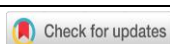# Improving the Ability of Principals to Carrying Out Academic Supervision Through Managerial Supervision with a Collaborative Approach

Imam Sujianto[1], Dwikoranto[2*], [3]Marsini

[1] Cabang Dinas Pendidikan Provinsi Jawa Timur Wilayah Bojonegoro, Bojonegoro, Indonesia
[2] Universitas Negeri Surabaya, Surabaya, Indonesia
[3] Universitas Doktor Nugroho, Magetan, Indonesia

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Sections Info	ABSTRACT
	Objective: The purpose of this school action research is to improve the ability of school principals to carry out academic supervision through managerial supervision with a collaborative approach. This research was conducted at Foster Vocational Schools in Bojonegoro Regency. The school is a school fostered by researchers who serve as supervisors. The subjects in this study were six principals of vocational school Taruna Mandiri Ngasem, vocational school Association of Teachers of the Republic of Indonesia 3 Bojonegoro, vocational school Al Kyai Sukosewu, vocational school Wali Songo Sugihawaras, vocational school Muhammadiyah 6 Kedungadem, and vocational school Miftahul Huda Baureno. This research was carried out for two months. **Method:** A collaborative approach with monitoring and evaluation, and workshops is an activation process that will be aimed at finding out whether the development of the implementation of this program, whether it is by plans, procedures, or standards that have been set and assess the level of achievement and effectiveness of the program that has been implemented. **Results:** the managerial supervision of the collaborative approach can improve principals' performance abilities in carrying out academic supervision. The results achieved in cycle 1 averaged 75.38, and cycle 2 achieved an average score of 92.42 according to the researcher's target, namely the average score of 80 and above. With the increased performance of school principals in academic supervision, all supervised teachers experience direct positive benefits from academic supervision. **Novelty:** Teachers feel that implementing learning in schools becomes more qualified, effective, and efficient.

INTRODUCTION

Academic supervision is one of the crucial competencies. However, one of the competencies that must be owned and mastered by school principals is carrying out academic supervision (Akhmad, 2022). Academic supervision aims to improve the quality of education on an ongoing basis to align with national education goals. The Principal assists teachers in developing competencies and helps manage the learning process to achieve learning objectives. Principals must understand the basic concepts, fundamental theories, principles, and characteristics of supervision to be used as a scientific basis for carrying out their professional duties as supervisors (Zulfikar et al., 2017; Bernadin & Russel, 2023). Implementing academic supervision requires conceptual, interpersonal, and technical skills to make it more effective in its application. Academic supervision techniques consist of two kinds, namely, individual and group (Ramdaniah, 2017). The Principal as a leader, must have competence in carrying out his duties professionally, namely personality, managerial, entrepreneurial, supervision, and social competence (Regulation of the Minister of National Education Number 13 of 2017). As an

academic supervisor, the Principal has the responsibility and authority to develop an academic supervision program. The stages in academic supervision activities are planning or compiling an academic supervision program, implementation, and follow-up or evaluation of results (Mushlih & Suryadi, 2018).

There are three main supervision competencies: 1) Planning an academic supervision program in order to increase teacher professionalism, 2) Carrying out academic supervision of teachers using appropriate supervision approaches and techniques, and 3) Following up on the results of academic supervision of teachers in order to increase teacher professionalism (Fadhli, 2017; Mulyasa, 2015). From the results of the implementation of academic supervision, we can find the weaknesses and obstacles teachers face in carrying out learning. Furthermore, the Principal provides solutions, guidance, and follow-up on the supervision results so that teachers can correct deficiencies and maintain excellence in the learning process (De Jong et al., 2020). The results of the implementation of supervision need to be followed up to provide accurate results to improve teachers' professional competence. This follow-up can be in the form of reinforcement, giving awards, educational advice, and providing opportunities for teachers to improve their performance (Murtiningsih et al., 2019).

The findings in the six private vocational schools assisted by the researcher explain that the learning supervision carried out by the Principal is only administrative, the substance of which has not yet touched the needs of teachers, especially in enhancing and improving the quality of learning. In addition, school principals rarely carry out learning supervision programs, especially monitoring the implementation of the teaching and learning process carried out by teachers in the classroom. Researchers have not received any evaluation and follow-up documents from the learning supervision program (Damayanti, 2017).

