Increase The Ability of Teachers to Apply Inquiry Learning Strategies Through Supervision Academic Based Coaching

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Abstract
This study aims to determine the improvement of teachers' teaching ability in science subjects in applying inquiry learning strategies (SPI) through the application of coaching-based academic supervision. The subjects in this study were 5 teachers of science subjects in Class X of SMAN 1 Bireuen for the 2021/2022 school year, with the focus of the research being the ability of teachers to compile learning implementation plans (RPP), carry out learning with SPI, and classical completeness of students in learning. The research design uses a school action research design as many as 2 cycles with stages of planning, action, observation, and reflection. In the first cycle, the average ability of teachers to compile lesson plans reached a score of 75.71%, the ability of teachers to carry out learning with SPI reached a score of 67.50%, and there were 2 classes with classical completion with classical completion below 85% with an overall average of 89.52%. In cycle II, the results achieved were that the average ability of teachers to compile rpp reached a score of 97.14%, the teacher's ability to carry out SPI learning reached 87.22%, and the percentage of classical completion of students at least 85.71% in only one class. Thus, the results of this study show that the application of coaching-based academic supervision can improve the ability of teachers to apply inquiry learning strategies.

Keywords: inquiry learning strategies, academic supervision, coaching

INTRODUCTION

The success of a learning in school is inseparable from the competence of teachers in the dimension of teacher competence which includes professional competence, paedagogy competence, personality competence and social competence. Sanjaya (2011) stated that no matter how good and ideal the educational curriculum is, no matter how complete the educational facilities and infrastructure are, without being balanced with the ability of teachers to implement it, then everything will be less meaningful.

The three main pillars that show that teachers have been able to work professionally in carrying out educational tasks are (a) mastering learning materials, (b) being professional in delivering learning materials to students, and (c) mature personalities Aqib and Rohmanto (2007). The three pillars are interrelated and support each other to improve learning performance. Learning performance determines the success rate and suitability of student learning outcomes with predetermined goals.

The learning process in the compulsory education unit is held interactively, inspiring, fun, challenging, motivating students to actively participate, and providing sufficient space for initiative, creativity, and independence in accordance with the talents, interests, and physical and psychological development of students. Learning objectives include the development of the realm of attitudes, knowledge, and skills elaborated for each educational unit.

Since July 2022, the implementation of the 2013 curriculum has been implemented in a limited and gradual manner at several levels of educational units. The 2013 curriculum emphasizes more on building student character and is competency-based. In the 2013

curriculum, student involvement in the learning process must use scientific approaches, integrated thematic (thematic between subjects), and thematic (in a subject) it is necessary to apply *discovery/inquiry* learning-based learning. To encourage the ability of learners to produce contextual work. Both individually and in groups, it is highly recommended to use a learning approach that produces project-based learning.

In terms of the context of the subject, the learning of Natural Sciences (IPA) is related to how to find out about nature systematically, so that science is not only a collection of knowledge in the form of facts, concepts, or principles but also a process of discovery. Science learning is expected to be a vehicle for students to learn about themselves and the surrounding nature, as well as the prospect of further development in applying it in everyday life. The learning process emphasizes providing hands-on experience to develop competencies to explore and understand the surrounding nature scientifically. In line with this, the *National Research Council* (1996) mentioned six standards for teachers in carrying out science learning as follows: (1) Can plan inquiry-based science learning; (2) Carry out science learning that directs and facilitates students in learning; (3) Carry out assessments that are adapted to the activities of the teaching teacher and in accordance with student learning; (4) Develop learning from the environment in which students learn; (5) Creating a society of science learners; and (6) Planning and developing learning from school science programs (Witarsa, 2011).

The science learning process in Indonesia is still too oriented towards mastering theory and memorization which causes students' learning ability to be hampered. Learning methods that are too *teacher-oriented (teacher centered*) tend to ignore the rights and needs, as well as the growth and development of children, so that the learning process that is fun, exciting, and educational is less than optimal (MoNE, 2007). Trianto (2011) stated that science learning is directed to inquiry and doing, so as to help students to gain a deeper understanding of the surrounding nature. An inquiry learning strategy is a design of learning activities used in learning and refers to a way to question, seek knowledge or information, or learn a symptom (Koes: 2003).

