Collaboration-Based Academic Supervision Model with Peer Evaluation Approach Improving Pedagogical Competence and School Performance

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ABSTRAK

Supervisi yang dilakukan di sekolah selama ini banyak dilakukan dengan metode observasi. Agar kegiatan supervisi memberikan hasil yang obyektif dan detail, maka dilakukan evaluasi diri secara kolaboratif yaitu dengan evaluasi teman sejawat (peer evaluation) untuk menemukan kekuatan guru yang perlu dipertahankan dan kekurangan yang harus diperbaiki. Penelitian ini bertujuan untuk mengetahui pengaruh model Supervisi Akademik berbasis kolaborasi dengan Pendekatan Peer Evaluation untuk Meningkatkan Kompetensi Pedagogik dan Kualitas Kinerja Sekolah: Peran Motivasi Kepala Sekolah Sebagai Variabel Moderasi. Penelitian ini merupakan penelitian kuantitatif dengan data numerik yang dianalisis menggunakan SEM berbantuan aplikasi Smart PLS. Populasi dalam penelitian ini berjumlah 2.476 guru. Data diperoleh dari kuesioner yang disebar pada 100 orang guru yang dipilih secara random sampling. Hasil penelitian menunjuukan bahwa Supervisi Akademik berpengaruh terhadap Kompetensi Pedagogik dengan nilai P-Value sebesar 0.000 (p<0.05). Supervisi Akademik berpengaruh terhadap Kualitas Kinerja dengan nilai P value sebesar 0.000 (p<0.05). motivasi mampu memoderasi positif Kompetensi pedagogic dengan nilai P value sebesar 0.032 (p<0.05). Motivasi tidak mampu memoderasi supervisi terhadap kualitas kinerja dengan nilai P value sebesar 0.138 (p>0.05). Supervisi mampu menjelaskan variable Kompetensi Pedagogik sebesar 69.4%. Supervisi mampu menjelaskan variable Kualitas Kinerja sebesar 40.1%. Kepala sekolah hendaknya dapat memantau secara berkala terhadap pembelajaran yang dilakukan oleh guru di kelas, sehingga kepala sekolah mengetahui permasalahan yang dihadapi oleh guru dalam pembelajaran.

ABSTRACT

Most of the supervision carried out in schools has been carried out using the observation method. In order for the supervision activity to provide objective and detailed results, a collaborative self-evaluation is carried out, namely peer evaluation to find teacher strengths that need to be maintained and deficiencies that must be corrected. This study aims to determine the effect of collaboration-based Academic Supervision model with Peer Evaluation Approach to Improve Pedagogic Competence and Quality of School Performance: The Role of Principal's Motivation as Moderation Variable. This research is a quantitative study with numerical data analyzed using the SEM assisted by the Smart PLS application. The population in this study amounted to 2,476 teachers. Data obtained from questionnaires distributed to 100 teachers who were selected by random sampling. The results showed that Academic Supervision has an effect on Pedagogic Competence with a P-Value of 0.000 (p <0.05). Academic Supervision affects the Quality of Performance with a P value of 0.000 (p <0.05). motivation is able to moderate positively pedagogic competence with a P value of 0.032 (p <0.05). Motivation is not able to moderate supervision of the quality of performance with a P value of 0.138 (p> 0.05). Supervision is able to explain the Pedagogic Competence variable of 69.4%. Supervision is able to explain the Performance Quality variable of 40.1%. The principal should be able to periodically monitor the learning carried out by the teacher in the classroom, so that the principal knows the problems faced by the teacher in learning.

1. INTRODUCTION

Teachers are professionals who play an important role in improving the quality of Indonesian education (Hayati & Widiati, 2015). In this case the teacher is required to have good competence, if the competence of the teacher is good then the performance of the teacher in learning is also good so that in the end it produces quality graduates (Andriani et al., 2018). Improving teacher performance has the most important position in efforts to improve the quality of learning which will have an effect on the quality of graduates and will affect the achievement of national education goals. Whether or not the pedagogic competence possessed by teachers can be seen from the quality of school performance. School performance can be seen from the achievements of the school concerned (Bunketorp Käll et al., 2015). These achievements include academic and non-academic achievements. The achievements obtained are

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the results of the work of school principals, educators, educational staff, carers, school committees, and other elements in the school (Johnson et al., 2012). The teacher as the object of supervision is preoccupied with administrative demands, while his main task as an educator is at the same time as "transfer of knowledge" to students getting a small portion (Syaharuddin, 2020; Zhang et al., 2015). Finally, the teacher assumes that supervision is the same as evaluation and inspection which always looks for mistakes. The teachers consider that the activity of supervision departs from the interests of the supervisor, and not the interests of the teacher, so that the relationship between supervisors and teachers is impressed between superiors and subordinates, psychologically the teacher feels depressed, does not have the opportunity to show his superiority and prowess (Herawati, 2017).