Actions that must be taken by supervisors who are also researchers in carrying out guidance and professional training for school principals are Managerial Supervision through a collaborative model involving workshops and monitoring-evaluation methods. This is because handling the problem of academic supervision requires an understanding of the 2013 curriculum material, which continues to develop. Hence, the Principal must also have a comprehensive understanding before carrying out his duties in academic supervision. To gain an understanding of the curriculum needs to be taken through workshops. Monitoring and evaluation aim to determine the program's implementation, achievement, and success and obtain input for further planning (Kemdikbud, 2014).

The school principal occupies a crucial role in achieving the quality of education. Thus, the Principal's performance means the Principal's work in achieving educational goals. Performance is an activity to complete tasks and responsibilities according to the expectations and goals set in a certain period (Susanto, 2016). Principals must have adequate knowledge, abilities, and skills (Kemdiknas, 2015).

Supervision is a professional activity carried out by school supervisors in the context of helping school principals, teachers, and other education staff to improve the quality and effectiveness of education and learning (Kemdikbud, 2014). Supervision is aimed at two aspects, namely: managerial and academic. A supervisor has a position or position that is higher than the person being supervised, a form of professionalism that is also carried out through dialogue on the study of problems regarding education to find a solution in increasing the professional ability of school principals, teachers, and other school staff in order to continue to enhance performance for schools towards achieving

a quality education (Sudjana, 2016; Sagala, 2014). Managerial supervision focuses on observing aspects of school management and administration that support the implementation of a lesson (Burhannuddin, 2017; Hasanah, 2020). While this academic supervision focuses on the supervisor's observation of what academic activities are in the form of learning both inside and outside the classroom (Aprida et al., 2020).

This study uses a collaborative approach: monitoring, evaluation, and workshop methods. Based on the explanation related to this type of approach, the collaborative approach tends to be recommended by the latest education practitioners because it upholds the values of equality in the need to develop supervisory professionals in positions and the responsibilities and professionalism of teachers as supervisor work partners. The primary method that academic unit supervisors must carry out in managerial supervision is monitoring and evaluation (Kemdikbud, 2014; Murtiningsih et al., 2019). Monitoring activity is intended to determine the progress of implementation in school administration, whether by plans, programs, or standards that have been set and to find obstacles that must be overcome in implementing the program. Monitoring is more centered on controlling during the program and is more clinical. Through monitoring, feedback can be obtained from schools or other related parties so that they can successfully achieve goals.

Monitoring as an activity follows the progress or process of implementing an activity so that the implementation can go according to plan (Siagian, 2017). The main things that need to be done in monitoring and evaluating include (a) the progress of the implementation of activities and (b) the results achieved from the implementation of activities (Kemdikbud, 2014; Arikunto, 2017). Workshops or workshops are one of the methods that supervisors can use in conducting managerial supervision. This method is a group and can involve several school principals, vice principals, or school committee representatives (Depdiknas, 2017). Because of the importance of supervision of learning carried out by the school principal, and determining the success of the implementation of learning in schools, in this school action research, it is necessary to have managerial supervision with a collaborative approach that can improve the performance of school principals.

The problem in this research is how to improve the ability of school principals to carry out academic supervision through managerial supervision with a collaborative approach at Foster Vocational Schools in Bojonegoro Regency in 2020/2021. This school action research aims to improve school principals' ability to carry out academic supervision through managerial supervision with a collaborative approach at Foster Vocational Schools in Bojonegoro Regency in 2020/2021. The benefits that can be obtained are 1)—increasing the competence of principals' supervision, especially in supervising teacher learning. 2). Teachers can develop their competence in learning in the classroom by fostering school principals through academic supervision. 3). Increasing the quality of the implementation of learning in schools impacts the quality of graduates who are good and absorbed in the world of work to the fullest.

RESEARCH METHOD

This research is a school action research to improve the performance or results of an activity. This study consists of four activities carried out in repeated cycles. The four main activities in each cycle are (a) planning, (b) implementing actions, (c) observing, and (d) reflecting (Pujianto et al., 2020). Implementation of the research begins with the first cycle, which consists of four activities. If the successes and obstacles of the actions

taken in the first cycle are known, the Principal, supervisor, and teacher determine the design for the second cycle.

Research Subject

The subjects of this school action research were six school principals who were at Foster Vocational Schools in Bojonegoro Regency for the 2020/2021 academic year, namely Taruna Mandiri Ngasem Vocational School, Association of Teachers of the Republic of Indonesia 3 Bojonegoro Vocational School, Al Kyai Sukosewu Vocational School, Wali Songo Sugihawaras Vocational School, Muhammadiyah 6 Kedungadem Vocational School, and Vocational High School Miftahul Huda Baureno. With a research focus on implementing managerial supervision, a collaborative approach is applied to school principals who experience problems carrying out academic supervision.

