Analysis of Difficulties of Science Teachers in Jayapura City in Conducting Class Action Research

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Abstract: The teacher's understanding of student development determines the accuracy of the strategies used in teaching which of course has an impact on student learning outcomes. One of the things teachers can do to overcome problems in the classroom is to conduct Classroom Action Research (CAR). Researchers are interested in conducting research, namely knowing teachers' difficulties in implementing PTK and knowing the factors that influence teachers' difficulties in implementing PK. This research is quantitative and descriptive. The population in this study were all science teachers in the city of Jayapura, and the research sample was teachers who were active members of the MGMP Science in the city of Jayapura, totaling 60 people. The research instrument is a questionnaire which is examined in this case, namely the difficulties of teachers in implementing PTK and the factors that influence teachers' difficulties in implementing PTK. Data were analyzed descriptively. The research results obtained are as follows: teachers' difficulties in making PTK are divided into two, namely: Teachers' general understanding of PTK, namely: teachers have difficulty understanding the characteristics of PTK (purpose, procedures and making reports); Teachers' understanding, especially about PTK, is that teachers experience difficulties related to: The rules for writing PTK according to the standard rules for writing scientific papers; Make an analysis of the causes of PTK background; CAR Implementation Procedures (planning, implementation, observation and reflection); CAR methodology (subjects, instruments, analysis techniques, data processing); Conducting discussions (interpreting data for and while reflecting); Systematics of writing final reports. Furthermore, the factors that influence teachers' difficulties in making PTK are divided into 2: Internal factors and external factors.

Keywords: CAR; Science; Teacher

Introduction

Awareness of the importance of education as a process of increasing human resources has encouraged the government to make efforts to improve the quality of education with various policies continuously starting from curriculum development and improvement, improvement of educational facilities, upgrading courses, and training for teachers which have implications for learning outcomes. Good learning outcomes obtained by students certainly cannot be separated from the achievements of teachers in managing learning in the classroom. Managing learning in the classroom is one of the jobs of a professional teacher who is oriented to the needs of students. Therefore, teachers are expected to be able to plan their lessons well, up to the preparation of learning evaluation tools. In addition, the learning model used in the teaching and learning process is expected to make it easier for students to receive and understand the material presented by the teacher. That is one of the duties of the teacher as a teacher.

A good teacher can provide lear study guidelines for students, provide instructions, direct, and learning conditions, and provide work tools that may be needed in learning activities. Aside from being a teacher, the

teacher, as well as an educator, must be able to see or detect student weaknesses or difficulties in learning, help students who need help, provide guidance, and evaluate and assess student success. All of these are problems that, of course, the teacher will find in the classroom. If you don't have intention and creativity, then the teacher will have difficulty or confusion in solving problems in class and in developing yourself.

This requires the teacher to have a good understanding of a problem in the classroom or at school. With a good understanding of a problem, of course, training teachers to improve their competence towards professionalism. One of the efforts to increase teacher professionalism in overcoming problems in class is by conducting Classroom Action Research (CAR). The implementation of CAR by the teacher will improve the ability to diagnose and solve problems in the classroom. CAR makes teachers active in finding theories that are relevant to problems found in class, which can then be used as alternative solutions and can be adapted. In addition, by doing CAR the teacher can find and test the hypotheses that are built so that they can become a referencefor solving problems found in class.

According to Wulandari et al. (2019), classroom action research is action research conducted by teachers in the classroom. This is in line with O'Brien cited by Oranga & Gisore (2023) Classroom action research is research conducted when a group of people (students) identifies a problem, then the researcher (teacher) determines an action to overcome it. Chin & Osborne (2008) revealed that CAR also does not have to be done by the teacher himself, but the teacher can ask or cooperate with other parties, in this case, colleagues. Verhoef et al. (2021) also view that CAR is carried out on an ongoing basis to improve practices where improvements are made based on self-reflection. Self-reflection by Ospina & Medina (2020) participants (teachers, students, or school principals) for example in social situations (including education) to improve rationality and problems encountered. According to Darling-Hammond et al. (2020), Classroom Action Research (CAR) is research conducted by Zhang et al. (2023) teachers in their classes by planning, implementing, and reflecting on actions in a collaborative and participatory manner to improve their performance as teachers, so that student learning outcomes can increase . The basic principles of CAR are: Ongoing, CAR is a cyclical ongoing effort; Integral, CAR is an integral part of the context under study; Scientific, problem diagnosis based on real events; Motivation, from within the motivation to improve quality must grow from within the teacher; Scope, the problem is not limited to learning problems inside and outside the classroom.