The current phenomenon shows that there is a gap between expectations and reality in the implementation of supervision (Mette et al., 2015). Lack of consistency between the normative view of scientific supervision theory with a descriptive view of the reality that occurs in schools, which raises researchers' anxiety, another problem of supervision still tends to lead to inspection, due to structural constraints the term supervision is supervisors not supervisors, causing the paradigm of thought to lead to inspection (Wagner, 2020). Another obstacle is that the scope of the supervisor's work places more emphasis on the administrative aspect, the cultural background makes teachers and supervisors not open in the supervision process, supervisors should combine the responsibility for improving teaching from the professional aspect and the administrative responsibility of the teacher because teaching assistance is professional guidance, meanwhile the administrative approach is part of the bureaucracy only (Marmoah, 2018). Most of the supervision carried out in schools has been carried out using the observation method where the observer conducts a checklist assessment at the same time in all aspects of the school. The purpose of supervision is to help teachers solve problems faced in teaching. In addition, the purpose of supervision is also to improve his ability to manage the learning process to achieve learning objectives. In addition, based on the results of interviews with several teachers in the Ambon area, several problems were found, namely: 1) The teacher felt that supervision could not be carried out in one meeting which simultaneously assessed several aspects. 2) Supervision of learning does not give teachers freedom to determine steps in improving learning, 3) Teachers have not been involved in the supervisory process related to the aspects to be assessed and follow-up after the assessment is carried out, 4) supervision is not carried out regularly on a regular schedule. Poor understanding of school principals on teaching supervision, (2) The principal is busy with daily routine tasks, (3) Limited infrastructure and funds, (4) The main task is not yet in accordance with the supervisory function, (5) Supervision from various parties, especially supervisors, on the implementation. the teaching supervision carried out by the principal is still lacking.

The implementation of academic supervision has been considered ineffective, supervision was born on the initiative of the supervisor, lack of class observations or visits, lack of cooperation between supervisors and teachers, so it is necessary to develop academic supervision that can overcome current problems, namely collaboration-based academic supervision (Peters, 2010). Supervision with a collaborative approach with teachers occurs in two directions, namely from the top or the leadership down or the staff and vice versa (Karnati, 2019). The collaborative approach in supervision is expected to provide solutions to problems faced by teachers quickly, because the supervisor in approaching the person being supervised starts with the creation of a good relationship between the two, so that objective data can be obtained (Ambarita et al., 2014). In carrying out their duties, a supervisor must be able to work together with all components of the school, including teachers (Peters, 2010). Many ways are used to carry out supervision, one of which is by collaborating with the teacher to evaluate everything about the teaching process which is also called the academic supervisor.

As an academic supervisor, the principal has an obligation to help teachers become professionals so that teachers can improve the quality of the learning process. The good effect of the application of academic supervision was found in previous research which involved 202 teachers in Tegal district, it was shown that academic supervisors were able to increase teacher motivation and performance (Habibi et al., 2018a). Similar results were also found in other research which involved 60 teachers who were randomly selected where academic supervision was able to affect teacher performance (Memah et al., 2019). Apart from acting as an educational consultant who is always a companion for teachers in improving the quality of education. With the assistance of supervision from the principal, it is hoped that the results of the implementation of the learning process in schools will be better and of quality so that the objectives of education will be achieved. This synergy can improve the quality of education in schools. Academic supervision is a series of activities in helping teachers to develop their abilities in the teaching and learning process in order to achieve learning goals (Jaya et al., 2015). Academic supervision carried out together with teachers must be oriented towards improving the quality of the process and learning outcomes that are right on target. In addition, with careful observation and what it is based on the

guidelines it also has the aim of improving and developing the situation of teaching and learning activities. The implementation of effective supervision is the implementation by observing, assessing, and fostering teachers to carry out their duties and functions optimally. The scope of educational supervision includes activities that aim to identify, monitor, assess and diagnose what happens in the educational process starting from the school (micro) to the national (macro) scope.