Planning, implementation, and assessment in the learning process need to be supervised and improved and even developed. The implementation of supervision of the learning process is carried out through supervision, either by the principal or the school superintendent. Supervision of learning must be carried out regularly and continuously. Supervision implemented in schools provides opportunities and opportunities for teachers to develop their professional abilities. This professional ability is reflected in the ability of teachers to provide learning assistance to their students. So there is a change in behavior. Supervision must be carried out by the supervisor constructively and creatively by encouraging teacher initiatives to actively participate in creating a conducive atmosphere that can arouse the atmosphere of student creativity in learning (Sagala: 2010).

The results of interviews with teachers at SMA Negeri 1 Bireuen in the preliminary study found that from 30 teachers, data was obtained that only 40% (12 people) of teachers used the Learning Implementation Plan (RPP) every time they learned in class. The learning process is carried out only based on the wishes of the teacher and also the condition of the students in the classroom. Rpp is only a softcopy on a laptop and is not printed to be used as a guide in teaching, so rpp only functions as an administrative part of learning. The results of the rpp study that have been prepared by 5 teachers of science subjects in class X are known that (1) The ability to formulate learning objectives (80%); (2) Ability to organize learning materials (40%); (3) Ability to determine teaching strategies (100%); (4) Ability to determine teaching steps (40%); (5) Ability to determine time allocation (50%); (6) Ability to determine sources, media, and tools (65%); (7) Ability to determine the form, procedure, and tools of

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assessment (50%). From these data, it is known that the teacher's ability to compile rpp only reaches an average while the results of interviews with teachers about the learning methods applied by teachers in the family of science subjects are also known that teachers have known about the selection of learning strategies or methods that are in accordance with the characteristics of the subjects and conditions of students, but teachers more often apply the expository method, discussion methods, question and answer, and cooperative models rather than carrying out learning with inquiry or discovery learning strategies because it takes too much time both in preparation and implementation. The results of observations on the implementation of teacher learning in science subjects in class X using the stages of inquiry learning strategies found that the stages of (a) orientation were 45%; (b) formulate a 40% problem; (c) formulate a 15% hypothesis; (d) conducting investigations/collecting 40% data; (e) analyze the data/ test the 40% hypothesis; and (f) formulate 25% conclusions, so that the average ability of teachers to implement inquiry learning strategies reaches only 34.71%.

Another problem is that the frequency of visits by school superintendents for periods 2021- 2022 at Bireuen State High School 1 is very rare. School Year 2021/2022 the school superintendent only came to visit and met with the teacher to conduct a general meeting without any observation to the classroom let alone providing feedback on the teacher's performance. The supervision method carried out by the school superintendent is only limited to general supervision and the delivery of information through teacher meetings. From the questionnaire data, it is known that teachers expect regular assistance and guidance from school supervisors regarding the latest information about education policies by the government, especially around the implementation of the 2013 curriculum.

Based on the above problems, it is necessary to carry out mentoring and coaching in the form of teaching supervision that provides teachers with the opportunity to develop their learning abilities that are more collaborative, reflective. In this case, especially in fostering teachers about the practice of teaching teachers with inquiry learning strategies. Improving the teaching ability of teachers in carrying out learning with certain methods is usually done by means of supervision or technical guidance through training, workshops, MGMP activities regularly, as well as teachers learning through friends or literacy studies from books and the internet. To change the practice of teaching, a teacher needs more than just an explanation of how to teach well. So that after participating in a program to improve the teaching ability of teachers to practice what is obtained, the program must be able to make teachers reflective, pay attention to the principle of changing teachers' conceptions of teaching and learning, pay attention to the emotional aspects of teachers, and provide support in the field. One alternative program to improve teacher professionalism that pays attention to the motivations and individual needs of teachers is coaching (Widodo, et al: 2011).

Supervision is an activity that involves a person in providing support and development of learners and respecting what he has taught. It goes on to explain that the main purpose of supervision is to help schools contribute more effectively to the achievement or success of Sergiovani and Starratt students:2007). Supervision services cover the overall teaching and learning situation. The definition is narrowed down to the problem of learning, so there is a mention of such supervision including learning supervision.