Reinforcing the principle stated by Haleem et al. (2022) said that the implementation of classroom action research by teachers aims to improve the quality of the learning process which is motivated by the problems that exist in the classroom. Because the classroom management that is carried out properly and accompanied by systematic and continuous evaluation will have a good impact on the quality of learning. In line with this, Dwivedi et al. (2023) argued that classroom action research conducted by the teacher will provide satisfaction for the teacher himself if he is successful in improving the learning process which was initially problematic and can even support the quality of student learning outcomes for the better. In this action research model, in general, four stages are commonly passed, namely : planning, implementation, observation, and reflection (Laily & Rakhmawati, 2023).

The importance of the benefits in making this CAR, it can be said that CAR is an important part of improving the quality of education. But the facts on the ground show that teachers are still rare in writing CAR scientific papers. This can be seen from several CAR publications conducted by teachers (Haristiani et al., 2023). Teachers only focus on the learning process, without doing self-evaluation. Even though professional teachers need to know the implementation and writing of CAR. Because with the ability to carry out and write CAR, the teacher can diagnose problems that occur in class, the teacher will be able to determine the right solution, so that he can implement it following a carefully prepared lesson plan. Based on this problem that makes researchers interested in conducting this research. The title is 'Analysis Of The Difficulties Of Science Teachers Throughout The City Of Jayapura In Conducting Classroom Action Research'.

Formulation of Research Problems

Based on the background explanation above, the research problem is formulated for the following reasons: What are the difficulties experienced by teachers in making CAR? what are the factors that affect teachers' difficulties in making CAR?

Research purposes

Based on the formulation of the problem, the objectives of this study are: Knowing what difficulties teachers experience in making CAR; Knowing the factors that influence teacher difficulties in making CAR.

Benefits of research

The results of this study are expected to provide benefits for stakeholders, namely teachers in the form of: Identification of the difficulties encountered in making

CAR; the factors that influence teacher difficulties in making CAR.

Method

Type of Research

This research is quantitative research with a descriptive approach. Where the results of the research will describe what it is about the variables studied.

Population and Sample

The population in this study were all 110 junior high school teachers in the city of Jayapura, while the sample in this study were active teachers in MGMP Science in Jayapura city of approximately 60 people.

Research Instruments

The instruments in this study were: Mixed questionnaire, namely a questionnaire containing closed and open questions. Where there are alternative answer choices so that respondents provide a choice of answers. In addition, an answer column is also provided so that respondents can provide additional answers to the answers they have previously chosen. With its deployment technique which is given online.

Data Analysis Techniques

Analysis will be carried out on each indicator of the aspects studied, by way of presenting each score of the indicator. Which will then be described in narrative form in the discussion.

Result and Discussion

The data collection process in this study was carried out online, namely by distributing questionnaires in the form of Google Forms to the research samples. Namely, teachers who are active in the Science MGMP throughout the city of Jayapura. The number of samples that filled out the questionnaire was 60 respondents. Based on research data, researchers divided 2 aspects of teacher difficulties in carrying out CAR. data classification can be seen in Table 1. While the factors that influence teacher difficulties in making CAR can be seen in Table 2.

Table 1. Teachers' difficulties in making CAR

Aspect Measured	Indicator	Frequency			Percentage		
		Yes	Doubtful	No	Yes (%)	Doubtful (%)	No (%)
Teacher understanding: in general CAR	Characteristics of CAR (Purpose, procedures to report preparation)	19	3	38	31.70	5	63.30%
	CAR as a support for the teaching profession	41	8	11	68.40	13.30	18.30
Teacher's understanding in particular: regarding the implementation of CAR	Rules for writing CAR according to the standard rule for writing a scientific paper	15	34	11	25	56.70	18.30
	Making CAR background cause analysis	4	35	21	6.70	58.30	35
	Car implementation procedures (planning, implementation, observing, and reflection)	18	8	34	30%	13.30	56.70
	CAR methodology (subject, instruments, analytical techniques. data processing)	15	8	37	25	13.30	61.70