Research Procedure

1. Planning

   Before carrying out the research, the authors observed the results of academic supervision carried out by the school principal in the odd semester of the 2020/2021 school year. The Author found that several school principals needed help to provide evidence of complete academic supervision. After gathering information from school principals and teachers, the authors determine the managerial supervision activities of a collaborative approach in improving the performance of school principals in carrying out academic supervision (Hijrah, 2016).

   The steps for planning a meeting include 1. They are determining the focus of observation/observation, 2. Establishing observation methods and instruments, 3. They are setting the time for managerial oversight and the next meeting.

2. Action Implementation

   The Action Plan can be seen in Table 1.

Table 1. Research action plan.

	Focus	Activity
1	Workshop 1	Curriculum 2013 revised 2020
2	Monitoring Evaluate 1	Supervise Academic result 1
3	Workshop 2	Curriculum 2013 revised 2020
4	Monitoring Evaluate 2	Supervise Academic result 2

3. Observation

   In this section, several things are important to note, namely:

   1) Direct observation during the 2013 Revised 2020 Curriculum workshop. This activity included researchers in the room to observe how school principals attend workshops directly, create academic supervision programs, evaluate the results of academic supervision, and develop follow-up plans. 2) Researchers monitor the results of academic supervision and evaluate individually the school principals who are monitored for evaluation. The results of this evaluation monitoring will be discussed again in the next workshop. 3) The research instrument uses observation and documentation sheets. The data obtained from this study is research data on the performance of school principals in implementing the supervision program (Patton, 2019). Data were analyzed using

the percentage technique then the criteria were matched with Table 2 (Kemdikbud, 2014).

Table 2. Performance assessment criteria.

Criteria	Value
Excellent (AB)	$90.00 < AB \leq 100.00$
Good (B)	$80.00 < B \leq 90.00$
Enough (C)	$70.00 < C \leq 80.00$
Less (K)	$K \leq 70.00$

The measure of success is measured by the actions taken in each research cycle. The school supervisor determines the success indicator for the Principal's performance in academic supervision. It is said to be successful if it scores > 80.00.

4. Reflection

Reflection explains the results of the implementation of the action, whether it has been prosperous or not successful, including the difficulties or obstacles encountered in implementing the action and plans practical follow-up actions in achieving the expected results.

RESULTS AND DISCUSSION
Results
Pre cycle results
The results in the precycle showed that six school principals showed deficient performance in carrying out academic supervision. The result value from monitoring six private school principals was 22.73, which means it could have been higher, far from satisfactory. Meanwhile, the ability of the Principal to carry out supervision must be good, meaning that he gets a score above 75.00. Meanwhile, researchers assign a score of 80 or higher because learning activities must be excellent so that the target of achieving competence in the 2013 curriculum revision 2020 is optimal.

In this study, the researcher used an analytic score, which means that the score is evaluated separately based on the elements in the analysis instrument for implementing academic supervision, namely: 1) Having an academic supervision program, 2) Developing a plan for implementing academic supervision, 3) Carrying out administrative supervision of learning plans, 4) They are implementing supervised class visits 5) Assess learning implementation plans, 6) Carry out administrative supervision of learning assessments, 7) Prepare follow-up plans for supervision results, 8) Carry out follow-up results of supervision, 9) Have unique coaching books, 10) Have development programs to increase results learning, 11) Conduct Teacher Performance Assessor (TPA) to improve teacher performance (Azwardi, 2020).

Researchers motivate school principals and ensure that school principals will be able to improve performance in carrying out academic supervision well in post-activity. The school principal prepares supervision programs, prepares supervision implementation plans, supervises class visits, carries out assessments of Learning Implementation Plans, carries out administrative supervision of learning assessments, develops follow-up plans for supervision results, carries out follow-up supervision results, makes unique coaching books, compiles development programs to improve learning outcomes.

In this section, the researcher collects data from observations during the workshop, and monitoring evaluation takes place in the form of 1 task, namely filling in the

Principal's performance measurement instrument. The data source is the implementation of academic supervision after the workshop. In this observation activity, researchers found an increase in the competence of school principals in compiling academic supervision programs, preparing plans for implementing academic supervision, carrying out administrative supervision of lesson plans, and carrying out supervision of class visits.