Teaching supervision is a system of organizational behavior related to learning behavior in improving the quality of education of learners (Lovel and Wiles: 1983). Academic supervision is to assess and nurture teachers in order to improve the quality of the learning process in order to obtain more optimal student learning outcomes. Academic supervision activities at least consist of: (1) the preparation and implementation of curriculum at the unit level of education; (2) prepare a syllabus and learning implementation plan; (3) selecting and

using learning strategies (approaches, methods and techniques); (4) the use of information and communication media and technology in learning; (5) planning and conducting classroom action research. These five aspects are closely related to the duties and responsibilities of teachers as learning agents (Sudjana: 2010).

It was further explained that academic supervision is not just conducting an assessment of teacher performance but providing expertise assistance to teachers so that teachers can improve and or improve their professional abilities, especially the ability to carry out learning in order to obtain optimal student learning outcomes. The assessment of teacher performance is only part of the supervision activity because the point is to improve the teacher's ability to carry out his main duties and responsibilities as a professional teacher. Therefore, good supervision must be able to make professional teachers, namely teachers who master competencies, both personal competencies, paedagogic competencies, professional competencies, and social competencies. Because a person will work professionally if he has sufficient competence, meaning that a person will work professionally if he has complete competence. A person will not work professionally if he only meets one of the competencies among the required competencies.

Clinical supervision and coaching as a direction to help teachers research their learning. Clinical supervision and coaching are examples of a good approach to supervision, informally understanding the needs and interests of teachers and formal enough to guarantee a good standard of learning agreement to be considered. Coaching has a different format but is similar to the makeup of clinical supervision. Coaching aims to encourage them to develop themselves and improve their performance through reflection on how they apply certain skills and knowledge in handling previously set work goals (Riandi, et al: 2008).

Thorpe dan Clifford (2003) yang menyatakan "*Coaching is fundamentally a relationship between two people that exists for a given purpose; once that purpose has been achieved, that relationship is no longer required. The purpose? To help individuals move from where they are to where they want or need to be-to develop them*". *Coaching* is basically a relationship between two people who have a mutual purpose; When the goal has been achieved, then the relationship also ends. The goal is to help someone move from where they are now in the direction they want to develop (Thorpe and Clifford:2003). There are 6 (six) stages in carrying out coaching that must be applied, namely: (1) Clarification of the goals and needs of *coaching*; At this stage, the *coaching* model that will be applied is explained so that the coachee understands the systematic approach that will be used, if necessary, to provide a design of activities to the *coachee*. At this stage it can be described in detail the work plan, and adjust the working hours and meeting place. (2) Agree on development needs; The purpose of this second stage is to find out the situation of the *coachee* and what he wants to achieve. This is known through the coachee's state report and discussions with the *coachee*. This stage includes meeting activities with the *coachee* which is a continuation of the meeting from the previous stage. At the end of this stage will be realized things such as; details of coaching activities, a description of the state of the coachee's abilities including the training experience that has been followed, and the agreed objectives of coaching activities and success criteria. (3) Formulate a detailed coaching plan; This stage is the stage of formulating a detailed plan about the coaching process. These stages include; (a) explanation of the objectives of the coaching process, (b) schedule of coaching activities, (c) provision of tasks such as providing reading materials and searching for data through observation (4) Carrying out tasks / activities The fourth stage in the coaching process is to implement the agreed plan. Namely implementing joint activities, so that at the next stage it can be known which parts should be improved / developed based on the performance that has been carried out. Things done include 2