Academic supervision that is carried out can have a positive impact on the pedagogic competence of teachers (Azwardi, 2020; Latiana et al., 2017; Mujiati, Suriansyah, & Rustam Effendi, 2019; Nordentoft et al., 2013; Pambudi & Gunawan, 2020; Porniadi et al., 2019; Saihu, 2020; Saleh et al. , 2021). Besides having an impact on the good pedagogic competence of teachers, the application of academic supervision has been proven to be able to improve teacher performance (Bahri, 2014; Habibi et al., 2018b; Hardono, Haryono, 2017; Pambudi, Bahtiar Agung, 2020; Purwoko, 2018; Saleh et al., 2021; Susanti et al., 2020; Usman, 2015). Therefore, the support from the principal is one of the important things to support teacher performance. The main role of a teacher is to educate, therefore, a teacher must have teaching skills that are in accordance with the needs and developments of the times (Dalal et al., 2017). Changes in the curriculum, the times that are constantly changing have led to the development of a philosophical, sociological, psychological, science and technology orientation, and the future hopes of graduates who continue to experience changes (Akbar, 2015). In order for the teacher evaluation to provide objective and detailed results, a collaborative self-evaluation is carried out, namely peer evaluation to find teacher strengths that need to be maintained and deficiencies that must be corrected (Arnodah, 2013).

The use of peer evaluations for teachers has multiple benefits. In addition to improving academic achievement, applying peer evaluation in supervisory settings can create better social relationships and cooperation, and increase self-confidence. Therefore, it is time for supervisors to pay attention to the application of peer evaluation to be developed and applied, so that the implementation of supervision does not only function as a tool to measure student learning achievement, but also to improve the learning process and quality (Renata et al., 2018). Peer evaluation will only be effective if it is based on honest, objective, and trustworthy attitudes and behavior among individuals and groups. This study aims to determine the effect of the implementation of collaboration-based academic supervision with a peer evaluation approach to increase pedagogic competence and performance quality as moderated by the principal's motivation.

2. METHOD

This type of research used in this research is quantitative research methods. Quantitative research methods can also be interpreted as research methods based on the philosophy of positivism, used to research on certain populations or samples, data collection using instruments. Margono explained that quantitative research is a study that uses the logic of the verification hypothesis which starts with deductive thinking to derive the hypothesis then conducts testing in the field and the conclusion or hypothesis is drawn based on empirical data. The population in this study amounted to 2476 public and private elementary school teachers gathered from 5 sub-districts in Ambon City in the 2019/2020 school year. The data on the number of teachers in each district shown in Table 1.

Table 1. Data of Elementary teachers in Ambon City

Districts	Teacher		
	Public	Private	Amount
Nusaniwe	615	95	710
Sirimau	627	294	921
South Leitimur	94	16	110
Teluk Ambon Baguala	310	50	360
Ambon Bay	328	47	375
Amount	1,974	502	2,476

Samples were taken by simple random sampling technique, that each member of the population has the same opportunity to be selected as a sample. The data in this study were obtained through a questionnaire distributed to 100 elementary school teachers. The sampling technique used was to draw all members of the population (Notoatmodjo, 2012). Data analysis used the Structural Equation Model (SEM) approach assisted by the smart PLS application. The stages of data analysis in this study are: Analysis of the outer model is carried out to ensure that the measurement used is valid and reliable. In the analysis of this model, it specifies the relationship between latent variables and their indicators. Analysis of the outer

model can be seen from several indicators: Convergent Validity is an indicator that is assessed based on the correlation between the item score / component score with the construct score, which can be seen from the standardized loading factor which describes the magnitude of the correlation between each measurement item (indicator) and the construct. The individual reflexive measure is said to be high if the loading factor score is> 0.6; Discriminant Validity is a measurement model with a reflexive indicator assessed based on cross loading the measurement with the construct. discriminant validity is comparing the square root value of average variance extracted (AVE). The instrument is declared valid if it has an AVE value (> 0.5); Composite reliability is an indicator to measure a construct that can be seen in the latent variable coefficients view. In this measurement, if the value achieved is> 0.70, it can be said that the construct has high reliability; Cronbach's Alpha is a reliability test that strengthens the results of composite reliability. A variable can be declared reliable if it has a Cronbach's alpha value> 0.7.