The elements of assessing the Learning Implementation Plan, supervising the administration of learning assessment, preparing follow-up plans for supervision results, making unique coaching books compiling development programs to improve learning outcomes, and plans for implementing TPA are starting to be made. During monitoring, researchers found a jump in the performance of school principals in carrying out academic supervision, but the results still needed to be optimal (Nisa', 2021; Sanglah, 2021).

Reflection, Based on observations on the implementation of the action, the researcher draws several conclusions about the implementation of the workshop, as follows:

1. Develop an academic supervision program. One in six school principals has a complete and good academic supervision program. Five other school principals also have a supervision program but need improvement in completeness. Furthermore, in monitoring the evaluation after the workshop, all school principals have a complete and good supervision program. Moreover, the acquisition value of the component of having an academic supervision program in this cycle is 100.00, and this element meets the requirements that the researcher expects. Whereas in the precycle, the acquisition value for this element has reached 71.00. The conclusion is that the Principal can develop an academic supervision program.

2. Prepare a plan for academic supervision, or arrange a schedule for implementing academic supervision. The gain value for this element is satisfactory, namely 100, while the gain value for precycle is 79.00.
   In this element, there is no need for improvement anymore. All school principals have been able to plan the implementation of supervision properly.

3. Carrying out administrative supervision of lesson planning has achieved an acquisition value of 75.00. This has achieved a good value. Meanwhile, the score for the precycle reached 54.00. This needs to be more satisfactory because the Principal must understand the completeness of the lesson plan prepared by the teacher. If this element is not understood, then the Principal's supervision is only administrative without knowing the validity of the device that the teacher offers to the Principal. The conclusion that can be drawn is that the Principal has a sufficient understanding of this element.

4. Carry out supervision of class visits in cycle 1; the acquisition value is 75.00. This is enough. However, it is necessary to improve the arena of implementation of teacher learning which is the spirit of education in schools. The Principal must have good competence in assessing the implementation of learning carried out by the teacher in the classroom. This acquisition value has experienced a significant improvement; in the precycle, it reached a value of 29.00. This was triggered by the need for more understanding of the Principal in the realm of learning implementation so that this main element could have gotten a better touch in the coaching carried out by the Principal on teachers. In this element, the competence of school principals still needs to be improved.

Carrying out the learning implementation plan assessment, the Principal's acquisition value is 50.00. This still needs to be satisfactory. The Principal's obstacle to this element is the Principal's lack of understanding of the lesson plan components in detail. Understanding of learning objectives and their relation to assessment instruments still needs to be improved. Mainly at the point of writing indicators as an elaboration of essential competencies still needs to be stronger. The Principal believes in the teacher because he needs help understanding the types of active verbs that should be included in the indicators.

In this element, the competence of school principals has increased, but it is still

far from the researchers' expectations. Furthermore, it is exacerbated by the need for more understanding of the Principal in the learning steps. The gain value for this element in Pracyclus is 0.00 (zero).

5. Carry out administrative supervision of learning assessment. The acquisition value in the precycle was 8.00. The Principal again took it for granted when the teacher handed over the assessment administration during academic supervision. Because the Principal needs to understand the assessment details, the Principal can already assess the teacher's assessment tools after the workshop. The value obtained for this element is 63.00.

6. Carry out follow-up plans on the results of supervision. In the precycle, the acquisition value is 0.00 (zero), meaning that the Principal does not develop a follow-up plan. In cycle one, the Principal's score for this element reached 75.00. The Principal made a follow-up plan for supervision after receiving a debriefing from the workshop. The researcher obtained sufficient school principal follow-up plan documents to monitor the evaluation. This is because several recommendations from the learning supervision notes in the Principal's class still need to be revised in providing recommendations that will be included in the follow-up plan.

7. Carry out a follow-up on the results of supervision. The gain value in the precycle was 0.00 (zero), which means that the Principal did not do any follow-up because a follow-up plan had not been prepared for the previous elements. Furthermore, after the implementation of the workshop, the Principal can determine the follow-up implementation steps. The follow-up carried out by the school Principal still needed to be on target because, in the last element, the preparation of a follow-up plan did not refer to classroom monitoring instruments. The gain value for this element is 50.00.

8. Have a unique coaching book. The Principal already has a unique guidance book for teachers who experience problems carrying out their duties in this element. Moreover, previously, the Principal needed the book. The score is 100.00. This means that the teacher's problems have been recorded in a unique coaching book.