Aspect Measured	Indicator	Frequency			Percentage		
		Yes	Doubtful	No	Yes (%)	Doubtful (%)	No (%)
	Making discussions (interpreting data for and when reflecting)	10	9	41	16.70	15	68.30
	Systematic writing of the final report	14	23	23	23.40	38.30	38.30
	Average				28.12	26.86	44.90

Based on Table 1, of the two indicators in the first aspect, namely the teacher's general understanding of CAR, in the first indicator, namely understanding the characteristics of CAR, 63.3% of teachers find this indicator difficult. Meanwhile, the other indicator is about understanding that CAR is one of the supports for the teaching profession, amounting to 68.3% of teachers understanding this indicator well. Furthermore, for the six indicators in the second aspect, namely the teacher's understanding specifically about CAR, in the first indicator, namely about the rules for writing CAR, 18.3% of teachers found it difficult; the second indicator is making a background of 35% choosing difficult; the third indicator regarding the procedure for implementing CAR by 56.7% chose difficult; the fourth indicator is regarding the CAR methodology by 61% choosing difficult; the fifth indicator is about making a discussion of 68.3% finding it difficult, and the last indicator is about the systematics of writing a final report by 38.3% of teachers choosing it difficult. Furthermore, below will present the factors that influence teacher difficulties in carrying out CAR.

Table 2. Factors that influence teacher difficulties in making CAR

Aspect Measured	Indicator	Frequency			Percentage		
		Yes	Doubful	No	Yes(%)	Doubtful (%)	No(%)
Internal Factor	Interest in making CAR in the last 3 years	6	17	37	10	28.30	61.70
	Teachers' motivation to make CAR in the last 3 years	6	17	37	10	28.30	61.70
External Factor	CAR implementation costs	25	24	11	41.70	40	18.30
	Time to carry out CAR	25	24	11	41.70	40	18.30
	Peer collaboration	24	25	11	40	41.70	18.30

Table 2, shows the factors that influence teacher difficulties in making CAR. Divided into 2 aspects, the first aspect is the internal factor and the second aspect is the external factor. Internal factors are factors from the teacher himself. While external factors are factors from outside or from the teacher's environment. The data in Table 2 above shows that 37 or 61.7% of teachers were not interested in making CAR in the last three years. While 17 other respondents chose to be hesitant and the remaining 6 respondents were interested in doing CAR in the last three years. Furthermore, for external factors, in the first indicator, namely implementation costs, 41.7% chose the answer yes, which means that costs are also a factor for teachers' difficulties in making CAR, then the second indicator, namely implementation time, also 41.7% chose an answer which means that time to carry out CAR is also one of the factors that influence teachers' difficulties in making CAR, and the third indicator, namely collaboration with colleagues, 40% chose yes, which also means that collaboration with colleagues is a factor influencing teachers in making CAR. To be clearer, the following will analyze each indicator from the aspect being measured. Teacher difficulties in carrying out CAR:

The first aspect to be measured: The teacher's general understanding of CAR

The first indicator in the first aspect: Characteristics of CAR (objectives, procedures to report preparation)
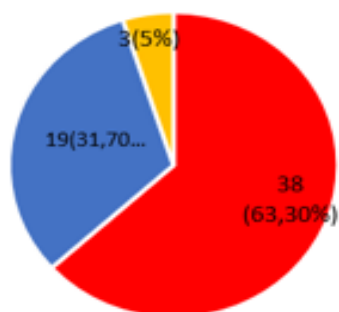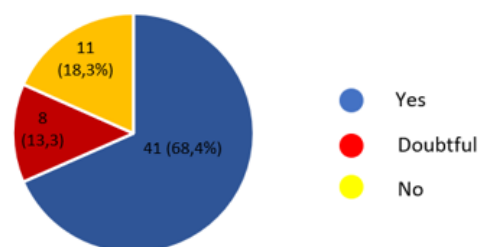

Figure 1. The percentage of respondents' answer choices on indicator I on the first aspect

Based on figure 1, it can be seen that 38 respondents, or 63.30% answered doubtfully (knowing only part of the characteristics of CAR); as many as 19 respondents, or 31.70% answered yes (knowing overall about the characteristics of CAR), and there were 3 respondents or 5% answered not knowing the characteristics of CAR at all. Based on the highest percentage of this indicator, namely 63.3% who answered doubtfully this means that many teachers still do not know properly and correctly about the characteristics of CAR. This is supported by the results of an open questionnaire filled in by respondents in the form of additional answers from their answer choices. It was obtained that many teachers chose doubtful answers because they had forgotten or had not done CAR for a long time, besides that some knew but only understood certain parts.