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categories; namely first, the application (practicing tasks or activities that the coachee wants to improve); Secondly, it collects data and evidence about the abilities of the coachee during the performance of tasks. Evidence in question of performance information obtained through self-assessment, observation, and feedback. (5) Revisiting activities and planning performance improvements; This stage is carried out through reflection / discussion activities about the results of observations and how to solve them in the future to improve them. In this section the coach and coachee discuss the coachee's experience and how the coachee builds it to improve his performance going forward. The focus of this meeting is on the coachee's perception of his performance, the results of observations from the coach, comments and observations from other observers, and the comparison of these performances with established standards. At the end of the activity, data will be obtained on the details of the coachee's abilities and the parts to be developed as well as the future plans that the coachee will carry out in carrying out his performance. (6) End coaching activities. Approaching coaching activities means that the coachee can continue to develop performance without the help of a coach. However, coaching activities can be continued if the coach has management coordination at work. At the stage, an evaluation of the coaching program   and activities that will be carried out to develop planning as a coach is carried out. The benefits of coaching are as follows (Rae:2005): a. For the coachee: (1) increased ability, confidence, flexibility and self-confidence; (2) the actual use of duties will provide a greater sense of engagement, commitment, and job satisfaction; (3) opportunities are given to grow in the workplace, to become more experienced, and to gain an understanding of higher-level employment; and (4) people develop into active learners, seeking more development opportunities. b. For coaches: (1) wider opportunities to use people's abilities more effectively, by saving time and money by improving the team atmosphere; (2) more effective control over greater flexibility in situations of change; (3) with fully developed staff, work and relationships will run more seamlessly; and (4) the development and strengthening of personal abilities. The benefit of research is that it can enrich conceptual knowledge and research, especially in educational supervision in the development of teachers' professional abilities; For education supervisors, the concept of coaching-based academic supervision can be used as an alternative to the implementation of educational supervision, especially improving the teaching ability of teachers in terms of implementing learning strategies; and for teachers, in order to be able to improve their paedagogic and professional competence in implementing inquiry learning strategies. The research was carried out at SMA Negeri 1 Bireuen on October 8, 20 22 to December 21, 2022. The research was carried out in a series of *action research* models of Kemmis and Mc Taggart actions in 2 integrated action cycles with the provision of coaching-based academic supervision actions consisting of planning, action/observation, and reflection stages. While the coaching stage consists of 6 (six) stages individually. At the planning stage of cycle I the researcher; (1) Conduct general meetings to explain the objectives and steps of *coaching*; (2) Discuss the teacher's work experience for 1 semester on the implementation of the 2013 curriculum (based on preliminary condition data); (3) Explain the concept of inquiry learning strategies and provide reading / literature materials, examples of lesson plans on inquiry learning strategies, and inquiry learning scenarios; and (4) Discuss with the teacher the details of the teaching schedule for the adjustment of the *coachin* program. At the researcher's action/observation stage; (1) Conduct discussions during 3 meetings; (2) Making learning observations using SPI Observations are carried out by researchers with observers accompanied by recording learning activities using video cameras; (3) Provide the results of the video recording to the teacher, to be assessed using the same observation sheet as the observer; (4) Ask the teacher to complete an assessment of student learning outcomes, to be used as a consideration of the next lesson plan;

and (5) Implement feedback with teachers based on existing observation data, and planning for future improvements. At the stage of reflection of the research cycle I of the researcher; (1) Analyze the results of teacher learning observations and student learning outcomes in one cycle; (2) Analyze the results of feedback activities with teachers at previous meetings; (3) Receive input from the principal/curriculum representative who acts as an observer of activities regarding the stages of coaching that have been implemented; and (4) Comparing the results of data analysis with indicators of success of actions, to determine the stages of coaching in the next cycle. In cycle II, planning is carried out such as; (1) Conduct joint meetings to discuss the implementation of coaching; (2) Provide reading books on learning strategies and models to teachers to better understand the concept of inquiry learning strategies and references on the development of teaching materials and learning media; (3) Provide examples of rpp and curriculum syllabus 2013, learning videos that apply scientific approaches and inquiry learning strategies, and review inquiry learning strategies; and (4) Designing and agreeing on a schedule for the implementation of the second cycle coaching program. At the stage of the researcher's action/observation; (1) Hold individual meetings with teachers for 3 meetings as agreed; (2) Observe the teacher's teaching ability in the classroom; and (3) Carry out feedback with the teacher based on existing observation data, and also request comments from the observer as input to the teacher. At the stage of reflection of the research of the researcher; (1) Analyze the results of teacher learning observations and student learning outcomes in one cycle; (2) comparing the teacher's ability results from each cycle; and (3) comparing research results in cycles I and II with the criteria of successful execution of actions.

RESEARCH METHODS

The research design uses a school action research design as many as 2 cycles with stages of planning, action, observation, and reflection.