9. Have a development program to increase learning outcomes. In the precycle, the acquisition value is 0.00 (zero); the Principal does not compile a program. Moreover, at the time of monitoring, the school principal scored 100.00. The school principal had developed a development program.

10. Have documents on improving teacher performance by TPA. The precycle gain for this element is 8.00. One out of six school principals has implemented TPA, while the other five still need to carry out teacher performance assessments. After monitoring, the acquisition value for this element is 67.00. This means that the

Principal only carries out this performance assessment for some teachers, but only a few.

The researcher concluded that the application of a collaborative approach in order to improve the performance of school principals in carrying out academic supervision has not yet reached the target, namely a score of 80 or higher because the implementation of academic supervision must be excellent so that the target for achieving the implementation of teacher learning in schools is effective, efficient and of good quality. Because cycle one has only achieved a score of 75.38 and has yet to reach the target value of 80.00, this school action research must be continued in cycle 2.

Cycle 2

Planning, This action plan begins with planning activities consisting of preparing workshop materials at school. The material for preparing the material is a review of the implementation of cycle 1. The material needed is a summary of the material for cycle 1, namely 1) Learning models and 2) Academic supervision. The agenda for Workshop 2 of the 2013 revision of the 2020 Curriculum at the Wali Songo Sugihwaras Vocational School continued with the evaluation monitoring agenda two and distributing questionnaires. Then it will be followed up with monitoring and evaluation of the Principal's activities in carrying out academic supervision. Time allocation for Workshop 2 of the 2013 revision of the 2020 Curriculum at the Wali Songo Sugihwaras Vocational School continued with evaluation monitoring two and distributing questionnaires to the target schools.

Action Implementation, The researcher carries out the implementation stage of the action based on a plan that has been prepared previously and agreed upon by the Principal of the school that will be included in the workshop. For cycle 2, the workshop implementation includes one meeting at the Wali Songo Sugihwaras Vocational School. For the pre-activity stage, the researcher opened a conversation with the principals of the workshop participants. The Principal was informed about what would be discussed in this session, and the researcher also explained the targets to achieve at the workshop's end (Sahertian, 2018).

The main activity in this activity was the researcher started showing presentation slides for material 1, namely academic supervision. The researcher describes one by one the slide shows and emphasizes the importance of the Principal's mastery of the competencies set out in Academic Supervision. Researchers describe the problems teachers face in preparing learning tools, learning implementation plans, and learning assessment plans. These problems will be resolved if the Principal has good supervision competence and is accompanied by good supervision performance (Azwardi, 2020).

The researcher also re-explained the 2013 curriculum material for the 2020 revision emphasizing character, competence, and literacy. The character component includes a discussion of thoughts, feelings, thoughts, and sports. At the same time, the literacy components include basic literacy, library literacy, media literacy, technology literacy, and visual literacy (Whitmore, 2016). Explanation of competence is divided into three: attitude, knowledge, and skills. This competency is prepared to welcome the 21st century, emphasizing critical thinking, collaboration, communication, creativity, and innovation (Neswary & Prahani, 2022; Pristianti & Prahani, 2022; Qotrunnada& Prahani, 2022). The researcher showed the presentation slides for material 2, namely learning models.

Post-activity researchers motivate school principals and ensure that school principals will be able to improve performance in carrying out academic supervision properly. Furthermore, principals supervise their respective schools' academic activities as described in the workshop material (Wiles, 2017). The school principal prepares supervision programs, develops supervision implementation plans, supervises class visits, carries out lesson plans assessments, supervises the administration of learning assessments, develops follow-up plans for supervision results, and makes unique guidance books, compiles development programs to improve learning outcomes. They monitored evaluation two by distributing questionnaires on the implementation of academic supervision to the target schools.

In this section, the researcher collects data from observations during a one-day workshop. Monitoring evaluation takes place in the form of 1 task, namely filling in the Principal's performance measurement instrument. The data source is the implementation of academic supervision after the workshop in cycle 2. In this observation activity, the researchers found an increase in the competency of school principals in a) compiling an academic supervision program, b) compiling a plan for implementing academic supervision, c) carrying out administrative supervision of lesson planning, d) compiling a follow-up plan for supervision, e) having a unique coaching book, and f) having a development program to improve learning outcomes has reached a score of 100. This means that in these elements, the Principal has been able to carry out satisfactorily

In elements a) carrying out supervision of class visits, b) carrying out lesson plan assessments, c) carrying out supervision of learning administration, d) carrying out a follow-up on the results of supervision, and e) improving the performance of TPA teachers begins to be implemented. During monitoring, researchers found many improvements in the performance of school principals in carrying out academic supervision.