Such as knowing the purpose of making CAR but having difficulties with research methods and many teachers answering that they do not understand the systematic part of making reports and the technical implementation in class. The results of this study are in line with the research of Margot & Kettler (2019), who also found the results of their research to be one of the difficulties for teachers in making CAR, which is related to the technical implementation such as difficulties in preparing the planning stages, as well as difficulties in preparing teaching agendas. Rozek & Stobäus (2016) also found results in their research that teachers experienced problems in CAR starting from understanding CAR itself to making research proposals and results. Everything becomes difficult for the teacher so the teacher becomes confused about starting to carry out CAR.

The second indicator on the first aspect: CAR as a support for the teaching profession

Based on the diagram, 41 respondents chose the answer yes (knows well) or 68.4% of teachers know very well about CAR as a support for the teaching profession; then only 8 respondents, or 13.3% chose to be hesitant (knowing but indifferent about CAR as a support for the teaching profession); and as many as 11 respondents or 18.3% chose not to know at all about CAR as a support for the teaching profession. Based on additional answers from an open questionnaire filled out by respondents, they answered that most of them know that CAR is a support for the teaching profession because by doing CAR they can find out the problems that exist in the classroom and can provide solutions to the problems they face. In addition, some respondents explained that CAR was also one of the obligations of teachers for promotions. Meanwhile, for respondents who answered they were unsure, this was based on the fact that they did not feel the need to do CAR because they had not yet taken care of a promotion

Figure 2. The percentage of respondents' answer choices in indicator II in the first aspect

The results of this study are also in line with Wellbrock et al. (2020) which found that teachers realize that CAR is very important for increasing teacher professionalism and can increase career paths to increase credit scores. Yulanto et al. (2018) also states that conducting CAR can create a learning culture among teachers related to Continuing Professional Development (PKB) which of course will have implications for teacher credit scores which in turn contribute to promotions and functional positions of teachers themselves. Based on the results of this study, the second indicator is that teachers' understanding of CAR as a support for the teaching profession does not become a difficulty for teachers in carrying out CAR.

The second aspect that is measured: The teacher's understanding specifically about CAR

Based on the diagram, as many as 15 respondents, or 25% chose the answer yes (knowing well about the rules for writing scientific papers); then as many as 34 respondents, or 56.7% chose a doubtful answer

(knowing but not optimal); and as many as 11 respondents or 18.3% chose no answer (not knowing at all about the rules for writing scientific papers). The results of the research based on additional answers from respondents found that they chose to hesitate because they had not written scientific papers for a long time, so they felt they had forgotten about the rules for writing scientific papers, in this case, CAR, such as regarding theoretical studies and procedures for writing scientific papers
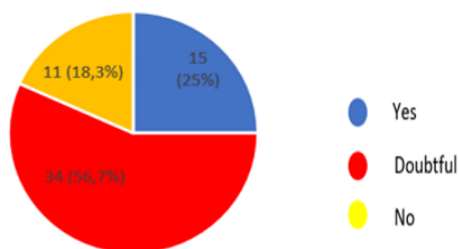
Figure 3. The percentage of respondent's answer choices in indicator I on the second aspect

Based on the figure 3, as many as 15 respondents, or 25% chose the answer yes (knowing well about the rules for writing scientific papers); then as many as 34 respondents, or 56.7% chose a doubtful answer (knowing but not optimal); and as many as 11 respondents or 18.3% chose no answer (not knowing at all about the rules for writing scientific papers). The results of the research based on additional answers from respondents found that they chose to hesitate because they had not written scientific papers for a long time, so they felt they had forgotten about the rules for writing scientific papers, in this case, CAR, such as regarding theoretical studies and procedures for writing scientific papers. In addition, some feel unsure, because they have never done scientific work but only know through reading CAR which has been journalized. Some think that writing scientific papers takes time. Furthermore, those who choose do not know at all because they have never made scientific work again during teaching. This was also reinforced by Hasanah & Sulha (2022) who concluded that one of the teacher's difficulties in writing CAR was the teacher's ability to write scientific papers. CAR. Based on the results of this study, it can be underlined that teachers have difficulty writing CAR according to the standard rules for writing scientific papers.

