura, D. S., Saputri, D. Y., & Bakdiyah, N. (2020). Analisis kemampuan berpikir kritis peserta didik dalam menemukan ide pokok teks non fiksi deskripsi kelas IV sekolah dasar. Universitas Sebelas Maret, 2–7.

[15] Ni'mah, N. (2022). Analisis Indikator Berpikir Kritis Terhadap Karakter Rasa Ingin Tahu dalam Kurikulum 2013. Anterior Jurnal, 22(Special-1), 118–125. https://doi.org/10.33084/anterior.v22ispecial-1.3220

[16] Ningsih, W., & Laili Rahmi. (2023). Pengaruh Media Poster Commnet Untuk Meningkatkan Cara Berfikir Kritis Siswa Pada Mata Pelajaran PPKn Kelas V SDN 112 Pekanbaru. Jurnal Penelitian Ilmu Pendidikan Indonesia, 2(3), 256–261. https://doi.org/10.31004/jpion.v2i3.149

[17] Padmakrisya, M. R., & Meiliasari, M. (2023). Studi Literatur: Keterampilan Berpikir Kritis dalam Matematika. Jurnal Basicedu, 7(6), 3702–3710. https://doi.org/10.31004/basicedu.v7i6.6327

[18] Rastal, J., 1, A., Faiz, A., & Septiani, L. (2022). EDUKATIF: JURNAL ILMU PENDIDIKAN Penggunaan Media Quiziz Sebagai Sarana Pengembangan Berpikir Kritis Siswa. Jurnal Ilmu Pendidikan, 4(1), 201–210. https://doi.org/10.31004/edukatif.v4i1.1804

[19] Rubi Babullah, Siti Qomariyah, Neneng Neneng, Ujang Natadireja, & Siti Nurafifah. (2024). Kolaborasi Metode Diskusi Kelompok Dengan Problem Solving Learning Untuk Meningkatkan Keterampilan Pemecahan Masalah Siswa Pada Materi Aqidah Akhlak. Jurnal Budi Pekerti Agama Islam, 2(2), 65–84. https://doi.org/10.61132/jbpai.v2i2.132

[20] Sa'diyah, H., Islamiah, R., & Fajari, L. E. W. (2022). Meningkatkan Keterampilan Berpikir Kritis Siswa Melalui Metode Diskusi Kelompok: Literature Review. Journal of Professional Elementary Education, 1(2), 148–157. https://doi.org/10.46306/jpee.v1i2.19

[21] Salichah, S. M. (2021). Meningkatkan Minat Serta Hasil Belajar PAI Dan BP Melalui Metode Diskusi Kelompok. Nuansa Akademik: Jurnal Pembangunan Masyarakat, 6(2), 103– 114. https://doi.org/10.47200/jnajpm.v6i2.798

[22] Sri Annisa, I., & Mailani, E. (2023). Analisis Faktor Penyebab Kesulitan Siswa Dalam Pembelajaran Tematik. INNOVATIVE: Journal Of Social Science Research, 3(2), 6469–6477. https://j-innovative.org/index.php/Innovative%0AAnalisis

[23] Unaenah, E. (2023). Analisis Kesulitan Belajar Matematika Materi FPB Dan KPK Siswa Kelas IV. Jurnal Pendidikan SEROJA, 2(Mi), 1–19.