Reflection, based on observations on the implementation of the action, the researcher draws several conclusions about the implementation of the workshop.

1) Develop an academic supervision program. Six school principals have complete and good academic supervision programs. Furthermore, the acquisition value of the elements of having an academic supervision program in this cycle is 100.00, and this element meets the requirements that the researchers expect. Furthermore, in cycle one, the acquisition value for this element has also reached 100.00. It was concluded that the Principal could develop an academic supervision program.

2) Prepare a plan for academic supervision, or arrange a schedule for implementing academic supervision. The acquisition value for this element is satisfactory, namely 100.00. In this element, there is no need for further improvement. All school principals have been able to arrange a schedule for carrying out supervision properly.

3) Carrying out administrative supervision of lesson planning has achieved an acquisition value of 100. This has achieved a satisfactory score. While the value obtained in cycle 1 reached a value of 75.00. This was very satisfying because the Principal already had a good understanding of the completeness of the lesson plan prepared by the teacher. The conclusion that can be drawn is that the Principal already has a sufficient understanding of this element.

   1. Supervise class visits in cycle 2. The score is 92.00. This is very good. The school principal already has good competence in assessing the implementation of

learning carried out by the teacher in the classroom. The acquisition of this score has experienced a significant improvement from cycle 1, reaching a score of 75.00. The competency of the Principal is excellent. If academic supervision is more frequent, the skills in academic supervision will also increase.

2. Carrying out the learning implementation plan assessment, the Principal's acquisition value is 79.00. This is still sufficient. The Principal's obstacle to this element is the Principal's lack of understanding of the lesson plan components in detail. However, this matter has experienced much progress. The competence of school principals has increased.

3. Carry out administrative supervision of learning assessment. The acquisition value in cycle 1 was 63.00. The Principal again took it for granted when the teacher handed over the assessment administration during academic supervision. Because the Principal needs to understand the assessment details, the Principal can already assess the teacher's assessment tools after the workshop. The value obtained for this element is 83.00.

4. Carry out follow-up plans on the results of supervision. The Principal made a follow-up plan for supervision after receiving a debriefing from the workshop. In cycle 1, the Principal's score for this element reached 75.00. Researchers have obtained satisfactory principal follow-up plan documents in monitoring and evaluation, namely the acquisition value of 100.00. This is because the recommendations from the learning supervision notes in the Principal's class are appropriate in providing recommendations that will be included in the follow-up plan.

5. Follow up on the results of supervision. The acquisition value in cycle 1 is 50.00, which means the Principal has completed the follow-up even though it is imperfect. Furthermore, after the implementation of the workshop, the Principal can determine the follow-up implementation steps. Moreover, the follow-up carried out by the Principal was right on target. The gain value for this element is 83.00.

6. Have a particular coaching book. The Principal already has a guidebook for teachers who experience problems carrying out their duties in this element. Moreover, the acquisition value is 100.00, as in cycle 1. This means that all the problems faced by the teacher have been recorded in the guidebook.

7. Have a development program to increase learning outcomes. In cycle 1, the acquisition value is 75.00; the Principal is quite capable of compiling a program. Furthermore, during monitoring, the school principal achieved an acquisition value of 100. The school principal had prepared an excellent development program.

8. Have documents on improving teacher performance by TPA. The acquisition value of cycle 1 for this element is 67.00. Six school principals have implemented TPA. Moreover, after monitoring, the acquisition value for this element is 79.00. This means that the Principal has carried out this performance assessment for all teachers but still needs coaching.