Scientific work is writing that is based on the results of scientific research. which of course is carried out by scientific principles and is written based on the standard rules of scientific writing. The teacher's scientific work is of course related to the problems faced by the teacher in the implementation of learning. So, the type of research

that is commensurate with teachers is classroom action research (CAR) (Myhill et al., 2023). By doing CAR, it will simultaneously increase the repertoire of teacher knowledge regarding scientific writing.

The second indicator on the second aspect: Making a CAR background cause analysis

Based on the diagram, as many as 35 or 58.3% of respondents chose the answers they did not know about making a CAR background the root of the problem; then 21 respondents or 35% chose the answer of not knowing at all in choosing the root causes of CAR; and only 4 respondents or 6.7% of respondents know well how to make a background.
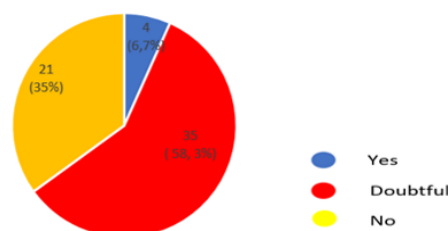
Figure 4. The percentage of respondent's answer choices in indicator II on the second aspect

This means that there are still many teachers who do not understand well how to make CAR backgrounds root causes. Based on the results of the additional answers given by the respondents, it is known that the teacher chooses not to know and does not know because he finds it difficult to choose specific root causes. Because there are so many problems at school, teachers are sometimes mistaken in determining the main problem that is right in CAR. Besides that, the different backgrounds of students make teachers still confused about choosing really important issues to raise in CAR. The results of this study were also supported by research conducted by Coman et al. (2020), which found that it was quite difficult for teachers to make CAR backgrounds.

The background of a scientific work is of course based on the problem that occurs to be raised as the root of the problem and will be resolved. The problem is the gap between expectations and the expected reality, so it requires a solution to solve the problem. Likewise in CAR, the root of the problem becomes an urgency that must be resolved in class and needs to be described in the research background. The research problem studied is a matter of concern and rests on the professional responsibility of the teacher as a teacher. The problem chosen should have a relationship with the learning process and student learning outcomes. The teacher must be able to determine the problems that become the

main substance of learning, where these problems determine whether the quality of learning is good or not, or the level of learning outcomes.

The third indicator on the second aspect: CAR Implementation Procedures (planning, implementing, observing, and reflecting)

Based on the diagram, as many as 34 respondents, or 56.7% of respondents chose the answer they did not know; as many as 18 respondents, or 30% chose the answer yes; and only 8 respondents or 13.3% chose the answer they didn't know, this data was reinforced by the additional answers the respondent chose not knowing because they did not know in detail or detail regarding the procedures carried out in carrying out CAR. As related to the planning stage, what should be provided, and developed? Likewise at the implementation stage to reflection.
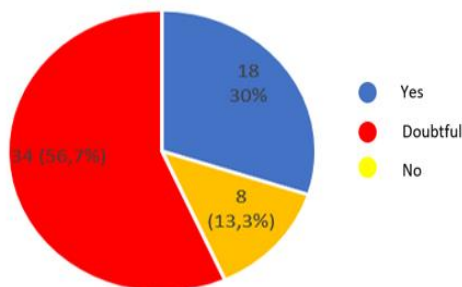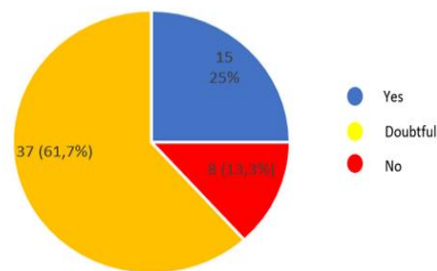
Figure 5. The percentage of respondent's answer choices in indicator III on the second aspect

Some respondents answered that the most difficult part was reflecting on the learning that had been done. What should be done during the planning, and implementation, and how to reflect on learning in CAR? besides that, this is also due to the lack of experience of teachers in conducting CAR so far. This is one of the causes of the difficulty for teachers to carry out CAR. Research experience will be a real reference for teachers to increase their knowledge independently in increasing teacher knowledge of CAR.