RESULT AND DISCUSSION

Cycle I The results of the study of the teacher's ability to compile rpp in cycle I are presented in table 1

▶ Table 1. Capability recapitulation teacher pile up RPP Cycle I

No	Aspects that Rated	Teacher					Average	
		G1	G2	G3	G4	G5	Score	%
1	Formulate purpose Learning	3	3	3	3	3	3.00	75.00
2	Organizing material Learning	3	3	1	3	1	2.20	55.00
3	Determine strategy teach	4	4	4	4	4	4.00	100.00
4	Determine steps teach	4	3	4	4	3	3.60	90.00
5	Determine allocation time	2	3	1	3	4	2.60	65.00
6	Determine source media and tool	4	2	4	2	2	2.80	70.00
7	Determine shape procedure and tool valuation	3	3	3	3	3	3.00	75.00
	Score maximum ideal (28)	23	21	20	22	20	21	75.71
	%	82.14	75.00	71.43	78.57	71.43		

From the table, it is known that the highest average score obtained by teachers is 82.14% and the lowest is 71.43%. It is also known that there are aspects that are still low in penyusunan Rpp, namely in the aspect of organizing learning materials (55%) and determining time allocation (65%). The results of observations on the implementation of teacher learning in the first cycle obtained the following data;

Table 2. Recapitulation of teachers' ability to carry out Cycle 1 learning

No	Assessed stages			Teacher			Average	
		G1	G2	G3	G4	G5	Score	%
1	Orientation	4.00	3.00	3.33	3.00	2.00	3.07	76.65
2	Formulating the problem	3.33	3.67	2.67	2.33	3.33	3.07	76.65
3	Formulating hypotheses	1.67	0.33	1.33	1.33	0.67	1.07	26.65
4	Do nvestigation/ collecting data	3.00	3.67	4.00	3.00	2.67	3.27	81.70
5	Analyzing data/	2.67	3.00	3.00	3.00	2.67	2.87	71.70
	testing hypotheses							
6	Formulating conclusions	3.00	3.00	2.33	2.67	3.33	2.87	71.65
	Number of scores	17.67	16.67	16.67	15.33	14.67	16.20	
	% Achievements	73.61	69.44	69.44	63.89	61.11	67.50	

Based on these data, it is known that of the 6 aspects of the stages assessed, the lowest stage aspect is formulating a hypothesis (26.65%) while other aspects have reached above 70%. This happens because in formulating a hypothesis, the teacher does not focus on one of several problems presented so that students do not understand the direction of the teacher's speech and there are teachers who directly formulate the problem instead of directing it to students through questions. The low aspect is in data analysis where there are teachers who do not provide a special form to direct students to infer investigation data, as well as the formulation of conclusions, where teachers do not provide relevant data for student reinforcement and give praise to students who have been willing to give conclusions. Recapitulation of the value of student learning outcomes in each class of the subject teacher obtained the following data;

The percentage of student learning completion in each class of the subject teacher is known that there are 2 classes that have a classical completion below 85%, which is at a completion of 80.95%.

The average recapitulation of teachers' ability to apply the first cycle of inquiry learning strategies (SPI) is summarized in the following table.

Table 3. Percentage of classical completion of student learning outcomes using cycle I inquiry learning strategies

No	Code Teacher	Eye Lesson	Class	KKM	Flat-Flat	Sum Student	Student Complete	% Classical
1	G1	Biology	MIA 1	76	90.71	21	21	100.00
2	G2	Physics	MIA 3	70	71.62	21	17	80.95
3	G3	Physics	MIA 2	75	90.48	21	21	100.00
4	G4	Chemistry	MIA 1	80	85.95	21	18	85.71
5	G5	Chemistry	MIA 2	76	79.57	21	17	80.95
			Average					89.52