Cycle 2 has been completed and successfully met the success criteria, namely the success indicator of achieving a score of 80.00 and above for the average performance of school principals in academic supervision. Because in this cycle, an average of 92.42 was achieved above the planned target, this school action research was stopped. The success of the research can be described in Figure 1.
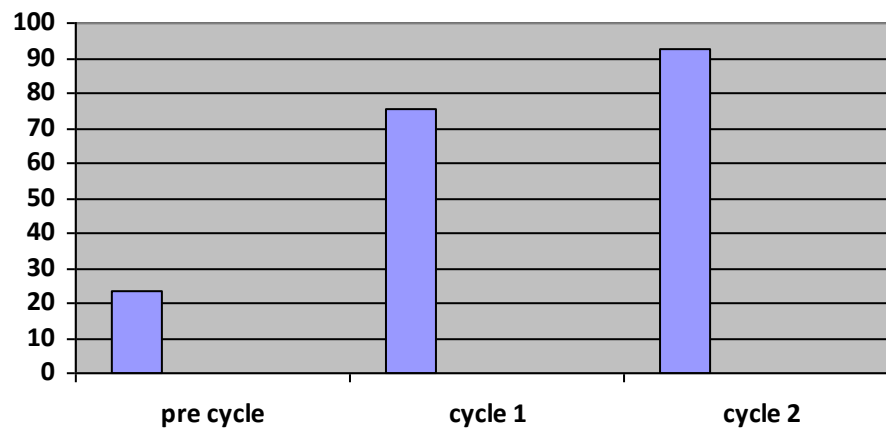
Figure 1. Results of academic supervision performance analysis.

The results of the questionnaire on the implementation of academic supervision by the school principal received excellent responses from the 14 respondents who filled out the questionnaire stating that after the first cycle of research, the school principal had been very helpful to teachers who wanted to develop their teaching profession. Moreover, academic supervision has benefited teachers (Azwardi, 2020). The cycle one and cycle two questionnaires show significant changes in respondents' responses to the performance of school principals and respondents' responses to academic supervision, as in Table 3.

Table 3. Results of the assessment questionnaire on school principals.

	Statement	Cycle 1	Cycle 2
1	The Principal of the school has a great responsibility for the success of learning	54	94
2	The Principal always motivates teachers to improve the quality of learning	54	92
3	The principal checks the completeness of the teacher's teaching planning documents at the beginning of the semester	81	0
4	The Principal provides input/suggestions on teacher teaching planning for the better	56	100
5	The Head of the School supervises academic activities according to the program that has been prepared	60	98
6	The Principal always conducts pre-observation interviews for class supervision	33	96
7	The Principal carries out class supervision diligently	69	92
8	The Principal conducts post-observation interviews	52	94
9	The Principal is willing to guide teachers who have difficulty compiling teaching tools	38	96
10	The Principal is willing to guide teachers who have difficulty teaching	29	94

Discussion

Based on the results of workshops, monitoring, and evaluation of the implementation of academic supervision carried out by school principals, data was obtained that all school principals had been able to plan, implement and follow up on academic supervision

(Akhmad, 2022). This can be seen from the average value of the Principal's performance in carrying out academic supervision of teachers, which is 92.42. The value of each action is increased, namely from cycle 1 to cycle 2. The performance of school principals in carrying out one academic supervision will experience much improvement so that all principals have exceeded the indicator of success, namely > 80. Indicators of success have been achieved so that the research cycle is finished (Burhannuddin, 2017; Hasanah, 2020).

Average overall score of all cycles. The initial data (precycle) mean overall score is 23.73 in the poor category, cycle 1 is 75.38 in the good category, and cycle 2 is 92.42 in the excellent category. In cycle 2, all research subjects met the predetermined success criteria > 80.00. The overall results of precycle, cycle 1, and cycle two can be seen in Figure 2.
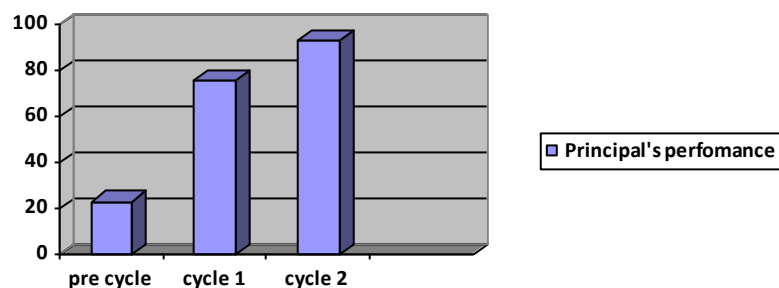

Figure 2. Mean precycle, cycle 1, and cycle 2.

Figure 2 shows that the average of all school principals has improved and increased from the average of precycle, cycle 1, and cycle 2 data. The sum of the average ability of school principals to carry out academic supervision is as follows.