Inner Model Analysis or what is commonly called the Structural Model is used to predict the causal relationship between the variables tested in the model. Inner model analysis can be evaluated by using the R-square for the dependent construct. Inner model analysis can be evaluated by using the R-square for the dependent construct. Changes in the value of the R-square can be used to assess the effect of certain independent latent variables on the dependent latent variables whether they have a substantive effect. In testing the hypothesis, it can be seen from the t-statistical value and the probability value. To test the hypothesis, namely by using statistical values, for alpha 5% the t-statistic value used is 1.96. So that the criteria for acceptance / rejection of the hypothesis is that Ha is accepted and H0 is rejected when the t-statistic is> 1.96. To reject / accept the hypothesis using probability, Ha is accepted if the p value is <0.05, while to see the direction of the effect, the Beta value coefficient is used

3. RESULT AND DISCUSSION

Result
Evaluation of the Measurement Model (Outer Model)

Evaluation of the outer model of the study is carried out by paying attention to the four measurement criteria of the outer model, the four criteria are Convergent Validity, Discriminant Validity, Composite Reliability and Cronbach Alpha. Convergent validity of the measurement model with reflexive indicators can be seen from the correlation between the item / indicator score and the construct score. Individual indicators are considered reliable if they have a correlation value above 0.70. Based on the measurement results of outer loading on reflective indicators, it is known that all research indicators have met the criteria to be used as variable measurement indicators because they have an outer loading value greater than 0.6 (outer loading> 0.6). The results of data testing show that all indicators have an AVE score (> 0.5). The data above shows that there is no variable indicator whose outer loading value is below the criteria so that all indicators are declared eligible or valid for research use and can be used for further analysis. Researchers used 2 types of reliability tests, namely the Cronbach Alpha test and the Composite Reliability test. Cronbach Alpha measures the lowest (lower bound) value of reliability. The data is declared good if the data has a Cronbach alpha value> 0.7 and a composite reliability score> 0.7. The results of data testing show that all research indicators are reliable with scores for each variable (p> 0.7).

Evaluation of the Structural Model (Inner Model)

Based on the R Square value in the Pedagogic Competence model (Y1), the R Square value is 0.694. These results indicate that the Supervision variable is able to explain the Pedagogic Competence (Y1) variable of 69.4% while the remaining 30.6% is explained by variables not included in the research model. In the second equation, the Quality of Performance (Y2), the Square value is 0.401. These results indicate that the Supervision variable is able to explain the Performance Quality (Y2) variable by 40.1% while the remaining 59.9% is explained by variables not included in the research model. Hypothesis testing in this study was carried out by looking at the T-Statistics value and the P-Values value. The research hypothesis can be stated as accepted if the P-Values value <0.05. The results of hypothesis testing obtained in this study through the inner model is shown in Table 2.

Table 2. Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (| O / STDEV |)	P Values
Moderating Effect Y1 -> Pedagogic Competence (Y1)	0.057	0.055	0.026	2,152	0.032

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (| O / STDEV |)	P Values
Moderating Effect Y2 -> Quality Performance (Y2)	0.063	0.052	0.042	1,486	0.138
Motivation (M) -> Pedagogic Competence (Y1)	0.426	0.440	0.109	3,928	0.000
Motivation (M) -> Quality of Performance (Y2)	0.092	0.103	0.148	0.624	0.533
Academic Supervision (X) -> Pedagogic Competence (Y1)	0.486	0.472	0.100	4,869	0.000
Academic Supervision (X) -> Quality of Performance (Y2)	0.587	0.590	0.132	4,459	0.000