In accordance with the table, it is known that the average ability of teachers in compiling rpp is 75.71% where the highest score only reaches 82.14%. The average score of teachers' ability to carry out SPI is 67.50% with the highest score only reaching 73.61% with an average. However, the classical percentage of student learning completion, there are 2 classes that are only 80.95% classical completion. Furthermore, the data is depicted in the following diagram:
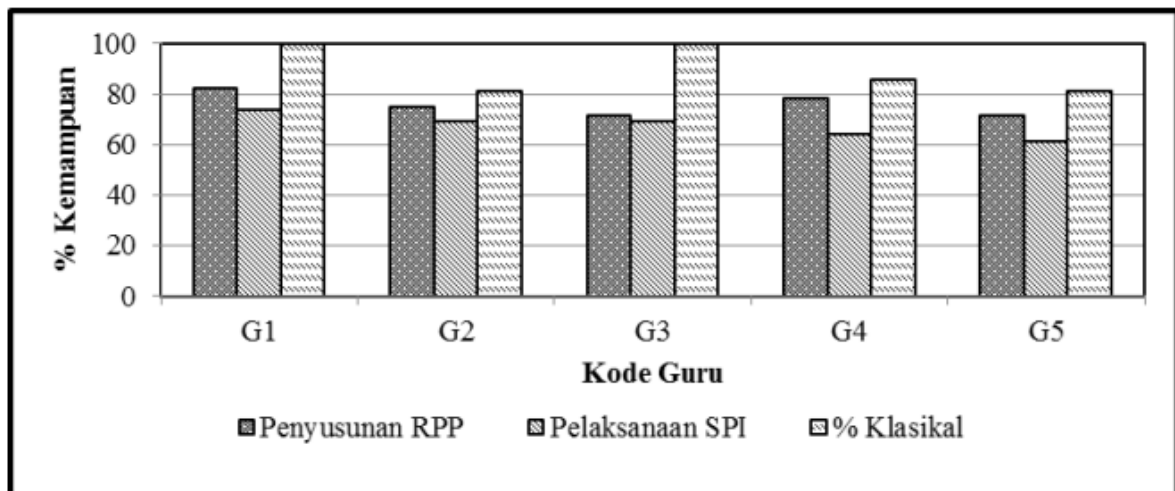
Based on the data and diagrams above, it is known that the ability of teachers to implement inquiry learning strategies has not reached the success indicator of 85%, the average ability of teachers to plan new learning reaches 71.43% with the lowest indicator being organizing teaching materials and allocating time then the average ability of teachers to carry out new inquiry learning reaches 67.50%, with the lowest indicator being to formulate hypotheses. The classical completion of students in each class has not all reached 85% there are 2 classes with classical completion of 80.95%. So the research continued in the second cycle by considering the weaknesses in cycle I.

Table 4. Recapitulation of the average ability of teachers to apply SPI cycle I

No	Master Code	Aspects of Student Ability and Learning Outcomes		
		RPP Preparation	SPI Implementation	% Classical
1	G1	82.14	73.61	100.00
2	G2	75.00	69.44	80.95
3	G3	71.43	69.44	100.00
4	G4	78.57	63.89	85.71
5	G5	71.43	61.11	80.95
Average		75.71	67.50	89.52

Cycle II The results of the study of the teacher's ability to compile rpp in cycle II are presented in the following table:

Table 5. Recapitulation of teachers' ability to compile Rpp Cycle II

No	Assessed Aspects	Teache					Average	
		G1	G2	G3	G4	G5	Score	%
1	Formulate learning objectives	4	4	4	4	4	4.00	100
2	Organizing materials Learning	4	4	3	3	3	3.40	85
3	Determining teaching strategies	4	4	4	4	4	4.00	100
4	Define steps teach	4	4	4	4	4	4.00	100
5	Determine time allocation	4	4	4	4	3	3.80	95
6	Define sources, media, and tools	4	4	4	4	4	4.00	100

No	Assessed Aspects	Teach					Average	
		G1	G2	G3	G4	G5	Skor	%
7	Define forms, procedures, and Assessment Tools	4	4	4	4	4	4.00	100
	Ideal max score= 28	28	28	27	27	26	27.2	97.14

Based on these data, it is known that the average ability of teachers to compile rpp is 97.14% with the lowest score is 92.86%. Then the lowest aspect is the organization of learning materials and determining allocations, but it has reached a minimum of 95%. This is because there are teachers who list teaching materials that are not in accordance with scientific methods, namely not described from general to specific along with relevant examples. However, the overall ability of teachers to compile rpp has achieved an indicator of success in action, which is above 85%. The results of the observation of teachers' teaching ability in applying inquiry learning strategies in cycle 2 are presented in the table below:

Table 6. Recapitulation of teachers' ability to carry out Cycle II learning

No	Assessed stages	Teacher					Average	
		G1	G2	G3	G4	G5	Score	%
1	Orientation	4.00	4.00	2.67	4.00	4.00	3.73	93.35
2	Formulating the problem	4.00	4.00	4.00	3.33	4.00	3.87	96.65
3	Formulating hypotheses	2.67	3.67	4.00	2.67	2.00	3.00	75.05
4	Conducting investigations / collecting data	3.67	3.67	3.67	3.67	4.00	3.74	93.40
5	Analyzing data/ testing hypotheses	4.00	2.33	3.67	3.67	4.00	3.53	88.35
6	Formulating conclusions	3.00	3.00	3.00	3.33	2.67	3.00	75.00
	Number of scores	21.34	21.00	21.00	20.67	20.67	20.94	
	% Achievements	88.89	87.50	87.50	86.11	86.11	87.22	

From the table, it is known that, the average score of teachers' ability to carry out SPI has reached 87.22% with the lowest score of 85.70%. Judging from the SPI stage, the lowest average score was 75%, namely at the stage of formulating hypotheses and formulating conclusions caused by the teacher not directing students to formulate their hypotheses before the investigation and the teacher forgot to provide relevant data in the reinforcement delivered at the end of the lesson. Overall, the average ability of teachers to implement SPI in cycle II has reached success indicators. . The percentage of student learning completion in cycle II for each class of subject teacher is presented in the table below

**Table 7. Percentage of classical completion of students by applying SPI cycle II**

No	Code Teacher	Eye Lesson	Class	KKM	Flat-Flat	Sum Student	Student Complete	% Classical
1	G1	Biology	MIA 1	78	90.90	21	21	100.00
2	G2	Physics	MIA 3	73	76.67	21	19	90.48
3	G3	Physics	MIA 2	73	95.24	21	21	100.00
4	G4	Chemistry	MIA 1	75	94.33	21	21	100.00
5	G5	Chemistry	MIA 2	77	81.19	21	18	85.71
			Average					95.24

Based on these data, it is known that the percentage of completion of student classical learning outcomes has reached the lowest classical completion of 85.71% with an average classical % of 95.24%. A recapitulation of the average teacher's ability to apply cycle II inquiry learning strategies is summarized in the following table:

Table 8. Recapitulation of the average ability of teachers to apply SPI cycle II

| No	Master Code	Aspects of Ability and Student Learning Outcomes		
		RPP Preparation	SPI Implementation	% Classical
1	G1	100.00	88.89	100.00
2	G2	100.00	87.50	90.48
3	G3	96.43	87.50	100.00
4	G4	96.43	86.11	100.00
5	G5	92.86	86.11	85.71
Average		97.14	87.22	95.24

Based on the data above, it is known that the percentage of the average score of teachers' ability to compile rpp is 97.14% with the lowest score of 85.71%. Then the ability of teachers to carry out SPI reached an average of 87.22% with the lowest score of 87.50% and the percentage of classical student learning completion reached an average of 95.24% with the lowest classical completion of 85.71%. The data is further illustrated in the following diagram:
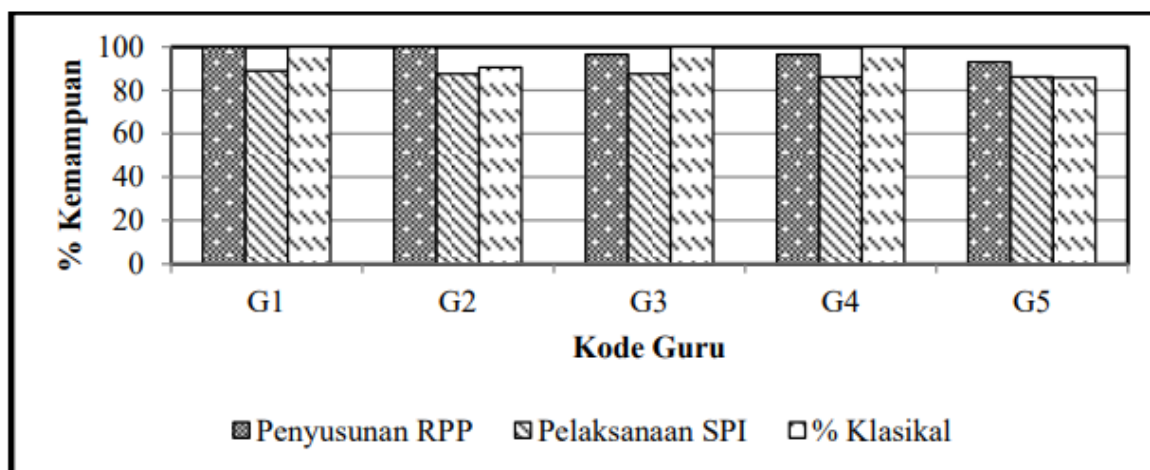
Gambar 2. Diagram kemampuan guru menerapkan pembelajaran SPI siklus 2