The fourth indicator from the second aspect: CAR Methodology (subjects, instruments, analytical techniques, data processing)

Based on the diagram, as many as 37 respondents, or 61.7% chose not to understand; as many as 15 respondents or 25% of the respondents chose the answer yes, and only 8 respondents, or 13.3% chose the answer no.

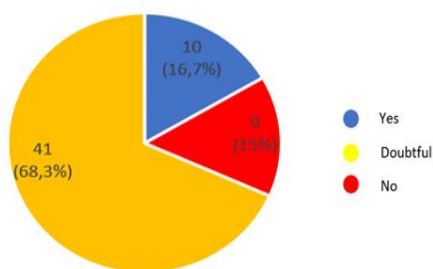**Figure** 6. The percentage of respondents' answer choices on indicator IV on the second aspect

This means that out of 60 respondents, there are still many teachers who lack and do not understand CAR methodology related to CAR subjects, instruments, and data analysis, and only 15 respondents understand CAR methodology. Based on additional answers given by respondents who answered they did not understand because the teacher only understood certain parts of the research methodology, some knew the research subject but did not know the proper data analysis techniques. Besides that, some are confused about determining the right instrument in CAR. most of the respondents answered that it was difficult to determine the right data analysis technique for CAR. While those who answered did not know how to give answers because they had never done CAR, so they did not know the CAR methodology.

This is in line with (Nisa et al., 2021) which also found that teachers had difficulty analyzing data. This is because they feel lacking in terms of knowledge about data analysis. So, far it's only been limited to looking for averages and percentages. While the development is in the form of good analysis using diagram tables and others, it still needs to be improved. Hardiansyah & Mulyadi (2022), also in their research obtained teacher responses regarding data analysis, namely teachers did not understand what analysis was used for CAR and teachers felt they lacked references related to knowledge of data analysis techniques. Based on this research data, it can be underlined that the teachers who were the sample of this study did not understand or had difficulties in terms of CAR methodology (related to subjects, instruments, analytical techniques, and processing data).

The fifth indicator on the second aspect: Making discussions (interpreting data for and when reflecting)

Based on the diagram, as many as 41 respondents, or 68.3% chose answers that did not know comprehensively; then 10 respondents, or 16.7% of respondents chose the answer they knew well and the

remaining 9 respondents, or 15% chose the answer they did not know.
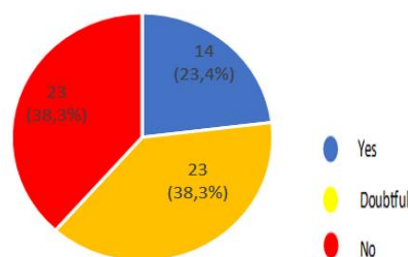

Figure 7. The percentage of respondent's answer choices on indicator V on the second aspect

Based on the additional answers given by the respondents who chose the answer, they did not know comprehensively about how to make CAR discussions because they found it difficult to interpret the data and lack of ideas to put into words. Furthermore, those who choose do not know because they have never done CAR. The results of this study are also in line with Etkina (2023), which also found that one of the teachers' difficulties in carrying out CAR was in the discussion section. Teachers find it difficult to distinguish between the description and the results of the discussion. The teacher thinks that the data description is just displaying the data, even though the data description is part of the interpretation of the data, while the discussion contains the actual results of the research which are linked to the results quantitatively. This is also reinforced by (Lodge et al., 2018) which found that teachers find it difficult to produce results and discussion in research because they are unable to develop ideas in discussion. Based on the data above, it can be underlined that the teachers as the sample of this study did not know comprehensively or still had difficulties in making CAR discussions because of the difficulty in interpreting the data and the difficulty in expressing ideas in the form of words.

The sixth indicator from the second aspect is the Systematics of writing the final CAR report and seeking references

Based on the diagram, as many as 23 respondents, or 38.3% chose the answer do not know; Similarly, those who answered that they did not know were 23 respondents or 38.3%, and as many as 14 respondents, or 23.4% chose the answer they knew.