Discussion

The Effect of Academic Supervision on Pedagogic Competence

The results of hypothesis testing show that Academic Supervision has an effect on Pedagogic Competence with a path coefficient value of 0.486 and a statistical T value of 4869 and a P-value of 0.000. The statistical T value is greater than the T table (4,869> 1,984) and the P value is 0,000 or less than the 5% alpha standard (0.000 <0.05), indicating that there is a significant effect of Academic Supervision on Teacher Pedagogic Competence. The results of the research are in line with the results of research who found that academic supervision can improve teacher pedagogical competence (Azwardi, 2020; Latiana et al., 2017; Mujiati, Suriansyah, & Rustam Effendi, 2019; Nordentoft et al., 2013; Pambudi & Gunawan, 2020; Porniadi et al., 2019; Saihu, 2020; Saleh et al. , 2021). Better Academic Supervision is able to improve Teacher Pedagogic Competence so that the first Hypothesis (H1) is accepted. Pedagogic Competence is the ability to manage student learning, which includes understanding students, designing and implementing learning, evaluating learning outcomes, and developing students to actualize their various potentials (Habibullah, 2012). With the existence of quality academic supervision, the pedagogical competence of teachers can be increased, and with the existence of academic supervision, it is hoped that it can develop the resources possessed by teachers in these schools (Angelicha & Sanoto, 2021).

The Effect of Academic Supervision on the Quality of School Performance

The results of hypothesis testing show that Academic Supervision has an effect on the Quality of Performance, has a path coefficient value of 0.587 and a statistical T value of 4.459 and a P-value of 0.000. The statistical T value is greater than the T table (4.459> 1.984) and the P value is 0.000 or less than the 5% alpha standard (0.000 <0.05), indicating that there is a significant effect of Academic Supervision on the Quality of Teacher Performance. In other words, the better Academic Supervision is able to improve the Quality of Teacher Performance or the Second Hypothesis (H2) is accepted. This finding is in line with the several research results (Bahri, 2014; Habibi et al., 2018b; Hardono, Haryono, 2017; Pambudi, Bahtiar Agung, 2020; Purwoko, 2018; Saleh et al., 2021; Susanti et al., 2020; Usman, 2015). Performance is the level of success of a person or group of people in carrying out their duties and responsibilities and the ability to achieve predetermined goals and standards. Supervision carried out by the principal to the teachers is carried out regularly and on a scheduled basis in the hope that the teacher is able to improve the learning process carried out (Ramadona & Wibowo, 2016). Supervision is an activity carried out by the principal to assist teachers in developing their abilities and facilitate teachers in efforts to improve the learning process.

The Role of Moderation of Motivation in the Relationship between Academic Supervision and Pedagogic Competence

The results of hypothesis testing show that motivation is able to moderate the positive supervision of pedagogic competence. The path coefficient value is 0.057 and has a T-statistic value of 2.152 and a P-value of 0.032. The statistical T value is greater than the T table (2.152> 1.984) and the P value is 0.032 or less than the 5% alpha standard (0.032 <0.05) indicating that motivation is able to have a positive moderating effect on academic supervision of pedagogic competence. These results support the findings (Kristiawan et al., 2009; Normianti et al., 2019; Siahaan et al., 2020). Competence includes knowledge, skills, intellectuals, strategies or a combination of the three that may be applied to a person or perhaps to a work unit. The competence of teachers who have received good supervision can increase when the teacher has good motivation.

The Role of Moderation of Motivation in the Relationship of Academic Supervision on the Quality of School Performance

The results of hypothesis testing show that motivation is not able to moderate the supervision of the quality of performance. The path coefficient value is 0.063 and has a statistical T value of 1.486 and a P-value of 0.138. The statistical T value is smaller than the T table (1.486 <1.984) and the P value of 0.138 or greater than the 5% alpha standard (0.138 <0.05) indicates that motivation is not able to provide a moderating effect on academic supervision of performance quality. This result at the same time rejects the findings (Farida et al., 2020; Rasyid & Tanjung, 2020; Siahaan et al., 2020; Wahyudi et al., 2018).

4. CONCLUSION

The results showed that the implementation of the collaboration-based academic supervision model with the peer evaluation approach was able to increase pedagogic competence moderated by the principal's motivation. However, the motivation variable has not been able to moderate the collaboration-based academic supervision model with a peer evaluation approach to school performance. Based on these findings, the principal should be able to periodically monitor the learning carried out by the teacher in the classroom, so that the principal knows the problems faced by the teacher in learning. Researchers who want to research further on this topic can use other variables and use a wider sample.

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