Based on the data in the table and diagram above, it is known that the teacher's ability to compile rpp and implement SPI in cycle 2 has reached success indicators (85%), students' classical completeness has been above 85% in each class, namely the lowest classical completion of 85.71%, and 100% of teachers and increased to 92.18% in cycle 2 with an increase of 20.57%. Furthermore, the data can be described in the diagram as follows:

Table 9. Recapitulation of the average ability of teachers to apply SPI each cycle

No	Assessment Aspects	% Average teacher ability			Information
		Precyclical	Cycle I	Cycle II	
1	RPP Preparation	60.71	75.71	97.14	Increase
2	SPI Implementation	34.17	67.50	87.22	Increase
	Average	47.44	71.61	92.18	Increase
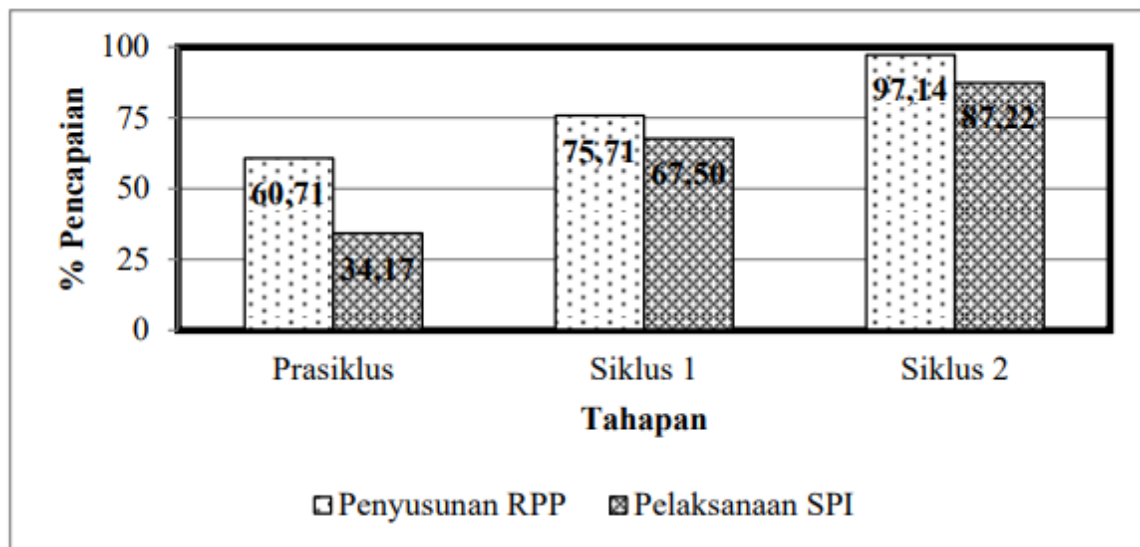
In this study, it was found that differences in teachers' teaching ability in planning and implementing SPI were also influenced by the level of teacher experience both from work and training that had been followed. In addition, it was also found that the emotional and social condition of the teacher also affected the good and bad performance of the teacher, this can be seen in the emotional condition of the teacher at informal meetings during individual coaching, which appears in the consistency of the teacher following the agreed coaching schedule and also the submission of copies of the RPP / teaching materials. So that coaches or implementers of academic supervision should better tolerate the level of abstraction and emotions of teachers during the coaching program.

CONCLUSION

From the results of research and research discussions, it can be concluded that the application of coaching-based academic supervision can improve the ability of teachers in science subjects in implementing inquiry learning strategies at SMAN 1 Bireuen.

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