1. Head of vocational school Taruna Mandiri Ngasem, precycle 39.00 in the "inferior" category, cycle one score 77.00 in the "enough" category, and cycle two score 98.00 in the "excellent" category.
2. Principal of vocational school Association of Teachers of the Republic of Indonesia3 Bojonegoro, precycle 20.00 in the "inferior" category, cycle one score 75.00 in the "enough" category, and cycle two scores 93.00 in the "very good" category,
3. Principal of Al Kyai Sukosewu Vocational School, precycle 20.00 in the "inferior" category, cycle one score 75.00 in the "enough" category, and cycle two scores 89.00 in the "good" category,
4. Principal of Wali Songo Sugiwararas Vocational School, precycle 18.00 scores in the "inferior" category, cycle one score 73.00 categories "enough," and cycle two scores 89.00 categories "good,"
5. Head of Muhammadiyah 6 Kedungadem Vocational School, precycle 18.00 scores in the "inferior" category, cycle one score 75.00 categories "enough," and cycle two scores 93.00 categories "very good," and
6. Head of vocational school Miftahul Huda Baureno, precycle 20.00 scores in the "inferior" category, cycle one scores 77.00 in the "enough" category, and cycle two scores 93.00 in the "very good" category.

The results of the action research above are the opinion of Sudjana (2014) that coaching and improving the competence of school principals is also the most important part of managerial supervision carried out by school supervisors (Zulfikar et al., 2017). Therefore, managerial supervision is carried out by school supervisors as educational

supervisors for school principals in order to improve the ability of school principals to carry out their main tasks and functions, and responsibilities. The implementation of academic supervision by school principals for teachers is significant to improve the professional abilities of teachers and improve the quality of learning through a good learning process (Ramdaniah, 2017). The implementation of supervision carried out by the Principal is hoped to impact the formation of the teacher's professional attitude (Leniwati & Arafat, 2017).

Furthermore, Professional guidance carried out by the Principal as a teacher supervisor is an effort that provides opportunities for teachers to develop professionally so that teachers become able and willing to improve and enhance their students' learning abilities (Damayanti, 2017). The Principal as a supervisor is shown by the improvement in teaching at the school he leads; this improvement seems to have been carried out by the supervisor's touch in the form of assistance in overcoming teacher difficulties (Eisenchimdt et al., 2019; Ekawaty & Ibrahim, 2018).

Based on this, the performance of school principals in carrying out academic supervision, both in terms of planning, implementing, and following up on the academic supervision of teachers, can be improved through the managerial supervision of school supervisors.

CONCLUSION

Fundamental Finding: Managerial supervision with a collaborative approach can improve the performance abilities of school principals at Foster Vocational Schools in Bojonegoro Regency in carrying out academic supervision. Implementation for precycle shows that the performance of school principals carrying out academic supervision is still low, with an average score of 22.73 in the less category. After the action was taken in cycle 1, there was an increase in the average score to 75.38 in the excellent category, but it did not meet the expected > 80 value criteria. Furthermore, in cycle two, efforts were made to improve to increase the average score to 92.42, with an excellent category. In cycle 2, all research subjects met the predetermined success criteria > 80.00. With the increased performance of school principals in academic supervision, all supervised teachers felt direct positive benefits from academic supervision. Teachers feel that implementing learning in schools becomes more qualified, effective, and efficient. **Implication:** It is hoped that school principals will improve their performance and develop their abilities to carry out academic supervision in preparing a plan, implementing, and following up on academic supervision of teachers in the framework of increasing teacher professionalism in the schools they foster. School supervisors are expected to be able to apply managerial supervision with a collaborative approach, namely combining monitoring and evaluation methods and workshops to improve the performance of school principals in carrying out academic supervision in target schools. **Limitation:** School supervisors try to improve research and development competencies to actualize themselves by writing school action research. **Future Research:** Teachers are expected to continually improve their performance in teaching through academic supervision, develop their professionalism, and seek to improve the quality of learning to produce good-quality graduates and be absorbed in the world of business and industry.

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Drs. Imam Sujianto, M.Pd.
Cabang Dinas Pendidikan Provinsi Jawa Timur Wilayah Bojonegoro, Indonesia
E-mail: imamsujianto@gmail.com

*Dr. Dwikoranto, M.Pd. (Corresponding Author)
Department of Physics, Faculty of Mathematics and Natural Science, Universitas Negeri Surabaya, Indonesia
Jl. Ketintang, Surabaya 60231, Jawa Timur, Indonesia
Email: dwikoranto@unesa.ac.id

Dr. Marsini, S. Pd., M.M
Universitas Doktor Nugroho Magetan, Jawa Timur, Indonesia
JL. Sendang Kamal 50 Maospati, Magetan 63392, Jawa Timur, Indonesia
Email: marsini@udn.ac.id