Figure 8. The percentage of answer choices for indicator VI respondents in the second aspect

This means that as many as 46 respondents did not know and did not know the systematics of writing the final CAR report and looking for references. Respondents who chose the answer did not know provided additional answers because they had not done CAR, then respondents who chose the answer did not know provided additional answers because they found it difficult to write an abstract, where the abstract is a summary of the CAR itself. Apart from that, there is a lack of literacy to find the right references and a lack of time to find referrals. This is in line with Dhawan (2020) which found the aspect of making reports that became difficult for teachers, namely the abstract format section. Teachers are confused by the number of abstract characters because abstract content consists of a summary of problems, objectives, procedures, and research results.

This was further strengthened by Keiler (2018), which also found that the teacher's difficulties in finding references were caused by the participants not using books as a reference. Teachers do not have a collection of educational books to explore the theoretical realm of CAR so more references are sought using the Internet. Referrals or references are one of the important things in research, including CAR. The number of references used makes the study of CAR theory more diverse thereby increasing the quality of research because it is supported by various theories. Reference sources were also obtained from books, journals textbooks, or modules. Of course, you have to pay attention to the credibility of the references referred to (Elo et al., 2014).

*Factors that influence teacher difficulties in carrying out CAR
The first aspect: Internal factors Indicators on internal factors: interest in making CAR*

Based on the diagram, as many as 37 respondents, or 61.7% of respondents chose no answer (have not done CAR in the last three years; then as many as 17 respondents, or 28.3% chose undecided (had only done it once in the last three years); and only 6 respondents

chose yes (had done CAR more than twice in the last three years).
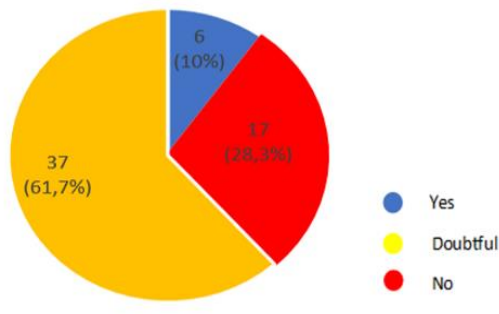
Figure 9. Percentage of respondents' answer choices for internal factors

This means that there are still many teachers who have not done CAR in the last three years. Based on the additional answers given by respondents this happened because they were not yet enthusiastic about conducting CAR due to a lack of literacy. Teachers feel confused about starting CAR. This is in line with the results of the data presented earlier. lazy to do CAR.

This is in line with the results of Marschall (2022) that teachers experience difficulties related to their willingness to do CAR. both interest and motivation within the teacher itself. the teacher does not have the will to do CAR because of the lack of literacy. Even though the more teachers read and understand about CAR, the more teachers can arouse interest and motivation to do or adopt CAR from the journals or books they read. But if interest or motivation in reading is also minimal, of course, it will be difficult for the teacher to start doing CAR. In contrast to the research by Al Mardhiyyah et al. (2021) which states that there are 2 motivations for high school teachers in Surakarta in conducting CAR, namely related to the need for promotion and improving the quality of learning. However, in this study, the teacher as the research sample only understood that CAR was useful for promotion purposes. In addition, some respondents are indifferent to this matter, because they feel that it is not the time to take care of promotion.

The second aspect: External factors, the first indicator is from external factors: The cost of implementing CAR

Based on the diagram, as many as 37 respondents or as many as chose the answer yes (high costs in conducting CAR); then 13 respondents, or 21.6% chose undecided; and only 10 respondents, or 16.7% chose not (feeling capable of financing CAR activities).
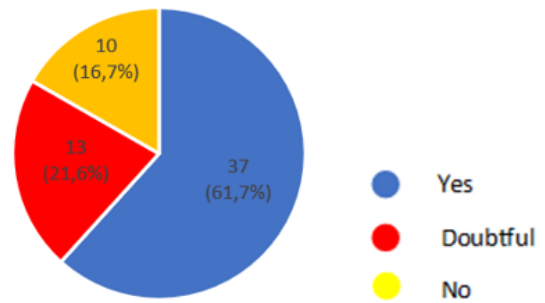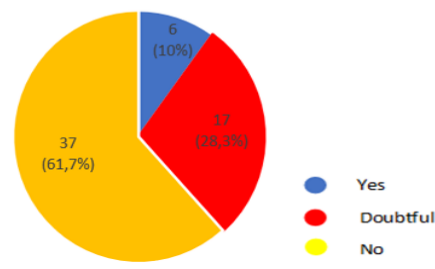

Figure 10. The percentage of respondents' answer choices on indicator I on external factors

Based on the highest percentage, namely respondents who find it difficult to do CAR, it means that cost is one of the factors causing the difficulty for teachers to do CAR. In addition to the results of the answers given, it is known that teachers feel that the costs of conducting CAR are quite large, where CAR is carried out in several cycles, in which there are several meetings in that cycle so it costs money to prepare everything. Krishna (2021) also obtained research results that cost was an obstacle for teachers in carrying out CAR. This is one of the causes of the difficulty for teachers to do CAR.

The second indicator of external factors: Time to carry out CAR

Based on the diagram, as many as 37 respondents, or 61.7% chose no answer (unable to do CAR); then 17 respondents or 28.3% chose the answer in doubt (quite difficult to do CAR, and only 6 respondents or 10% chose the answer yes (can do CAR).
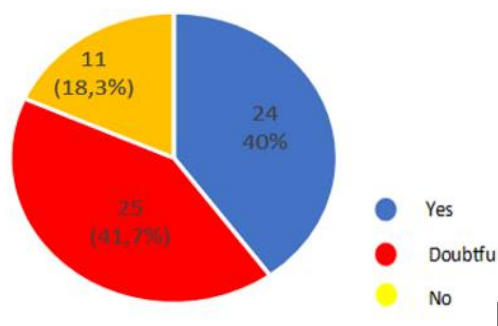

Figure 11. The percentage of respondents' answer choices on indicator II on external factors

This means that of the 60 respondents who filled out the questionnaire 37 respondents were constrained when doing CAR, as well as 17 respondents who were hesitant it quite difficult. Based on the additional answers filled in by respondents it was found that

teachers had difficulty dividing teaching time with time for CAR preparation starting from looking for references and making methodologies to carrying out CAR activities This is also in line with research conducted by Saeb et al. (2021) who found teachers' perceptions that CAR requires time to implement it, this makes teachers not do CAR. Based on the data obtained in this study, it can be underlined that time is also one of the causes of teachers' difficulties in conducting CAR.

The third indicator of external factors: is peer collaboration

Based on the diagram, as many as 25 respondents, or 41.5% chose answers that were hesitant or quite difficult to collaborate with colleagues; then as many as 24 respondents or 40% chose the answer yes (able to collaborate with colleagues) and the remaining 11 respondents or 18.3% chose the answer unable to collaborate.

Figure 12. The percentage of respondents' answer choices on indicator II on external factors

Respondents who chose hesitated only because they had never tried to collaborate in terms of research. However, in other matters at school, such as cooperation in committees, teachers can collaborate or work together. This means that in general teachers can collaborate with colleagues in conducting CAR. De Jong et al. (2022) argues that the collaboration process is important for teachers to carry out research collaborations to be carried out systematically so that there is a process of developing and understanding better teaching practices between teachers. Apart from that, collaboration can also potentially exchange references to increase teacher references.

Conclusion

Based on the results and discussion above, it can be concluded as follows: The teacher's difficulties in carrying out CAR are divided into two, namely: The teacher's general understanding of CAR is that it is difficult for teachers to understand the characteristics of

CAR (objectives, procedures, and preparation of reports). The teacher's understanding specifically about CAR is that teachers experience difficulties related to: The rules for writing CAR are following the standard rules for writing scientific paper. Make a CAR background cause analysis, CAR Implementation Procedures, CAR Methodology, make discussion (interpret data for and while reflecting, Systematics of writing the final report. The factors that affect teachers' difficulties in making CAR are divided into 2: Internal factors, namely: teacher interest in making CAR in the last three years is still low, External Factors: The costs for carrying out CAR are considered large, and CAR implementation time is considered time-consuming for other activities. Based on the results and discussion of this study, several things are suggested by researchers, namely: The need for increased teacher literacy to understand CAR, both in general and specifically.

Conflicts of Interest
The authors declare no conflict of interest.

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